1d2: Qualified and Activist Leadership 29
President 29
Provost 30
Associate Provost and Dean of Graduate Studies 30
Assistant Provost for Enrollment Services 30
Vice President for Finance and Administration 30
Vice President for University Advancement 30
1d3-1d4: Effective Administrative Organization 30
Office of the Provost 30
University Advancement 31
Finance and Administration 31
College Leadership 31
Leadership and Management Committees 31
Executive Leadership Council 31
Deans’ Council 31
Information Technology Steering Committee 32
Enrollment Management Committee 32
1d5: Faculty-Led Academic Programs 32
Forums for Faculty Decision Making 32
College Faculty Councils 32
The Faculty Senate 33
Standing Faculty Committees 33
The Staff Senate 34
1d6: A Focus on Communications 34
Leadership Team 34
Deans’ Council 34
Faculty Senate 34
Campus Communications 34
1d7: A Climate of Continuous Improvement 35
The Undergraduate Leadership Curriculum 35
The One-Stop Center 35
Reinventing Teaching and Learning Using Technology 36
The U Serving You Process 36
Self-Study Improvement Initiatives 36
1e. A Commitment to Integrity 37
1e1-1e2-1e3: Academic and Administrative Integrity 37
Academic Honor Code 37
Student Code of Conduct 37
Code of Conduct Cases 38
Financial and Operational Integrity 38
Administrative Policies and Procedures 38
A Commitment to Ethical and Sustainable Behavior 38
1e4-1e5: Operational Integrity 39
Student Services 39
Co-Curricular Activities 39
Auxiliary Activities 39
1e6-1e7: Community and Stakeholder Integrity 39
Marketing and Advertising Coordination 40
Association of Independent Technological Universities 40
U.S. News America’s Best Colleges 2010 40
Princeton Review 40
Military Friendly School 40
Bloomberg Businessweek 41
1e8: Responding to Complaints and Grievances 41
Conclusion 41
Opportunities for Improvement 41
Criterion Two: Preparing for the Future 45
2a. A Focus on the Future 45
2a1: Strategic Planning Process 45
2a2: Drivers of Change 46
New Academic Programs 46
Student Recruiting and Program Delivery Modes 47
International Focus 47
2a3: Developing Global Leaders 48
2a4-2a5: A Focus on Innovation and Change 48
Improving Entrepreneurship and Innovation in Southeast Michigan 48
An Advanced eLearning Environment 49
Support for Applied Research 49
2a6: A Proud Heritage 49
An Active Detroit Presence 49
A Commitment to Working Professionals 49
Restoring Aeronautical Engineering 50
Well-Known Alumni 50
2a7: An Inclusive Decision Making Process 50
2b. Aligning Strategy with Resources 51
2b1: Financial Resources 51
Financial Performance 51
Budgeting and the Economic Recession 52
Financial Ratio Analysis 52
Enrollment Trends 54
Tuition Rates 58
Financial Aid 61
Library Spending 62
Information Technology Spending 62
Efficiency and Sustainability 62
Table of Contents

2b2: Resource Development and Allocation 64
Budget Planning 64
2b3: Human Resources 66
Employment Trends and Diversity 66
The Faculty 66
Administration and Staff 67
2b4: Organization Development 68
Faculty Recruitment and Evaluation 68
Promotion and Tenure 69
Administration and Staff Performance 69
Evaluation Planning 69
Employee Recognition Programs 69
License to Lead Program 70
Idea Inbox 70
Social Events 70
Employee Surveys 70
2b5: Developing Financial Resources 71
Facilities and Grounds 71
Investments in Intellectual and Physical Capital 72
Campus Master Planning 73
Gifts to the University 73
Capital Campaigns 74
University Investment Portfolio 75
Sponsored Research and Programs 75
2b6: Response to the Economic Crisis 76
Recovery Starts Here Initiative 76
2b7: A History of Achievement 77
Growth of Academic Programs 77
Growth of Campus Facilities 77
One-Stop Approach to Student Services 77
2c. Continuous Improvement through Assessment 77
2c1-2c2: A Growing Culture of Assessment 77
Monitoring Assessment Progress 77
Assessing Academic Programs 78
2c3-2c4: Acting on Assessment Findings 78
Academic Program Planning and Review 78
Undergraduate Leadership Curriculum 79
AITU Benchmarking Visits 79
Student Activities Organizational Review 79
Performance Evaluation Model Surveys 80
2c5: Institutional Research and Support 80
2d. Aligning Planning With Action 80
2d1-2d2: Coordinated Planning Processes 81
Capital Campaign Planning – 25 Year Cycle 81
Campus Master Planning – 20 Year Cycle 81
Higher Learning Commission Accreditation – 10 Year Cycle 81
Professional Program Accreditation – Varying Cycles 81
University Strategic Planning – 5 Year Cycle 81
Assessment Planning – 5 Year Cycle 82
Enrollment Planning – 5 Year Cycle 82
Academic Program Planning and Review – 3 Year Cycle 82
Budget Planning – 3 Year Cycle 82
Information Technology Planning – 3 Year Cycle 83
Library Planning – 1 Year Cycle 83
2d3: Integrated Operations 83
College of Architecture & Design 83
College of Arts & Sciences 84
College of Engineering 84
College of Management 85
2d4: A Structured Yet Flexible Planning Process 86
Academic Program Planning and Review 86
Student Tablet-Laptop Program 86
Recovery Starts Here Initiative 86
2d5: Linking Academics to the Real World 87
2d6: An Inclusive Planning Process 87
Conclusion 88
Opportunities for Improvement 88
Criterion Three: Student Learning and Effective Teaching 91
3a. Documentation of Program Learning Outcomes 91
3a1: Undergraduate and Graduate Learning Goals 92
Undergraduate Learning Goals 92
Graduate Learning Goals 93
Doctoral Learning Goals 94
3a2: A Comprehensive Approach to Assessment Design 94
Assessment of General Education 94
Program Area Assessment 94
3a3: Use of Multiple Assessment Measures 95
Freshman Placement Tests 95
Assessing Student Writing 95
ICCP Examination 95
Student Satisfaction Surveys 95
Feedback from Employers and Advisory Groups 96
National Survey of Student Engagement 96
3a4-3a5: Disseminating Assessment Findings 96
3a6: Degree Program and Certificate Assessment 96
3a7: Faculty Leadership of the Assessment Enterprise 96
Department and Program Area Committees 97
University Assessment Committee 97
3a8: Continuously Improving the Assessment Enterprise 97
Annual Assessment Reports 97
Assessment Day 98
3b. Encouraging and Supporting Effective Teaching 98
3b1: Qualified and Committed Faculty 98
Faculty Rank and Terminal Degrees 99
Adjunct Faculty 99
Academic Program Development 99
3b2-3b3: Development and Recognition of Effective Teaching 100
Faculty Professional Development 100
Faculty Professional Participation 100
Faculty Sabbaticals 100
Faculty Awards 100
3b4-3b5-3b6: Improving Instructional Effectiveness 101
Student Course Evaluations 101
Instructional Templates and Rubrics 101
Center for Teaching and Learning 101
Professional Engagement 102
3c. Creating Effective Learning Environments 102
3c1: Assessment-Driven Improvements to Learning Environments 102
Assessment and Professional Accreditation 102
Assessment and Learning Resources 102
Writing Across the Curriculum 102
3c2: A Diverse and Supportive Learning Environment 103
Honors Program 103
Dean of Students 103
Activities for International Students 104
University Housing 104
Dining Services 105
Student Recreation 105
Organizing for Student Services 106
Campus Bookstore 107
Campus Safety 107
3c3-3c4: Student Advising and Development 108
Academic Achievement Center 108
First Year Program 109
Office of International Programs 109
Lawrence Tech Scholars Program 110
Student Engagement 110
Counseling Office 110
Disability Services 110
3c5: A Technology-Enabled Learning Environment 110
eLearning Services 110
LTU Online 111
Information Technology Infrastructure and Services 112
Tablet-Laptop Program 112
Media Services 113
3c6: Continuously Improving Learning Resources 113
Foundations of Excellence in the First College Year 113
National Survey of Student Engagement 114
3d. Improving Learning Resources 114
3d1: Laboratories, Libraries, and Other Facilities 114
Academic Laboratories 114
Computer Laboratories 115
Auditoria and Performance Spaces 115
University Library 115
3d2-3d3: A Focus on Improving Learning Resources 117
Academic Achievement Center Surveys 117
University Housing Survey 117
Tablet-Laptop Survey 118
Help Desk Satisfaction Survey 118
3d4: Supporting the Use of Technology 118
Help Desk 118
The eHelp Online Knowledge Base 119
3d5-3d6-3d7: Support for Innovation in Learning Resources 119
Center for Teaching and Learning Workshops 119
Laptop and Tablet PC Grants 119
Online and Hybrid Course Development Stipends 119
Conference Support for Teaching and Learning Using Technology 119
Kern Innovative Teacher Initiative 120
Conclusion 120
Opportunities for Improvement 120
Criterion Four: Acquisition, Discovery, and Application of Knowledge

4a. Developing a Culture of Learning
4a1-4a2-4a3: Supporting a Learning Culture
4a4: Faculty and Student Achievements
4a4a5: Faculty and Student Achievements
4a6: Continuous Improvement through Research and Scholarship

4b. Mission-Driven Academic Programs
4b1: The Core Curriculum
4b2: Evolving the Core Curriculum
4b3: Assessing Graduate Programs
4b4-4b5-4b6: Preparing Students for Professions and Lifelong Learning

4c. A Global, Diverse, and Virtual Future
4c1: Academic Program Review
4c2-4c3: Preparing Students for a Global and Diverse Future

Criterion Five: Engagement and Service
5a. Building Relationships with Constituents
5a1-5a2: A Legacy of Service
5a4: External Consultation on Academic Programs

5b. Support for Constituent Relationships
5b1: Organizing for Relationships

Conclusion
Opportunities for Improvement
Request for Institutional Change:  
**Doctoral Programs**  
**Introduction**  
Change Being Proposed  
Factors Leading the Institution to Undertake the Proposed Change  
Lawrence Tech's Approach to Doctoral Programs  
Doctor of Manufacturing Engineering Systems  
Doctor of Management in Information Technology  
Doctor of Business Administration  
Doctoral Program Enrollment  
Graduates and Dissertations  
Doctoral Advisory Boards  
Campus Culture of Doctoral Studies  
Faculty Scholarship and Applied Research  
Student Publications and Professional Awards  
Alumni Demand for Programs  
Demand for Fulltime Program Options  
Preparing Future Academics  
Demand for Hybrid Delivery Options  
Doctoral Program Proposals  
The Proposed Change  
Doctor of Engineering Degree  
Ph.D. Options in Management and Engineering  
Approvals Obtained to Implement Change  
Impact of Change on Previously Identified Challenges  
Institution's Plan to Implement and Sustain the Change  
Implementation Timeline  
Strategies to Evaluate the Change  
Conclusion and Request  

Request for Institutional Change:  
**Online Programs**  
**Introduction**  
Change Being Proposed  
Factors Leading the Institution to Undertake the Proposed Change  
Program Development  
Faculty Support  
Enrollment and Withdrawals  

---

**Table of Contents**

Global Service Opportunities
Study Abroad Opportunities
5b4-5b5: Supporting Relationships
Support for Faculty Engagement
Center for Nonprofit Leadership and Management
Center for Global Leadership and Understanding

5c. Responding to Constituent Needs
5c1: Collaborative Partnerships
University High School
K-12 Outreach Projects
STEM Initiatives
Community College Articulation Agreements
Collaborative Relationships with Universities
International Academic Agreements
5c2: Transfer Policies
5c3-5c4-5c5: Sustainable Partnerships
Membership Organizations
Microenterprise and Nonprofit Initiatives

5d. Constituents' Views of Lawrence Tech's Services
5d1-5d2: Assessment of Outreach Efforts
5d3-5d4-5d5: Civic and Community Involvement
Economic Development Outreach
Visits by Policy-Makers and Policy-Makers
Community Use of University Facilities
Community Perspective
Professional Development Center

Conclusion
Opportunities for Improvement

Request for Continued Accreditation
Summary Statement
Criterion One
Criterion Two
Criterion Three
Criterion Four
Criterion Five
Requests for Institutional Change
Doctoral Programs
Online Programs
Request for Continued Accreditation
Criterion Two: Preparing for the Future

Figure 1: Financial Performance (millions) 45
Figure 2: Primary Reserve Ratio 53
Figure 3: Net Income Ratio 53
Figure 4: Equity Ratio 53
Figure 5: Composite Index 54
Figure 6: Head Count and Credit Hour Trends 54
Figure 7: Enrollment and Credit Hour Production – College of Architecture & Design 54
Figure 8: Enrollment and Credit Hour Production – College of Arts & Sciences 55
Figure 9: Enrollment and Credit Hour Production – College of Engineering 55
Figure 10: Enrollment and Credit Hour Production – College of Management 55
Figure 11: Male and Female Enrollment 56
Figure 12: Full-Time and Part-Time Enrollment for Male Students 56
Figure 13: Full-Time and Part-Time Enrollment for Female Students 56
Figure 14: Age Distribution for Male Undergraduate Students – Fall 2009 57
Figure 15: Age Distribution for Female Undergraduate Students – Fall 2009 57
Figure 16: Undergraduate Student Ethnicity 57
Figure 17: Graduate Student Ethnicity 58
Figure 18: Out-of-State Enrollment – 2010 58
Figure 19: ACT Test Scores 58
Figure 20: Undergraduate Yield Count 59
Figure 21: Undergraduate Yield Rates 59
Figure 22: Graduate Yield Count 59
Figure 23: Graduate Yield Rates 59

Criterion Three: Student Learning and Effective Teaching

Figure 24: Retention Rates 59
Figure 25: Undergraduate & Graduate Degrees Awarded 59
Figure 26: Tuition Increases 60
Figure 27: Tuition Rates at Michigan Private Universities and Colleges 60
Figure 28: Out-of-State Tuition Competitiveness with Technologically Focused Institutions 60
Figure 29: Average Financial Aid Award Package 63
Figure 30: Annual Cost of Attendance for 2010-2011 63
Figure 31: Tuition Discounting History (millions) 63
Figure 32: Number of Undergraduate Students Applying For and Receiving Aid 63
Figure 33: Percent of Undergraduate Students Applying For and Receiving Aid 63
Figure 34: Graduate Students Applying For and Receiving Aid 65
Figure 35: Undergraduate Students Applying For and Receiving Aid 65
Figure 36: Library Collection Funding 65
Figure 37: Information Technology Capital Spending 65
Figure 38: Lawrence Tech Employment History 65
Figure 39: Full-Time Employees by Major Unit – March 2010 65
Figure 40: Employees by Gender 67
Figure 41: Minority Employees by Gender 67
Figure 42: Full-Time Faculty By Academic Department – March 2010 67
Figure 43: Highest Degree for Full-Time Faculty 68
Figure 44: University Gifts and Grants 74
Figure 45: Sponsored Research and Program Funding (millions) 74

Criterion Four: Acquisition, Discovery, and Application of Knowledge

Figure 46: Distribution of Degrees by Faculty Rank 98
Figure 47 – University Library Print Circulation 117
Figure 48: Full-Text Searches and Displays 117
Figure 49: Library Visitors 117

Figure 50 – Undergraduate Leadership Curriculum Overview 130
Figure 51 – Royalty Distribution for University-Owner Inventions 141
# List of Evidence Repository Items

## Introduction
- (Evidence Repository)
- (INT-01-“Lawrence Tech Recognition”)
- (INT-02-“Third Party Comment Notifications”)
- (INT-03-“Statement of Affiliation Status”)

## Criterion One: Mission and Integrity

<table>
<thead>
<tr>
<th>Criterion One: Mission and Integrity</th>
<th>19</th>
</tr>
</thead>
<tbody>
<tr>
<td>(C1-01-“Degree and Certificate Programs”)</td>
<td></td>
</tr>
<tr>
<td>(C1-02-“Delivery Sites”)</td>
<td></td>
</tr>
<tr>
<td>(C1-03-“Marketing Materials and Program Brochures”)</td>
<td></td>
</tr>
<tr>
<td>(C1-04-“Board of Trustees Bylaws”)</td>
<td></td>
</tr>
<tr>
<td>(C1-05-“Board of Trustees Members”)</td>
<td></td>
</tr>
<tr>
<td>(C1-06-“Board of Trustees Agendas”)</td>
<td></td>
</tr>
<tr>
<td>(C1-07-“Board Books”)</td>
<td></td>
</tr>
<tr>
<td>(C1-08-“Board of Trustees Interviews”)</td>
<td></td>
</tr>
<tr>
<td>(C1-09-“Lawrence Tech Organization Chart”)</td>
<td></td>
</tr>
<tr>
<td>(C1-10-“Leadership Profiles”)</td>
<td></td>
</tr>
<tr>
<td>(C1-11-“Academic Deans and Chairs”)</td>
<td></td>
</tr>
<tr>
<td>(C1-12-“College Faculty Councils”)</td>
<td></td>
</tr>
<tr>
<td>(C1-13-“Faculty Senate Bylaws”)</td>
<td></td>
</tr>
<tr>
<td>(C1-14-“Faculty Senate Agendas and Minutes”)</td>
<td></td>
</tr>
<tr>
<td>(C1-15-“Standing Faculty Committee Membership”)</td>
<td></td>
</tr>
<tr>
<td>(C1-16-“Staff Senate Bylaws”)</td>
<td></td>
</tr>
<tr>
<td>(C1-17-“Staff Council Members”)</td>
<td></td>
</tr>
<tr>
<td>(C1-18-“Staff Senate Agendas and Minutes”)</td>
<td></td>
</tr>
</tbody>
</table>

## Criterion Two: Preparing for the Future

<table>
<thead>
<tr>
<th>Criterion Two: Preparing for the Future</th>
<th>45</th>
</tr>
</thead>
<tbody>
<tr>
<td>(C2-01-“Lawrence Tech Strategic Plans”)</td>
<td></td>
</tr>
<tr>
<td>(C2-02-“Financial Performance-FY2000-FY2009”)</td>
<td></td>
</tr>
<tr>
<td>(C2-03-“Capital Projects-FY2007”)</td>
<td></td>
</tr>
<tr>
<td>(C2-04-“Undergraduate Retention by Ethnicity-Fall 2004-Fall 2008”)</td>
<td></td>
</tr>
<tr>
<td>(C2-05-“Degrees Awarded by Ethnicity-2005-2009”)</td>
<td></td>
</tr>
<tr>
<td>(C2-06-“Tuition Rates at Michigan Private Universities and Colleges-FY2009-FY2010”)</td>
<td></td>
</tr>
<tr>
<td>(C2-07-“Tuition Competitiveness with Michigan Public Universities-FY2009-FY2010”)</td>
<td></td>
</tr>
<tr>
<td>(C2-08-“Cost of Attendance-FY2001-FY2011”)</td>
<td></td>
</tr>
<tr>
<td>(C2-09-“Financial Aid Award History-2000-2009”)</td>
<td></td>
</tr>
<tr>
<td>(C2-10-“Lawrence Tech Funded Awards-2009-2010”)</td>
<td></td>
</tr>
<tr>
<td>(C2-11-“Full-Time and Part-Time Employment by Major Unit”)</td>
<td></td>
</tr>
<tr>
<td>(C2-12-“IPEDS Employee Data-FY2000-FY2008”)</td>
<td></td>
</tr>
<tr>
<td>(C2-13-“Highest Degree Earned By Department-March 2010”)</td>
<td></td>
</tr>
<tr>
<td>(C2-14-“Adjunct Faculty Compensation Schedule”)</td>
<td></td>
</tr>
<tr>
<td>(C2-15-“Merit Pay Program”)</td>
<td></td>
</tr>
<tr>
<td>(C2-16-“Employee and Dependent Tuition Assistance”)</td>
<td></td>
</tr>
<tr>
<td>(C2-17-“College Performance Evaluation Models”)</td>
<td></td>
</tr>
<tr>
<td>(C2-18-“Faculty Handbook”)</td>
<td></td>
</tr>
<tr>
<td>(C2-19-“Employee Recognition Awardees”)</td>
<td></td>
</tr>
<tr>
<td>(C2-20-“Morpace Employee Satisfaction Survey - 2002”)</td>
<td></td>
</tr>
<tr>
<td>(C2-21-“Building Plans and Uses”)</td>
<td></td>
</tr>
<tr>
<td>(C2-22-“Deferred Maintenance Inventory-August 2009”)</td>
<td></td>
</tr>
<tr>
<td>(C2-23-“Capital Campaign Overview”)</td>
<td></td>
</tr>
<tr>
<td>(C2-24-“Alumni Giving-FY2001-FY2009”)</td>
<td></td>
</tr>
<tr>
<td>(C2-25-“Faculty and Staff Donations and Endowed Scholarships”)</td>
<td></td>
</tr>
</tbody>
</table>
Criterion Three: Student Learning and Effective Teaching

(C3-01-"Facilitating Reflective Learning")
(C3-02-"Professional Accreditation Documents")
(C3-03-"Annual Assessment Reports")
(C3-04-"Graduating Student Surveys-2006-2010")
(C3-05-"Noel-Levitz Student Satisfaction Surveys-1996-2006")
(C3-06-"University Assessment Committee")
(C3-07-"Assessment Day Agendas-2003-2009")
(C3-08-"Adjunct Faculty Processes")
(C3-09-"Course Approval Process")
(C3-10-"Program Approval Process")
(C3-11-"Faculty Sabbaticals")
(C3-12-"Syllabus Template")
(C3-13-"Blackboard Grading Rubrics")
(C3-14-"Professional Accreditation Agencies and Schedules")
(C3-15-"Writing Across the Curriculum")
(C3-16-"Lawrence Tech Student Handbook")
(C3-17-"Student Government Constitution")
(C3-18-"Student Organizations and Honor Societies")
(C3-19-"University Housing Rates and Occupancy")
(C3-20-"Dining Services Meal Plans")
(C3-21-"Student Recreation Annual Reports-2004-2009")
(C3-22-"TOEFL Scores-Spring 2008")
(C3-23-"Information Technology Infrastructure")
(C3-24-"Tablet-Laptop Software Images")
(C3-25-"Tablet-Laptop Hardware and Software Value")
(C3-26-"Foundations of Excellence Dimensions Reports")
(C3-27-"National Survey of Student Engagement Reports")
(C3-28-"Academic Laboratories")
(C3-29-"Faculty Library Committee")

Criterion Four: Acquisition, Discovery, and Application of Knowledge

(C4-01-"Faculty Research and Scholarly Publications")
(C4-02-"Research Funding History-FY2003-FY2010")
(C4-03-"Current Sponsored Research Projects")
(C4-04-"Examples of Sponsored Research")
(C4-05-"Learn All About It Luncheon Topics")
(C4-06-"SoTAL Poster Sessions")
(C4-07-"Undergraduate Leadership Curriculum")
(C4-08-"Undergraduate Leadership Transcript")
(C4-09-"Guest Speaker Series")
(C4-10-"APRC Template and Checklist")
(C4-11-"Global Leadership Resource Guide")
(C4-12- "QUEST Program Brochure")
(C4-13-"Institutional Review Board Documents")
(C4-14-"DMIT Dissertation Process Model")
(C4-15-"Intellectual Property Policy")
(C4-16-"Grant and Contract Compensation Policy")

Criterion Five: Engagement and Service

(C5-01-"Carnegie Community Engagement Partnerships")
(C5-02-"Professional Memberships")
(C5-03-"Alumni Association Bylaws")
(C5-04-"Community College Articulation Agreements")
(C5-05-"International Academic Agreements")
(C5-06-"Community Testimonials")

Request for Institutional Change: Doctoral Programs

(CRD-01-"Dissertations Published")
(CRD-02-"Graduate and Student Employment")
(CRD-03-"Industry Advisory Board Members")
(CRD-04-"Doctoral Student Scholarly Publications")
Lawrence Technological University is pleased to submit its Self-Study to the Higher Learning Commission in support of its request for continuing institutional accreditation. The Self-Study is the product of a three-year institutional effort and demonstrates Lawrence Tech’s fulfillment of the Commission’s Criteria for Accreditation in the context of the University’s mission.

Lawrence Tech has evolved dramatically since the 2001 accreditation visit. Numerous new academic programs have been established at the bachelor’s, master’s, and doctoral levels. Lawrence Tech has instituted a comprehensive Undergraduate Leadership Curriculum which is unique in higher education with the exception of the United States military service academies. The campus has seen remarkable development including the construction of a second residence hall, the University Technology and Learning Center, the A. Alfred Taubman Student Services Center, and a University Quadrangle that is both beautiful and contains over 100 geothermal wells to support the energy needs of the Student Services Center. The University’s information technology environment has been dramatically upgraded with campus-wide wireless coverage, a comprehensive and unique student Tablet-Laptop Program, extensive eLearning services, and rich digital library holdings.

Throughout this Self-Study, Lawrence Tech’s focus on leadership, doctoral programs, applied research, technology-enabled and online programs, and international partnerships will be highlighted. These areas of focus extend the University’s historic mission to develop its position as a preeminent private university with a public focus.

In addition to requesting continuing accreditation, Lawrence Tech is appending two requests for institutional change to this Self-Study: the first requests approval to offer additional doctoral degree programs, and the second requests approval to offer any of the University’s academic programs in either a hybrid or online mode using established University decision making processes. These two requests build upon the success of the University’s three existing doctoral programs and the strong growth of the University online programs.

Lawrence Tech received its last reaccreditation visit by the Commission in 2001 and received a full ten-year accreditation. Lawrence Tech initiated its self-study process in December 2007, almost three years in advance of the current accreditation visit. This extended project has enabled the University to document how it fulfills its mission against the Commission’s accreditation criteria and to evaluate its future directions and challenges.

The Self-Study Steering Committee began meeting in February 2008. The Steering Committee consisted of a committee chair, one faculty representative from each of Lawrence Tech’s four colleges, and a representative from the Office of the Provost. The academic members of the committee were chosen to represent each of the four colleges as well as administration and staff. They were selected because of their abilities...
to communicate, make decisions, work collaboratively within and between colleges, and commit to a long-term project. The members of the Steering Committee collaborated to design the outline of the Self-Study, identify themes and issues, and gather supporting information within each of the colleges. The Steering Committee was supported by representatives from Institutional Research, Finance & Administration, the Library, and eLearning Services.

The Steering Committee identified four principles to guide its development of the Self-Study:
- To gather evidence of the alignment of Lawrence Tech’s mission with institutional and educational outcomes. This evidence supports the “Assurance” section of the visit report.
- To gather evidence that Lawrence Tech is organized, governed, and resourced to sustain and extend its mission into the future. This evidence supports the “Advancement” section of the visit report.
- To gather evidence that demonstrates linkages between long-term planning initiatives, assessment of student learning, and University operations.
- To actively engage the entire Lawrence Tech community in the Self-Study process and to learn from our experiences.

In consultation with President Walker and Provost Vaz, the Steering Committee identified the institutional themes of leadership, doctoral programs, applied research, technology-enabled and online programs, and international partnerships to emphasize the evolution of the University against its mission. The Steering Committee also collaborated with President Walker and Provost Vaz to identify two requests for an extensive written survey or were interviewed in fall 2009.

Throughout the Self-Study process, the Steering Committee engaged the University community through participation at college and department meetings, guest participation at Steering Committee meetings, faculty updates via the Faculty Senate, use of an informational Web site and Blackboard organization, e-mail updates, and a quarterly print publication titled “Accreditation Matters.”

Dr. Karen Solomon, our Commission liaison, visited the campus in November 2008 to consult with academic administrators and faculty members on issues related to doctoral studies and the Commission’s upcoming review of academic sites. During spring 2009, the Commission visited Lawrence Tech for its assessment of academic sites, resulting in approval of the University’s sites. The Steering Committee developed an interview framework for use within the four colleges to gain additional insights from faculty and staff. During summer 2009, extensive interviews were held with administrative and student services offices to evaluate the University’s administrative operations. Doctoral faculty members in the Colleges of Engineering and Management developed proposals for new and revised doctoral programs, and eLearning Services developed a proposal for online programs.

In fall 2009, faculty members of the Steering Committee worked within the four colleges to gather information and documents describing how faculty and staff support the five Criteria for Accreditation. Most members of the Board of Trustees responded to an extensive written survey or were interviewed in fall 2009.

The Self-Study (this document) is organized around the five Criteria for Accreditation and contains the headings and table of contents make it easy to identify the accreditation criteria, sub-criteria, and evidentiary statements.

The Self-Study document also contains the two Requests for Institutional Change, the General Institutional Requirements, the Institutional Snapshot, and Federal Compliance information.

The Self-Study is produced in both print and PDF formats. The PDF format contains hyperlinks from the document to documents located in an online (Evidence Repository). The print document clearly references specific documents in specific sections of the Evidence Repository.

The Evidence Repository, deployed as a Blackboard e-portfolio, is organized by major headings of the Self-Study. Repository documents are posted in either PDF or Excel formats. Some documents are made available only to the Commission’s consultant-evaluators, others to the University community, and others to the general public. The Evidence Repository includes some documents not explicitly referenced in the Self-Study but which may be of interest to consultant-evaluators. The Evidence Repository can be accessed by going to accreditation.ltu.edu.

The Resource Room, located in the Welcome Center of the A. Alfred Taubman Student Services Center, provides access to printed copies of the Self-Study or for reference by the Commission’s consultant-evaluator team as well as a comfortable and efficient working environment for the team.

Although the Self-Study is organized for convenience around the five Criteria for Accreditation, you will see references made throughout the document to the Commission’s four cross-cutting themes and eight institutional themes designed to communicate the future-oriented posture of the University. As there is acknowledged overlap between some accreditation criteria, some evidence is referenced in one or more sections of the Self-Study but discussed in detail in only one section.
Cross-Cutting Themes

The Commission has defined four cross-cutting themes to help frame institutional mission and operations. These themes will be emphasized throughout the Self-Study.

A Focus on the Future

The “future-oriented organization” demonstrates comprehensive planning driven by the institutional mission. These institutions understand social and economic change and their planning demonstrates their ability to interpret change to impact the lives of its constituents. These institutions are able to integrate new processes and technologies into its operation.

Throughout this Self-Study you will see evidence of Lawrence Tech’s future focus through its use of institutional strategic planning and agile adaptation to changing social and economic conditions.

A Focus on Learning and Assessment

The “learning-focused organization” demonstrates a holistic view of learning and assessment, with processes in place to assess student learning, support scholarship, and enhance the academic culture of the institution. While academic services, library services, and technology resources are important to learning, it is the assessment of learning outcomes and a culture of continuous improvement that drive the improvement of student learning.

Throughout this Self-Study you will see evidence of Lawrence Tech’s learning focus through its assessment and assessment program, unique Undergraduate Leadership Curriculum, linkage between students and future employers, support for research and scholarship, and a culture of continuous improvement. These capabilities leverage Lawrence Tech’s significant investments in academic services, library services, and technology resources. The Change Request for Doctoral Programs demonstrates the University’s ability to sustain a culture of doctoral studies and processes that demonstrate leadership from our faculty, students, administrators, and staff.

Governance and Communication

All institutions must continually strive to achieve the blend of institutional governance structures and processes that best support its mission. Lawrence Tech has made great strides in establishing inclusive and effective governance processes involving faculty, students, administrators, staff, and external constituencies.

Effective governance is founded on trust and open communication, and Lawrence Tech has made significant efforts to build a trusting and supportive campus environment.

Lawrence Tech recognizes that governance is never a finished product and communication can always be improved. Like all institutions of higher education, the University is challenged to find the right balance between too little communication and information overload. While governance and communication must always be a work in progress, the Self-Study highlights how the University has improved its culture of shared governance.

A Focus on Distinctiveness

The “distinctive organization” develops and lives by a clear vision while appreciating and learning from diversity. Such institutions are reflective, accountable, and continuously improving. Lawrence Tech embraces its mission, vision, and heritage while laying out aggressive plans to transform itself into a preeminent private university.

This Self-Study highlights evidence of distinctiveness in mission, planning, academics, assessment, scholarship, technology, and engagement. These dimensions are consonant with the mission and work together to realize the vision of preeminence.

Institutional Themes

In addition to the Commission’s cross-cutting themes, Lawrence Tech has focused its Self-Study on eight institutional themes that reflect its vision of preeminence.

Lawrence Tech has chosen these themes to support for research and scholarship, and a culture of continuous improvement. These capabilities leverage Lawrence Tech’s significant investments in academic services, library services, and technology resources. The Change Request for Doctoral Programs demonstrates the University’s ability to sustain a culture of doctoral studies and processes that demonstrate leadership from our faculty, students, administrators, and staff.

A Focus on Connectedness

The “connected organization” demonstrates a culture of service and connections with its various constituencies to advance the common good. These institutions communicate effectively both internally and externally. Lawrence Tech has always been “a private institution with a public purpose.” From its founding in 1932, Lawrence Tech has been directly connected to the community. Its focus remains on educating leaders in the fields of engineering, architecture, management, and arts and sciences.

Many Lawrence Tech students are working professionals striving to enhance their careers while balancing home, work, and academic responsibilities.

Throughout this Self-Study you will see evidence of Lawrence Tech’s efforts to connect internally with students, faculty, and staff, as well as externally with the community, nonprofit organizations, government, and the general public.

Assessment

The 2001 Self-Study, Lawrence Tech has developed a culture of assessment. Led by an active faculty-based Assessment Committee, Lawrence Tech has instituted University-level and program-level assessment plans and has acted on findings to improve instruction. Assessment is now an important ongoing component of the learning culture of the University.

Lawrence Tech strives to have as many of its academic programs as possible accredited by professional accreditation organizations. Each of which evaluates outcomes assessment as part of their accreditation process. The University recognizes that its focus on assessing undergraduate education must be extended to cover graduate and doctoral programs. The Change Request for Doctoral Programs highlights some of the work already completed at the doctoral level, and other progress in the important area of assessment is found throughout the Self-Study.

Online Degree and Certificate Programs

Since approval of its first fully online degree programs in 2007, enrollment in these programs has steadily increased. Several hybrid programs requiring campus residency have been introduced and other fully online degree programs are in development. Nearly ten percent of all credit hour production at Lawrence Tech is derived from fully online courses delivered through the LTU Online Initiative in collaboration with academic departments.

Extending the mission of academic programs that can benefit students from across the country and around the world. Lawrence Tech plans to offer many of its graduate degree programs in online or hybrid modes. The Change Request for Online Programs highlights Lawrence Tech’s accomplishments and demonstrates the University’s capacity to provide additional online learning opportunities for our students.

Doctoral Studies

Since approval of Lawrence Tech’s first doctoral program by the Commission in 2001, faculty and students have created a culture of doctoral studies and distinguished doctoral programs from the University’s historic master’s degree programs. More than 50 students have received their doctorates from Lawrence Tech in the Doctor of Engineering Manufacturing Systems, Doctor of Management in Information Technology, and Doctor of Business Administration programs. Doctoral students have published over 100 papers in peer-reviewed journals and have won awards for their papers and conference presentations.

While creating a culture of doctoral studies, Lawrence Tech has increased sponsored research, scholarly works, and, creative output at all levels. The University has established new policies, procedures, support services, and seed funding for faculty members to develop their research agendas. Our Change Request for Doctoral Programs demonstrates the University’s capacity to expand its program of doctoral studies to include a professional doctorate in Engineering and Ph.D. options in both Engineering and Management.

Since approval of its first fully online degree programs in 2007, enrollment in these programs has steadily increased. Several hybrid programs requiring campus residency have been introduced and other fully online degree programs are in development. Nearly ten percent of all credit hour production at Lawrence Tech is derived from fully online courses delivered through the LTU Online Initiative in collaboration with academic departments.

Extending the mission of academic programs that can benefit students from across the country and around the world. Lawrence Tech plans to offer many of its graduate degree programs in online or hybrid modes. The Change Request for Online Programs highlights Lawrence Tech’s accomplishments and demonstrates the University’s capacity to provide additional online learning opportunities for our students.
International Initiatives
Extending the reach and reputation of the University outside Southeast Michigan is not limited to online programs or to recruiting students across the United States. Lawrence Tech has made great progress in recruiting international students to the Southfield campus, providing higher education opportunities for students from 50 countries, diversifying the student body and providing collaborative opportunities for faculty both here and abroad.

Lawrence Tech has signed more than 35 academic agreements with international universities. Students from several of these universities have come to Lawrence Tech to study for bachelor’s and master’s degrees, and Lawrence Tech students have studied at international universities and/or interned at global offices of international firms. Some of the international agreements include joint research projects and faculty exchanges. The emphasis on building global relationships demonstrates Lawrence Tech’s commitment to providing global leadership opportunities to our students and faculty, and to bring the value of a Lawrence Tech education to students worldwide.

Response to the Economic Crisis
Lawrence Tech students, families, and employers have been dramatically affected by the recent recession as unemployment rates in Michigan topped 15% and many employers eliminated tuition reimbursement funding for their employees. Many prospective undergraduate students lacked parental financial support long associated with Michigan’s manufacturing economy. Prospective graduate students found themselves without jobs and focused their financial resources on family expenses and mortgage payments rather than pursuing graduate degrees.

Founded in the midst of the Great Depression, Lawrence Tech has always been sensitive to the needs of working professionals and their families. Lawrence Tech’s innovative Recovery Starts Here initiative garnered nationwide attention for its bold approach to serving over 450 displaced undergraduate and graduate students and dependents by providing a 50% tuition discount. This initiative, requiring reallocation of over $3 million in operating funds to University-funded financial aid, illustrates the depth of University support to make accreditation evidence gathering a part of the University’s operation of its culture of operations. This evolution has begun with increased coordination between long-term planning processes and assurance reviews.

The University expects to be eligible to participate in the Commission’s “Open Pathway” option of the new accreditation model. The “Open Pathway” project entails a comprehensive Self-Study focused on institutional quality initiative that spans all the Criteria for Accreditation, either designed by the University or selected from a list of suggested topics. The Self-Study addresses assurance, improvement, and compliance with federal requirements in addition to documenting the results of the quality initiative. The University views the “Open Pathway” option as a way to extend its already strong focus on continuous improvement.

Accreditation History

Professional Program Accreditation
A number of Lawrence Tech’s academic programs are professionally accredited by nationally recognized accreditation organizations:
• The Bachelor of Fine Arts in Architectural Imaging is accredited by the National Association of Schools of Art and Design (NASAD)
• The Bachelor of Science programs in Civil, Computer, Electrical, and Mechanical Engineering programs are accredited by the Accreditation Board for Engineering and Technology (ABET)
• The Bachelor of Science in Chemistry has been certified by the Committee on Professional Training of the American Chemical Society (ACS)
• The Master of Business Administration, Master of Science in Information Systems, and Master of Science in Operations Management are accredited by the International Assembly of Collegiate Business Education (IACBE)
• The Master of Business Administration is also accredited by the Association of Collegiate Business Schools and Programs (ACBSP).

In September 2010 Lawrence Tech will be visited by ABET for its six-year reaccreditation. The University will ask for initial accreditation for the Bachelor of Science in Biomedical Engineering and the Bachelor of Science in Engineering Technology.

Professional Affiliations
The University maintains memberships in many national post-secondary education organizations including the Council for Higher Education and Support of Education, the American Council on Education, the Association of Governing Boards, the Association of Independent Institutions, the Council of Graduate Schools, the Association of American Colleges and Universities, the College Entrance Examination Board, EDUCAUSE, the Sloan Consortium, the New Media Consortium, and others.

Milestones Since The 2001 Comprehensive Visit
Lawrence Tech has achieved a number of important milestones since the last Commission accreditation visit in 2001. These and other accomplishments are discussed in the various chapters of the Self-Study.

Governance and Communication
Lawrence Tech has established a comprehensive governance process. Faculty members lead the development of academic programs and assessment activities. The Faculty Senate and Staff Senate are viable and sustainable organizations which play significant roles in the life of the University. Each college has its own active Faculty Council.
The University leadership has extended its efforts to communicate with the University community. The provost and associate provost meet biweekly with the chair and vice chair of the Faculty Senate. The University’s leadership team meets informally with interested faculty and staff over breakfast throughout the year to discuss issues of concern. President Walker and the leadership team host campus-wide meetings two or three times each year to present updates on campus initiatives, challenges, budget, and other issues. Provost Vaz attends a full faculty and staff meeting each semester in each college to update the college on University initiatives and to address college issues. Provost Vaz and her staff meet with academic and administrative support units once each year for a formal briefing and open discussion.

Assessment

Lawrence Tech has continued its assessment efforts through the faculty-led Assessment Committee and has extended its assessment efforts beyond undergraduate education into master’s and doctoral programs. Significant work has occurred in the areas of writing and oral communication. The new Undergraduate Leadership Curriculum uses a portfolio approach to assess learning outcomes for academic and co-curricular activities, team work, ethical decision making, and co-curricular leadership experiences. Efforts are made to increase student residence hall usage, to improve satisfaction with academic programs, and to improve access to Campus Center facilities.

Academic Programs

Lawrence Tech has implemented a comprehensive Leadership Curriculum across all undergraduate programs, complementing Lawrence Tech’s Core Curriculum and providing all undergraduate students with academic and co-curricular leadership experiences. Efforts are underway to extend this approach to include entrepreneurial curricular opportunities.

Lawrence Tech has implemented a number of undergraduate, master’s, and doctoral programs since 2001. Lawrence Tech’s three doctoral programs were launched between 2002 and 2004. Recent undergraduate and graduate program additions include:

- Undergraduate – Bachelor of Science in Industrial Design, Bachelor of Fine Arts in Game Art, Bachelor of Science in Audio Engineering Technology, Bachelor of Science in Business Management, Bachelor of Science in Operations Engineering, Bachelor of International Business Management, Bachelor of Arts in English and Communication Arts, Bachelor of Science in Molecular and Cell Biology, Bachelor of Science in Transportation Design, Bachelor of Science in Media Communications,
- Graduate – Master of Arts in Environmental Graphics, Master of Science in Global Operations and Project Management, Master of Science in Industrial Engineering, Master in Urban Design, Master in Architecture (5-plus program), Master in Interior Design (5-plus program), Master of Science in Architectural Engineering (five-year program), Master of Business Administration-International, Master of Science in Architecture and Management, Master of Science in Mechatronics Systems Engineering, Master of Educational Technology.

The University has added many undergraduate and graduate certificate programs, especially in conjunction with the Recovery Starts Here initiative, which help retrain professional workers for new career opportunities. New certificate programs include Architectural Management, Building Information Modeling and Computer Visualization, Animation and Visual Effects, Set Design, Alternative Energy, Nonprofit Leadership and Management, Innovative Product Design, Information Assurance, Film Production Technology, Robotics Education, and Manufacturing Systems for the Defense Industry. These certificate programs are made possible from existing degree programs, and several certificate programs are offered online.

Doctoral Programs

Lawrence Tech offers three doctoral programs: Doctor of Engineering Management Systems, Doctor of Management in Information Technology, and Doctor of Business Administration. Over 50 students have received their degrees from Lawrence Tech starting with the 2006 graduating class.

Student Services and Student Life

Lawrence Tech has a coordinated suite of student services since establishing a dean of students position in 2002. The number and range of student activities and recreational opportunities have increased significantly, and a new student residence hall was opened in 2002.

A Change Request for Doctoral Programs builds on the work of faculty members in the Colleges of Engineering and Management to redesign existing programs to provide broader doctoral opportunities for Lawrence Tech students. The University asks the Commission to approve a new professional Doctor of Engineering program and to allow the University to offer Ph.D. programs in Management and Engineering to students having more significant fundamental or applied research agendas supported by faculty research expertise and external funding.

Online Programs

Lawrence Tech established the LTU Online initiative in 2006 with the development of online courses supporting several degree programs. In early 2007 the Commission granted approval for the University to offer three fully online degree programs: Master of Business Administration, Master of Engineering Management, and Bachelor of Science in Information Technology. Since the first semester of online course offerings, with 11 sections serving 143 unique students in fall 2006, LTU Online has grown steadily and offers 58 unique sections in spring 2010. Student evaluations of online classes are consistently positive with a course withdrawal rate of only 0.5% for spring 2010.

LTU Online has collaborated to produce additional online certificate programs and two unique hybrid programs – Master of Architecture and Master of Interior Design – that include residency requirements. Over a dozen additional degree and certificate programs are under development. Deans and department heads have been challenged to move graduate programs in hybrid or online mode to extend Lawrence Tech’s reach both nationally and globally.

The Change Request for Online Programs reflects the capabilities of LTU Online and the extensive collaboration with academic departments to deliver Lawrence Tech’s unique academic programs outside Southeast Michigan. The University requests Commission approval for offering many of the University’s academic programs online using its internal decision making processes.

Fundamental and Applied Research

Lawrence Tech is undergoing a transition from a primarily teaching institution to an institution that balances outstanding teaching and research. With its broad range of academic programs and associated professional disciplines, the University has defined faculty scholarly activity to include fundamental and applied research, creative technology, and library services.
works, scholarship within the faculty member’s discipline, and scholarship related to teaching and learning.

Lawrence Tech has developed significant applied research capabilities, especially in the College of Engineering with its Center for Innovative Materials Research, a nationally recognized center for materials research. Lawrence Tech’s three doctoral programs have spurred faculty as well as student research.

Lawrence Tech has developed an intellectual property policy, indirect cost policy, and compensation policy for grant-funded research. The University has also developed a research seed grant program using a portion of indirect cost recovery to sponsor faculty members in developing research agendas with the promise of external funding.

Community Engagement

Lawrence Tech has always focused on its relationship with the community. The University maintains education centers in Lansing, and Northern Michigan, and offers programs at the Troy Automation and Engineering Center (TARDEC) in Warren and the Chrysler Technical Center in Auburn Hills. The University’s Robolotest program attracts hundreds of junior high and high school students to the campus for indoor intelligent vehicle competitions. The Center for Nonprofit Leadership and Management has developed extensive outreach capabilities including a presence in the Osborn neighborhood of Detroit with its microenterprise project funded by the Skillman Foundation. The College of Architecture & Design’s Detroit Studio has conducted numerous community-based studies benefiting Detroit residents. The University is very active in economic development activities including Oakland County’s Automation Alley business development association, the Michigan SmartZone program, the Detroit Regional Chamber of Commerce, and many other organizations.

All of these community-focused activities have earned Lawrence Tech the Community Engagement Classification from the Carnegie Foundation for the Advancement of Teaching, only one of nine Michigan universities – and the only technological college – to receive this prestigious classification.

The University has also developed a research seed grant program using a portion of indirect cost recovery to sponsor faculty members in developing research agendas with the promise of external funding.

Community Engagement

Lawrence Tech has always focused on its relationship with the community. The University maintains education centers in Lansing, and Northern Michigan, and offers programs at the Troy Automation and Engineering Center (TARDEC) in Warren and the Chrysler Technical Center in Auburn Hills. The University’s Robolotest program attracts hundreds of junior high and high school students to the campus for indoor intelligent vehicle competitions. The Center for Nonprofit Leadership and Management has developed extensive outreach capabilities including a presence in the Osborn neighborhood of Detroit with its microenterprise project funded by the Skillman Foundation. The College of Architecture & Design’s Detroit Studio has conducted numerous community-based studies benefiting Detroit residents. The University is very active in economic development activities including Oakland County’s Automation Alley business development association, the Michigan SmartZone program, the Detroit Regional Chamber of Commerce, and many other organizations.

All of these community-focused activities have earned Lawrence Tech the Community Engagement Classification from the Carnegie Foundation for the Advancement of Teaching, only one of nine Michigan universities – and the only technological college – to receive this prestigious classification.

Lawrence Tech’s Community Engagement Classification from the Carnegie Foundation for the Advancement of Teaching, only one of nine Michigan universities – and the only technological college – to receive this prestigious classification.

Lawrence Tech has evolved dramatically in the past ten years. A mature campus master planning process is integrated with the University’s strategic plan and capital campaign. New buildings include the University Technology and Innovation Center, a new residence hall, the award-winning A. Alfred Taubman Student Services Center, the nationally known Center for Innovative Materials Research, and the extensive renovation of the University Quadrangle at the center of campus which includes geothermal wells to heat and cool the Student Services Center.

The current campus master plan and capital campaign include construction of a new science and engineering building, construction of a freshman residence hall, creation of a student center in the Buell Building, and many other improvements.

Advancement and Fund-Raising

Lawrence Tech conducted its most successful capital campaign leading to the opening of the A. Alfred Taubman Student Services Center. The campaign, conducted between 1999 and 2006, raised over $46 million against an original target of $20 million.

The current capital campaign – “Proud Heritage, Bold Future” – focuses on raising up to $100 million to support a range of capital and human investments including construction of a new science and engineering building. To date the current capital campaign has raised over $45 million. The University has also received an increasing number of major donations for naming opportunities of new buildings as well as academic and service departments. The University is proud of the contributions of its alumni and employees during annual giving campaigns, raising over $750,000 in the past three years.

External Recognition

Lawrence Tech’s program excellence is recognized by independent comparative guidebooks and other organizations, including the Association of Independent Technological Universities, U.S. News America’s Best Colleges 2010, Princeton Review 2010 (top 25 percent), and as a Military Friendly School. Bloomberg Business Week recently recognized Lawrence Tech among the top 30% in the nation for the earning power generated by its bachelor degree programs. Lawrence Tech is one of only nine institutions in Michigan to receive the Carnegie Community Engagement classification. Lawrence Tech was among just 37 of 3,200 colleges and universities to win the 2004 Council for Advancement and Support of Education Award for Educational Fund Raising. See [INT-01 -“Lawrence Tech Recognition”] for a summary of Lawrence Tech’s recent recognitions.

Progress against Issues Noted in Prior Team Reports

The 2001 accreditation report required two follow-up activities scheduled for 2003 and 2005. A monitoring report on the University’s first doctoral programs – Doctor of Engineering Manufacturing Systems and Doctor of Management in Information Technology – was accepted by the Commission in 2003, and approval was granted to start a third doctoral program, the Doctor of Business Administration. A focused visit on governance and assessment was completed and accepted by the Commission in 2005.

Goverance and Communication

In its assurance report, the Commission noted that the University’s governance structures had been significantly improved and that a Staff Senate had been established. The Commission noted that the University “has substantially improved communication between the higher administration and the faculty/staff through more frequent regularly scheduled meetings and a wider distribution of minutes and other information.” The team noted that the University “is committed to and is making a good faith effort to improve communication, to increase the faculty and staff’s input and involvement in the governance, and to increase trust among the administration, faculty, and staff.”

The team made several recommendations to improve governance and communication including:

- Improvements in codifying policies and procedures in a timely manner
- Continued efforts to engage faculty in University decision making processes
- More consistent meeting schedules for the Faculty Senate

Since 2005, additional print, e-mail, and Web-based communication methods have been implemented to share information with the University community. The Faculty Senate and Staff Senate function effectively and are part of the fabric of University life. The chair of the Faculty Senate serves as a participant on the Deans’ Council. Faculty Councils operate within each college with curriculum decisions being approved by faculty. The Graduate Council reviews graduate curriculum and course proposals to resolve curriculum and responsibility issues. Curriculum proposals are approved by the Deans’ Council. Meeting minutes from governance bodies are shared with the University community and are available for inspection in the Evidence Repository.

Upon his inauguration in 2006, President Walker set a goal of further improving campus communication. He established a program of monthly open meetings, usually over breakfast, with participation by the president and vice presidents. Faculty and staff are encouraged to attend these meetings to ask questions and
## Lawrence Tech at a glance

### 2008-2009 Revenues
- Tuition Revenue $55,083,120
- Discounts $8,195,424
- Other Income $3,052,963
- Student Fees $1,918,461
- Total Revenue $51,859,120

### 2008-2009 Expenses
- Student Services $5,234,967
- Physical Plant $5,984,380
- Debt Services $2,040,728
- Student Fees $1,918,461
- Instruction $18,074,004
- Capital $1,557,665
- Total $51,844,471

### Assessment
In its assurance report, the Commission noted that "faculty is now heavily involved in both curriculum and assessment of student learning." The team concluded that the University "has made sufficient progress towards fulfilling the expectations of the Higher Learning Commission and that it will continue its efforts in the area of assessment."

The Commission made several recommendations for improving student assessment including:
- Increased resources and budgets for assessment at the University and college levels
- Adjustments to the assessment schedule
- Use of assessment "best practices" by all academic departments

Lawrence Tech has continued its focus on assessment and has adjusted assessment schedules in response to the Commission’s recommendations. The faculty-led Assessment Committee prepares annual Assessment Reports, with the results being reviewed and discussed at an annual Assessment Day program where plans for the upcoming year are formulated. An exemplary program of writing assessment has been created for all undergraduate students, and innovative approaches for assessing teamwork and character have been implemented. The University’s Undergraduate Leadership Curriculum uses portfolio techniques to support its assessment program. Emphasis has been placed on graduate program assessment, and significant efforts in doctoral program assessment have been undertaken.

### Other Issues from 2001
In addition to the issues discussed above, the 2001 accreditation report identified several other institutional challenges and suggestions for improvement including:
- Establishing a balance between "cutting edge practitioners (adjunct faculty) and full-time academicians"
- The need for a "funded program of Faculty and Staff Development, especially regarding the use of new technology and for the implementation of the assessment program"
- The need for faculty development for part-time faculty
- The need for "special attention to the budget, space allocation, facilities, and staffing of the library"

The University has made progress in all of these areas. The balance between adjunct faculty practitioners and full-time faculty is well understood and the value offered by adjunct faculty has been affirmed by students’ responses to the National Survey of Student Engagement. The University has increased its number of full-time faculty from 103 in 2000 to 129 in 2009. Adjunct faculty members are monitored and supervised by full-time faculty members within each college and participate in a University orientation program. The College of Management has created an exemplary program for training and developing adjunct faculty members, and this practice has been shared with the other colleges.

### Solicitation of Public Comment
Consistent with Commission guidelines, the University announced the Commission’s visit and requested third party comment from its constituencies through the following actions in May 2010:
- Notices about the Commission’s visit were posted on the University’s Web site and published in the internal campus newsletter
- A press release announcing the Commission’s visit and request for public comment was issued
- Newspaper advertisements announcing the Commission’s visit and request for public comment were published in the Detroit Free Press and the Detroit News
- Information about the Commission’s visit and request for public comment was provided to attendees of the May 2010 commemorative exercises

Stakeholders were able to submit comments via the Web site and were also invited to send comments by mail to the Commission at: Public Comment on Lawrence Technological University

The Higher Learning Commission
30 North LaSalle Street, Suite 2400
Chicago, IL 60602-2504

Copies of third party notifications have been sent to the Commission with the dates of publication. See (NT-02 “Third Party Comment Notifications”) for more information.

### Approach to Institutional Improvement
The linkage of the University’s long-term planning processes forms the basis for ongoing institutional improvements based on comprehensive strategic planning. Linkages between the University’s strategic plan, campus master plan, capital campaign, assessment plan, academic program review, and budgeting plan provide the foundation for continuous improvement. Excellent relationships between academic and support units, underscored by the actions of the University leadership team, provides the University with the flexibility to adapt to changing situations and to respond creatively to future challenges.

Consistent with the University’s practice of continuous improvement, the Self-Study Steering Committee identified and implemented over a dozen institutional improvement initiatives. The most significant initiative was a comprehensive Academic Program Planning and Review process, which was implemented in 2009.

### Overview of Requests for Institutional Change
Lawrence Tech is submitting two Requests for Institutional Change with this Self-Study: a proposal to extend doctoral programs offered by the Colleges of Engineering and Management, and a proposal to extend hybrid and online degree offerings.

### Doctoral Programs
Lawrence Tech currently offers three doctoral programs: the Doctor of Management in Information Technology, the Doctor of Engineering Manufacturing Systems, and the Doctor of Business Administration. These programs have established a solid record of student academic achievement including external awards, publication of student work in peer-reviewed journals, industry sponsorship of research, and career advancement. The doctoral programs have also contributed to a significant increase in faculty scholarly productivity. The University is not able to respond to student demands for broader doctoral opportunities in the College of Engineering nor to demands for Ph.D. programs given our current status.

The University requests permission from the Commission to expand its doctoral offerings in the Colleges of Engineering and Management.
Lawrence Tech received Commission approval in 2007 to offer three fully online degree programs: the Bachelor of Science in Information Technology (completion program), the Master of Business Administration, and the Master of Engineering Management. Several online certificate programs have since been developed to extend the University’s online learning portfolio. These programs are supported by a professional staff using best practices in the design and delivery of online programs.

The University’s online programs now serve 15% of all Lawrence Tech students including an increasing number of fully online students. Online learning is now an important element of the University’s strategic plan and is identified as one of the characteristics of the University’s journey toward preeminence. The University is not able to respond adequately to student demands for additional online programs given our current status. The University requests permission from the Commission to offer any of its academic degree or certificate programs in hybrid or online delivery formats subject to internal University approval.

### Statement of Affiliation Status

Lawrence Tech’s Statement of Affiliation is provided as INT-05 “Statement of Affiliation Status” in the Evidence Repository. The University is proposing two changes to its affiliation status by submitting two accompanying Requests for Institutional Change:

1. **Stipulations on Affiliation Status**
   - **Current**: Accreditation at the Doctoral level is limited to the Doctor of Business Administration, the Doctor of Engineering in Manufacturing Systems, and the Doctor of Management in Information Technologies.

2. **Approval of Distance Education Degrees**
   - **Current**: Prior Commission approval required for distance education programs other than the Master of Business Administration, Master of Engineering Management, and the Bachelor of Science in Information Technology.
   - **Requested Change**: No prior Commission approval required for distance education programs authorized through the University approval process.

### Acknowledgments

Lawrence Tech acknowledges the contributions of many members of the University community in preparing this Self-Study. The Self-Study process was guided by a faculty-led Self-Study Steering Committee which has met since February 2008 and whose members have individually gathered much of the college-level information contained in this document:

- Dr. Patty Castelli, Associate Professor, College of Management
- Lewis Frasch, Associate Dean, College of Engineering
- Dr. Dale Gyure, Associate Professor, College of Architecture & Design
- Dr. Steven Howell, Associate Provost and Dean of Graduate Studies
- Dr. Alan McCord, Executive Director of eLearning Services and College Professor of Management (chair)
- Dr. Valentina Tobias, Associate Professor, College of Arts & Sciences

Many administrators, faculty, staff, and members of the Board of Trustees contributed to the Self-Study by providing written information in response to requests, being interviewed, and clarifying information. The following individuals provided direct support to the generation of data, production of the Self-Study document, creation of the online repository, and creation of the Resource Room:

- Anne Adams, Marketing and Public Affairs
- Bruce Annett, Marketing and Public Affairs
- Amy Blankenship, eLearning Services
- Larry Chesnutt, Institutional Research
- Gary Coccozoli, University Library
- Rachel Crouse, eLearning Services
- Angela DiMiccio-Ilawumm, IT Services Delivery
- Morja Franetovic, eLearning Services
- Scott Leibman, eLearing Services
- Eric Pope, Marketing and Public Affairs
- Mary Thomas, Institutional Research

Gretchen Weiner, University Library

The Steering Committee thanks all members of the University community for their helpful attitudes and good spirits throughout this long and involved project.

### Conclusion

Lawrence Tech has made significant progress in many areas over the past ten years, and has addressed the concerns of the Commission noted in its 2001 accreditation report by virtue of follow-up visits in 2003 and 2009.

The University has significantly improved its governance and communication processes, created a culture of doctoral studies reinforced by increased emphasis on faculty and student scholarly and research work, continued to improve its assessment program, constructed new facilities, invested heavily in technology and library services, and has established a vibrant online learning program.

Lawrence Tech is a substantially different and more mature institution today than in 2001. The following chapters of the Self-Study, each focused on one of the Commission’s Criteria for Accreditation, presents the University’s accomplishments, plans, and challenges in more detail. The Lawrence Tech community looks forward to receiving valuable comments and counsel from the Commission’s consultant-evaluators and thanks the team members in advance for their commitment to higher education.
Criterion One: Mission and Integrity

Lawrence Technological University (Lawrence Tech) has been clearly focused on its mission since its founding in 1932. The current mission statement of the University, approved by its Board of Trustees and clearly communicated to the University community and its stakeholders, is:

To develop leaders through innovative and agile programs embracing theory and practice.

The University’s governance processes, allocation of resources, teaching and learning, acquisition and application of knowledge, and community engagement all directly support the accomplishment of the institutional mission. The University has extended its mission statement to include a vision, set of values, and cause to which it has committed itself. This commitment is tangible and extends to how students and the community view the University.

1a. A Focus on Mission and Vision

Criterion 1a: Lawrence Tech’s mission documents are clear and articulate publicly the organization’s commitments.

Lawrence Tech strives to distinguish itself as a preeminent private university with outstanding academic programs and a concern for providing flexible access to its programs. This commitment to access and quality is grounded in the University’s legacy and continues to the present day. Lawrence Tech’s motto – “theory and practice” – reflects the University’s historic orientation toward providing quality educational programs to educate the whole person and prepare its students for professional leadership positions.

References to mission, vision, values, and motto are found throughout the University’s publications and Web sites, strategic plan, campus master plan, and capital campaign. Many University units have developed their own mission statements which reinforce and support the University’s mission.

1a1-1a2: Mission of the University

1a1: Lawrence Tech’s board has adopted statements of mission, vision, values, goals, and organizational priorities that together clearly and broadly define the organization’s mission.

1a2: The mission, vision, values, and goals documents define the varied internal and external constituencies Lawrence Tech intends to serve.

Lawrence Tech is a student-centered, comprehensive, teaching university with focused, technologically oriented professional programs. The vision of the University is to be the region’s preeminent private university producing leaders with an entrepreneurial spirit and global view. The University community understands that the vision is challenging and audacious but one worth striving to achieve.
University Mission

The current mission statement, vision statement, values statement, and cause statement are the results of the latest cycle of campus strategic planning which concluded in 2007. The Board of Trustees has approved the current mission statement of the University to read:

To develop leaders through innovative and agile programs embracing theory and practice.

University governance processes, allocation of resources, teaching and learning, acquisition and application of knowledge, and community engagement all directly support the accomplishment of the mission. The evolution of the University’s mission since its founding in 1932 is discussed in Criterion 1a5.

University Vision

While a mission describes what an institution strives to accomplish, a vision describes what the institution strives to become as it continuously works to fulfill its mission. While the mission statement describes the University’s central focus, a forward-looking vision statement has been developed to extend this mission into the future:

To be a preeminent private university producing leaders with an entrepreneurial spirit and global view.

Lawrence Tech’s current vision evolved from its earlier focus on industry linkage and professional preparation to its current emphasis on leadership, entrepreneurship, and globality. The vision’s inclusion of preeminence is a central theme of President Walker as he works with campus administrators, faculty, staff, and members of the Board of Trustees.

University Values

Values represent the core cultural priorities of the institution that guide the way how students, faculty, and staff act to fulfill the mission. Values represent the “code of conduct” by which the University conducts its affairs. These core values include:

- Theory and Practice
- Teamwork and Trust
- Character and Integrity

“Theory and Practice” is the motto of the University and is reflected in all academic programs. Teamwork and trust are necessary traits of successful individuals and organizations and represent, along with character and integrity, the hallmarks of outstanding leaders. Lawrence Tech has embodied these values in its Undergraduate Leadership Curriculum which provides all undergraduate students with the opportunity to learn about and apply leadership skills in a team-focused environment.

University Cause

A cause statement represents a calling or “reason for being.” The cause is the most recent addition to the University’s mission and links mission, vision, and values to institutional behavior:

- The intellectual development and transformation of our students into critical thinkers, leaders, and lifelong learners.

These important extensions of the mission statement – vision, values, and cause – provide a framework on which the University builds its academic programs, administrative operations, student services, and community engagement efforts.

1a3-1a4: Overview of Educational Programs

1a3: The mission documents include a strong commitment to high academic standards that sustain and advance excellence in higher learning.

1a4: The mission documents state goals for the learning to be achieved by its students.

Lawrence Tech’s academic programs include undergraduate, master’s, and doctoral programs leading students to leadership roles in professional careers. Beginning with a focus on undergraduate engineering education and the supporting disciplines of mathematics and natural sciences, Lawrence Tech’s undergraduate programs have evolved to support not only engineering but architecture, design, management, information technology, computer science, natural sciences, and the humanities. Lawrence Tech’s motto of “theory and practice” has long been incorporated into its academic programs, including capstone projects in the majority of all programs offered. Leadership, entrepreneurship, and sustainability, are being infused into the undergraduate curriculum.

Lawrence Tech began offering master’s degree programs in 1991 and now offers master’s degrees in all four colleges, with the Master of Architecture degree serving as the terminal degree in the architecture discipline. The offering of doctoral degrees beginning in 2001 in the Colleges of Management and Engineering have led to new academic opportunities for students and new research opportunities for both students and faculty.

Academic Programs

Lawrence Tech offers nearly 100 undergraduate, graduate, and doctoral degree and certificate programs. Please see (C1-01: “Degree and Certificate Programs”) for a complete listing.

Lawrence Tech offers 51 bachelor’s and associate degree programs. Many four-year programs provide minor concentrations for students enrolled in other degrees. The University offers 15 undergraduate certificate programs. Certificate programs may be pursued separately or in combination with a four-year degree program.

Lawrence Tech offers 21 master’s degree programs including several dual-degree programs. The University offers 17 graduate certificate programs. Admission requirements for these programs are equivalent to the associated master’s degree program. Students may pursue graduate certificate programs independently or as part of a master’s degree program.

Lawrence Tech offers three professional doctorate degrees in the Colleges of Engineering and Management. A number of Lawrence Tech’s academic programs are accredited by independent professional accrediting organizations including:

- American Chemical Society (ACS)
- Association of Collegiate Business Schools and Programs (ACBSP)
- Council for Interior Design Accreditation (CIDA)
- Engineering Accreditation Commission of the Accrediting Board for Engineering and Technology (ABET)
- International Assembly of Collegiate Business Education (IACBE)
- National Architectural Accrediting Board (NAAB)
- National Association of Schools of Art and Design (NASAD)

Delivery Locations and Modes

Lawrence Tech offers all of its degree and certificate programs on the Southfield campus. Selected programs are offered at educational sites in the state of Michigan, all of which have been approved by the Commission for program delivery. See (C1-02: “Delivery Sites”) for a complete listing.

The College of Engineering offers courses at the University’s Campus of Science as part of a collaborative partnership. The College of Management has been approved by the Provinces of Ontario and British Columbia to offer its Master of Business Administration in Toronto and Vancouver respectively.

Three degree programs were approved by the Commission in 2007 for fully online delivery: Master of Business Administration, Master of Engineering Management, and Bachelor of Science in Information Technology (completion degree). These master’s degrees are offered in hybrid mode with the majority of coursework completed online: Master of Architecture, Master of Educational Technology, and Master of Interior Design. Several undergraduate and graduate certificate programs are available as fully online programs: Building Information Modeling and Computer Visualization, Architectural Management, Nonprofit Management and Leadership, and Project Management.

General Education Requirements

Lawrence Tech’s Core Curriculum is required of all undergraduate students, and provides an excellent foundation and intellectual preparation for entering the world of work. The Core Curriculum is directly related to the University’s mission by providing interactive engagements with literature, history, philosophy, mathematics, science, and technology. The Core Curriculum emphasizes shared intellectual experiences within a community of learning through reading, directed discussions, group presentations, and problem-solving teamwork.

The Core Curriculum includes four courses in the humanities, two courses in communications, two courses in mathematics, two courses in science with one including a laboratory experience, and one upper-division elective in the humanities or social sciences.

Lawrence Tech’s unique Undergraduate Leadership Curriculum represents an extension of the University’s Core Curriculum requirements. The Undergraduate Leadership Curriculum is the first of its kind outside the United States military service academies to require all degree-seeking undergraduate students on the main campus to enroll in for-credit core courses and extra-
curricular workshops dedicated to leadership development and experiences. Both the Core Curriculum and Leadership Curriculum are discussed in more detail in Criterion Four.

Educational Partnerships

Lawrence Tech has established articulation agreements with a number of Michigan community colleges to accept transfer credits for students earning degrees at those institutions. Lawrence Tech has established partnership agreements to offer selected degree programs on the campuses of Macomb Community College, Schoolcraft College, Lansing Community College, Northwest Michigan College, and North Central Michigan Community College. These agreements enable students from up to 300 miles from the Southfield campus to enroll in Lawrence Tech’s unique academic programs. Distant students may also enroll in online programs or courses to further their education. Articulation agreements and partnerships are discussed in more detail in Criterion Five.

Lawrence Tech was a founding partner of the manufacturing education program at Detroit’s world-renowned Focus:HOPE organization. Since starting career preparation programs in 1981, Focus: HOPE has helped more than 8,000 talented men and women establish successful careers. Lawrence Tech offers its Associate Degree in Manufacturing Engineering Technology at Focus:HOPE’s Detroit education center and has graduated more students than other partner schools combined.

Lawrence Tech maintains an academic partnership with Shanghai University for Engineering Science where Lawrence Tech faculty members teach eight courses per year in Shanghai and students then come to the Southfield campus to earn master’s degrees in engineering, management, computer science, or science education. Lawrence Tech has established over 35 partnership agreements with international universities, which are discussed in Criterion Five.

1a5: Evolution of the Mission

1a5: Lawrence Tech regularly evaluates and, when appropriate, revises the mission documents.

Prior to 1963, Lawrence Technological University had no formally published mission statement. Since that time not only has the University developed and refined a mission statement, it has added vision, values, and cause statements. Each of the four colleges has developed individual mission statements recognizing their areas of academic focus. A historical perspective is useful to understand how the mission statement and ancillary declarations have evolved.

Origins

Lawrence Institute of Technology (LIT) was founded in 1932 by two brothers, George and Russell Lawrence. According to an oral history contributed by the family, Lawrence Tech’s mission was:

To provide an engineering education for sons of blue collar workers in the Detroit area factories.

LIT’s primary educational emphasis was on engineering programs, and the institute distinguished itself as a provider of well-trained graduates to the automotive industry. Lawrence Tech was located in Highland Park—a city contained within the boundaries of the city of Detroit—in a building leased from Ford Motor Company adjacent to the famous Ford factory where mass production of vehicles was invented.

For much of its early history, the University was defined by its engineering programs and was organized on an entrepreneurial model with little faculty governance. In 1955 Lawrence Tech moved to its present location in the city of Southfield, located just north of the city of Detroit.

Initial Commission Accreditation

In 1967, Lawrence Tech was granted initial accreditation by the Commission. In preparing for its candidacy phase in 1963, Lawrence Tech adopted the following mission statement for its primary purposes, reproduced in part below, which clearly echoes its founding mission:

The Lawrence Institute of Technology was conceived by its founders as an institution of higher learning wherein education might be as nearly free of bias as is reasonable.

In 1967, Lawrence Tech provided bachelor’s degree programs in Architecture, Engineering, and Industrial Management. A Technical Institute offered an associate degree program in Engineering Technology, and pre-engineering programs supported less-prepared and nontraditional students. Lawrence Tech was one of the few institutions in the nation where complete bachelor’s degree programs in architecture, engineering, and industrial management were offered in an evening format.

University Status

In 1989, the evolution of the University’s general education and academic programs prompted a name change to Lawrence Technological University. Once solely a college of engineering, Lawrence Tech developed sustainable professional programs in architecture, design, management, arts, and sciences. In 1990, the position of provost and chief academic officer was established and the University’s mission had evolved to read:

The Mission of the University is to provide an education for motivated and qualified students, at an affordable cost and in an accessible format, which will prepare them to contribute to society, and their own welfare, in primarily professional, technical, scientific, and management roles in industry, business, and government.

This mission was crafted at the time when the University was making significant organizational and institutional changes. More importance was given to faculty governance, and a Faculty Council was created in each college to advise the dean on academic matters. In response to the Commission’s 1991 recommendations, a Faculty Senate was established in 1993.

In 1993, upon the retirement of President Richard Marburger, the Board of Trustees conducted its first national search for a president. Charles O. Chambers, former chief executive of the American Institute of Biological Sciences, was appointed President and CEO in 1993. In 1994, another national search resulted in the hiring of a new provost and chief academic officer, Lewis Walker, from the University of Hartford.

The educational, administrative, and service components of the University were dramatically transformed by the new leadership team. Significant changes to the organizational structure of the University were made, including the creation of a vice president for finance and administration as recommended by the Commission in 1991. In 1999, the position of executive director of development was elevated to vice president for university advancement and several senior directors were added in this area.

National searches resulted in the hiring of new deans in the Colleges of Architecture & Design, Arts & Sciences, and Engineering.

Establishing a Strategic Focus

The comprehensive strategic planning initiative established in the late 1990s resulted in further evolution of the mission statement:

• To provide superior undergraduate, graduate and lifelong learning for professional achievement and civic excellence.

The strategic planning initiative also identified a set of purposes which further elaborated the mission statement:

- To maintain programs at a high level of contemporary theory and practice using leading-edge learning technologies, and distinctive treatment of general education.
- To offer high quality education in the form of accessible, convenient, technology-based, personal, and small class instruction.
- To offer a core/foundation liberal arts education designed to cultivate student’s ability to think critically, to solve problems creatively, and to make decisions that will benefit themselves and society.
- To respond to and serve industry, the professions, and the community by providing quality innovative programs and continuing professional development.

Toward Preeminence

The retirement of President Chambers in 2006 led to the elevation of Provost Walker to the position of president, and the elevation of Associate Provost Maria Vaz to the position of provost and chief academic officer. President Walker led the 2007 revision to the University’s strategic plan which included an update to the University’s mission statement. In addition to the mission, statements of vision, values, and cause were updated. The University vision statement reads:

To be a preeminent private University producing leaders with an entrepreneurial spirit and global view.

The inclusion of "preeminence" in the vision statement reflects a serious and challenging long-term goal for positioning the University. President Walker has identified these characteristics as hallmarks of preeminence:

- A substantial endowment
- Sought after innovative educational programs and initiatives
- A notable faculty

Toward preeminence
1b. A Focus on a Diverse and Global Society

Criterion 1b: In its mission documents, Lawrence Tech recognizes the diversity of its learners, other constituencies, and the greater society it serves.

Lawrence Tech provides its services in a diverse region and increasingly diverse student body. The University believes that a wide range of student backgrounds, interests, and orientations contributes to enriching educational experience for all students and providing opportunities for global engagement.

1b-1b2: Diversity and Multicultural Orientation

1b1: In its mission documents, Lawrence Tech addresses diversity within the community values and common purposes it considers fundamental to its mission.

1b2: The mission documents present Lawrence Tech’s function in a multicultural society.

Southeast Michigan is a diverse region with large immigrant populations and many spoken languages, and Lawrence Tech’s students reflect this diversity. Lawrence Tech has actively recruited students from outside its traditional market of Southeast Michigan to include students from 25 states and 50 countries. Recruiting female engineering and science students is of particular concern to the University. Complete information on the diversity of Lawrence Tech’s students is provided in the Institutional Snapshot section.

Lawrence Tech’s origins attest to its continued focus on improving the community through the lives of its students. The University’s focus on leadership includes institutional actions to advance the community. The Recovery Starts Here initiative is but one example of how the University responds to community needs by providing educational opportunities to residents affected by the recession.

Lawrence Tech maintains a number of relationships with civic, economic, charitable, and professional organizations throughout Southeast Michigan including well-known organizations such as Focus:HOPE, the Detroit Economic Club, the Engineering Society of Detroit, and the Detroit Regional Chamber of Commerce. Lawrence Tech also engages the community in a number of local initiatives and partnerships including the Fordable University High School, the Osborn microenterprise project in Detroit, the College of Architecture & Design’s Detroit Studio, and many partnerships with regional nonprofit organizations.

Here initiative is but one example of how the University engages in more mass media campaigns. A complete listing of Lawrence Tech’s recent radio advertising campaigns and other mass media marketing campaigns can be found at the web site at ltu.edu/news.

Lawrence Tech positions itself with a comprehensive public awareness program including press releases, interviews, articles, and mass media campaigns. A complete listing of recent news releases and media placements can be found at the web site at ltu.edu/news.

Lawrence Tech’s origins attest to its continued efforts to involve civic, economic, charitable, and professional organizations throughout Southeast Michigan including well-known organizations such as Focus:HOPE, the Detroit Economic Club, the Engineering Society of Detroit, and the Detroit Regional Chamber of Commerce. Lawrence Tech’s recent radio advertising campaigns have focused on topics such as the Undergraduate Leadership Curriculum, the undergraduate QUEST research initiative, and on specific degree and certificate programs. This focus can be seen on the web site at ltu.edu/news/radio.asp.

As a result of this extensive and sustained commitment to serving the greater society, Lawrence Tech was recently awarded the Carnegie Community Engagement classification, one of only 119 institutions nationwide – and one of only nine institutions in Michigan – to receive this status. Lawrence Tech’s community engagement is discussed in detail in Criterion Five.
Criterion One: Broad Understanding of the Mission

1c1: The board, administration, faculty, staff, and students understand and support Lawrence Tech’s mission. Lawrence Tech’s mission is reflected through its comprehensive strategic planning process, which is discussed in more detail in Criterion Two. The mission is clearly communicated to the community through the strategic planning process, deployment of strategic planning objectives to academic and administrative units, and consistency of internal and external messages.

Under the leadership of President Walker and active involvement of members of the Board of Trustees, the strategic plan is acknowledged by the community. It addresses the documents upon which colleges and administrative units build their own objectives and service plans. The strategic plan ensures coordination between the many long-term planning processes necessary to sustain the University.

1c2: Lawrence Tech’s strategic decisions are mission-driven.

The Board of Trustees is actively involved in applying the mission to the University’s strategic planning process through the Strategic Plan Implementation Review Committee, co-chaired by Board member Howard Padgham and President Walker. President Walker and the vice presidents lead the strategic planning initiatives in coordination with an external consultant. The Committee, which includes the four college deans and key administrators, meets four times each year to monitor progress against the strategic plan and to discuss internal and external developments impacting plan objectives. Strategic planning discussions routinely focus on the University’s mission, vision, values, and cause as strategic initiatives are reviewed.

Specific areas of focus in the current and prior strategic plans are discussed in more detail in Criterion Two. The direct link between mission and the major objectives is evident by their focus on leadership, innovative and agile programs, and balance between academic theory and research. The major objectives also demonstrate alignment with the five Commission accreditation criteria of mission, planning, assessment, scholarship, and engagement.

1c3: Planning and Budgeting Priorities

1c3: Lawrence Tech’s planning and budgeting priorities flow from and support the mission.

The University’s strategic plan is firmly grounded on the University’s mission and sets long-term strategic objectives for all areas of the University. Virtually all major campus initiatives are documented in the Strategic Plan. Periodic formal review of the Strategic Plan allows the University to adjust its shorter-term priorities to address pressing needs not considered when the plan was written. The most significant example of such a short-term adjustment was the Recovery Starts Here initiative, which dedicated $3 million in tuition grants to displaced professionals.

1c4-1c5: Unit-Level Planning Processes

1c4: The goals of the administrative and academic subunits of Lawrence Tech are congruent with the organization’s mission.

1c5: Lawrence Tech’s internal constituencies articulate the mission in a consistent manner.

The four colleges have articulated mission statements, visions, and objectives that are congruent with the University’s mission. The college-level statements are unique to their academic areas of focus, and reflect their own heritage and contribution to the University. Administrative units focus on delivering student services or institutional support. Their mission statements address their primary purpose and are directly associated with objectives set forth in the strategic plan.

College of Architecture & Design

The mission of the College of Architecture & Design is to provide a comprehensive architecture and design education, which synthesizes diverse approaches, disciplines, and human resources, while respecting the uniqueness of the environments and societies we affect. The intent is to develop graduates committed to creative inquiry, critical thinking, judgment, and progressive design through community and professional leadership.

College of Arts & Sciences

The mission of the College of Arts & Sciences is to integrate traditional liberal arts education with the needs of the 21st century. We do so by enhancing our first-rate core curriculum with a co-curricular program that focuses on career pathways, experiential learning, and leadership. Our vision strongly supports the University’s strategic goal: Leadership through theory and practice. Building on its innovative programs and new endeavors, the College of Arts & Sciences will be recognized as the college that prepares leaders for the 21st Century.

College of Engineering

The mission of the College of Engineering is to be a leader in engineering education with regional recognition and national prominence. The College of Engineering wants our engineers to grow as leaders through innovative and agile programs embracing theory and practice. Our goal is to prepare our students to be outstanding professionals characterized by integrity, social responsibility, and a global perspective. We will position the College of Engineering as a haven for student learning and the application of knowledge.

College of Management

The mission of the College of Management is the development and delivery of distinctive and innovative management programs that help transform our students into global thinkers, leaders, and citizens. The vision of the college is to educate students who will advance a more humane and sustainable world community led by global thinkers and leaders. The mission is supported by the college’s motto of “leadership through theory and practice.”

Academic and Administrative Service Units

Academic and administrative service units reporting to the provost and vice presidents develop their own mission and vision statements to guide unit-level planning and reflect the mission of the University. These are a few examples of mission statements from campus offices that illustrate the efforts provided to Lawrence Tech students and their linkage to the University’s mission:

• Academic Achievement Office: Support Lawrence Tech’s mission by providing academic assistance to the University’s students. We strive to educate, empower, and inspire students to become independent and successful lifelong learners.

• College of Architecture & Design Detroit Studio – Provide students with an enriched educational experience through community-based architectural, urban design and community development projects, and offer accessible and useful programs and information to the public, the design profession, municipal officials, and the business community.

• First Year Programs – Help our first year students’ transition into college and to help our students successfully complete their first college year.

• Student Activities – Encourage the intellectual, social, and civic development of students individually, and through student groups.

The University has done an excellent job of defining its mission, vision, values, and cause through its strategic planning process. Colleges and academic departments have made efforts to define themselves in the face of increasing competition, but the University recognizes that additional efforts are needed to define the distinctiveness of each academic program to communicate Lawrence Tech’s value proposition to prospective students.

1d. A Culture of Shared Governance

Criterion 1d: Lawrence Tech’s governance and administrative structures promote effective leadership and support collaborative processes that enable the organization to fulfill its mission.

Lawrence Tech is a non-stock, non-profit trusteeship corporation founded in 1932, whose purpose is entirely educational. Prior to 1994, the University was governed by a two-tiered board: an internal and external body consisting of the Members of the Corporation and the Board of Trustees. In 1994 the governance of the University was restructured and simplified. The University is now governed by a Board of Trustees which is responsible for the overall policy of the institution.

The senior leadership team of the University is comprised of President Lewis Walker, Provost Maria Vaz, Vice President for Finance and Administration Linda Height, and Vice President for University Advancement Stephen Brown.
Each of the four colleges is led by a dean with assistance from associate deans, department chairs, academic program directors, and service coordinators as needed. Ten academic departments exist within the four colleges:

- College of Architecture & Design – Architecture; Art and Design
- College of Arts & Sciences - Humanities, Social Sciences and Communication; Mathematics and Computer Science; Natural Sciences
- College of Engineering - Civil Engineering; Electrical and Computer Engineering; Mechanical Engineering; Engineering Technology
- College of Management – Management

Each college has a Faculty Council that advises the dean on academic and other matters. Faculty Councils establish standing committees or task forces as needed. Each college establishes industry advisory councils to advise academic program directors on emerging industry trends and employment needs. University governance processes attempt to balance shared interests while focusing on the institutional mission. Many members of the Lawrence Tech community have invested their time and talents to establish a fair-minded, collegial, and results-oriented governance environment. The Graduate Council, Assessment Committee, and other faculty-led groups set objectives and expectations for curriculum development and assessment of student learning. The Faculty Senate and Staff Senate have assumed more prominent roles on campus. These faculty and staff groups collaborate closely with the administration to ensure broad participation and continuous improvement. The chair of the faculty senate participates in the Deans’ Council.

1d1: An Engaged Board of Trustees

1d1: Board policies and practices document the board’s focus on Lawrence Tech’s mission. The Board of Trustees consists of between 15 and 25 members who serve staggered three-year terms. The trustees elect a chairman. Lawrence Tech’s President serves ex officio as a trustee with vote. The Board meets at least three times each year in September, January, and June joined by the academic deans. The Board is responsible for these aspects of the operation of the University:

- The University’s plan of organization
- Faculty promotion and tenure
- Major expansion of facilities
- Annual budget and tuition
- Management of the endowment
- Authorization of bonds, promissory notes or other university borrowing
- Establishment and discontinuance of academic programs
- Upon recommendation by the faculty, awarding of degrees, certificates, and diplomas

Board of Trustees Bylaws

The current Board bylaws, last updated and approved in September 2009, consist of 11 articles. See C1-04-“Board of Trustees Bylaws”) for a copy of the bylaws.

- Article I – Name and Purpose
- Article II – Members
- Article III – Board of Trustees
- Article IV – Committees of the Trustees
- Article V – Officers
- Article VI – Educational Programs
- Article VII – Fiscal Year
- Article VIII – Notices and Wavers
- Article IX – Bankers, Trustees, and Other Instruments
- Article X – Indemnification
- Article XI – Amendments

Board of Trustees Members and Organization

See C1-05-“Board of Trustees Members”) for a current membership list of the Board of Trustees and Advisory Members of the Corporation. The Board of Trustees is organized into standing committees:

- Executive Committee
- Academic Affairs Committee
- Finance Committee

The Executive Committee consists of five trustees, including the president who also provides staff support. It advises the Board on all matters concerning strategic planning, the mission, goals, and plans of the University. The Executive Committee develops and reviews University policies and focuses on the conditions of employment of the president and other senior officers, employee fringe benefits, and expense accounts of all administrative employees. The Executive Committee can act on behalf of the Board between its regular meetings and may make action decisions that are subsequently considered for ratification by the full Board. The Academic Affairs Committee consists of at least five trustees and is staffed by the provost. The Academic Affairs Committee advises the Board in all matters of academic degree offerings, granting of degrees, and all faculty tenure decisions. The Academic Affairs Committee meets at least three times during the year, once in an open meeting with the deans, officers of the Faculty Senate, and chairs of the college Faculty Councils.

The Finance Committee consists of seven trustees and is staffed by the vice president for finance and administration. The Finance Committee advises the Board of all matters regarding University finances including adoption of the annual budget, serving as the audit committee of the Board, reviewing business and fund-raising plans, appointing and supervising independent investment managers for endowment, operating surpluses, and real estate. The Finance Committee meets at least twice a year.

In addition to the three standing committees, there are two ad-hoc committees of the Board: the Nominating Committee and the Strategic Plan Implementation Review Committee. The Nominating Committee consists of five trustees who recruit and nominate candidates for Board vacancies. The Strategic Plan Implementation Review Committee consists of five trustees who monitor the implementation of the strategic plan, participate in campus-wide strategic planning meetings, and provide status reports to the full Board.

Advisory Members of the Corporation are elected by the Board of Trustees and presided over by the Board chair. They receive information about University educational activities and business of the Corporation and make non-binding recommendations to the Board. The members may take part with the trustees in all social and ceremonial functions of the University.

Board of Trustees Agendas and Minutes

Each Board agenda typically includes an update on the status of the University’s strategic plan, a finance report, an academic affairs report, an advancement report, and a president’s report. Special topics such as the campus master plan, community engagement, special events, or executive committee sessions are included when Board discussion or approval is required. See C1-06-“Board of Trustees Agendas”) for Board agendas from 2001 through 2009. See C1-07-“Board Books”) for recent Board briefing materials and meeting minutes.

Board of Trustees Perspectives

Extensive written and face-to-face interviews were conducted with eleven members of the Board of Trustees during the Self-Study process. See C1-08-“Board of Trustees Interviews”) for a consolidated set of interview notes.

Board members demonstrated a broad understanding of the University’s mission and a deep commitment to appropriate Board oversight of the University and respect for the University leadership. Board members recognize the current economic challenges facing Southeast Michigan and the University. Most Board members have held leadership positions in global corporations and have a keen understanding of global issues affecting both business and education. Board members also bring their unique professional perspectives to the Board in areas such as finance, architecture, information technology, health care, entrepreneurship, and higher education.

1d2: Qualified and Activist Leadership

1d2: The board enables Lawrence Tech’s chief administrative personnel to exercise effective leadership.

The University’s governance structure involves the Board of Trustees, executive officers, administrators, faculty, and staff. See C1-09- “Lawrence Tech Organization Chart”) for a complete view of the current organization.

The president is the chief executive officer and is appointed by and serves at the pleasure of the Board of Trustees, supported by an associate and assistant provost, the chief academic officer, appointed by the president and confirmed by the Board of Trustees. The vice president for finance and administration is the chief fiscal officer, appointed by the president and confirmed by the board. The vice president of university advancement is the chief development officer. See C1-10- “Leadership Profiles”) for biographical sketches of the leadership team.

President

The president of the University is the chief executive officer. The President is responsible for all activities and programs of the University including its fiscal, administrative, and academic well-being. Reporting directly to the president are the provost, the vice president for finance and administration, and the vice president for university advancement. The president is an
Vice President for Finance and Administration
The vice president for finance and administration is the chief financial officer of the University and treasurer of the Corporation. The vice president is responsible for all financial and administrative activities and support services, like facilities, bookstore, and safety and security.

Vice President for University Advancement
The vice president for university advancement is the chief development officer of the University. The Vice President is responsible for organizing, directing and evaluating the University’s institutional advancement activities including the annual fund, capital campaign, major donor relations, deferred giving, corporate participation, and foundation support. He is also responsible for marketing and public affairs.

1d3-1d4: Effective Administrative Organization
1d3: The distribution of responsibilities as defined in governance structures, processes, and activities is understood and is implemented through delegated authority.

1d4: People within the governance and administrative structures are committed to the mission and appropriately qualified to carry out their defined responsibilities.

Lawrence Tech is organized around the four colleges under the Office of the Provost. The provost also manages a range of student services, academic services, and technology services organizations which provide shared services to the community. Finance, budget, and human resources units report to the vice president for finance and administration, and the vice president for university advancement manages fund-raising, government relations, and public affairs units.

Office of the Provost
The Office of the Provost provides academic leadership for the University and administers academic and technology support services to the campus. Operating units reporting to the Office of the Provost include:
- eLearning Services
- Enrollment Management
- Graduate Programs
- Information Technology Service Delivery
- Institutional Research and Academic Planning
- Research Support Services and Technology Partnerships (with Provost)
- Student Affairs
- University Library

University Advancement
The Office of University Advancement provides leadership for the University's development, marketing, and public relations efforts. Operating units reporting to the Office of University Advancement include:
- Alumni Services
- Corporation and Foundation Relations
- Government Relations
- Marketing and Public Affairs
- Technology Partnerships (with Provost)

Finance and Administration
The Office of Finance and Administration provides fiscal leadership and management for the University. Operating units reporting to the Office of Finance and Administration include:
- Accounting
- Campus Facilities
- Campus Safety
- Controller
- Human Resources
- Payroll

College Leadership
The academic deans are the chief academic officers of the four colleges, responsible for implementing university policy, planning, development, and quality of academic programs and research. They also promote continuing education, recruitment, supervision and evaluation of the faculty, and representation of their college and the University in the community. Deans are supported by associate or assistant deans, department chairs, or other academic administrators consistent with college requirements. Deans are appointed by the president upon recommendation by the provost and confirmed by the Board of Trustees.

Several faculty-led committees interact with these leadership committees to ensure participation and clear lines of decision authority. Several faculty-led committees interact with these leadership committees.

Executive Leadership Council
The Executive Leadership Council, chaired by the president, is responsible for the implementation of the strategic plan, enrollment management, technology, facilities, marketing, financial base, leadership, faculty, and staff. Membership includes the top administrative officers of the University appointed by the president.

Deans’ Council
The Deans’ Council is chaired by the provost and consists of the four college deans, the dean of students, the associate provost and dean of graduate studies. The Deans’ Council approves all new academic programs and policies, and provides advice to the provost on academic and administrative issues.

The Deans’ Council meets every two weeks and serves as the primary coordinating mechanism between the provost, the colleges, and academic service departments. The assistant provost for enrollment services, vice president for finance and administration, the vice president for university advancement, registrar, director of admissions, director of financial aid, and director of institutional research and academic planning participate with the Dean’s Council as advisers. Voting members are the provost, the four academic deans, the dean of students, and the associate provost and dean of graduate studies.
Information Technology Steering Committee

The Information Technology Steering Committee is responsible for advising the executive director of IT Service Delivery on information technology policy, operational issues, and the prioritization of services. Led by the provost, the Steering Committee includes the vice president for finance and administration, the associate provost and dean of graduate studies, and the director of eLearning Services.

Enrollment Management Committee

The Enrolment Management Strategic Committee is chaired by the assistant provost for enrollment management and addresses enrollment management issues. The Committee is a forum between the provost, the directors and the four colleges in matters of recruitment and retention. This committee is ad hoc and is comprised of various faculty, staff, students, administration, and alumni.

1d5: Faculty-Led Academic Programs

1d5: Faculty and other academic leaders share responsibility for the coherence of the curriculum and the integrity of academic programs.

Lawrence Tech faculty members have primary responsibility for the design, implementation, and delivery of academic programs, student academic performance, content, research, and community service. The president, provost, and Board of Trustees receive advice from the faculty in the tradition of shared governance, common mission, and dedication to the advancement of the University.

College faculty members may help advance concepts for new programs by their faculty through collaboration, and the Deans’ Council is responsible for approving new academic programs prior to action by the Board of Trustees. This type of collaboration is especially important for development of interdisciplinary programs.

Academic Program Review Committee

The Academic Program Review Committee is made up of representatives from the four colleges, and four faculty members appointed by the college deans, and one faculty appointed by the Faculty Senate. This committee identifies and recommends improvements in instruction and support for faculty members initiating and conducting research.

Standing Committee on Tenure Removal

This committee hears all cases brought forward for removal of tenure from a tenured faculty member.

Academic Program Committee

This committee is made up of representatives from colleges, and service units to provide advice on potential new academic programs, their financial and operational viability. This committee enhances collaboration between academic and service units, and is one of the initial steps in the approval process for new programs.

Conflict Resolution Committee

This committee is comprised of fifteen members from faculty, staff and administration who address work-related faculty Advice of Faculty Councils is not binding on the deans, but is considered significant to administrative decision making. See (C1-12: “College Faculty Councils”) for charters of the Faculty Councils.

The Faculty Senate

The Faculty Senate was formed in 1993 to make recommendations to the provost regarding issues concern to the faculty. The Faculty Senate is the entity officially constituted to represent and promote University-wide faculty aims for the purpose of furthering academic excellence and contributing to the success of the University. See (C1-13: “Faculty Senate Bylaws”) for the current bylaws of the Faculty Senate. Membership of the Faculty Senate consists of full-time faculty, who are elected by their peers. The chair of the Faculty Senate participates as a non-voting member of the Deans’ Council. The chair and vice-chair of the Faculty Senate meet on a biweekly basis with the provost and associate provost. Current officers of the Faculty Senate include:

• Chair – Dr. Ghassem Arar, College of Arts & Sciences
• Vice Chair – Dr. Lisa Anneberg, College of Engineering
• Secretary – Dr. Nicole Wilkome, College of Arts & Sciences
• Treasurer – Professor Edward Orlowski, College of Architecture & Design

The Faculty Senate meets every two weeks during the academic year and publishes its agenda and minutes to a Blackboard organization accessible by all faculty members. See (C1-14: “Faculty Senate Minutes”) for representative agendas and meeting minutes.

Standing Faculty Committees

The provost, president, and trustees receive advice from the faculty through several standing faculty committees in keeping with the University’s tradition of shared governance, common mission, and mutual dedication. See (C1-15: “Standing Faculty Committees”) for a list of current standing committees.

Academic Standing Committee

This consists of the dean of students, the director of admissions, and representatives from the four colleges.

Credit Review Committee

This committee is chaired by the registrar and has a faculty representative from each college. The committee reviews all applications from students for additional transfer credit and guest credit.

Research Committee

This committee consists of the associate provost, representatives from finance and advancement, and four faculty members appointed by the college deans, and one faculty appointed by the Faculty Senate. This committee identifies and recommends improvements in instruction and support for faculty members initiating and conducting research.

Academic Program Committee

This committee is made up of representatives from colleges, and service units to provide advice on potential new academic programs, their financial and operational viability. This committee enhances collaboration between academic and service units, and is one of the initial steps in the approval process for new programs.
The president, provost, and vice presidents host formal campus briefings each semester on a wide range of subjects. All faculty and staff are invited to the briefings and question and answer sessions are included as part of the agenda. The provost and associate provost meet bimonthly with the chair and vice-chair of the Faculty Senate to discuss issues of importance to the Faculty Senate. The provost and key members of her staff visit the faculty of each college at the start of each major semester to update the faculty on enrollment data, academic programs, academic services, learning technologies, and other initiatives of interest to faculty. The provost has instituted a briefing program for academic and administrative units of the University. Units prepare their own agendas describing current activities, future plans, and anticipated challenges for presentation to the provost and her staff once per year. An open discussion identifies follow-up activities, opportunities for faculty cross-unit collaboration, and specific issues which need attention. Units are free to invite participants from other units to attend their briefings.

Deans’ Council
The Deans’ Council meets bimonthly and minutes of these meetings are distributed to all faculty and staff via e-mail. (See C1-19 “Deans’ Council Minutes”) for representative agendas and meeting minutes.

Faculty Senate
The Faculty Senate meets bimonthly and meeting minutes are published on a Blackboard organization available to all faculty members. The Faculty Senate holds one campus-wide faculty luncheon meeting each semester with agenda topics including sabbatical reports, updates on academic initiatives, and updates on Faculty Senate deliberations. These luncheon meetings include time for open discussion.

Campus Communications
The Web site ltu.edu/news houses all campus communications, press releases, video content, and radio advertising audio files. An electronic newsletter, the Tech News, is published regularly in e-mail format with links to article content posted on technews.ltu.edu. A print newsletter, the Campus Connection, is issued monthly to all faculty and staff. A glossy print magazine, the Lawrence Technological University Magazine, is distributed twice each year to the campus community, alumni, and donors. See (C1-20 “Campus Publications”) for representative samples of these publications.

Lawrence Tech’s A Focus on Communications

Lawrence Tech has made great strides in improving communication processes associated with University governance and decision making. Given the number of committees involved in the governance process and the wide range of initiatives undertaken within the University, the communication process is by its nature continuously evolving. This section highlights several key communication processes.

Lawrence Tech demonstrates a culture of continuous improvement and experimentation. New initiatives are frequently initiated and integrated into the fabric of the University with broad involvement. Several examples of continuous improvement initiatives are discussed below.

Support for improving communication processes regularly strengthens them as well. Several examples of these processes included in this report are examples of initiatives during its work.

The Undergraduate Leadership Curriculum

The Undergraduate Leadership Curriculum was developed as an outcome of Assessment Day 2006. A task force made up of representatives from each college was formed to brainstorm possibilities for a leadership curriculum to address the needs identified during Assessment Day 2006. After reviewing the curriculum and benchmarking other universities with leadership programs, the Task Force proposed a four-year phased-in curriculum with leadership components in each undergraduate year. This outline was presented at Assessment Day 2006 and was incorporated into the University’s strategic plan in 2007.

The Leadership Curriculum Implementation Committee began implementing the Undergraduate Leadership Curriculum during fall 2007 with leadership components built into the freshman-level University Seminar. Each year, a new component of the Undergraduate Leadership Curriculum is incorporated into the undergraduate academic programs. The Leadership Curriculum is discussed in greater detail in Criterion 40.2.

The One-Stop Center

Lawrence Tech also focuses on continuous improvement of its infrastructure and student success. The U Serving You initiative has evaluated a number of areas within the University using a multidisciplinary process approach. The Self-Study Steering Committee identified and managed a dozen continuous improvement initiatives during its work.

The Undergraduate Leadership Curriculum

The Undergraduate Leadership Curriculum was developed as an outcome of Assessment Day 2006. A task force made up of representatives from each college was formed to brainstorm possibilities for a leadership curriculum to address the needs identified during Assessment Day 2006. After reviewing the curriculum and benchmarking other universities with leadership programs, the Task Force proposed a four-year phased-in curriculum with leadership components in each undergraduate year. This outline was presented at Assessment Day 2006 and was incorporated into the University’s strategic plan in 2007.

The Leadership Curriculum Implementation Committee began implementing the Undergraduate Leadership Curriculum during fall 2007 with leadership components built into the freshman-level University Seminar. Each year, a new component of the Undergraduate Leadership Curriculum is incorporated into the undergraduate academic programs. The Leadership Curriculum is discussed in greater detail in Criterion 40.2.

The One-Stop Center

The A. Alfred Taubman Student Services Center was the centerpiece of Lawrence Tech’s capital campaign that raised over $46 million to strengthen retention and student success, create new endowed scholarships, and enhance the campus experience. The 42,000-square-foot Taubman Student Services Center, was the centerpiece of Lawrence Tech’s capital campaign that raised over $46 million to strengthen retention and student success, create new endowed scholarships, and enhance the campus experience. The 42,000-square-foot Taubman Student Services Center, was the centerpiece of Lawrence Tech’s capital campaign that raised over $46 million to strengthen retention and student success, create new endowed scholarships, and enhance the campus experience.
all the services students need to succeed: the Academic Achievement Center, Offices of Admissions, Career Services, Dean of Students, Financial Aid, Registrar, and Student Activities; Student Computing Center, and the Welcome Center. Cross-trained employees are able to answer questions immediately to eliminate confusion, and resolve questions quickly. A number of universities from across the country have visited the Taubman Center to understand how to establish “one stop” student services operations.

**Reinventing Teaching and Learning Using Technology**

Various national efforts and programs point to the convergence of pedagogy with technology. The Reinventing Teaching and Learning Using Technology task force worked during the 2007-2008 academic year and made recommendations in six key areas: faculty and student services, hybrid academic programs, academic software, infrastructure, and technical support, campus master plan, and academic departments. Virtually all of the recommendations have since been implemented. See (C1-21-“Reinventing Teaching and Learning Technology”) for the full report and action plans.

**The U Serving You Process**

The U Serving You process was established to put Lawrence Tech’s continuous improvement mindset into action for administrative and academic support services. This user-driven process improvement model is modeled after corporate initiatives such as GM’s GOST, Ford’s Rapid, and GE’s Workout programs. Champions for each initiative are directly involved with the process and the program is actively supported by senior leadership. Various roles are defined for workshop and implementation phases, including sponsors, champions, coaches, drivers, and “roadblock busters.” Among the areas benefiting from U Serving You are international admissions, the help desk, first year advising, career services, and buildings and grounds.

**Self-Study Improvement Initiatives**

The Self-Study Steering Committee identified a dozen improvement initiatives during its work. The Steering Committee developed the frameworks for the two accompanying Requests for Institutional Change. The additional improvement initiatives below were identified by the Steering Committee, approved by the provost and Deans’ Council, and undertaken during the Self-Study process:

- **Academic Program Planning and Review (Criterion Two and Three)** – This initiative resulted in the University’s first comprehensive academic program planning and review process. Built upon observed best practices, this process resulted in a review of all undergraduate, graduate, and doctoral programs in the 2009-2010 academic year.
- **Long-Term Planning Linkages (Criterion One and Two)** – This initiative reviewed the linkage between the University’s long-term planning processes including the strategic plan, card no master plan, enrollment plan, budget plan, academic program plan, accreditation plan, capital campaign, and technology plans. This documented the plan life cycles and information linkages between the individual planning processes to ensure that important planning elements are shared between individual plans at the proper times.
- **Plan and Report Evidence Repository (Criterion One and Two)** – This initiative was established to help the University prepare for the Commission’s new accreditation process. An Evidence Repository using the Blackboard Content System was created to house reports and data supporting the Self-Study. The Evidence Repository is designed to meet the emerging needs of the Commission’s new accreditation process.
- **Closed-Loop Improvement Processes for Assessment (Criterion Two and Three)** – This initiative supported reliability of closed-loop processes to improve the operation of the University Assessment Committee by using assessment data to support academic programs, student behavior, and applied research. These policies and procedures address issues of honesty, fairness, openness, diversity of opinion, and active governance.

1e1-1e2-1e3: Academic and Administrative Integrity

The activities of Lawrence Tech are congruent with its mission.

1e2: The board exercises its responsibility to the public to ensure that Lawrence Tech operates legally, responsibly, and with fiscal honesty.

1e3: Lawrence Tech understands and abides by local, state, and federal laws and regulations applicable to it (or bylaws and regulations established by federally recognized sovereign entities).

1e1-1e2-1e3: Academic and Administrative Integrity

The activities of Lawrence Tech are congruent with its mission.

1e2: The board exercises its responsibility to the public to ensure that Lawrence Tech operates legally, responsibly, and with fiscal honesty.

1e3: Lawrence Tech understands and abides by local, state, and federal laws and regulations applicable to it (or bylaws and regulations established by federally recognized sovereign entities).

1e1: Lawrence Tech upholds and protects its integrity.

Every action taken by a University or by a member of its community reflects on its integrity. Every act against the mission helps guide and shape institutional and personal behavior to ensure integrity.

Lawrence Tech addresses integrity primarily through its focus on institutional mission. Policies and procedures have been established to ensure integrity with respect to decision making, fiscal operations, academic programs, student behavior, and applied research. These policies and procedures address issues of honesty, fairness, openness, diversity of opinion, and active governance.

1e1-1e2-1e3: Academic and Administrative Integrity

The activities of Lawrence Tech are congruent with its mission.

1e2: The board exercises its responsibility to the public to ensure that Lawrence Tech operates legally, responsibly, and with fiscal honesty.

1e3: Lawrence Tech understands and abides by local, state, and federal laws and regulations applicable to it (or bylaws and regulations established by federally recognized sovereign entities).
are introduced to the Code of Conduct during orientation and references to the Code are included in course syllabi and is posted in on the Web site at ltu.edu/student_affairs. See (C-1-24-"Student Code of Conduct") for the document. The University, through the dean of students, maintains authority to impose sanctions for behaviors violating the Code of Conduct. Due process for disciplinary issues culminates with the Student Discipline Committee composed of 15 students recommended by the deans, faculty, administration staff, and Student Government.

Code of Conduct Cases

Thirty-five alleged violations were brought before the judicial process during the 2009-2010 academic year, resulting in the dismissal of ten students. See (C-1-24-"Code of Conduct Cases") for a synopsis of cases and dismissals during the past three years. The table shows the breakdown of violations by code section with dishonesty, policy violations, and alcohol use the most frequent areas of alleged violations.

Financial and Operational Integrity

The University’s financial statements and federal financial aid operations are audited annually by Plante & Moran. Financial and federal financial aid audits are discussed in the General Institutional Requirements and Federal Compliance sections. The Vice President for Finance and Administration has developed a “balanced scorecard” to present financial and non-financial dimensions and metrics:

- Enrollments – Hours by Semester, Credit Hours by College, and Student Recruitment head count for FTIACs and Transfers
- Program and Delivery – Student Assessment Follow-up, Graduating Student Evaluations by College, and Capacity Utilization by course and day/evening room use
- Constituency Satisfaction – Student, employee, and alumni surveys
- Campus Environment – Campus Master Plan Implementation, and Technology Infrastructure
- Development and Reputation – Annual Fundraising, Capital Campaign, Endowment, Government Activity and Sponsored Research, Rankings, and Rating Rankings
- Financial Health – Cash Flow, Budget Management, Tuition, Investment Performance, and Debt Performance

A longitudinal view of each metric is presented along with an assessment of whether each target is being achieved. The measures are aligned with Commission on Accreditation criteria and the process demonstrates that the administration and Board of Trustees monitor and exchange information about the University’s progress. See (C-1-25-“Balanced Scorecard”) for a representative example of the scorecard.

Administrative Policies and Procedures

Integrity is assured through University policies and by independent external audit. Examples of audit-based improvements include development finance and purchasing policies, and publication of an administrative process and procedure manual.

Administrative policies and procedures are documented in the Staff and Administrators Handbook which is updated periodically and posted on the Human Resources Web site. See (C-1-26-"Staff and Administrators Handbook") for a current copy of the document. Among the policies and procedures addressed in the Handbook include conflict of interest, outside employment, personal and military leave, access to personnel files, performance evaluation, drug and alcohol use, and safety policy.

A Commitment to Ethical and Sustainable Behavior

Lawrence Tech is able to observe the results of its ethical behavior through its governance processes, independent audit processes, federal financial aid audits, record of continuous improvement, and recognition by professional and community organizations. Lawrence Tech faculty members are actively engaged in academic governance at the department and University levels. Regularly scheduled faculty meetings are held to consider new and changed academic programs, and the Deans’ Council and Graduate Council act on new academic programs. The Academic Program Planning and Review process involves faculty members and program directors in a forward-looking review of all academic programs. The Academic Program Review Committee is comprised of faculty members and administrators who offer advice and counsel to their colleagues as new academic programs are developed.

Lawrence Tech has extended its commitment to academic integrity through its innovative Undergraduate Leadership Curriculum. Students are exposed to leadership theories and practice their leadership skills in real-world environments. The University is expanding its focus on leadership development skills to include entrepreneurship and sustainability, which together will produce graduates with a keen appreciation and understanding of their role as future leaders to sustain and grow organizations using ethical leadership methods.

Lawrence Tech’s academic programs are accredited by professional program accreditation agencies, all of which focus on academic integrity from the perspectives of their disciplines. The College of Architecture & Design has implemented a graduate course in ethics to prepare students to deal with ethical situations in the workplace.

Lawrence Tech also practices sustainability in its facilities and operations. The most striking example is the A. Alfred Taubman Student Services Center, which uses geothermal energy for heating and cooling and a 10,000-square-foot vegetated roof and bioswale to manage water runoff. The Taubman Center is one of the first university buildings in Michigan to receive the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) Silver Level certification, and has won numerous design and engineering awards.

1e4-1e5: Operational Integrity

1e4: Lawrence Tech consistently implements clear and fair policies regarding the rights and responsibilities of each of its internal constituents.

1e5: Lawrence Tech’s structures and processes allow it to ensure the integrity of its co-curricular and auxiliary activities.

Lawrence Tech’s governance process involves a number of faculty and administrative groups which collaborate to ensure integrity and continuous improvement. Integrity is also represented by the availability of extensive academic and student services.

Student Services

The University’s student services activities report to the dean of students. The dean coordinates a wide range of services including counseling, student government, multicultural student services, international student services, career services, and student judicial services. The dean works closely with academic units to ensure that faculty members and college administrators are involved with policy and service development and that varying perspectives on student needs are addressed.

Co-Curricular Activities

Lawrence Tech provides a wide range of co-curricular activities including study abroad, service learning, and volunteer organizations. Many student organizations engage in volunteer activities supporting community needs. The Undergraduate Leadership Curriculum, led by a faculty coordinating committee, requires service learning by all undergraduate students.

Auxiliary Activities

Lawrence Tech does not operate traditional auxiliary activities such as housing, recreation, or special events as independent units. These operations, including housing and student recreation, are integrated into the budgets of the supervising administrative units. Fees collected from these areas comprise a portion of the operating budgets of these units with the balance coming from general fund allocations.

Several operating units are managed by contract including dining services, the bookstore, and the Professional Development Center. The University owns a number of rental housing properties adjacent to the campus and are managed under lease to private tenants.

1e6-1e7: Community and Stakeholder Integrity

1e6: Lawrence Tech deals fairly with its external constituents.

1e7: Lawrence Tech presents itself accurately and honestly to the public.

Lawrence Tech’s program excellence is recognized by numerous professional accreditation agencies. Independent comparative guides have recognized Lawrence Tech for its focus on unique academic programs, applied research, and student services.

Lawrence Tech is a member of numerous professional organizations and participates in a range of surveys including US News and World Report, the Chronicle of Higher Education’s “Great Places to Work” program, the College Board, Peterson’s, Barron’s, EDUCAUSE, ASEE, NAAB, Noel-Levitz, NSSE, and others.

Lawrence Tech administers two different surveys to its recent graduates. The National
Survey of Student Engagement (NSSE) was first administered in 2008 and is administered every three years and will be administered in fall 2010.

Marketing and Advertising Coordination

Lawrence Tech's marketing and advertising activities are managed by the Office of Marketing and Public Affairs reporting to the vice president of advancement. Marketing and Public Affairs collaborates with Enrollment Services, the four colleges, eLearning Services, and other offices to develop a comprehensive marketing strategy for the University. All marketing materials, mass media campaigns, and the University's public Web site are coordinated through Marketing and Public Affairs.

Lawrence Tech's mass marketing campaigns traditionally focused on building name recognition for the entire University. In 2009, a new mass media campaign that highlighted the unique academic programs of individual colleges. Samples of Lawrence Tech's marketing materials are available for review in the Resource Room. Lawrence Tech was awarded the Award of Excellence for Issues Management and Crisis Communications by the Detroit Chapter of the International Association of Business Communicators for the Recovery Starts Here campaign. The multimedia initiative, which made use of Web, print, and outdoor advertising, publicize Lawrence Tech's offer of 450 tuition scholarships to eligible disabled workers and their dependent children. Every five years, Lawrence Tech surveys its alumni through an ACT survey.

Association of Independent Technological Universities

Lawrence Tech is a member of the Association of Independent Technological Universities (AITU); AITU was founded in 1957. AITU is an organization of leading American technological institutions whose mission is to exchange ideas and best practices; to advance engineering, science, and professional education; and to inspire innovation. AITU members include California Institute of Technology, Carnegie Mellon University, Case Western Reserve University, Drexel University, Emory-Riddle Aeronautical University, Harvey Mudd College, Illinois Institute of Technology, Massachusetts Institute of Technology, Rensselaer Polytechnic Institute, Rochester Institute of Technology, Rose-Hulman Institute of Technology, Stevens Institute of Technology, and Worcester Polytechnic Institute.

U.S. News America's Best Colleges 2010

Lawrence Tech has advanced within the top tier of U.S. News' America's Best Colleges rankings for 2010, ranking 47th of 71 Midwestern colleges and Lawrence Tech has consistently ranked in the top tier of its category since the early 1990s. The 2010 results again allow Lawrence Tech to use the U.S. News "best colleges" logo badge on promotional materials as testimony to its ranking. In addition to the University's overall citation, Lawrence Tech is tied for 49th of 100 national schools listed in the category of Best Undergraduate Engineering Programs.

Princeton Review

Lawrence Tech has earned the "Best in the Midwest" designation for 2010 from the Princeton Review based on academic excellence and an anonymous student survey. The "Best" designation is awarded to only about 25 percent of the nation's 2,500 four-year colleges. To receive the "Best" designation publication, colleges had to meet standards for academic excellence within their region. Students were surveyed on several issues including accessibility of their professors, quality of the campus food, their fellow students, and campus life. The rating categories include academics, admissions selectivity, financial aid, quality of life, and sustainability.

Military Friendly School

Lawrence Tech has been named to the Military Friendly School list compiled by GI Jobs. The list honors the top 15% of colleges, universities, and trade schools that do the most to embrace America’s veterans as students. Criteria for being named to this list include recruitment and retention efforts for military and veteran students as well as academic accreditations. The U.S. Department of Veterans Affairs has designated Lawrence Tech as a "Yellow Ribbon School" for its 25% match of the GI Bill funds available to any veteran. Lawrence Tech offers tuition discounts to all active military, inactive, reserve, or retired military of 25% for undergraduate students and 16% for graduate students. A veteran’s student club and support group are active on campus.

Bloomberg Businessweek

Lawrence Tech was awarded the Award of Excellence for Issues Management and Grievances by the Detroit Chapter of the International Association of Business Communicators for the Recovery Starts Here campaign. The multimedia initiative, which made use of Web, print, and outdoor advertising, publicize Lawrence Tech's offer of 450 tuition scholarships to eligible disabled workers and their dependent children. Every five years, Lawrence Tech surveys its alumni through an ACT survey.

Conclusion

We believe that Lawrence Technological University meets Criterion One. The University's mission is clearly stated and is the result of decades of continuous evolution in light of accomplishments, changing student needs, a changing regional community, and increased institutional capabilities. The mission statement has been extended to include a long-term vision, a set of values, and a cause against which institutional operations are gauged. The University's mission is clearly articulated, shared within the community, and is well understood by the Board of Trustees, administration, faculty, and staff. The mission is actively embraced by the four colleges and other units of the University which plan their actions in support of the mission. The University's strategic plan embodies the mission and lays out clear goals and objectives for achieving the mission. The strategic plan is used by University units to prepare their operational plans and is strongly linked to budgeting decisions. The strategic plan is actively monitored by a committee comprised of administrators and members of the Board of Trustees. Decision making and authority are clearly defined for both academic and administrative processes, with clearly documented policies and procedures. A balanced scorecard approach is used to inform the Board of Trustees of the progress of the University along many dimensions.

The University's leadership is well qualified and committed to the future success of Lawrence Tech and its students. Faculty members are clearly involved in the governance of the University with students, parents, and other stakeholders. Processes for addressing issues of academic integrity, student behavior, and other issues are documented by the dean of students and academic departments. Complaints from external stakeholders are routed to the appropriate administrative office where they are addressed.

The University has undertaken an improvement initiative to further document complaint procedures as part of the Self-Study process. Student complaints are handled by academic departments, administrative departments, and student services departments. These processes are discussed in the Federal Compliance Section.

Opportunities for Improvement

Lawrence Tech has done an excellent job of defining its mission, vision, values, and cause. The mission is clearly reflected in the strategic plan and there is broad understanding that the strategic plan is both a living document and an active guide to managing the University. Colleges and academic departments have made efforts
to define themselves in the face of increasing competition, but the University recognizes that additional efforts are needed to define the value of a Lawrence Tech education and the distinctiveness of each academic program to extend the University’s value proposition. The University has engaged the Art & Science consulting group to advise the University on its positioning and tuition practices.

Lawrence Tech recognizes the delicate balance between active communication and information overload. The University is committed to continuously improving communication and coordination between deans, associate deans, department chairs, program directors, and faculty members. The University recognizes that no single communication method will be able to engage everyone effectively all of the time. The increasing complex environment requires Lawrence Tech to find new ways to ensure that all members of the University community are informed of important issues and are aware of the opportunities to engage with University governance and planning processes.
Criterion Two: Lawrence Tech’s allocation of resources and its processes for evaluation and planning demonstrate its capacity to fulfill its mission, improve the quality of its education, and respond to future challenges and opportunities.

The focus of Criterion Two is to determine whether the University has allocated resources in a manner appropriate to fulfilling and sustaining its mission. A range of institutional capabilities are needed to evaluate current academic programs and services, develop future scenarios, establish a comprehensive strategic plan, allocate resources against the objectives contained in the plan, assess progress toward achieving objectives, and flexibly respond to unexpected barriers and events.

Lawrence Tech has developed comprehensive and linked strategic planning, campus master planning, and capital campaign processes. This chapter provides evidence of development of faculty and staff resources to build capabilities needed to accomplish the University’s mission.

The results of strategic planning and resource development is demonstrated in Criterion Three, which describes the learning environment that has been built at Lawrence Tech. Criterion Four shows that strategic planning and resource development have enabled the University to transform itself into a balanced teaching and research university. Criterion Five demonstrate that Lawrence Tech has sustained deep community engagement for an institution of our size.

“The future is not easy. But when we set our minds on the positive, our future can be as bright as we want it to be.”

—Rhonda Jackson, Psychology major and Campus Safety Officer

2a. A Focus on the Future

Criterion 2a: Lawrence Tech realistically prepares for a future shaped by multiple societal and economic trends.

Lawrence Tech recognizes that strategic planning linked to mission is crucial to sustaining the University. Since the inception of the University’s strategic planning process over ten years ago, the University has developed these capabilities and established recurring processes to ensure that strategic planning and resource allocation remains aligned with the mission.

Many of the top ten jobs in demand in 2010 did not exist in 2004. Lawrence Tech is currently preparing students for jobs that do not yet exist - using technology that, in many cases, has yet to be invented - in order to solve problems that we do not yet know are problems.

2a1: Strategic Planning Process

Lawrence Tech’s planning documents reflect a sound understanding of the organization’s current capacity.

Lawrence Tech has developed a comprehensive strategic planning process to guide its advancement and operations. The strategic planning process uses a five-year planning window with two-year rolling updates. The first strategic plan was prepared in 1998, and a strategic planning leadership group, including five members of the Board of Trustees, was formed in early 1999 to monitor progress against the plan. Plan updates were issued in 2001.
and monitoring metrics for each area.

The strategic plan defines strategic objectives, areas: People; Programs; Positioning, Support all strategic plans.

2003, 2005, and 2007. A revision to the strategic plan, Lawrence Tech’s planning documents

3. Positioning, Support, and Partnerships
– Lawrence Tech is positioned and
– Lawrence Tech provides an environment that is comprehensive, collaborative, and caring community that develops leaders and mentors committed to student success.

2. Programs – Lawrence Tech is distinguished for its integration of leadership principles into the curriculum and the development of the next generation of thinkers, entrepreneurs, and global thinkers. Lawrence Tech’s distinctive, professional, and interdisciplinary programs respond to societal and industry needs, provide experiential learning and life-changing opportunities that prepare students to succeed in today’s market, and meet the demands and challenges of emerging markets.

3. Positioning, Support, and Partnerships – Lawrence Tech is positioned and branded as the preeminent private university in the region with a national and international reputation that promotes leadership through theory and practice. Lawrence Tech has sustained and growing support from our alumni and friends, industry, foundations, and government to achieve annual goals and long-term vision. Lawrence Tech fosters collaboration to meet growth goals, expand into new markets, enhance our programs and learning, and contribute to the community.

4. Physical Environment and Infrastructure – Lawrence Tech implements a safe, leading-edge learning environment that is comprehensive, captivating, collaborative, motivating, and competitive.

5. Financial Stability and Growth – Lawrence Tech’s long-term financial integrity is maintained through diversified and strengthened revenue streams with appropriate cost structures, regular investment strategy reviews, and continuous improvement.

Progress against the strategic plan is monitored by the Strategic Plan Implementation Review Committee. The strategic plan is actively linked with University planning processes including budgeting, the campus master plan, capital campaign, enrollment plan, and technology plan.

These linkages support integration of large-scale academic and administrative initiatives. Examples of these institutional initiatives include support for applied research, development of online programs, and development of the Undergraduate Leadership Curriculum.

5. Financial Integrity and Growth

2a2: Lawrence Tech’s planning documents demonstrate that attention is being paid to emerging factors such as technology, demographic shifts, and globalization.

The strategic planning process and its ongoing monitoring provide mechanisms for campus leadership to use quantifiable data to track progress against the plan, and to identify long-term trends which shape future directions. The planning process has helped identify several important areas for future focus including the need for new academic programs, new models for student recruitment and program delivery, a more robust international presence, and increased support for applied research.

New Academic Programs

The strategic planning process has helped highlight the need for new academic programs, especially those that make use of Lawrence Tech’s unique interdisciplinary capabilities. Lawrence Tech’s Master of Science in Mechatronics Systems Engineering combines academic content from mechanical, electrical engineering to provide graduates with the skills to create seamless and unified systems that encompass the principles of the different disciplines. Mechatronics programs have become very popular in Europe and Asia and Lawrence Tech's program is the first in the state of Michigan and one of only a few in the United States. The program includes the nation’s first graduate-level course dealing with the use of embedded sensors in tires to improve vehicle performance.

Lawrence Tech’s Biomedical Engineering program prepares students to work alongside doctors, nurses, and other medical professionals to develop and improve a wide range of biomedical instruments and devices. The Biomedical Engineering program combines intensive coursework in engineering with strong backgrounds in biology, chemistry, and physics, instrumentation, and other subjects pertinent to the medical field.

Lawrence Tech’s Nonprofit Leadership and Management program prepares students for productive careers in the rapidly growing nonprofit sector. The curriculum provides a comprehensive understanding of what it takes to lead and manage a charitable nonprofit organization in today’s environment. The program is available as a specialization within the Master of Business Administration degree or as a graduate certificate program offered both on the Southfield campus and online.

Lawrence Tech’s new Architectural Engineering program in a five-year direct entry architectural program which prepares students to become licensed professional engineers with strong architectural design skills. The Architectural Engineering program illustrates the interdisciplinary collaboration which is a hallmark of Lawrence Tech faculty.

Student Recruiting and Program Delivery Modes

The projected future demographics of the state of Michigan have caused Lawrence Tech to look outside its traditional service area for recruiting undergraduate and graduate students. Targeted recruitment in the Chicago, Philadelphia, and New York areas has drawn new undergraduate students to architecture, design, and engineering programs. At the same time, graduate student recruitment has focused on attracting students to unique online and hybrid graduate programs in nonprofit management, architecture, and engineering management.

With Lawrence Tech’s focus on preeminence, we believe that we can attract more regional and national students to the campus. To assist the University in these efforts, the Art & Science Group LLC artsci.com has been retained to analyze the potential for national recruiting, our national marketing materials, and financial aid practices. The Art & Science Group is respected for helping many well known universities expand their reach.

Lawrence Tech has created a unique and supportive environment for on-campus undergraduate students while providing on-campus and online options for graduate students. The University’s emphasis on professional engagement and research has resulted in a resident Master of Architecture degree program, where on-campus experiences are integrated with an online academic program. The University’s emphasis on Business Administration and Doctor of Management in Information Technology programs have been modified to be delivered in a hybrid format, reducing the need for commuting to campus and enabling both programs to draw students from outside Southeast Michigan.

International Focus

Lawrence Tech has made a strategic decision to increase its international presence to recruit international students to the Southfield campus.

The University’s efforts focus on establishing partnerships with universities in a targeted range of countries including China, India, the Middle East, Canada, and South America. Some of these partnerships allow Lawrence Tech classes to be offered at international sites and Lawrence Tech faculty members to teach in international venues. These activities also support the University’s applied research and scholarship efforts. International partnerships are discussed in more detail in Criterion Five.

Lawrence Tech recently expanded its long-standing collaborative relationship with the Shanghai University for Engineering Science (SUES). SUES students have, for several years, taken Lawrence Tech courses in Shanghai and then come to the United States to earn master’s degrees in engineering, management, computer science, or science education. The new alliance expands academic program offerings to include graphics and imaging, interior design, and transportation design through the College of Architecture & Design.

Criteria Two
The SUES agreement and Lawrence Tech's presence in China have helped bring about exchange agreements with new partners, including Sichuan University and Sichuan and Soochow University. Students at Soochow University complete their bachelor's degree with two years of study at Lawrence Tech. The agreement with Soochow University includes a study abroad program for Lawrence Tech students in China during the summer semester. The Ministry of Education recently awarded Lawrence Tech’s College of Management permission to offer its MBA program within Ontario, the only U.S. university receiving such permission. The British Columbia Ministry of Education has also awarded Lawrence Tech the opportunity to offer its MBA program in Vancouver. Lawrence Tech has established several agreements with universities in India, including Sardar Vallabhbhai Patel University complete their bachelor's degree program in India and part at Lawrence Tech in the College of Engineering.

2a3: Developing Global Leaders

Lawrence Tech has long recognized the values of diversity and globality. The University's legacy location adjacent to Ford Motor Company's Highland Park manufacturing plant provided the opportunity to serve one of the most diverse work forces in the nation. The global nature of many businesses headquartered in Southeast Michigan has provided opportunities for residents to work abroad and interact with colleagues from many cultures and backgrounds.

Lawrence Tech has responded in many ways to position itself within a multicultural society. The University's Undergraduate Leadership Curriculum is the only such program outside the United States military service academies, requiring leadership coursework and experiences for all undergraduate students. The Master of Business Administration International program leverages globalization coursework from the Master in Global Leadership and Management program developed for the U.S. Army's senior civilian managers.

"I am proud to be associated with the accomplishments of Lawrence Tech graduates”

-Lloyd E. Reuss, Chairman, Lawrence Tech Board of Trustees

Former President, General Motors Corporation

The University’s international partnerships enable collaboration with colleagues around the world and attract international students to the Southfield campus. The College of Architecture & Design maintains an active global study program for its students, providing studio opportunities in France, Greece and other locations. The College of Engineering maintains a long-standing relationship with SUES to exchange students and provide Chinese students with the opportunity to interact with Lawrence Tech professors in Shanghai. The College of Architecture & Design collaborates with Tsinghua University in Beijing to provide a joint architectural studio over the internet. The Center for Global Leadership and Understanding in the College of Management links global experts with Lawrence Tech students and regional business leaders.

2a4-2a5: A Focus on Innovation and Change

Lawrence Tech’s strategic planning process incorporates continual scanning to detect and respond to major forces impacting the future of the University such as globalization, information technology, regional and national demographics, employee diversity, outsourcing, and patterns of collaborative work.

These and other trends are especially important given the University's location in Southeast Michigan, one of the most impacted by the economic recession and manufacturing globalization. The University works collaboratively with the Detroit Regional Chamber of Commerce, Michigan Works, Automation Alley, and other groups focused on recreating a competitive economic climate in the region.

Improving Entrepreneurship and Innovation in Southeast Michigan

In July 2009, Lawrence Tech was awarded an $80,000 grant from the Economic Development Administration, Department of Commerce, and Detroit Regional Chamber of Commerce to improve entrepreneurship, innovation, and product development in Southeast Michigan. The study will determine the feasibility of creating a regional Center for Innovation and Entrepreneurship.

An Advanced eLearning Environment

Lawrence Tech has invested significant financial and staff resources to develop an integrated learning environment using the latest learning technologies and digital learning resources. Lawrence Tech implemented the first fully wireless campus in Michigan, and recently upgraded its wireless network to the latest 802.11n technology. The University has expanded its Internet access to support student use of video and social media resources.

Lawrence Tech is one of the only institutions in the country providing a tablet or laptop computer to all undergraduate students that are pre-loaded with discipline-specific professional software. All Lawrence Tech classes make use of the Blackboard learning management system, and faculty members have gained skills in delivering hybrid and online instruction. The Center for Teaching and Learning builds faculty skills with pedagogical and classroom skills, and eLearning Services builds faculty skills in using technology-enabled learning tools.

Support for Applied Research

Increased emphasis on master’s and doctoral programs has resulted in higher levels of faculty research, scholarly, and creative activities. Lawrence Tech established new expectations for research, scholarship, and creativity in the revised Faculty Handbook. The University also recognized that faculty needed additional support to identify, apply for, and administer sponsored research projects. The Research Support Services Committee was established to meet this need. Indirect cost recovery funds have been used to establish a Research Seed Grant program to support faculty development of research proposals. An Institutional Review Board has been established to review and approve student and faculty research involving human subjects.

2a6: A Proud Heritage

Lawrence Tech incorporates in its planning those aspects of its history and heritage that it wishes to preserve and continue.

Lawrence Tech's name for its new capital campaign – “Proud Heritage, Bold Future” – underscores respect for the University’s heritage while articulating a preeminent future. Evidence presented throughout the Self-Study underscores the linkage between Lawrence Tech’s history, mission, values, and motto and the continuous creation and improvement of unique “theory and practice” programs.

The historic bonds between Lawrence Tech and the business community are reflected not only in the University’s academic programs but in how students and faculty value the leadership skills gained at Lawrence Tech. Talented adjunct faculty members who are practitioners in their field underscore the linkage between the business community and the University.

The history of Lawrence Tech’s evening academic programs continues with evening degree programs at the undergraduate and graduate level, many of their master’s programs, and full online programs designed to meet the needs of students with busy work and personal schedules. Delivery of academic programs at business locations and community college locations throughout Michigan is a testament to the heritage of the University.

An Active Detroit Presence

With its roots in the heart of Detroit, Lawrence Tech has sustained relationships with the city of Detroit since its founding in 1932. The University still holds its annual commencement exercises at Detroit’s riverfront Cobo Hall. The University has been associated with the Detroit Economic Club, one of the world’s top executive leadership forums, since its founding. President Walker serves as a member of their Board of Directors and as presiding officer for a number of meetings. Lawrence Tech staff record and preserve all meeting presentations.

The College of Architecture & Design’s Detroit Studio was founded in 1996 in the New Center area. Its location in central Detroit creates a unique educational setting for students, and its long-term commitment to working with Detroit neighborhoods distinguishes it from other universities. The Detroit Studio serves the community through service learning projects utilizing interdisciplinary collaboration and teamwork to address real needs and problems.

A Commitment to Working Professionals

Lawrence Tech’s legacy of providing evening classes for working adults has evolved into a
focus on providing flexible learning opportunities for professional students. The Recovery Starts Here initiative addressed this population by providing an unprecedented 50 percent tuition grant to 450 displaced workers or their dependent children while developing new academic programs designed to help strengthen and diversify Michigan’s economy. Career networking receptions and workshops matched displaced college-educated workers with innovative companies. The Recovery Starts Here initiative rewarded $3 million of University tuition grants. An additional 200 tuition grants are being offered during the fall 2010 semester.

Restoring Aeronautical Engineering

Lawrence Tech has introduced a minor in aeronautical engineering, one of the hottest areas of engineering in the United States. The program marks a return to a venerable tradition, as Lawrence Tech had a degree program in aeronautical engineering from its founding in 1932 until 1953 when the aviation industry had relocated to California and Washington. During the 1950s, Lawrence Tech students won many national competitions. In the late 1940s, Lawrence Tech students who had flown as pilots in World War II designed, constructed, and flew racing planes in national competitions. Lawrence Tech graduates have been hired by NASA and major aerospace companies due to their education in aerodynamics, structural mechanics, control systems, stability, noise and vibrations, and engineering materials.

Well-Known Alumni

The accomplishments of alumni contribute to an institution’s heritage. Lawrence Tech has produced a large number of notable alumni who have gone on to success in the business and nonprofit world. Several of Lawrence Tech’s notable alumni include:

- Edward Donley – B.S. Mechanical Engineering 1943 – Former president of Air Products & Chemicals and former chairman of the United States Chamber of Commerce.
- John W. Laistler – B.S. Aeronautical Engineering 1958 – Developed the revolutionary roll-on/roll-off cargo design used in cargo aircraft worldwide.
- George Sierant – B.S. Mechanical Engineering 1947 – Engineered the first rear-facing child safety seat and developed the six-way seat adjuster for GM vehicles.
- A. Alfred Taubman – former Lawrence Tech architecture student – One of the nation’s leading real estate developers, innovators, and owners of shopping malls.
- Lewis Veraldi – B.S. Mechanical Engineering 1968 – Led development of Ford Taurus/Sable project and pioneered the use of cross-disciplinary project teams.

2a7: An Inclusive Decision Making Process

The administrative structure at Lawrence Tech focuses on accomplishing strategic planning objectives, managing budget and human resources, and creating new approaches to service delivery. Lawrence Tech administrators are encouraged to develop innovative ways to deliver services while responsibly managing their resources. The faculty governance process at Lawrence Tech has evolved over the past ten years to further faculty decision making about academic programs and courses, assessment, academic program review, and other areas.

Lawrence Tech’s approach to strategic planning involves a wide range of constituents and results in clearly stated planning objectives. Responsibilities and timelines are provided in the strategic plan and in periodic updates reviewed by the Strategic Planning Review Committee. Lawrence Tech’s financial planning processes focus on aligning the University’s strategic plan with fund-raising, tuition, spending, and budget management.

2b. Aligning Strategy with Resources

Citation 2b: Lawrence Tech’s resources base supports its educational programs and its plans for maintaining and strengthening their quality in the future.

Lawrence Tech strives to balance its operational resources with forward-looking planning. Recognizing that the University still relies largely on tuition revenues to fund both operations and future initiatives, the University has undertaken consecutively larger capital campaigns over the past ten years, with the current capital campaign having a goal of $100 million. The focus of the capital campaign is on endowment, scholarships, faculty development, and new and refurbished facilities. These investments will strengthen the University’s capabilities to advance its mission. The University balances its growth objectives by establishing strong linkages between its long-term planning, mid-range enrollment management and budgeting processes, and short-term budget management. These linkages allow the University to build and sustain academic programs while providing a degree of flexibility to respond to new opportunities or unanticipated challenges.

2b1: Financial Resources

2b1: Lawrence Tech’s resources are adequate for achievement of the educational quality it claims to provide.

Lawrence Tech’s financial resources enable it to meet its mission and extend its reach to students, alumni, and the community. Like many similar sized institutions, Lawrence Tech relies heavily on tuition revenue to fund its operations, and this is a recognized area for attention during the upcoming capital campaign. Additional operating income is derived from student fees, proceeds from endowment, rental income, gifts, grants, and indirect cost recovery from increasing levels of sponsored research.

Financial Performance

The University operates with a goal of achieving a nominal operating margin of revenues over expenditures. This operating margin is used to fund capital projects or a quasi-endowment managed by the Board.

Financial performance for the past five years is summarized in Figure 1. (See C2-02-‘Financial Performance-FY2000-FY2005’ for performance over the last ten years.) Prior to FY2005, the University’s budget format and process changed from year to year, making it difficult to compare results. The University experienced a decrease in net assets of $5.76M during this time. Leadership changes and improvements in financial operations were undertaken in FY2005 which stabilized the University’s financial performance.

Since FY2005, the University has followed a standard operating budget format. The process has made it easier to analyze reports, explain variances, and assist departments in understanding their internal processes. Since FY2005, the University has followed a standard operating budget format. The process has made it easier to analyze reports, explain variances, and assist departments in understanding their internal processes. Since FY2005, the University has followed a standard operating budget format. The process has made it easier to analyze reports, explain variances, and assist departments in understanding their internal processes. Since FY2005, the University has followed a standard operating budget format. The process has made it easier to analyze reports, explain variances, and assist departments in understanding their internal processes. Since FY2005, the University has followed a standard operating budget format. The process has made it easier to analyze reports, explain variances, and assist departments in understanding their internal processes.
went through a period of relative stability with small enrollment increases. Revenue increased slightly each year, and tuition discounting was increased. Auxiliary revenues increased as a result of requiring meal plans for residence hall students. Academic support and student services expenses increased as the campus shifted to a more residential student population and more graduate and doctoral programs were added. Physical plant expenses increased primarily due to utility costs. Many deferred maintenance projects were funded during these years. A debt reserve fund was created in FY2005 to set aside funds to cover principal payments. This fund was tapped in FY2009 to ensure a balanced budget in light of a dramatically worsening fund was tapped in FY2009 to ensure a balanced set aside funds to cover principal payments. This projects were funded during these years.

Due to utility costs. Many deferred maintenance Physical plant expenses increased primarily more residential student population and more expenses increased as the campus shifted to a students. Academic support and student services result of requiring meal plans for residence hall small enrollment increases. Revenue increased went through a period of relative stability with any additional funding being requested. A list of these meetings.

The Office of Finance and Administration reviews the funding list with the provost to prioritize requests against University priorities and expected revenues. These recommendations are reviewed and finalized by the president. The budget is communicated to all departments with the option for follow-up discussions on specific items.

Capital Budgeting

All capital requests, with the exception of information technology and campus facilities projects, are assembled during the budget process. A Capital Review Committee, comprised of two faculty members from each college, a representative from both the Faculty Senate and Staff Senate, and a representative from the Office of Finance and Administration meets two or more times each year to discuss and prioritize capital requests against University objectives. The highest priority items are funded according to the allocated capital budget.

Due to the recession and accompanying enrollment decline, Lawrence Tech did not convene the Capital Review Committee in FY2008 or FY2009. See (C2-03-“Capital Projects-FY2007”) for the projects funded through the capital process in FY2007.

Financial Ratio Analysis

The financial ratios developed by KPMG and used by the Commission document current and trended financial performance, and assist the University in making informed decisions about the future use of its financial resources. Lawrence Tech’s performance against the KPMG financial ratios is summarized in this section.

Primary Reserve Ratio

The primary reserve ratio defines how long the institution could continue to operate using only its expendable reserves. SFAS 116 and 117 suggest that a primary reserve ratio of 4 provides about five months of expenses without income. Lawrence Tech’s five-year average of primary reserve ratio is .37 and the five-year trend is shown in Figure 2.

Lawrence Tech has achieved the recommended target for this ratio. The FY2009 ratio would have exceeded the target had it been for investment losses from the recession. The University did experience lower levels for this ratio during the early 2000s while significant capital improvements were being made using a combination of donations and bonds.

Net Income Ratio

The net income ratio represents the extent to which unrestricted activities provide a net surplus or deficit. Ratios should target at least two to four percent as a goal over an extended time period, although the target may vary from year to year. Lawrence Tech’s five-year average of net income ratio is 2.9% and the five-year trend is shown in Figure 3.

Lawrence Tech has achieved the recommended target for this ratio but did not achieve the target for FY2009. There were fiscal years prior to 2005 where this ratio was negative, but corrective measures have returned the University to the targeted range for this ratio. The University has set an internal target of a six percent or higher net income ratio.

Equity Ratio

The equity or capitalization ratio is the portion of the institutions’ assets that are owned or leveraged, and therefore represents the efficiency of its cash management and investment strategies. The target boundaries for this ratio are 50 to 85 percent. Lawrence Tech’s five-year average of equity ratio was 55% and the five-year trend is shown in Figure 4.

Lawrence Tech has achieved the recommended target for this ratio. Prior to 2005, the University completed several building projects which resulted in lower ratios. Debt has been reduced during the last five-year period, resulting in a steadily increasing ratio. The University is currently engaged in an aggressive fund-raising campaign for future capital projects and endowment growth. This fund-raising and continued debt repayment should place the University in a position to make additional large capital investments within the next five years.

Composite Index

The composite index is a combination of the primary reserve, net income, and equity ratios, with a maximum score of 3.0. Private institutions with a composite score of 1.5 to 3.0 are not reviewed by the Commission. Lawrence Tech’s five-year average composite score is 2.82 and the five-year trend is shown in Figure 5.
Lawrence Tech has achieved the recommended target for this ratio. The below-target net income ratio in FY2009 was the primary reason for the lower composite index. The past five years have been extremely difficult years for non-profit higher education institutions in Michigan. Lawrence Tech has undertaken significant expense controls, including a rare reduction in force in early 2009, to maintain a positive net income ratio during the height of the recession. University leaders believe that Lawrence Tech is likely to improve the net income ratio as the expected economic recovery takes hold and as the University diversifies its enrollment base.

As the University moves forward, a significant change to the tuition model coupled with increased fund-raising and sponsored research efforts will further strengthen its financial position. The Board of Trustees strongly supports the financial direction of the University and their private sector leadership experience brings strong financial skills to the decision making process.

**Enrollment Trends**

Lawrence Tech’s student population is largely between 18 and 34 years of age with slightly more male than female students. The majority of Lawrence Tech students have resided in the metropolitan Detroit area. They are career-motivated individuals who take their college education and academic performance seriously. About half of Lawrence Tech students are “traditional” students entering the University as freshmen. Non-traditional students comprise about 35% of the student population and are working adults who have decided to complete their education while holding jobs and raising families. About 15% of Lawrence Tech students are graduate students holding professional positions who are pursuing an advanced degree to further their careers.

**Competitive Environment**

The graduating population of Michigan high school seniors has been falling for several years, with the next small increase projected to occur in 2012. The continuing recession in Southeast Michigan has caused many students to consider lower-cost community college enrollment for the first two years of their college careers. Lawrence Tech’s overall enrollment has increased steadily in the last ten years but decreased since 2007 due to the recession.

Lawrence Tech’s biggest FTIAC recruiting challenge is the extensive system of high quality public universities and community colleges in Michigan, and the state government’s active advocacy of community college enrollment. Community college enrollment in Michigan over the last five years has increased between five and twelve percent annually while enrollment in public universities has increased by one to three percent annually. Enrollment at some public institutions has actually declined.

Loss of tuition reimbursement by Southeast Michigan companies resulted in a loss of 600 graduate students during the 2008-2009 academic year. The University regained a number of these students through the Recovery Starts Here initiative while rekindling its historic reputation as a quality destination for part-time adult professional students.

Lawrence Tech, despite being a private institution with an excellent academic reputation, competes with both private and public institutions in its traditional market. Michigan has a loosely coordinated and actively competing network of 15 excellent public universities including three constitutionally autonomous institutions, two Big Ten research institutions, and three Mid-American Conference institutions. Establishing intercollegiate athletic teams and building additional residence halls will enhance our competitive position.

Summaries of enrollment trends over time are discussed in the following sections. Detailed enrollment data is provided in the Institutional Snapshot, and complete data sets are provided in the Evidence Repository.

**Students and Credit Hours**

Overall student enrollment and credit hour trends are summarized in Figure 6. Lawrence Tech’s enrollment has been significantly impacted by the recession. The impact was more significant on graduate programs due to job losses and withdrawal of employer tuition reimbursement. The Recovery Starts Here initiative brought 450 new and returning students to the campus, and fall 2009 new student enrollment increased 23% across all categories: FTIACs, transfer students, and graduate students. Out-of-state new student enrollment increased by three percent, and international enrollment now accounts for 12% of overall enrollment.
Student enrollment and credit hour production by college for fall 2008 and fall 2009 are summarized in Figures 7 through 10. Among the academic programs holding promise for continuing enrollment growth are media communications, biomedical engineering, architectural engineering, and transportation design. The hybrid Master of Architecture program already enrolls 40 students from across the country in its first year of operation. Entry into NAIA intercollegiate athletics is expected to help increase undergraduate enrollment in many arts and sciences programs. Programs struggling to regain enrollment include mechanical engineering, electrical engineering, and master’s programs in the Colleges of Engineering and Management. The University believes that this situation is temporary and as the economy starts regaining strength our enrollment will also continue to increase.

Demographics

A summary of male and female enrollment trends is shown in Figure 11. The ratio of male to female enrollment has remained steady over the past five years, underscoring the difficulties faced by all institutions to attract female students to the STEM disciplines.

Full-time and part-time enrollment for males and females is summarized in Figures 12 and 13. Approximately 66% of Lawrence Tech’s undergraduate population is comprised of traditional college age students 21 years or younger. The age distribution for Lawrence Tech’s 3,193 undergraduate students for fall 2009 by gender is shown in Figures 14 and 15.

Slightly more female students enroll early, with age distribution for the remaining students comparable between males and females.

Minority enrollment has increased over time, as summarized in Figures 16 and 17. Among the academic programs holding promise for continued growth are media communications, biomedical engineering, architectural engineering, and transportation design. The hybrid Master of Architecture program already enrolls 40 students from across the country in its first year of operation. Entry into NAIA intercollegiate athletics is expected to help increase undergraduate enrollment in many arts and sciences programs. Programs struggling to regain enrollment include mechanical engineering, electrical engineering, and master’s programs in the Colleges of Engineering and Management. The University believes that this situation is temporary and as the economy starts regaining strength our enrollment will also continue to increase.

Trends in undergraduate and graduate applications, admissions, and enrollment are summarized in Figures 20-23. For the purposes of this discussion, “conversion” is defined as the ratio of admissions to applications, and “yield” is defined as the ratio of enrollment to admissions. Lawrence Tech’s overall application conversion rate for fall 2009 undergraduates was 49.7%, slightly higher than the national average of approximately 45%. The undergraduate yield.
rate was 32.2%. Undergraduate conversion and yield rates are dropping nationally because of the number of students applying to seven or more colleges through higher education portals. The yield rate for graduate students was 50% in fall 2009.

The conversion rate for out-of-state students was 34.4% in fall 2009, and the yield rate for out-of-state students was 11.5%, both considerably lower than for in-state students. Conversion and yield rates for out-of-state graduate students were 57.1% and 20.5% respectively.

**Student Retention**

Freshman to sophomore retention rates have increased over the past five years from 68.9% to 77.1% as shown in Figure 24. See (C2-04-“Undergraduate Retention by Ethnicity-Fall 2004-Fall 2008”) for a breakdown of retention rates by ethnicity. Lawrence Tech’s retention rate for African-American students rose from 25.8% in fall 2005 to 62.1% in fall 2009.

**Degrees Awarded**

The number of undergraduate degrees (associate’s and bachelor’s) and graduate degrees (master’s and doctoral) awarded for the past five years is summarized in Figure 25. Approximately 40 undergraduate and graduate certificates are also awarded each year, and not included. See (C2-05-“Degrees Awarded by Ethnicity-2005-2009”) for a breakdown of degrees by ethnicity.

**Tuition Rates**

Tuition rates are set annually by the Board of Trustees and are announced to current and prospective students by the provost each spring. In the past, multiple tuition rates have been established for the same courses delivered at different course sites. This historic practice is being changed where possible to standardize tuition rates for undergraduate, graduate, and doctoral programs regardless of delivery location.

**In-State Tuition Competitiveness**

As a private institution relying largely on tuition revenues, the University is sensitive to the cost of higher education. For the 2009-2010 academic year, tuition increases were held at the lowest rate possible given the high regional rate of unemployment and the loss of employer tuition reimbursement. Lawrence Tech does not charge different tuition rates for in-state, out-of-state, or international students.
Lawrence Tech’s annual tuition increases for the past ten years are shown in Figure 26. The average annual tuition increase during this ten year period was 7.6%.

The significant tuition increase in 2005 resulted from infrastructure upgrades to support the undergraduate tablet-laptop program, and the incorporation of the student technology fee into tuition.

Lawrence Tech competes for many of its students with private universities and colleges in Michigan. Figure 27 shows Lawrence Tech’s tuition compared to Michigan private universities and colleges. See (C2-06-“Tuition Rates at Michigan Private Universities and Colleges-FY2009-FY2010”) for a full comparison. The average cost of tuition for FY2010 for these institutions was $21,119. The average tuition increase for all above-average cost institutions was 4.9% as contrasted with 3.6% for all below-average cost institutions.

Figure 26: Tuition Increases

<table>
<thead>
<tr>
<th>Year</th>
<th>Highest (Kalamazoo College)</th>
<th>Kettering University</th>
<th>Lawrence Tech</th>
<th>FY10 AVERAGE</th>
<th>Lowest (Baier College)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY09</td>
<td>$30,823</td>
<td>$26,936</td>
<td>$21,979</td>
<td>$21,119</td>
<td>$8,550</td>
</tr>
<tr>
<td>FY10</td>
<td>$32,643</td>
<td>$28,032</td>
<td>$22,958</td>
<td>$21,119</td>
<td>$8,775</td>
</tr>
</tbody>
</table>

Percent Increase

- Highest (Kalamazoo College): 5.9%
- Kettering University: 4.1%
- Lawrence Tech: 4.5%
- FY10 AVERAGE: 4.2%
- Lowest (Baier College): 2.6%

Figure 27: Tuition Rates at Michigan Private Universities and Colleges

Most private institutions in Michigan have a liberal arts focus, with only Kettering University competing directly against Lawrence Tech in a significant number of its academic programs. Kettering University’s FY2010 tuition was 22% higher than Lawrence Tech’s. Lawrence Tech competes directly against many publicly funded universities within the state of Michigan. Significant competition for engineering, management, information technology, and natural science students exists from six public universities within Southeast Michigan: Oakland University, Wayne State University, University of Michigan-Dearborn, University of Michigan-Flint, Eastern Michigan University, and the University of Michigan-Ann Arbor. Similar competition exists for graduate students in engineering, computer science, management, and information technology.

Figure 28-“Tuition Competitiveness with Michigan Public Universities-FY2009-FY2010”) for a comparison of Lawrence Tech’s undergraduate tuition competitiveness with ten Michigan public universities for in-state and out-of-state students. In-state tuition is of course much lower at all benchmarked public universities, but the average tuition increase for state-funded schools for FY2010 was 6.4% for in-state students and 6.0% for out-of-state students, compared with a 4.5% increase at Lawrence Tech.

Out-of-State Tuition Competitiveness

For out-of-state students, the average tuition for the ten benchmarked Michigan public institutions discussed above is virtually equal to Lawrence Tech’s tuition. This provides Lawrence Tech with the opportunity to recruit talented engineering and architecture students from outside Michigan while remaining on an equal cost footing with Michigan’s public universities.

Lawrence Tech is also a lower-cost option for national students seeking a technologically focused education as shown in Figure 28. The reputation and cost for Lawrence Tech’s undergraduate programs in architecture and engineering have the potential to draw more students from across the country even at higher tuition rates.

New Tuition Model

Lawrence Tech is implementing the first phase of a new tuition model during 2010 which is designed to correct structural issues with the University’s net income ratio. Correcting this issue will allow the University to invest in capital expenditures, faculty and staff salary, and TIAA-CREF retirement funding, address deferred maintenance projects, and support marketing the University’s academic programs. All of these investments will help the University address its strategic planning objectives.

The Board of Trustees has approved tuition and fee increases of eight percent for summer and fall 2010. At the same time, the financial aid budget has been increased by 14%. Provost’s grants were increased by 30% in FY2009 and by 50% in FY2010. The University will also award more graduate scholarships and grants. The Art & Science Group has been engaged to investigate Lawrence Tech’s current tuition structure, financial aid practices, and recruiting strategies. Art & Science will make recommendations to the University on adjusting these practices to optimize regional and national student enrollment.

Lawrence Tech is already the most reasonably priced private non-liberal arts institution in the state of Michigan. Michigan’s public universities have substantially increased their tuition rates with the recent decline of state funding, and the uncertain future of the state’s economy makes it likely that more substantial tuition increases lie ahead. From a national perspective, Lawrence Tech’s academic programs are very similar to those offered by Rochester Institute of Technology and Illinois Institute of Technology, both of which are also members of the Association of Independent Technological Universities, but which both charge substantially higher tuition than Lawrence Tech.

With academic initiatives including the student tablet-laptop program, Undergraduate Leadership Curriculum, entrepreneurship curriculum, QUEST program, undergraduate Core Curriculum, online master’s degree programs, and practitioner-scholar doctoral programs, Lawrence Tech has positioned itself to deliver a compelling argument for both in-state and out-of-state students to enroll at the University.

Financial Aid

Lawrence Tech’s students, like those at most institutions, fund their education using a variety of sources including parent or student income, savings, parent or student borrowing, grants, and scholarships. Lawrence Tech discounts its tuition through a range of financial aid awards and...
loans. Awards are given based on a combination of academic qualifications and financial need. Types of financial aid include:

- Federal Title IV Programs
- State of Michigan Programs
- Lawrence Tech Budgeted Scholarships and Waivers
- Donor Funded Scholarships
- Other Scholarships

Almost 2,400 Lawrence Tech students accepted a financial aid award package averaging $16,914 in the 2008-2009 academic year, distributed as shown in Figure 29. Lawrence Tech is not authorized by the Department of Education to provide Title IV aid to students not enrolled in a full degree program. The Commission and the Department of Education are working on regulations governing this practice and Lawrence Tech will evaluate new regulations as they are promulgated.

Cost of Attendance

Lawrence Tech's 2010-2011 annual cost of attendance for full-time undergraduate (15 semester credit hours) and graduate students (seven semester credit hours) is summarized in Figure 30. See (C2-08/“Cost of Attendance-FY2001-FY2011”) for historic cost of attendance data.

Award History

Tuition discounting has substantially increased over the past decade as shown in Figure 31. See (C2-08/“Financial Aid Award History-2000-2009”) for a ten-year view of award history. Approximately 23% of Lawrence Tech funded awards are need-based and 77% are merit-based. Grants and scholarships are awarded by the faculty-led Scholarship Committee. See (C2-10/“Lawrence Tech Funded Awards-2009-2010”) for award levels, criteria, and numbers of awards accepted for the 2009-2010 academic year. Approximately $13M in financial aid awards were offered to Lawrence Tech students in 2008-2009, and approximately $8.9M was accepted. The significant increase in Lawrence Tech funded financial aid in FY2009 was due to additional resources allocated to support the Recovery Starts Here initiative, which provided tuition support to 450 displaced workers and their dependents. Figures 32-35 show breakdowns of undergraduate and graduate students applying for and receiving aid over the past five years.

The percentage of undergraduate students applying for and receiving aid has fallen over the past five years, while the percentage of graduate students applying for and receiving aid has remained relatively constant.

Library Spending

The University Library has received increased levels of funding over the past ten years to build its physical and virtual collections. Spending trends for the University Library collections are shown in Figure 36. Annual funding increases have ranged between 6.2% and 17.3% and have averaged over 9.5% for the past seven years. Recent investments have focused on building the Library's digital collections, driven by the University's new academic programs, increased demand by doctoral students, availability of new digital resources, and the growth of online classes. Space restrictions in the Library's current location in the Buell Building place a practical limit on the Library's physical holdings.

Information Technology Spending

Lawrence Tech has dramatically increased spending on information technology infrastructure, student computers, software, and support services over the past ten years. Major University decisions driving information technology investments include the Blackboard learning management system in 1998, the student laptop program in 2000, the first fully wireless campus in the state of Michigan in 2001, and the Banner administrative information system in 2002. Capital and non-salary investments supporting campus information technology are summarized in Figure 37.

Efficiency and Sustainability

The A. Alfred Taubman Student Services Center has been built to the U.S. Green Building Council’s LEED specifications at the silver level. The 42,000-square-foot building meets the criteria of sustainable site development and construction, water and energy efficiency, recycled materials selection, and indoor environmental quality. One hundred twenty-one geothermal wells sunk 300 feet below the University Quadrange provide heating and cooling for the building. A vegetated roof, weirs, tile fields, and long-rooted grasses filter rainwater and reduce run-off to two tributaries of the Rouge River by 60%.

Figure 29: Average Financial Aid Award Package

Figure 30: Annual Cost of Attendance for 2010-2011

Figure 31: Tuition Discounting History (millions)

Figure 32: Number of Undergraduate Students Applying For and Receiving Aid

Figure 33: Percent of Undergraduate Students Applying For and Receiving Aid
Lawrence Tech participates in DTE Energy’s energy optimization program for commercial and industrial customers. A number of improvements were made to the Buel Building, Rider Field House, Applied Research Center, and Structural Testing Lab. Occupancy sensors have been installed in most offices and some classrooms, switching off lights when spaces are unoccupied. The University is retrofitting older fluorescent light fixtures with new tubes and ballasts to improve energy efficiency.

Lawrence Tech’s sustainability efforts resulted in the Detroit Free Press selecting the University as one of 16 inaugural “Michigan Green Leaders” in April 2010. Lawrence Tech was chosen from over 350 nominees to receive the award. Lawrence Tech maintains a number of external partnerships with campus service providers. All contractual relationships are awarded through competitive bidding and are managed by the vice president for finance and administration.

Campus facilities operations have been contracted to ARAMARK since 1997. Campus dining services were awarded to ARAMARK in 2010. Campus bookstore services are contracted to Barnes & Noble College Bookstores. Student laptop and tablet computers are provided under contract from Computer Data Warehouse.

2b2: Resource Development and Allocation

2b2: Plans for resource development and allocation document Lawrence Tech’s commitment to supporting and strengthening the quality of the education it provides.

Resource development and allocation are driven by the campus strategic and academic plans. The Academic Program Planning and Review process adds a key element of continuous improvement to academic plans and budgetary needs.

The current strategic plan includes a specific objective to allocate resources based on clearly articulated priorities and making information-based decisions. Examples of planning and budgeting priorities in the current strategic plan include:

- Establishing a student leadership development program
- Improving faculty development, recruitment, retention, and recognition programs
- Developing biomedical, health, and life sciences programs
- Expanding online degree and certificate programs
- Extending recruitment to reach a sustainable goal of 15% international student enrollment
- Reviewing and updating the campus master plan and identifying new facility projects
- Enhancing the Library’s physical and virtual resources
- Upgrading campus teaching facilities to ensure common use of instructional technologies

The long-term vision is clearly documented as part of the University’s capital campaign. The major initiatives of the capital plan include:

- A new Engineering and Science building
- Expansion of facilities for the College of Architecture & Design
- Construction of additional student housing
- Renovation of the Buel Building into a Student Union
- Improvements to the campus perimeter and entrances
- Upgraded upgrades of the IT infrastructure and network
- Upgrades to the teaching and learning environment
- Relocation of the College of Management
- Upgraded facilities for student activities
- New construction to support a future fifth college

Long-term plans are supported by the capital campaign and ongoing capital investments, with downstream operating costs built into the annual budgeting cycle.

Budget Planning

Annual campus budget planning uses a rolling three-year projection assuming flat enrollment and increasing expenses. Additional considerations include new academic programs, expected cash donations, demographic trends, and tuition rates charged by competitors. Tuition rates are approved on a one-year basis from these projections. Annual budgets are developed beginning in January with at least two cycles of review before the budget is approved in July.

New capital expenditures not associated with the capital campaign are evaluated separately from operating budgets by the Capital Budget Review Committee, a faculty-driven committee which meets two or more times during the annual budget process. The Committee is comprised of two representatives from each college and is supported by representatives of the finance and administration department as non-voting members.

Figure 34: Graduate Students Applying For and Receiving Aid

Figure 35: Undergraduate Students Applying For and Receiving Aid

Figure 36: Library Collection Funding

Figure 37: Information Technology Capital Spending

Figure 38: Lawrence Tech Employment History

Figure 39: Full-Time Employees by Major Unit – March 2010
Lawrence Tech has become a more complex organization over the past decade, requiring a broader range of academic and professional skills on the part of its employees. Implementation of three doctoral programs and the University’s emphasis on applied research has improved faculty research and scholarly output. Implementation of the One-Stop Center has resulted in cross-training of student services staff members. A more robust information technology infrastructure has resulted in greater technology skills on the part of all University employees.

A comprehensive human resources Web site was first created in 1999 and was significantly updated in 2003 and 2007. The Web site provides easy access to information needed by employees to conduct performance evaluations, enroll for benefits, and initiate personnel action requests. Human Resources provides all employment information and documents electronically, and moved to electronic W2 production in 2008.

Employment Trends and Diversity

The number of employees at Lawrence Tech has increased modestly over the past five years as shown in Figure 38. Overall employment has increased 9% with academic positions increasing by 10.4% and administrative and professional positions increasing by 9.5%. Lawrence Tech employs both full-time and part-time employees in academic and non-academic units. The number of full-time employees by major unit is shown in Figure 39. See (C2-1-“IPEDS Employee Data-FY2000-FY2008”) for a complete employment breakdown.

Lawrence Tech is an Equal Opportunity Employer. See (C2-12-“IPEDS Employee Data-FY2000-FY2008”) for a complete table of historic IPEDS employee data for both full-time and part-time employees, including a separate table for full-time faculty.

Females accounted for 42% of all employees in 1999 and 39% of all employees in 2008 as shown in Figure 40. Females comprise 50% of senior administrative positions. Minorities accounted for a constant 22% of all employees over the past ten years as shown in Figure 41. Employees not reporting ethnicity are not counted in this table.

The Faculty

Lawrence Tech’s faculty members are recruited from a wide range of institutions and industries. The University has historically recruited faculty members with a combination of academic accomplishment, professional experience, and outstanding teaching ability.

The distribution of full-time faculty by academic department, excluding deans and associate deans, is shown in Figure 42. All faculty members hired in the past decade hold a terminal academic degree in their discipline. The field of architecture recognizes the Master of Architecture as its terminal professional degree. Some graphic design instructors hold bachelor’s degrees as is the case in professional practice. The fields of engineering and architecture value professional certification in addition to academic preparation, and many faculty members in these disciplines hold professional licenses as practicing engineers or architects.

Figure 43 shows the breakdown of highest degree for full-time faculty over the past five years. See (C2-13-“Highest Degree Earned By Department-March 2010”) for a complete breakdown of highest degrees by department for both full-time and adjunct faculty.

Lawrence Tech relies on a highly qualified group of adjunct faculty members to support the work of its full-time faculty. Many adjuncts from local industries are recognized as national experts. Approximately 300 adjunct faculty are employed during each academic year, with one-third of adjunct faculty holding a terminal degree in their field. Students value the perspective and experience of adjunct faculty members as they bring the perspective of the current practitioner to the classroom. Adjunct faculty members support traditional and online classes and are evaluated each semester for continual employment.

Lawrence Tech’s adjunct faculty salaries are competitive with regional private institutions. Adjunct faculty members teaching for ten or more consecutive years receive an additional five percent payment. Hourly compensation rates for adjunct faculty are based on the type of classes taught, the disciplines involved, and the level of research activity required. See (C2-14-“Adjunct Faculty Compensation Schedule”) for more information on adjunct faculty compensation.

Employee Benefits and Services

Lawrence Tech provides a comprehensive employee benefits package to all full-time employees. Benefits include medical, dental, vision, and both short- and long-term disability policies. The University also supports flexible spending accounts and provides an employee assistance program, pre-paid legal services, identity theft services, and an educational assistance program for employees, their spouse, and dependent children.

Retirement Plans

The University currently offers two voluntary, tax sheltered retirement saving plans to employees: Defined Contribution Retirement Plan and Tax-Deferred Annuity Plan. Both plans are funded through the Teachers Insurance and Annuity Association College Retirement Equities Fund (TIAA CREF). Historically the University has provided a matching five percent contribution toward the Defined Contribution Retirement Plan. The University’s contribution was suspended in fall 2009 due to the economic recession. The matching contribution will be restored as soon as possible.

Lawrence Tech employs a number of administrators to oversee academic and administrative areas of the University. Some administrators are also members of the faculty but receive a separate administrative appointment without teaching load. Some faculty members assume administrative responsibilities for academic programs via release time or as a service component of their faculty contract.

Lawrence Tech employs a wide range of professional and support staff to provide administration, student services, technology, library, and other skills to the campus community. Lawrence Tech is an Equal Opportunity Employer. See (C2-11-“Full-Time and Part-Time Employment by Major Unit”) for a more detailed employment breakdown.
Lawrence Tech recognizes that the skills and knowledge of its employees are critical to the success of the University. The educational assistance program encourages personal development through formal education so employees can improve job-related skills or enhance their ability to compete for higher-level jobs.

Full-time and part-time employees and their families are eligible for tuition and application fee waivers to attend Lawrence Tech undergraduate classes. Employee and dependent tuition waivers from the last four years totaled over $3,300,000. Employees may also, with the support of their supervisor, request tuition support for academic programs outside of Lawrence Tech supporting their professional development. External tuition reimbursement for the last four years totaled almost $20,000. See {C2-16-"Employee and Dependent Tuition Assistance"} for more information on these programs.

Lawrence Tech publishes a wellness e-newsletter to faculty, staff, and administrators. The Rider Field House is available for use by employees at a nominal fee. Employees receive a ten percent discount for Bookstore purchases.

"Lawrence Tech is an institution that deserves the highest applause, the highest salute, because it is a great university and it is one that you can be extremely proud of."

— Joe Knollenberg, Member of Congress of the United States

<table>
<thead>
<tr>
<th>Bachelor</th>
<th>Master</th>
<th>Master Arch</th>
<th>JD</th>
<th>PhD</th>
<th>Total</th>
<th>% Terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>24</td>
<td>7</td>
<td>2</td>
<td>77</td>
<td>113</td>
<td>76.1%</td>
</tr>
<tr>
<td>2006</td>
<td>7</td>
<td>21</td>
<td>8</td>
<td>2</td>
<td>120</td>
<td>76.7%</td>
</tr>
<tr>
<td>2007</td>
<td>7</td>
<td>21</td>
<td>10</td>
<td>2</td>
<td>124</td>
<td>75.8%</td>
</tr>
<tr>
<td>2008</td>
<td>32</td>
<td>24</td>
<td>10</td>
<td>4</td>
<td>88</td>
<td>76.7%</td>
</tr>
<tr>
<td>2009</td>
<td>17</td>
<td>21</td>
<td>9</td>
<td>4</td>
<td>87</td>
<td>77.5%</td>
</tr>
</tbody>
</table>

**Employee and Dependent Tuition Assistance**

**Lawrence Tech** intentionally develops its human resources to meet future changes.

**Promotion and Tenure**

The University grants tenure to qualified faculty for whom the University can identify a long-term and sustaining need. Tenure gives faculty academic freedom in teaching and research. The decision to grant tenure is based on the achievements, competence, and future promise of the faculty member as a productive participant in the academic life of the University. Faculty with titles of assistant professor or associate professor cannot be reappointed after six years of service unless they are awarded tenure. Faculty hired at the rank of professor must petition for tenure consideration within their first year of service.

Consideration for tenure is not optional for eligible faculty. Faculty applying for tenure submit a written petition supported by comprehensive portfolios that document their goals and accomplishments in teaching, scholarly activity, and service. The chairperson, faculty council, and other designated faculty body independently make recommendations to the dean on the tenure application. The dean also submits a recommendation to the provost, and the provost and president must recommend approval to the Board of Trustees, which makes the decision regarding award of tenure. Only the Board of Trustees is able to award or remove tenure.

Complete information on promotion and tenure processes are found in the Faculty Handbook, which is available as {C2-16-"Faculty Handbook"}.

**Administration and Staff Performance Evaluation Planning**

A Performance Evaluation Model (PEM) was created in 2001 to provide a consistent, flexible, and effective method to measure the performance of administrators and professional staff. The PEM includes eight areas of accountability, three optional areas, and weighted categories used at the supervisor’s discretion. The performance evaluation process is conducted during the fall semester to align with the University’s salary and performance planning programs. The PEM program was updated in 2002 and 2004 based on employee surveys.

Each employee submits an annual Employee Performance Self-Assessment form to be considered by the supervisor during the evaluation process. This component facilitates an open dialogue between the employee and the supervisor. Academic and non-academic administrators are also reviewed using a 180-degree evaluation instrument.

**Performance Improvement and Progressive Corrective Action**

If an employee’s performance does not meet established expectations, a Performance Improvement Plan may be initiated by the supervisor in consultation with the human resources office. The plan provides a written agreement between an employee and supervisor that identifies areas of below-standard job performance. It includes measurable objectives by which improvement will be evaluated, and specific timelines within which the employee must meet the stated objectives.

If the Performance Improvement Plan proves ineffective or if immediate action needs to be taken due to unacceptable employee behavior, the supervisor completes a Progressive Corrective Action form, which documents an employee’s violation of University policies and/or employment requirements. The form provides a chronological history of actions and consequences, and serves as the basis for progressive disciplinary actions or termination.

**Employee Recognition Programs**

Several awards for outstanding performance are given each year to faculty, staff, and administration. A listing of recent award winners is provided in the Evidence Repository. Lawrence Tech recognizes employees for their years of service beginning at the fifth year. Award winners receive a specially designed Lawrence Tech service award pin. Employees with 15 or more years of service may choose from a variety of awards from a special catalog. All award winners are honored at a luncheon ceremony each September. See {C2-19-"Employee Recognition Awardees"} for a list of recent award winners.

**Marburger Awards**

Dr. Richard Marburger, President Emeritus, and his wife Mary founded the Marburger Award program upon his retirement. The Marburger Awards program is designed to recognize faculty, administration, and staff who contributed the most outstanding and meritorious service that year. Recipients of this award receive a certificate and a $1,000 honorarium. Awardees are elected by their peers and honored at a luncheon ceremony in December.
The Human Element – This module provided a framework for evaluating and enhancing personal and staff performance, and included conflict management skills.

Communication and Collaboration – This introduced techniques to motivate, inspire, and lead employees at all levels of an organization, including strategies for communicating with internal and external audiences.

Managerial Facts & Functions – This module provided fundamental business techniques in the area of managing projects, change, finance, and risk.

Managing the Mix – This module broadens awareness of student development, government regulatory guidelines, and contract language.

A new Professional Protocol Workshop will be offered in fall 2009 to employees and students.

Nominations are accepted at any time from staff, faculty, or students through the Staff Resource Office.

Staff suggestions are reviewed periodically by the Human Resources Office, faculty, staff, and administrators on a wide range of workplace management issues and skills.

Idea Inbox

Lawrence Tech initiated an Idea Inbox in 2009. This employee suggestion program elicits ideas and suggestions from all members of the University community. All ideas are reviewed by a committee for possible action. Nine of 27 ideas have already been selected for implementation, including recycling toner cartridges, the campus emergency security number, moving to CFL bulbs, and establishing a campus bicycle loan program.

Social Facilities

The University sponsors a number of social events throughout the year to provide opportunities for faculty and staff to engage in a relaxed atmosphere. Events include the all-campus holiday luncheon, birthday celebrations held throughout the academic year and hosted by the provost, and vice president for finance and administration, a fall campus picnic, and social activities associated with award and recognition ceremonies.

Employee Surveys

Several employee surveys have been conducted to gauge employee perceptions of the workplace and identify issues to address. Many informal surveys are conducted in the process of designing new services and administrative procedures.

The most recent formal survey of Lawrence Tech employees was conducted by Morpace Associated in 2002. Surveys were distributed to 517 University employees with an effective return rate of 36%. The survey found an overall satisfaction score for all employees of 7.2 on a ten-point scale. The highest areas of satisfaction include the general employment environment and direct management. Employees felt that the University was positioned to achieve most of its strategic planning objectives, and were positive about overall management communications, workplace technologies, employee empowerment, and University effectiveness.

Concerns were expressed regarding interdepartmental communication, handling of employee suggestions and complaints, and the effectiveness of senior leadership in seeking employee input to decision making. Concerns were also expressed over the quality of information technology services. Both of these concerns have received considerable attention and improvement since the satisfaction survey was conducted. See (C2-20-Morpace Employee Satisfaction Survey - 2002) for the executive summary and survey instrument.

Developing Financial Resources

Lawrence Tech’s history of financial resource development and investment documents a forward-looking concern for ensuring educational quality.

The Mary Ann Marcum Customer Service Award

The Mary Ann Marcum Customer Service Award is made possible through a generous gift by Frank E. Marcum in memory of his late wife, Mary Ann. This award is presented each semester to Lawrence Tech employees of any job classification who provide their customers with quality service and assistance. The recipients are chosen by a selection panel and the award is presented at a public reception.

Teaching and Learning Using Technology Award

The Teaching and Learning Using Technology Award is presented to a deserving faculty member each spring with a plaque and a cash prize of $750. The criteria for selecting the awardee are the innovative use of technology to engage students and improve student learning, the discipline-specific nature of the innovation, and feedback on how this innovation increased student engagement and performance.

Staff Member of the Month Award

The Staff Council recognizes Lawrence Tech staff each month for their outstanding contributions to the University. Nominees exhibit professionalism, dedication, and integrity in the workplace, and excel in the performance of their duties. Nominations are accepted at any time from staff, faculty, or students through the Staff Senate Web site.

License to Lead Program

The License to Lead program was delivered in 2006 and 2007 to administrators and professional staff to enrich skills and prepare for future opportunities. The series focused on partnering and teamwork in the workplace. Approximately 45 faculty, staff, and administrators participated in the four seminars comprising the program:
The Center for Innovative Materials Research (CIMR) is a state-of-the-art laboratory for the research, development, and testing of carbon and other advanced materials for defense, automotive, and infrastructure applications. Connected to the Engineering Building and dedicated in 2008, CIMR was made possible by a $11 million research agreement with the Army Research Lab and the U.S. Army Tank-Automotive Research, Development, and Engineering Center.

The Don Ridler Field House is named for the coach and athletic director who led the Lawrence Tech basketball teams of the 1940s and 1950s to national prominence. The field house includes a 1,500-seat gymnasium, exercise track, weight room, saunas, racquetball courts, and locker facilities.

The Engineering Building was the first building on the Southfield campus when it opened in 1955. Expanded in 1987, the building houses classrooms, laboratories, and offices for the College of Engineering.

The Professional Development Center, built in 1959 and substantially upgraded in 1996, provides facilities for non-degree professional training and business acceleration.

The Residence Halls – University Housing-North (2002) and University Housing-South (1977) house approximately 600 residential students. Both residence halls feature one- and two-bedroom apartment-style suites that accommodate two to four students. Single rooms are available only in University Housing-South.

The Science Building, opened in 1967, was extensively renovated and upgraded in 1999 with new computer and multimedia equipment. It houses classrooms, laboratories, and faculty offices for Arts & Sciences. In 2009 chemistry laboratories were upmodified to multipurpose live science laboratories. The Edward Donley Computer Center and 303-seat auditorium are in this building.

The University Technology and Learning Center, opened in 2001, is an 87,000-square-foot building housing technology labs and studios. It also houses the University Gallery, Mabach Inter-Faith Lounge, Lear Auditorium, Denso Interactive Center, and Media Services Studio. The building connects with both the Architecture and Engineering buildings.

The University Quadranle at the center of campus features crosscutting paths, granite benches, trees, and a biorecalc of grasses to filter rainwater. It also caps a field of 121 geothermal wells which heat and cool the Taubman Center. The University Quadranle features a solar-powered “gardens of light,” an earth-integrated amphitheater, and the metal sculpture, Occam’s Razor. A circle of basalt boulders from Michigan’s Upper Peninsula creates a rock plaza facing current operations or which cannot be funded within the current capital budget. Deferred maintenance projects are those that fall into one of the following categories from the current fiscal year to several years into the future.

The current deferred maintenance inventory totals $6,240,000 with $335,000 of projects needing completion by FY2012. Shorter-term projects include replacement of domestic water heaters, upgrading fire alarm units, replacing rooftop HVAC units, and constructing an additional pole barn for salt storage. Longer-term projects include HVAC replacements, bathroom remodeling, carpet replacement, perimeter lighting, and new entry doorways. See (C2-22: “Deferred Maintenance Inventory-August 2009”) for a completed list of deferred maintenance initiatives.

Investments in Intellectual and Physical Capital

Lawrence Tech has established a 25-year program for substantial investments in its intellectual and physical capital to achieve its vision of preeminence. The plan is designed to position Lawrence Tech as the leading private university of the metropolitan Detroit area, recognized nationally through distinctive and applied research projects.

Anticipated investments in intellectual capital will be funded from an endowment totaling $344.5 million with an additional $244.5 million targeted for physical capital. In addition to investments in the four colleges, investments will also be made for scholarships, faculty support, and university development.

See (C2-23: “Capital Campaign Overview”) for more details on the current capital campaign and associated campus master plan elements.

Campus Master Planning

The campus master plan is the third major revision of the plan first developed in the late 1990s. The planning vision builds out the existing campus space, extends the campus into property owned on the southeast and western ends of the campus, and assumes future space acquisitions on the western and northern boundaries of the campus. The planning horizon for the campus master plan is 25 years and includes the following phases:

Phase 1 (2008-2013) – Constructing a new Engineering and Science Building, renovating the Swed Building to establish a Student Union, upgrading the campus network, and investing in the teaching and learning environment.

Phase 2 (2014-2018) – Upgrading the campus perimeter and entrances, renovating the Buell Building, upgrading engineering and science facilities, and constructing a new residence hall.

Phase 3 (2019-2023) – Upgrading the campus perimeter and entrances, renovating the South Housing unit, expanding and renovating the College of Architecture & Design, and upgrading the student environment including the Ridler Field House.

Phase 4 (2024-2028) – Continuing renovation of the Buell Building, and constructing a new building for the College of Management.

Phase 5 (2029-2033) – Continuing improvements to the perimeter and entrances, constructing a conference and commencement center, and constructing a new building for a future college.

Engineering and Science Building

The largest physical investment in the campus master plan is for a new Engineering and Science Building. This structure will consist of rehabilitation of the current Engineering building and new additions which will replace the existing Engineering Building, and augment the existing Science, and Architecture buildings. The new building, with a gross footprint of 152,000-square-feet and a usable footprint of 89,000-square-feet, will provide modern classroom and laboratory facilities for the Colleges of Architecture & Design, Engineering, and Arts & Sciences. The building will feature flexible laboratory and office space, student research pods, and collaborative learning classrooms using the latest video and electronic technologies. The building will also provide additional social space for students to encourage interaction between students in multiple academic programs.

Many of the existing laboratories located in the Engineering Building will be integrated into the new facility. New Arts & Sciences laboratories will support physics, robotics, and other programs. New Architecture & Design studios will support Architectural Engineering, and other programs.

Gifts to the University

Gifts to the University are solicited as cash, gifts of stock, gifts of real property, and planned gifts. Planned gifts include gift annuities, charitable remainder trusts, charitable lead trusts, and similar gifts. Revocable gifts such as bequest intents, inclusion in personal trusts, and estate-based gifts are also included. Corporate and matching gifts are also solicited, although the number of firms offering matching gifts has declined significantly over the recession. Major gifts are defined as gifts of $10,000 or more and leadership gifts are defined as $1,000,000 or more.

Leon Linton (BSME, 1962) recently donated $2.5 million to name and endow the Department of Mechanical Engineering. Linton is the founder and CEO of Southern Systems Inc., which designs, builds, and installs custom conveyor systems for manufacturing and distribution facilities. His gift will help the Department of Mechanical Engineering fund laboratory equipment, facilities, and other needs to enhance the students’ educational experiences.

The University’s fundraising database was screened by MaGiC for prospects in late 2009. The screening helped identify new major gift prospects and refined existing potential prospects. This screening will allow for greater segmentation of annual fund prospects to support more focused appeals. A summary of all gifts to the University over the past ten years is provided in Figure 44.

Annual Alumni Fund

Lawrence Tech alumni participate in annual fund-raising efforts and contributed almost $3M to the University during FY2009. See (C2-24: “Alumni Giving-FY2001-FY2009”) for more details on alumni giving. While the average gift size has increased significantly over the last few years, participation rates have fallen recently.

The Alumni Association uses a telefund appeal for its annual fund drive. All donors who made a gift in the prior year receive a phone call thanking them for their gift. Direct mail is coordinated with the telefund appeals to better integrate future fund-raising requests.
to match other donors’ contributions dollar-for-dollar totaling $150,000.

The significant drop in FY2010 faculty-staff contributions is due to several factors including lack of a merit pay program, loss of the TIAA-CREF employer match, and significant donations by senior administrators in the FY2009 campaign. See (C2-25-“Faculty and Staff Donations and Endowed Scholarships”) for more information on faculty and staff giving.

**Capital Campaigns**

The University’s “Campaign for Lawrence Tech: A Commitment to Our Students” was conducted between 1999 and 2006. The initial goal of $20 million was exceeded with total contributions of $46.6 million. The campaign focused on construction of the University’s Technology and Learning Center, the A. Alfred Taubman Student Services Center, and the University Quadrangle. Contributions also supported the University’s general endowment and the scholarship fund.

The current capital campaign – “Proud Heritage – Bold Future” – was started in 2006 with a two-year silent phase. The Remington Group was engaged to advise the University on the structure of the campaign. The campaign was designed to mirror the University’s strategic and campus master plans, and included an internal fund-raising audit to identify which approaches have been most successful in raising funds for the University.

Several new staff members were hired to support the campaign, new fund-raising software was purchased, and a number of campuses to identify best practices. The campaign planning and leadership phase consisted of feasibility visits with top donors, documenting needs of various campus constituencies, and screening over 26,000 alumni and friends for the potential to make major gifts to Lawrence Tech: A Commitment to Our Students. The endowment is invested to support the University’s spending policies, account for future inflation, and to maintain long-term endowment growth. Most endowment funds are designated for student scholarships, and quarterly meetings are held with the controller, the director of financial aid, and the Scholarship Committee to plan for the use of endowed scholarships.

The endowment is managed by an external investment manager, FreedomOne, under contract to the University. Fund assets are managed using a well-diversified balanced portfolio as determined by the investment committee of the Board of Trustees. The fund’s management objective is to achieve long-term capital growth and income with consideration for capital preservation with reasonable and prudent levels of risk. Commodities, unregistered securities, letter stock, short sales, or margin transactions are not permitted. Options and foreign trading are not authorized unless they are part of normal hedging activities of collective or mutual funds. The endowment is currently allocated to the Commonfund, Commonfund Hedged, MuniBond, Vanguard Fund, and JPMorgan Chase Fund.

The desired long-term rate of return on endowment assets is at least eight percent net of expenses over a five-year moving average, and financial performance is in line with peer institutions and external benchmarks. The current spending policy set by the Board of Trustees is to allocate no more than 5.5 percent annually of total endowment funds as measured on a three-year moving average to designated spending initiatives.” See (C2-20-“Endowment Financial Performance”) for historic performance of the portion of the endowment fund managed by FreedomOne as of June 2009.

**Board Designated Fund**

The board designated fund is an unrestricted fund comprised of excess operating revenues and unrestricted gifts not designated to the operating fund. The Board of Trustees may transfer such funds into short-term or long-term investments until a decision is made regarding their use. A portion of the board designated fund is transferred annually to the operating fund while allowing for longer-term portfolio growth.

**General Opportunity Fund**

The general opportunity fund is used to invest short-term operating revenue balances during the course of a fiscal year. The fund can be used to maintain a cash reserve for operating and capital expenses as well as for unexpected contingencies that may occur during annual operations. The general opportunity fund must be liquid on a daily basis, and must have limited exposure to potential capital losses.

**Real Estate Portfolio**

The adjacent real estate portfolio has been assembled for future University use as designated by the campus master plan. The real estate portfolio is comprised of purchased properties and gifts of property from donors. Gifts of real estate may be designated to either endowment or board designated fund use. Properties not adjacent to the University are sold as soon as practicable. Adjacent real estate is managed as an investment until authorized by the Board of Trustees for educational use under the campus master plan.

**Sponsored Research and Programs**

Lawrence Tech receives sponsored research, contract, and grant funds from a number of funding sources including government agencies, corporations, foundations, and congressional earmarks. Overall sponsored research and program funding (in millions) from FY2001 to FY2009 is shown in Figure 45. See (C2-27-“Performance”) for historic performance of the portion of the endowment fund managed by FreedomOne as of June 2009.
Criterion Two

for program reallocation, downsizing, or growth.

Lawrence Tech’s planning processes are flexible enough to respond to unanticipated needs. Peer-reviewed and government-sponsored funding has steadily increased over the past ten years, with the amount of funding in the second half-decade more than 250% that of the first half. This long-term increase in peer-reviewed and government-sponsored funding is due to increased emphasis on applied research by faculty members, addition of doctoral programs, creation of the Research Centers of Excellence, establishment of the Research Support Services, creation of the Research Centers of Excellence, establishment of the Research Support Services, and growth of academic programs.

During the past ten years, Lawrence Tech has established three doctoral programs, several new undergraduate and graduate degree programs, and several dozen new certificate programs. The University has also established multiple course delivery locations in Michigan and Canada, and has developed several online and hybrid degree programs. The level of faculty and student scholarship and research has dramatically increased, supported by a research infrastructure and active encouragement by academic leaders.

The largest historic external funding source was sponsored programs. Peer-reviewed and government-sponsored funding has steadily increased over the past ten years, with the amount of funding in the second half-decade more than 250% that of the first half. This long-term increase in peer-reviewed and government-sponsored funding is due to increased emphasis on applied research by faculty members, addition of doctoral programs, creation of the Research Centers of Excellence, establishment of the Research Support Services, and growth of academic programs.

The largest historic external funding source was sponsored programs. Peer-reviewed and government-sponsored funding has steadily increased over the past ten years, with the amount of funding in the second half-decade more than 250% that of the first half. This long-term increase in peer-reviewed and government-sponsored funding is due to increased emphasis on applied research by faculty members, addition of doctoral programs, creation of the Research Centers of Excellence, establishment of the Research Support Services, and growth of academic programs.

The largest historic external funding source was sponsored programs. Peer-reviewed and government-sponsored funding has steadily increased over the past ten years, with the amount of funding in the second half-decade more than 250% that of the first half. This long-term increase in peer-reviewed and government-sponsored funding is due to increased emphasis on applied research by faculty members, addition of doctoral programs, creation of the Research Centers of Excellence, establishment of the Research Support Services, and growth of academic programs.

Lawrence Tech’s planning process and its administrative decision making structure has enabled the University to link its long-term planning processes and accomplish its strategic planning objectives in a wide range of areas. A review of the 2004 strategic plan shows that virtually all objectives were accomplished. As of January 2010, virtually all objectives in the 2007 strategic plan have been completed or are on track for completion.

Growth of Academic Programs

During the past ten years, Lawrence Tech has established three doctoral programs, several new undergraduate and graduate degree programs, and several dozen new certificate programs. The University has also established multiple course delivery locations in Michigan and Canada, and has developed several online and hybrid degree programs. The level of faculty and student scholarship and research has dramatically increased, supported by a research infrastructure and active encouragement by academic leaders.

Growth of Campus Facilities

During the past ten years, Lawrence Tech has established three doctoral programs, several new undergraduate and graduate degree programs, and several dozen new certificate programs. The University has also established multiple course delivery locations in Michigan and Canada, and has developed several online and hybrid degree programs. The level of faculty and student scholarship and research has dramatically increased, supported by a research infrastructure and active encouragement by academic leaders.

One-Stop Approach to Student Services

As part of the Transition to the New Campus project, all Enrollment Services operations were co-located in the new building. The technology help desk was also moved into the new facility. Lawrence Tech’s enrollment services integrated Admissions, Registrar, Financial Aid, and Student Accounting Services into a one-stop center, the primary point of contact for students, parents, and faculty. The one-stop center receives in-depth training to answer all matters related to accounts receivable, financial aid, registration, and records. Services provided for walk-in students are also provided by phone, e-mail, and Web services. During a normal business day, the one-stop center serves approximately 150 students, few of whom need to be referred to other staff members of the Enrollment Services unit.

Criterion Two

Continuous Improvement through Assessment

Lawrence Tech’s ongoing evaluation and assessment processes provide reliable evidence of institutional effectiveness that clearly informs strategic planning.

By virtue of its heritage and strong linkages with business and industry, Lawrence Tech is focused on continuous improvement. This focus takes many forms including business process redesign, long-term campus master planning, and active participation in the strategic planning process. The culture of the campus focuses on solving problems with participation by administration, faculty, staff, and students.

A Growing Culture of Assessment

Lawrence Tech maintains effective systems for collecting, analyzing, and using organizational information.

The University’s strategic plan is constantly evaluated and assessed through input from departments assigned to carry out objectives and through the active involvement of the Strategic Plan Implementation Review Committee comprised of administrators and members of the Board of Trustees. The Strategic Planning objective is clearly noted and actions are taken to address variances from the plan.

The University Assessment Committee was created in response to the Commission’s 2001 accreditation visit, with the goal of having faculty from all departments directly involved in designing and monitoring the University’s assessment of student learning. An annual Assessment Day was created to develop a culture of assessment at Lawrence Tech. The University’s assessment and program review processes are directly linked with professional accreditation activities.

Monitoring Assessment Progress

The University Assessment Committee has mandated preparation of annual assessment reports from each academic department. Documents written for professional accreditation bodies are not acceptable for annual report, although sections from such documents may...

Sponsored Research and Program Funding (FY2001-FY2010)

Lawrence Tech’s new “fast track” graduate certificate. Manufacturing Systems for the Defense industry, helps engineers who have been displaced from the auto industry to make the transition to the growing defense industry in Southeast Michigan. Lawrence Tech worked with defense suppliers such as Raytheon and General Dynamics, military planners at the Tank Automotive Research, Development and Engineering Center (TARDEC) and U.S. Army TACOM Life Cycle Management Command (TACOM) in Warren, engineering development specialists at Automation Alley, and employment specialists at the Oakland County office of Michigan Works to develop the certificate program. Classes started in January 2010 for the first cohort of 25 students, with a total of 75 engineers expected to start the program during fall 2010.

Learning about Lawrence Tech's long-term planning process provides a framework for structured growth over time. With enrollment and budgetary projections operating over a three-year rolling cycle, shorter-term adjustments are built into the planning process. The board designated fund, the general opportunity fund, and the University’s line of credit provide degrees of flexibility in addressing short-term contingencies.

The recent recession and the removal of tuition reimbursement funding by regional businesses resulted in a negative impact on graduate enrollment and some impact on undergraduate enrollment due to loss of household income in the region. These negative impacts occurred within one fiscal year and have required additional adjustment including some personnel layoffs, operating budget reductions, and temporary elimination of the University’s match for employee retirement funding.

At the same time, the University has been able to respond to the economic crisis with additional financial aid for displaced workers, creation of numerous new certificate programs, and creation of an academic planning program and review process to manage the portfolio of academic programs. These actions underscore the University’s adaptability and resolve while addressing unanticipated events.

Recovery Starts Here Initiative

Lawrence Tech’s Recovery Starts Here initiative was created quickly to respond to the rapid economic downturn and associated job loss in Southeast Michigan. This nationally recognized program provided grants that cover 50 percent of the tuition for 450 displaced workers or their dependent children who qualify for admission to the University. The start of Michigan’s No Worker Left Behind program provides up to two years of free tuition for unemployed workers to pursue a degree or certificate in a high-potential occupation or emerging industry. Additional federal assistance is available through the Trade Adjustment Assistance program. An additional 200 recovery grants are being offered in fall 2010.

As part of the Recovery Starts Here initiative, Lawrence Tech introduced 36 new certificate programs designed to position graduates for employment opportunities in emerging areas of the Michigan economy including energy, defense, film production, and life sciences. The development of these certificate programs represented the largest launch of new programs in the history of the University, and was accomplished while the University was reducing budget and staffing in late FY2009.

Lawrence Tech’s new “fast track” graduate certificate. Manufacturing Systems for the Defense industry, helps engineers who have been displaced from the auto industry to make the transition to the growing defense industry in Southeast Michigan. Lawrence Tech worked with defense suppliers such as Raytheon and General Dynamics, military planners at the Tank Automotive Research, Development and Engineering Center (TARDEC) and U.S. Army TACOM Life Cycle Management Command (TACOM) in Warren, engineering development specialists at Automation Alley, and employment specialists at the Oakland County office of Michigan Works to develop the certificate program. Classes started in January 2010 for the first cohort of 25 students, with a total of 75 engineers expected to start the program during fall 2010.
be excerpted. The annual assessment reports address these items for all programs in the department:
  - Program Educational Objectives, Outcomes, and Accreditation Status
  - Assessment Activities and Assessment Results
  - Action Plan for the upcoming year

The Assessment Committee reviews and monitors current and prior year reports to ensure that appropriate progress is being made against University learning objectives. Assessment is discussed in more detail in Criterion Three.

Assessing Academic Programs

Academic programs director use assessment data, advice from professional advisory councils, peer review by professional accreditation bodies, and input from faculty members to prepare an academic program plan every three years. The program review document culminates with a three-year strategic plan for program improvement which is reviewed and discussed with the dean and provost.

Crosscutting themes from all program review documents are considered by the provost for University improvement initiatives. New program planning is coordinated through the Academic Program Planning and Review Committee, consisting of faculty members and administrators, which provide advice and counsel on new program proposals in the early stages of development.

20c: Action on Assessment Findings

20d: Appropriate and feedback loops are available and used throughout Lawrence Tech to support continuous improvement.

20e: Periodic reviews of academic and administrative units contribute to improvement of Lawrence Tech.

Lawrence Tech makes significant use of data and feedback loops to promote organizational improvement. Many universities use operational metrics to manage day-to-day operations. The strategic planning process uses objective measures to determine progress against institutional objectives. The University Assessment Committee sets measurable assessment objectives and monitors progress against those objectives across all undergraduate programs. Several examples of how Lawrence Tech practices continuous improvement in academic and service areas are discussed in this section.

Academic Program Planning and Review

Lawrence Tech established its first comprehensive Academic Program Planning and Review (APPR) process for undergraduate and graduate programs in 2009. The University’s approach to program review uses data and feedback from multiple sources to assess the vitality of academic programs and to validate the academic objectives and learning outcomes of students. The program review process looks at the inputs, processes, and results of learning within a department, program, or cluster of majors. The process reveals strengths, weaknesses, evidence of student achievement, and areas for development.

The APPR process ensures that all academic degree programs are reviewed every three years. A review timeline is prepared by institutional research and forwarded to program directors and department chairs at the start of the review cycle. The program director uses this template to prepare the review document in consultation with faculty members, external advisory committees, and other stakeholders during year one of the three-year cycle.

A unique feature of Lawrence Tech’s APPR process is that planning elements are directly linked to the Commission’s criteria for accreditation. The review template consists of the following components:

- Program Overview – Program and director information, link to program Web site, brief overview and history of the program, and list of associated concentrations, certifications, and dual degrees.
- Program Distinctiveness (Criteria One and Five) – Identification of benchmark institutions and articulation of how the Lawrence Tech academic program is distinctive.
- Curriculum and Learning (Criterion Three) – Listing of program objectives and learning outcomes, assessment methods, teaching and learning modes used in the program, evidence of graduate skills and accomplishments, and input from external advisory committees.
- Program Enrollment History and Demographics (Criteria Two and Three) – Using data provided by the institutional research office, program directors discuss enrollment, graduation, and demographic trends. They also describe the factors that draw students to the program, including program features, occupational projections, and marketing initiatives.

- Faculty (Criteria Two and Four) – Using data provided by the institutional research office, program directors discuss the full-time and adjunct faculty teaching in the program, their qualifications and expertise, distribution of work between full-time and adjunct faculty, scholarship and service activities, and the opportunities provided for faculty development.
- Program Resources (Criteria Two and Three) – Program directors assess how existing organizational structures support the program, discuss current resource levels, laboratories, library resources, technology resources, eLearning resources, and academic support services. They make recommendations for upgrading resources to improve the program.
- Professional Accreditation (Criteria Three and Five) – Program directors provide the latest accreditation information, planned follow-up actions, and future accreditation schedules. If professional accreditation opportunities exist, they discuss plans to obtain applicable professional recognition.
- External Relations (Criteria Two and Five) – If the program has an external advisory council, program directors propose members of the council and their qualifications are listed. Improvements actions taken as a result of council input are discussed. If the program does not have an external advisory council, plans are established to create and sustain a council. Opportunities for alumni to remain engaged with the program are discussed along with the professional and trade organizations in which faculty participate.
- Three-year plan (Criterion Two) – The improvement objectives contained in the prior plans are reviewed. Strengths and weaknesses are discussed. Specific actions to be taken over the next three years to sustain and improve the program are listed.

The plan is accomplished by comments from the department chair and dean, and is then reviewed by the associate provost who returns recommendations for dialog and follow-up actions. See (C2-28-“Academic Program Planning and Review Findings”) for a summary of findings and recommendations from the first program review cycle.

Undergraduate Leadership Curriculum

The Undergraduate Leadership Curriculum was developed as an outcome of Assessment Day 2005. A task force made up of faculty from each college was formed to brainstorm possibilities for a leadership curriculum and to benchmark other universities with leadership programs. The task force presented its proposal for a four-year phased-in curriculum at Assessment Day 2006. President Walker announced leadership development as a goal for undergraduate students and the initiative was incorporated into the 2007 University strategic plan.

The Leadership Curriculum Implementation Committee began implementing the Undergraduate Leadership Curriculum during fall 2007 by incorporating leadership components into the existing first year University Seminar. Each year, a new component of the Undergraduate Leadership Curriculum is deployed. More information about the Undergraduate Leadership Program is provided in Criterion Four.

ATU Benchmarking Visits

Lawrence Tech was invited to join the prestigious list of top tier universities: Rochester Institute of Technology, Drexel University, and Illinois Institute of Technology to benchmark their academic programs and services. These benchmarking visits were integrated with findings from focus group interviews with over 50 non-Michigan students who considered or enrolled at Lawrence Tech to affirm several objectives already included in the University’s strategic plan:

- Construct a new residence hall serving freshman students
- Entering NAIA intercollegiate athletics
- Improving student amenities on campus including dining services
- Restructuring Lawrence Tech’s tuition model
- Designing new doctoral programs
- Creating a compelling personalized marketing message to prospective students which highlights the advantages of a Lawrence Tech education

Student Activities Organizational Review

The dean of students organized a comprehensive review of student activities in September 2008. The process included administration of a student survey, focus groups with interested students, and a U Serving You workshop to develop recommendations. Over 500 students respond via Web- and paper-based surveys. The survey measured participation in student activities, satisfaction with current programs, and suggestions for new programs. The survey identified intercollegiate athletics, upgraded facilities, and improved communications as priorities.
The U Serving You workshop identified four major objectives from which improvement initiatives were developed. A proposal was prepared for Lawrence Tech to re-enter intercollegiate athletic competition, which is discussed in Criterion Three. The student recreation evaluation survey was refreshed and regular articles are submitted for publication in the Tech News. Student Activities offers more programs and events geared toward student leadership through the Student Government and Students Planning Activities Monthly (SPAM) group. A new student recreation student survey is scheduled for the 2010-2011 academic year.

Performance Evaluation Model Surveys

In January 2002, the Performance Evaluation Committee developed a post-implementation questionnaire to measure satisfaction and obtain feedback of the process. 80% of campus employees responded to the questionnaire. As a result of the 2002 survey, a number of changes were made to the PFM process including condensing and expanding certain sections and establishing a program to train supervisors in using the tool. In July 2004, comments and suggestions were again solicited for the annual survey for reviewing program effectiveness. Based on the suggestions received, the program was again improved in several ways including combining administrator and staff forms into one document, populating several ways including combining administrator and staff forms into one document, populating total scores automatically, and making the mid-year review optional.

2c5: Lawrence Tech provides adequate support for year review optional. total scores automatically, and making the mid-year review optional. A significant improvement in institutional enrollment reporting occurred with the rollout of the new APPR process. Data sets for all academic programs were prepared by Institutional Research which provided program directors with comprehensive enrollment, demographic, graduation, faculty, and other information. This core data set can be used for long-term academic planning and will reduce the need for ad-hoc reporting.

The Foundations for Excellence in the First College Year initiative received significant institutional support during the fact-finding and planning phase. All four co-directors attended a three-day Policy Institute launch meeting in North Carolina in 2007 to receive comprehensive training for the project. Continuing support is provided for administration of the NSSE and Noel-Levitz surveys.

2. Aligning Planning With Action

Criterion 2d: All levels of planning align with Lawrence Tech’s mission, thereby enhancing its capacity to fulfill that mission.

Lawrence Tech has made great strides in establishing a coordinated suite of planning processes. Starting with a long-term vision for the future of the campus, a campus master plan and accompanying capital plan are established. A five-year strategic plan, refreshed every two years, represents the essential guidance for the University’s operations. All of these planning documents are rooted in the University’s vision, mission, and values.

“Preparing for the future is not easy. But when we set our minds on the positive, our future can be as bright as we want it to be.”

-Rhonda Jackson, Psychology major and Campus Safety Officer

2d1-2d2: Coordinated Planning Processes

2d1: Coordinated planning processes center on the mission documents that define vision, values, goals, and strategic priorities for Lawrence Tech.

2d2: Planning processes link with budgeting processes.

Lawrence Tech’s long-term planning processes are actively linked and coordinated with enrollment planning and budgeting processes. The recently implemented APPR process adds a critical link between academic program and budget planning. Process owners have been asked to incorporate the following practices into their planning processes to ensure that Lawrence Tech’s long-term planning processes are cross-linked:

• Invite representatives of other long-term planning processes to provide plan input
• Consider and document plan linkages and share these with other long-term process owners
• Include a discussion of Commission accreditation criteria in long-term plans
• Linkages between the University’s planning processes are highlighted in this section.

Processes are listed starting with the longest planning cycle.

Capital Campaign Planning – 25 Year Cycle

Lawrence Tech’s Capital Campaign operates with 25-year vision windows and 10-year planning windows. Capital campaigns are associated with both the campus master plan and the strategic plan. President Walker’s vision for capital investments associated with the current 25-year window total approximately $580M. The current capital campaign started in July 2008 and is expected to conclude by June 2016 with a target of $100M. The campaign focuses on phase one of the current campus master plan, funding new programs, and increasing the University’s endowment to $75 million. Planning for next capital campaign will begin in July 2013.

Campus Master Planning – 20 Year Cycle

The campus master plan uses a twenty-year visioning window with five-year segments. The first campus planning process in 1997 addressed only the central campus core. A preliminary campus master plan was created in 2000 and the first rigorous planning process was completed in 2002. The 2008 master plan addressed the entire campus and the next planning cycle is scheduled for 2013-2014.

President Walker is updated monthly on plan progress, and the Board of Trustees receives an update at their June meeting. The plan is reviewed for consistency at this point. A recent mid-term adjustment modified the 2003 plan element that called for a sale of Housing South and support for a charter school in operation at that time. Both elements were removed from the plan based on economic and program decisions.

Linkage to the capital campaign is based on campaign vision, timing and nature of gifts, programming decisions based on academic needs, and current financial conditions. For example, both the University Technology and Learning Center and the North Housing residence hall were funded by 12-15 year bonds, and the A. Alfred Taubman Student Services Center was partially funded by a short-term bond due to financial conditions at the time of construction. Bridge loans are sometimes used to allow the University to begin construction of new buildings.

Higher Learning Commission Accreditation – 10 Year Cycle

Accreditation by the Higher Learning Commission occurs on a ten-year cycle. The current on-site visit occurs in October 2010, with the next scheduled visit expected in 2020. Work on the 2010 accreditation self-study plan began in 2007. The cycle will be adjusted as needed to reflect the Commission’s new Pathways accreditation model.

Professional Program Accreditation – Varying Cycles

A number of Lawrence Tech academic programs in all four colleges are accredited by professional accreditation associations. Most of the professional accreditation cycles are six years in length. The APPR process incorporates professional accreditation cycles into the planning of the three-year program review cycle.

University Strategic Planning – 5 Year Cycle

The strategic planning process uses a five-year planning window with updates every two years. Planning linkages for the campus master plan and capital campaign plan extend beyond the five-year window of the strategic plan.
The strategic planning process was started in February 1998 as part of feasibility planning for the proposed University Technology and Learning Center building. The first plan had a five-year window and was operational in nature. A strategic planning leadership group was formed in early 1999 to target future strategic planning efforts.

Updates to the strategic plan were issued in 2001, 2003, 2005, 2007, and 2010. The president is responsible for execution of the strategic plan with individual plan components assigned to appropriate administrators. The Board of Trustees is actively involved in monitoring implementation of strategic plan elements.

The annual budgeting process links to the strategic plan by budget requests from academic and administrative units against the plan. Most academic and service units link their annual operating plans to the strategic plan, and most units incorporate strategic plan elements into employee performance planning.

Assessment Planning – 5 Year Cycle

The assessment planning process uses a rolling five-year cycle to measure, interpret, and act upon five goal areas: advanced knowledge, fundamental skills and abilities, leadership, teamwork, and character.

The assessment planning process began following the 2001 Commission site visit. The Assessment Committee began its work by assessing Lawrence Tech's Core Curriculum. Members from all academic departments serve three-year staggered terms. The Assessment Committee has historically focused on assessing undergraduate learning, with graduate learning a more recent focus.

Departmental assessment activities are coordinated through the Assessment Committee, with professional accreditation requirements also driving development and implementation of assessment practices.

Enrollment Planning – 5 Year Cycle

The enrollment planning process uses a five-year window associated with the University strategic plan for new programs. The planning window has lengthened somewhat over time as the University explores new national and international markets. The overall strategy is updated in year three of the planning cycle. Annual enrollment and faculty projections are provided by the deans. The financial aid discount rate target is set with a two-year window. Tactics and operational budgets are established on a yearly basis.

Undergraduate student recruitment starts at the sophomore level of high school and operates over an 18-month period. It often takes between two and three years before recruitment results are seen in new markets. Names of students taking the PSAT or PLAN tests are available in the spring of the students' sophomore year. ACT and SAT tests are administered in the students' junior year. Student names are purchased using honors and GPA criteria against profiles for Lawrence Tech's undergraduate programs. Enrollment plans are linked with future space and facility needs whenever possible. The addition of the APPR process is expected to improve the linkage between enrollment and space planning.

Academic Program Planning and Review – 3 Year Cycle

Academic Program Planning and Review uses a three-year cycle. New initiatives identified during the review process are intended to be incorporated into unit-level budget planning. Linkages to elements of the University's Strategic Plan are also identified during the review process.

The Academic Program Review Committee uses a peer review model to advise faculty members on the development of new academic programs early in the development cycle. This process is being formally incorporated into the Academic Program Planning and Review process to ensure that academic programs benefit from an end-to-end advisory process.

Budget Planning – 3 Year Cycle

The budget planning process uses a rolling three-year cycle. A baseline expenditure projection is established assuming flat enrollment and increasing expenses. New academic programs, anticipated cash donations, student demographic trends, and competitor tuition rates are assessed against this projection. Tuition rates are set and approved on a one-year basis.

Strategic plan elements and downstream operating expenses for new campus facilities are incorporated into future budget projections. A recent example of this was committing to a significant upgrade to the campus electrical grid to support increased power demands.

Annual unit budgets are developed beginning in January with at least two cycles of review before the budget is approved by the Board of Trustees. The budget process includes a component where each area identifies activities and expenditures proposed in support of the strategic plan. New capital expenditures are developed, prioritized, and supported by the operating units, and are prioritized by a faculty committee against the projected capital budget.

Information Technology Planning – 3 Year Cycle

Information technology planning uses a three-year planning cycle driven by the strategic plan and supported by an emerging IT planning process. Planning input for strategy and operations is provided to the Information Technology Steering Committee. The current plan consists of a mixture of strategic and operational elements. The IT budget is developed in concert with the annual University budget for both operations and capital expenditures.

Library Planning – 1 Year Cycle

Library Planning uses a one-year planning cycle in line with the University's annual budgeting process. Collection input is provided by the faculty-led Library Committee, and content providers make the Library aware of new product opportunities which are evaluated by faculty prior to purchase decisions. The overall direction of Library planning emphasizes the development of its digital collection, development of unique print collections, and physical improvements to the library space. The University plans to extend the library planning window to three years.

2d3: Integrated Operations

2d3: Implementation of Lawrence Tech's planning is evident in its operations.

Lawrence Tech's comprehensive strategic planning and budgeting processes encourage coordinated planning and service delivery. This section highlights the linkage of the University's strategic plan with the plans of the four colleges.

College of Architecture & Design

The College of Architecture & Design has built its current strategic plan around objective 7.4 of the University's strategic plan:

7.4 Establish the College of Architecture & Design as one of the leading programs nationally and internationally recognized for its undergraduate curriculum and graduate and interdisciplinary programs.

The college has developed its current strategy around President Walker's strategic priorities of innovation, strong and timely programs, making a difference in people's lives both locally and internationally. The college is also well positioned within Lawrence Tech's Research Centers of Excellence initiative.

The college's strengths center on the growing stature of the college within the University environment. The University's Undergraduate Leadership Curriculum and the college's practice orientation making the college a unique choice among national colleges of Architecture & Design. The hallmark of the college's academic program is design integration, with recognized strengths in structures and sustainability. The professional and educational rigor that college academic programs adds to its reputation.

The college has responded to several key programmatic initiatives and new market opportunities. The college has maintained and grown its core undergraduate student base from traditional undergraduate student base from Michigan, developing articulation agreements with community colleges, and establishing a national and international focus through
hybrid graduate programs. These efforts are supported by increased faculty research and publication, student organizations study abroad options, new national and international recruiting efforts. College-level marketing and recruiting actions include community and high school visits, virtual tours, college fairs, homecoming events, publications, student blogs, and direct follow-up with candidates. The college’s outreach to alumni and professional associations includes establishing a national advisory board, co-op program, and annual continuing education programs for AIA members.

The college recognizes economic and competitive realities while developing and executing its plans. Employment in the design professions has suffered under the current economic recession. Michigan’s population is shrinking and Southeast Michigan has been severely impacted by the recession. As a result, some companies may defer investments in college education, may seek community college alternatives, or seek alternative sources of funding. Some of the college’s competitors within Michigan are changing their admission standards and developing new design programs. Lawrence Tech presently has a regional rather than a national reputation, making it more difficult to recruit students on a national level. Campus residential amenities contribute to the national recruiting challenge.

College of Arts & Sciences

The College of Arts & Sciences has built its current strategic plan around objective 7.2 of the University’s strategic plan:

7.2 (The College of Arts & Sciences) will create and market its own free-standing degree programs niche, including the exploration of a new requirement of foreign languages as it serves the Lawrence Tech community as the provider of the core curriculum.

The vision of the college is to be a preeminent private liberal arts and sciences college setting new standards for higher education. To achieve this vision, the college collaborates with all other colleges to create cutting-edge interdisciplinary programs to meet emerging market needs in the life sciences, film and media, computer game development, and digital health. The college is also creating distinctive experiential learning programs such as the Scholars Program, Honors Program, and QUEST Program.

The QUEST Program aligns passion with career paths, promotes leadership, and stimulates innovation. Thirty-five students have collaborated with 118 faculty members to produce 27 QUEST projects in 2009-2010. QUEST students have formed a unique active learning community and have demonstrated superb learning outcomes.

The college aggressively pursues educational partnerships with other institutions, businesses, and industries. The college provides two teacher preparation programs at the master’s degree level. The K-12 community is served through the Robofest program, workshops for teachers, student summer camps, the Oakland County Science Olympiad, and Metropolitan Detroit Science Teacher Association conferences. The college maintains relationships with community colleges as well as research universities including several colleges of medicine. Industry relationships include the health care, automotive, software, energy, and media sectors. The college pursues international research partnerships such as a research project in membrane dynamics using quantum-dot nanotechnology in collaboration with UCLA, UC-Berkeley, and ENS-Pairs.

The college strives to achieve excellence across all units through human capital investment which helps faculty serve as role models for life-long learning and innovation. The college is implementing a five-year phased renovation plan to create an attractive and engaging learning environment. Planned improvements include hallway spaces, conference rooms, rooms for student organizations and communities, natural sciences laboratories, and a mathematics center. The college’s approach to achieving its vision during an economic downturn includes setting high expectations for building human capital, maximizing the use of available resources, and leveraging outside resources including industries, medical schools, other universities, and community colleges.

College of Engineering

The College of Engineering has built its current strategic plan around objective 7.1 of the University’s strategic plan:

7.1 (The College of Engineering) will increase significantly the undergraduate enrollment through a concerted effort to invigorate, reposition and differentiate the College of Engineering as a leader for innovative engineering education.

The vision of the college is to be positioned as a leader in engineering education with regional recognition and national prominence. Acting on President Walker’s vision of preeminence, the college has identified initiatives in each of its vision areas: innovation, strong and timely programs, making a difference in people’s lives, leadership, agility, and international presence. In the area of innovation, the college has established the Center as a focal point for project-oriented, collaborative, and interdisciplinary learning and research opportunities. The Engineering Design Center is a link with the corporate world where students apply theory and practice to projects defined by industry to develop into highly valued professional engineers.

College faculty concentrate on teaching, advising, research, and service. Teaching programs will be conducted in a new learning-oriented facility that will integrate lectures and laboratories, while promoting interdisciplinary research. Academic programs will be reengineered to make them competitive, attractive, and relevant. Laboratory experiences will challenge students with open-ended design problems to explore state-of-the-art thinking and innovation.

The college intends to make a difference in people’s lives through active applied research. The college is represented in six of the seven areas of the NSF’s Research Centers of Excellence initiative: leadership, materials and structures, mobility, energy, sustainability, life sciences, urban design, and planning. Faculty members are active researchers and publishers and demonstrate professional leadership at the national, regional, and international levels. The college is also active in the community and provides students with service learning opportunities.

The college incorporates both leadership and entrepreneurship into the curriculum, and exhibits excellence in student leadership at the national level. The college is developing a common freshman year curriculum, graduate thesis programs, and doctoral programs. The college is also reaching out to form international academic partnerships to bring more international students to the Southfield campus, and research.

The college’s approach to enrollment and recruiting is centered on building awareness through faculty and student excellence. Outreach programs to transform students into global thinkers and leaders. The depressed Michigan economy and loss of employer funded tuition benefits have seriously impacted college enrollment. Students are looking for degree programs that offer value and provide them with the knowledge and skills to enable them to succeed in a global economy. The college is offering niche degree programs with customized attributes such as convenient delivery modes and outstanding student services to respond to the educational market in Southeast Michigan.

The Master of Global Leadership and Management was developed for civilian employees of the United States Army and Air Force. The MBA International program has been developed for managers working in international organizations. Both the Doctor of Business Administration and Doctor of Management in Information Technology focus on global management and innovation. A dual degree program has been established for students wishing to pursue the Global Leadership and Management program simultaneously with the Master of Business Administration program.
A “three plus one” undergraduate completion program in International Business has been developed for international students. Finally, the full Master of Business Administration degree program is available online.

The college has established a Center for Global Leadership and Understanding to provide research and scholarship opportunities for faculty and doctoral students. The Center also offers workshops for local businesses with operations in foreign countries. The college’s Center for Nonprofit Leadership and Management supports development of social entrepreneurs and prepares students for leadership positions in the nonprofit sector. The Center provides workshops for nonprofit board members and numerous networking opportunities for the nonprofit sector. The Center also engages in a community-based applied research program.

2d4: A Structured Yet Flexible Planning Process

Lawrence Tech has continually improved its planning processes over the past ten years. The lack of an academic program review process was noted as a significant gap in the University’s planning processes. Many new programs had been established in response to student demand and institutional objectives, but existing programs were not regularly assessed or counseled to ensure long-term sustainability.

The University responded to this challenge by founding the Academic Program Planning and Review Committee in 2004 to provide peer consulting on the creation of new academic programs, including use of a program design template. A formal Academic Program Planning and Review process was implemented in 2009, and the activities of both processes are now being merged.

Student Tablet-Laptop Program

Another example of flexible University planning processes is the student tablet-laptop program. First established in 2003, the program provided each undergraduate student with a personal laptop computer pre-loaded with discipline-specific software and productivity tools. The software images for each academic year are planned in advance in collaboration with all academic departments. A site visit to Virginia Tech in 2008 prompted the University to migrate from laptop to tablet computers for the 2008-2009 academic year, and introduced Macintosh laptops for students in the Imaging and Media Communications programs.

A committee of faculty members and the Student Technology Advisory Group as well as Student Government representatives tested and provided recommendations on 12 different tablet and laptop computers for deployment in fall 2010. All new machines have a more advanced processor, more RAM, larger hard drives, and larger screen sizes. The full software image for all academic programs is now available on all machines.

Recovery Starts Here Initiative

The most significant contingency to challenge the University during the past decade has been the recession, which struck Southeast Michigan in a very swift and profound way. Despite significant and rapid enrollment decreases due to the economic crisis, especially at the graduate level, the University quickly adjusted its budget and staffing during FY2009 to end the fiscal year with a balanced budget while providing some funding for FY2010 capital projects. A tuition increase of 4.5% was approved for the 2009-2010 academic year, with the operating budget held constant with end-of-year 2008-2009 levels. The 2009-2010 budget was reviewed again in January 2010. An eight percent tuition increase has been approved for the 2010-2011 academic year. External consultants and the University have been engaged to develop a long-range plan for restructuring tuition plans and student recruiting efforts.

“As we compared graduates from other schools in the region, we found that the Lawrence Tech grad was exceptionally well prepared. I’m very proud of this school.”

James P. Ryan, AIA, President JPRA Architects

2d5: Linking Academics to the Real World

2d5: Planning documents give evidence of Lawrence Tech’s awareness of the relationships among educational quality, student learning, and the diverse, complex, global, and technological world in which the organization and its students exist.

Lawrence Tech’s strategic plan includes a number of objectives that attest to the University’s awareness of the linkages between the University and the larger world. Examples of these objectives and resulting actions include:

Objective 2 – Culture Shift – By 2010, achieve a culture shift through the investment of time and financial resources to sustain a community of empowered, agile, accountable, and collaborative employees focused on performance and providing students with mentoring and a high quality engaging educational experience as measured by graduate satisfaction and National Survey of Student Engagement (NSSE).

The University has focused on mature and comprehensive communication systems, used the NSSE survey to gauge student engagement, improved faculty development programs, improved outreach programs to alumni, and strengthened and diversified the Board of Trustees.

Objective 3 – Leadership, Entrepreneurship, and Global View – By 2011, Lawrence Tech will have the best leadership program in the nation and be distinctive for its core with curricula that integrate principles of leadership and entrepreneurship within a global and societal context at all academic levels.

The University has implemented leadership, entrepreneurship, and sustainability components into the curriculum. Lawrence Tech’s Undergraduate Leadership Curriculum is the only program of its kind in the country other than the United States military service academies.

Objective 6 – Innovative Curriculum Design and Delivery – Secure a leadership position in innovative curriculum design and delivery modes.

The University has established online programs in all four colleges to extend its reach outside its traditional service boundaries.

Objective 10 – Partnerships and Outreach – Actively engage external partners to enhance the reputation, reach and educational experience, and recognition of Lawrence Tech as an institution dedicated to the vitality of the region.

The University has established greater linkages with Southfield, Detroit, and the Southeast Michigan region, and has developed partnership programs with a number of international universities.

Objective 12 – Sustainability and Environmental Stewardship – Differentiate Lawrence Tech as an environmentally engaged university that recognizes its responsibility to safeguard the assets of our campus and community.

The University had practiced environmental stewardship in its operations and has created a set of environmental standards and benchmarks for new buildings and operations.

2d6: An Inclusive Planning Process

2d6: Planning processes involve internal constituents and, where appropriate, external constituents.

Lawrence Tech’s 2007 strategic planning process included participation by dozens of faculty, staff, administrators, students, members of the Board of Trustees, and an external consultant. Individual study teams were established to develop each area of the strategic plan.

There is also broad representation of the campus community monitoring strategic plan progress through the Strategic Plan Implementation Review Committee. Industry advisory councils support long-term planning for academic programs. A number of invited guest experts briefed the committee on issues including enrollment, information technology, health care, and the nonprofit sector.
Conclusion

We believe that Lawrence Technological University meets Criterion Two. Lawrence Tech’s strategic planning process responds directly to Criterion Two, which calls on the institution to allocate resources and processes to “demonstrate its capacity to fulfill its mission, improve the quality of its education, and respond to future challenges and opportunities.” The University is governed by an informed Board of Trustees who have resolved to preserve the institution’s integrity. Qualified and experienced administrators operate through well-defined organizational structures and policies to carry out the mission of the institution. Faculty members with appropriate academic credentials provide high quality instruction for the University’s academic programs. A comprehensive strategic planning process provides a sound framework for managing the University.

The University has aligned its mission and vision with its academic programs, student recruiting, and fund-raising to create a sustainable financial model for continued operations and expansion. The University is diversifying its income sources to better position itself to sustain and extend its mission. These actions support President Walker’s vision of the University being able to carry out the mission of the institution. Faculty and program directors results in periodic improvements was exacerbated by the recent recession. A new tuition model and expectations of enrollment recovery are expected to restore employer-funded retirement contributions, capital investments, and perhaps a merit pay program. Targeted marketing initiatives in Michigan, the United States, and globally will clearly articulate the value of a Lawrence Tech education for undergraduate, graduate, and doctoral students. Additional internal processes for increasing the conversion and yield rates for out-of-state and international students are being developed. It will be challenging but not impossible to implement and manage these significant changes.

The number of female students enrolled in the STEM disciplines is an area of concern for the University. Lawrence Tech’s mix of female and minority faculty has remained relatively steady over the past five years, but the University is making a concerted effort to hire additional female and minority faculty. Three of the ten new full-time faculty hired in fall 2010 are female. With an increase in minority and international students, the University seeks a more diverse faculty while ensuring that the most qualified faculty are hired. The University recognizes that the wide range of responsibilities for department chairs and program directors results in periodic communication issues, so efforts are underway to improve University-wide processes and provide department chairs with additional training and resources to improve communication and academic program management. The University also recognizes that more attention is needed to departmental practices for recruiting, hiring, orienting, mentoring, and assessing adjunct faculty members. The APPR process will be assessed to determine changes prior to the next three-year cycle of evaluation. Findings from the APPR process will be integrated into campus budgeting and master planning activities to ensure appropriate levels of full-time and adjunct faculty members, classroom and laboratory spaces, library resources, and technology services. The APPR process will be extended to provide additional rigor and peer review in the development of new academic programs.

Facilities in the College of Engineering are aged, and new and refurbished facilities are needed to support the college’s mission. Lawrence Tech has created a highly entrepreneurial and agile environment which calls for marketing, communication, and related services to be quickly and effectively coordinated. The University must ensure that existing programs are appropriately sustained while new programs are being developed.

Opportunities for Improvement

Lawrence Tech’s reputation as an “engineering school” stems from its origins. The public and some prospective students are not aware of Lawrence Tech’s strong architecture and design programs, its programs in the arts & sciences, its graduate management programs, or its doctoral programs. Some misconceptions also exist around tuition levels given Lawrence Tech’s active competition with large public universities in the region. The University recognizes that sustained efforts are needed to develop the public’s perception of Lawrence Tech as a preeminent private university offering outstanding academic programs in many fields and at many levels of study.

Lawrence Tech’s historic reliance on tuition to fund operating expenses and capital improvements was exacerbated by the recent recession. A new tuition model and expectations of enrollment recovery are expected to restore employer-funded retirement contributions, capital investments, and perhaps a merit pay program. Targeted marketing initiatives in Michigan, the United States, and globally will clearly articulate the value of a Lawrence Tech education for undergraduate, graduate, and doctoral students. Additional internal processes for increasing the conversion and yield rates for out-of-state and international students are being developed. It will be challenging but not impossible to implement and manage these significant changes.

The number of female students enrolled in the STEM disciplines is an area of concern for the University. Lawrence Tech’s mix of female and minority faculty has remained relatively steady over the past five years, but the University is making a concerted effort to hire additional female and minority faculty. Three of the ten new full-time faculty hired in fall 2010 are female. With an increase in minority and international students, the University seeks a more diverse faculty while ensuring that the most qualified faculty are hired. The University recognizes that the wide range of responsibilities for department chairs and program directors results in periodic communication issues, so efforts are underway to improve University-wide processes and provide department chairs with additional training and resources to improve communication and academic program management. The University also recognizes that more attention is needed to departmental practices for recruiting, hiring, orienting, mentoring, and assessing adjunct faculty members. The APPR process will be assessed to determine changes prior to the next three-year cycle of evaluation. Findings from the APPR process will be integrated into campus budgeting and master planning activities to ensure appropriate levels of full-time and adjunct faculty members, classroom and laboratory spaces, library resources, and technology services. The APPR process will be extended to provide additional rigor and peer review in the development of new academic programs.

Facilities in the College of Engineering are aged, and new and refurbished facilities are needed to support the college’s mission. Lawrence Tech has created a highly entrepreneurial and agile environment which calls for marketing, communication, and related services to be quickly and effectively coordinated. The University must ensure that existing programs are appropriately sustained while new programs are being developed.
Criterion Three: Lawrence Tech’s learning environment and assessment methodologies are grounded in our mission and in our motto of “theory and practice.” The University’s historic focus on providing evening classes for working adults has evolved into a comprehensive university model serving multiple student populations using traditional, hybrid, and online delivery modes.

Criterion Three not only addresses assessment of learning outcomes, but also the quality and sustainability of the University’s learning environment. The learning environment is comprised of many elements, all of which interact to provide students with the opportunity to learn and thrive. These elements include – but are not limited to – support for effective teaching, provision of effective teaching facilities and supporting technologies, provision of integrated student services, and promotion of a safe and engaging campus environment.

Over the past ten years, Lawrence Tech has substantially upgraded its learning environment in a number of areas including establishing the Academic Achievement Center, Office of First Year Programs, Center for Teaching and Learning, campus wireless network, tablet-laptop program, and Blackboard learning management environment. Increased digital library resources, the LTU Online initiative, Help Desk, and eLearning Services enrich the University’s learning environment and provide opportunities for faculty to use innovative instructional techniques to improve student learning. All of these elements will be discussed in this section.

3a. Documentation of Program Learning Outcomes

Criterion 3a: Lawrence Tech’s goals for student learning outcomes are clearly stated for each educational program and make effective assessment possible.

Each Lawrence Tech degree program has defined learning outcomes, and each course has specific learning objectives specified. Learning outcomes and course objectives are documented on program Web sites and in course syllabi.

Lawrence Tech’s primary undergraduate degree programs in engineering and architecture are built on the need for graduates to become professionally certified. Undergraduate engineering programs are externally accredited by the Accreditation Board for Engineering and Technology (ABET). The Master of Architecture program is accredited by the National Architectural Accrediting Board (NAAB). Undergraduate programs of interior design and imaging in the College of Architecture & Design are accredited by the National Association of Schools of Art and Design (NASAD) or Council for Interior Design Accreditation (CIDA). Additional professional accreditations apply to the undergraduate Chemistry program and to graduate programs in Management. The College of Management was the first institution in the nation to receive no conditions or notes for outcomes assessment practices in its last IACBE professional accreditation visit.
These professional accrediting bodies not only provide a framework for the design of Lawrence Tech’s professional degree programs, but also provide context for participating in the University’s own assessment program, which has evolved significantly since its origins in 2001 and the Commission’s 2005 follow-up visit. Lawrence Tech’s assessment program has its genesis in recommendations made by the Commission during its 2001 site visit, and the commitment to professional accreditation of as many academic programs as possible. Lawrence Tech’s faculty-led assessment initiative supports a long-term inquiry into the nature of student learning at the University. The assessment process sets University-wide assessment standards, encourages creation of program-specific standards, provides faculty members with the skills and tools to conduct effective assessment, uses a closed-loop model that encourages action and supports continuous improvement of instruction.

Lawrence Tech recognizes that assessment of student learning is a University-wide process, and that the process must yield results that continuously improve the education provided to our students. The results of the assessment process must also be accepted by faculty members as credible and actionable. Furthermore, assessment results should drive curricular improvement and the budgetary resources required to implement these improvements. This section underscores Lawrence Tech’s commitment to providing the resources and leadership to sustain its assessment processes, as well as its commitment to continuously improve the assessment process and its linkage to budgeting.

**3a1: Undergraduate and Graduate Learning Goals**

**3a1.1 Lawrence Tech clearly differentiates its learning goals for undergraduate, graduate, and post-baccalaureate programs by identifying the expected learning outcomes for each.**

All academic programs have measurable and appropriate objectives. In addition to content objectives defined within each academic program, the University has defined seventeen student educational objectives in five goal groups for all undergraduate students. Master’s and doctoral level learning outcomes are defined within each program but do not use overarching University objectives at this time. Learning objectives for all professionally accredited programs are informed by the requirements of the relevant professional accreditation agencies. Academic programs have clearly documented program requirements and recommended pathways for program completion. A complete listing of academic program workflows is available on the faculty advising section of the provost’s Web site.

The University’s approach to assessment supports continuous improvement of Lawrence Tech’s curriculum, institutional accreditation, and discipline-specific professional accreditation. Assessment is a required component for development of new academic programs and ongoing evaluation and planning for existing programs. Led by the University Assessment Committee comprised of faculty representatives from all academic departments, Lawrence Tech’s assessment process has evolved from a focus on undergraduate assessment to include master’s and doctoral programs.

**Undergraduate Learning Goals**

To earn a bachelor’s degree, Lawrence Tech students must demonstrate advanced knowledge in their field’s context and application of knowledge. Objectives for field knowledge are defined by individual academic programs and documented in program descriptions, course syllabi, and annual assessment reports.

Graduates are expected to have breadth and depth of knowledge in the humanities, social sciences, mathematics, and natural sciences. They are expected to be skilled in written and oral communication and to demonstrate creativity, critical thinking, analytical, and problem-solving skills. They should be aware of the diverse basis of our culture and the foundations and development of American society. Students also must demonstrate effective use of technology in their fields.

Lawrence Tech’s faculty have established five goal areas for undergraduate programs. Objectives have been defined under each goal area with which students and academic programs are assessed. Many of these skills are developed as part of the Core Curriculum, Lawrence Tech’s general education program. Other skills are developed within specialty courses residing within the student’s academic major. Lawrence Tech has increased its emphasis on leadership, teamwork, and character education in a recent revision of educational goals for undergraduates.

**Goal Group I – Application of Advanced Knowledge**

Undergraduates will participate in one of the major programs offered by the University, all of which include a capstone experience. This goal is supported by the following outcomes:

1. Graduates will demonstrate knowledge, and expertise in applying this knowledge, in their fields.
2. Graduates will demonstrate effective use of technology and the ability to apply it in their fields.

**Goal Group II – Fundamental Cognitive Skills and Abilities**

Graduates will have the attributes of a well-educated person. These will include both breadth and depth of knowledge in the humanities, social sciences, mathematics and analysis, and natural sciences, consistent with the basic educational philosophy of the University. This goal is supported by the following outcomes:

1. Graduates will be skilled in written and oral communication.
2. Graduates will be aware of the diverse basis of our culture and will demonstrate breadth and depth in the arts and the humanities.
3. Graduates will be aware of the foundations and development of American society.
4. Graduates will demonstrate competence in mathematics and in the use of the scientific method and laboratory technique.
5. Graduates will demonstrate creativity and critical thinking, as well as analytical and problem-solving skills consistent with the technological focus of the University.

**Goal Group III – Leadership**

Undergraduates will exhibit entrepreneurial skills and the potential to assume positions of leadership. This goal is supported by the following outcomes:

1. Graduates will have experiences that promote the ability to analyze unfamiliar situations, assess risk, and formulate plans of action.
2. Graduates will have experiences that promote a global and societal perspective.

**Goal Group IV – Teamwork**

Undergraduates will have opportunities to develop the ability to work with others, including those unlike themselves, so that they can contribute to a diverse society. This goal is supported by the following outcomes:

1. Graduates will have defined roles in teamwork experiences in which both process and progress are monitored.
2. Graduates will have team experiences in which they focus on a common goal, take responsibility for their own contributions as well as for the team’s product, and evaluate one another’s contribution to the team.
3. Graduates will have team experiences in which they practice making decisions, reaching consensus, and resolving conflicts.

**Goal Group V – Character Education**

Undergraduates develop their ethical and personal values, so that they can exercise their professional skills in the interests of society. This goal is supported by the following outcomes:

1. Graduates will have opportunities to learn the value of contributing to their community and to society.
2. Graduates will have opportunities to develop personal values as the foundation of integrity and professional ethics.

**Graduate Learning Goals**

Each graduate program has defined learning goals for the program and objectives for the courses comprising the program. Lawrence Tech does not have a common set of learning objectives for all graduate programs due to the wide range of disciplinary expectations.
Graduate programs make extensive use of rubrics to assess course-level learning outcomes, supported by the Assessment Committee and by the Center for Teaching and Learning. Graduate programs are also implementing reflective learning to assess student learning. Reflective learning is designed to reinforce what has been learned through lectures, discussions, readings, research, and presentations. Reflection requires the student to construct personal narratives about how course learning relates to their life experiences. See (C3-01-"Facilitating Reflective Learning") for a guidebook on reflective learning developed by faculty in the College of Management.

**Doctoral Learning Goals**

Each doctoral program has defined learning goals for the courses comprising the program, and outcomes for qualifying examination and dissertation processes. Doctoral programs are discussed in greater detail in the Institutional Change Request for Doctoral Programs.

All doctoral programs use an extensive interview process to assess student qualifications prior to admission decisions. Students are required to pass all coursework in both their major field and in research to coursework. Students must then pass a qualifying examination evaluated by multiple faculty members before entering the dissertation phase of their studies.

The dissertation process is defined in phases with approval from the dissertation committee required for a student to progress to the next level of research work. The dissertation is defended to the committee and a public presentation is often scheduled. Students are also expected to submit research papers to peer-reviewed journals.

**3a2: A Comprehensive Approach to Assessment Design**

Assessment of student learning provides evidence for multiple stakeholders: students, program, and institutional.

Some assessment objectives such as leadership and teamwork are assessed University-wide while discipline-specific objectives are assessed within academic departments. The professional accreditation of many Lawrence Tech undergraduate and graduate programs adds to the assessment expertise of our faculty members. See (C3-02-"Professional Accreditation Documents") for a collection of reports and self-studies from ABET, ACGME, NAAB, NASAD, IACBE, and ACBSP, all of which address assessment methods and findings.

Assessment methods used for on-ground and online courses are as consistent as possible given the limitations of both delivery methods. The eLearning Services department collaborates with the Center for Teaching and Learning on developing robust assessment methods that can be shared between on-ground, hybrid, and online courses. eLearning Services offers online assessment and evaluation as one of its service areas.

**Assessment of General Education**

Lawrence Tech's Core Curriculum represents the University's general education program. The University Assessment Committee gathers and interprets assessment information for the Core Curriculum annually as part of the University assessment requesting process. See (C3-03-"Annual Assessment Reports") for copies of all University assessment reports.

**Program Area Assessment**

Faculty members define program area objectives in addition to the University goals and objectives discussed in the previous section. Faculty agree on program area objectives based on professional accreditation requirements, curricula developed by peer and professional organizations, their own professional training and experience, and input from industry advisory groups.

For example, the Master of Construction Engineering program bases its educational outcomes on the Book of Knowledge 2 (BOK2) developed by the American Society of Civil Engineering. The Project Management program bases its educational outcomes on the Project Management Body of Knowledge developed by the Project Management Institute. The Master of Science in Information Systems program bases its educational outcomes in part on the model curriculum developed by the Association for Computing Machinery.

Program area assessments are conducted by each department and are submitted as part of annual assessment reporting. All department assessment reports are incorporated into annual University assessment reports.

**3a3: Use of Multiple Assessment Measures**

3a3: Assessment of student learning includes multiple direct and indirect measures of student learning.

Lawrence Tech makes use of multiple assessment measures – both direct and indirect – in evaluating student learning. This section highlights examples of the types of measures used across academic programs and as part of the undergraduate assessment initiative.

**Freshman Placement Tests**

All entering freshmen are required to take placement assessments for their major. Assessment topics include mathematics, English reading and writing, chemistry, physics, biology, and computer literacy. New transfer students are required to take placement assessments in areas where they do not have transfer credit. Information concerning placement assessments is sent to students upon acceptance to the University.

**Assessing Student Writing**

Lawrence Tech expects students to present well-written assignments and to recognize that good writing skills are integral to their future professional success. All faculty members are asked to require assignments where students write within their disciplines. A writing assessment rubric has been developed for use in humanities courses and is being used by other academic programs.

The Core Curriculum requires that students pass a Writing Proficiency Examination as a graduation requirement for all undergraduate students. Instituted in fall 2005, this timed exam involves writing at least three double-spaced pages in response to writing prompts provided with the exam. Registration for junior or senior Humanities electives is blocked for students who have not completed the examination. Students who do not pass the Writing Proficiency Exam after two trials are required to complete a junior-level writing course to improve their writing skills.

Student papers are randomly selected from two courses across core curriculum courses each year. These samples are encoded and are scored by faculty members using a double-blind method. Analysis of data across core curriculum courses allows longitudinal analyses of students' progress in writing during their first two years at Lawrence Tech, and to identify strengths and weaknesses in the writing instruction delivered across the Core Curriculum.

**ICCP Examination**

The Bachelor of Science in Information Technology program uses the Institute for Certification of Computing Professionals (ICCP) examination as a graduation requirement for all students. The program’s target is a 75-80% pass rate for the exam, and students are consistently achieving a pass rate of 78% with a slight upward trend. The data suggest that continuous improvement of BSIT courses has resulted in improved ICCP examination scores, and that high ICCP pass rates contribute to the high placement rate for BSIT graduates.

**Student Satisfaction Surveys**

Lawrence Tech uses a graduating student survey and a nationally normed survey from Noel-Levitz to measure overall student satisfaction. These indirect measures are used to assess students' satisfaction of students with their coursework as well as their academic engagement at the University.

The University administers a graduating student survey every year to all undergraduate students, replacing individual surveys previously used by the four colleges. The survey is online and students are required to complete the survey prior to graduation. The survey measures student perceptions on a wide range of academic issues including course content, faculty knowledge, quality of instruction, application of coursework to work situations, and programs and areas covered by the Core Curriculum. The 2010 graduating student survey showed that 83% of graduates attending commencement ceremonies indicated that they had not completed the examination. Students who do not pass the Writing Proficiency Exam after two trials are required to complete a junior-level writing course to improve their writing skills.

The most recent survey was administered in 2006 and the next survey is scheduled for fall 2010. Lawrence Tech’s student satisfaction scores have improved significantly over the years in virtually all categories, with all categories reporting at higher levels of satisfaction than national averages. Students expressed the highest degrees of satisfaction with campus life, learning experiences, quality of instruction, application of coursework to work situations, and preparation in areas covered by the Core Curriculum. The 2010 graduating student survey showed that 83% of graduates attending commencement ceremonies indicated that they had not completed the examination. Students who do not pass the Writing Proficiency Exam after two trials are required to complete a junior-level writing course to improve their writing skills.
Findings

Passage rates on licensing exams, placement of external accountability (e.g., graduation rates, student learning) are available to appropriate surveys for survey trends over time. "Noel-Levitz Student Satisfaction Survey 1996-2006" for survey trends over time. Surveys are conducted to gather feedback about the performance of Lawrence Tech graduates in the workplace. Advisory group members for the College of Architecture & Design employ graduates in their work in the field. Graduates are surveyed at various points throughout their careers to design around the country, but report anecdotal findings that Lawrence Tech graduates tend to outperform graduates of other institutions because they can "hit the ground running."

National Survey of Student Engagement

Lawrence Tech implemented the National Survey of Student Engagement (NSSE) in 2008 to provide indirect evidence of students' engagement with external academic programs. A number of improvements have been made as a result of the initial NSSE survey findings. More information on the NSSE initiative is provided in section 3a6.

3a4-3a5: Disseminating Assessment Findings

Results obtained through assessment of student learning are available to appropriate constituencies, including students themselves. Lawrence Tech integrates into its assessment of student learning the data reported for purposes of external accountability (e.g., graduation rates, passage rates on licensing exams, placement rates) for appropriate constituencies.

The Assessment Committee prepares and disseminates an annual University assessment report which documents assessment findings and recommendations from the previous year. The assessment report is to be used in part to develop the agenda for the Assessment Day held each September. See (C3-03-"Annual Assessment Reports") for copies of all University assessment reports.

The APPR process uses graduation rates and other student performance data as part of the review. APPR documentation includes the most recent assessment data and departmental assessment results submitted to the Assessment Committee.

3a6: Degree Program and Certificate Assessment

Lawrence Tech's assessment of student learning extends to all educational offerings, including credit and noncredit certificate programs. All of Lawrence Tech's academic certificate programs are comprised of courses taught in full degree programs. Course credit is not scheduled exclusively for certificate-seeking students, and certificate-seeking students are held to the same admission requirements as degree-seeking students. Many certificate-seeking students are dually enrolled in degree programs.

The University has recently received approval to offer continuing education units for teachers from the Michigan Department of Education, and is pursuing accreditation by the International Association for Continuing Education and Training and the American Institute of Architects for administering CEU programs.

The Professional Development Center offers non-credit programs for accounting, real estate, Lean training, Six Sigma training, executive coaching and leadership, insurance studies, project management, and entrepreneurship. These programs are non-credit and do not provide CEUs at this time.

3a7: Faculty Leadership of the Assessment Enterprise

Lawrence Tech's assessment program has focused on creating closed-loop processes between data gathering, analysis, decision making, and continuous improvement. The assessment program has been linked to academic program decision making and to resource allocation through the strategic planning and budgeting processes. The assessment program receives strong support from the president and provost, and academic deans, with overall leadership provided by the faculty-led University Assessment Committee.

Annual Assessment Reports

Lawrence Tech's assessment program has focused on creating closed-loop processes between data gathering, analysis, decision making, and continuous improvement. The assessment program has been linked to academic program decision making and to resource allocation through the strategic planning and budgeting processes. The assessment program receives strong support from the president and provost, and academic deans, with overall leadership provided by the faculty-led University Assessment Committee.
The Assessment Committee evaluates the results of all departmental Assessment Reports and provides a summary to the University community. See {C3-05-“Annual Assessment Reports”} for copies of all University assessment reports. Examples of improvements made from recent Assessment Report recommendations include:

- Significant improvements to the undergraduate Writing Proficiency Exam
- Curriculum and assessment improvements to support assessment of oral presentation skills
- Mapping of NSSE survey questions to Lawrence Tech's educational goals
- Assessment goals for graduate programs
- Assessment models for character education
- Video capture of student oral presentations
- Undergraduate leadership curriculum development
- Assessment plan for the Undergraduate Leadership Curriculum

**Assessment Day**

The University Assessment Committee sponsors an annual Assessment Day of professional development related to assessment for all faculty, staff, and administrators. Assessment Day provides an opportunity for the Assessment Committee to review assessment findings, outline assessment plans for the upcoming year, and engage faculty with external speakers and focused activities to improve assessment skills. The majority of on-campus classes are cancelled on Assessment Day to ensure broad faculty attendance and participation. See {C3-07-“Assessment Day Agendas-2003-2009”} for agendas and speakers at Lawrence Tech’s Assessment Days.

### 3b. Encouraging and Supporting Effective Teaching

**Lawrence Tech’s legacy as a teaching institution and its focus on “theory and practice” requires faculty members who are skilled both in their disciplines and in designing effective learning environments for students. Both full-time and adjunct faculty members are recruited to Lawrence Tech with these two dimensions in mind.**

Over the past ten years, Lawrence Tech has also recruited full-time faculty members with active research agendas to provide research opportunities for graduate and undergraduate students. Faculty research, however, does not supplant the expectation of effective teaching, and should be used to enhance faculty teaching and student engagement skills.

Lawrence Tech encourages and supports the development of its faculty members through professional development opportunities, sabbatical programs, faculty-centered service organizations, provision of modern teaching tools and technologies, and incentive grants.

**Figure 46: Distribution of Degrees by Faculty Rank**

<table>
<thead>
<tr>
<th>Faculty Rank</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>10%</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>20%</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>30%</td>
</tr>
<tr>
<td>College Professor</td>
<td>20%</td>
</tr>
<tr>
<td>Senior Lecturer</td>
<td>10%</td>
</tr>
<tr>
<td>Post-Doctor Instructor</td>
<td>10%</td>
</tr>
</tbody>
</table>

The Commission defines qualified faculty as “people who by formal education and tested experience know what students must learn” while being able to “create the curricular pathways through which students gain the competencies and skills they need.” These two dimensions of a qualified faculty member directly reflect Lawrence Tech’s motto of “theory and practice.”

**Faculty Rank and Terminal Degrees**

Lawrence Tech recruits full-time faculty members with the appropriate terminal degree in their field. This is usually a doctorate degree. Faculty members in departments such as engineering and architecture generally hold professional licenses in those fields. Direct industry practice is highly valued by the University, enabling faculty to collaborate with practicing professionals to determine learning objectives and course content for the University’s academic programs.

Full-time faculty members may receive either non-tenure-track or tenure-track appointments. Tenure-track positions are classified as Assistant, Associate, or Full Professor. Figure 46 shows the distribution of degrees by faculty rank. The great majority of the full-time faculty holding master’s degrees are in the College of Architecture and Design, where the Master of Architecture is the terminal degree.

A new process was established in 2009 to ensure faculty full-time faculty vitae and official transcripts are updated and maintained in the provost’s office. Information is gathered and updated during annual faculty contract processing. Faculty may submit their vitae as Word or PDF files, or use a Web-based resume builder developed by the University. Vitea and other credentials for adjunct faculty members are maintained by the academic departments.

**Adjunct Faculty**

Adjunct faculty members generally have academic degrees at least one level above the courses they are assigned to teach or develop, with terminal degrees in their fields preferred. Special emphasis is placed on current practitioner experience. Academic departments are responsible for hiring, scheduling, mentoring, and evaluating adjunct faculty.

See {C3-08-“Adjunct Faculty Processes”) for descriptions of various processes used across the University to manage adjunct faculty.

The University provides a campus-wide orientation for new adjunct faculty each fall and spring semester. The orientation describes what it means to be an adjunct faculty member at Lawrence Tech. The orientation session includes an introduction to the University, an overview of faculty expectations, and presentations on a range of topics including teaching practices, campus safety, library, technology resources, and eLearning resources.

Some departments provide focused faculty development opportunities for their adjuncts, with the program developed by the College of Management cited as exemplary. The college provides two to three workshops per academic year, supplemented by online materials. A typical workshop agenda consists of networking, administrative updates, and a focused training program. A wide range of topics have been featured in the areas of pedagogy, academic integrity, and use of technology.

**Academic Program Development**

New degree programs, credit courses, or changes to existing ones, require approval at several levels. The faculty initiator prepares a proposal for change which fully explains the need and the resources required. Faculty members proposing new academic programs are asked to seek counsel from the Academic Program Review Committee to ensure that their proposals address requirements for library resources, technology, and student services.

See {C3-09-“Course Approval Process”} and {C3-10-“Program Approval Process”) for descriptions of how courses and programs are created and approved. Approval at the departmental level is followed by referral to the college’s Faculty Council for review and approval. In the case of graduate programs and courses, the proposal is also referred by the dean to the Graduate Council for recommendation. New courses and programs are presented by the dean to the Deans’ Council, which acts on the request. In the case of new programs or substantial changes to old programs, the provost, after approval from the president, forwards a recommendation through the president to the Academic Affairs Committee of the Board of Trustees for review and recommendation to the full Board of Trustees.

“...The high academic standards set by the faculty and administration at Lawrence Tech, prepares students for the expectations of employers in the real world.”

-Alexandria Barnard, Administrative Assistant, College of Architecture & Design
Faculty Professional Development

Faculty professional development initiatives include the annual Assessment Day, periodic guest speakers, and programs offered by the Center for Teaching and Learning, including at least two professional development full day workshops. The University supports new faculty members with experienced faculty mentors and provides an orientation program at the start of each semester. Academic departments also provide various professional development activities.

eLearning Services offers an online faculty orientation program each semester covering topics such as instructor presence, classroom engagement, and the use of online learning tools. A weekly online professional development presentation is delivered in Lawrence Tech’s Wimba Web collaboration environment. Topics have included video production, streaming videos, using the tablet PC, professional organizations for eLearning, and classroom lecture capture.

Faculty members also gain professional development through service on University committees and task forces, supervision of interns and co-curricular activities, and participating in shared governance. Lawrence Tech’s emphasis on interdisciplinary program development affords faculty members the opportunity to interact with colleagues outside their primary field and develop creative approaches to delivering interdisciplinary education.

Faculty Professional Participation

The University encourages faculty members to be active in their professional fields, as active and contributing members of professional organizations. Professional consulting related to scholarship or teaching is also considered in the evaluation of performance. Professional consulting should not be scheduled for more than one-fifth of the faculty member's schedule of duties at the University and should directly or indirectly benefit student educational experiences.

Faculty Sabbaticals

Lawrence Tech supports an active program of faculty sabbaticals with pay and benefits to qualified tenured or non-tenured faculty members with six or more years of continuous University service. Sabbatical leaves may be granted for the purpose of professional development, government or community service, research, or academic improvement.

Faculty members submit sabbatical proposals to their dean and college Faculty Council. The proposal shows how the leave will benefit the faculty member, college, and University. The Faculty Council and dean provide letters of support to the Faculty Senate, which ranks all proposals and forwards their recommendations to the provost. The provost and president approve the number of sabbatical leaves considering available budget and faculty needs.

Within 30 days of returning from a sabbatical leave, the faculty member submits a written report to the dean and provost describing the outcomes of their work and benefits to the University. Formal presentations are made by sabbatical recipients to the full faculty during a Faculty Senate meeting. See (C3-11-“Faculty Sabbaticals”) for a listing of recent sabbatical awardees and topics.

Faculty Awards

Faculty members receive several awards each year focused on teaching excellence. See (C2-19-“Employee Recognition Awardees”) for a list of awardees.

The Marburger Fund for Excellence in Achievement presents an annual Faculty Person of the Year award. Faculty members are nominated by their faculty peers, administrators, staff, or students.

The Henry and Barbara Horridt Excellence in Teaching Award is presented to a faculty member who has distinguished himself or herself in the classroom as an outstanding teacher. Lawrence Tech faculty, adjunct faculty, and instructors who have taught at the University for at least five years are eligible to receive the award.

The annual Teaching and Learning Using Technology Award is presented to a deserving faculty member each spring. Criteria for the award include demonstrating innovative use of technology to support learning strategies, the discipline-specific nature of the innovation, and feedback on how the innovation increased student engagement, knowledge, and performance.

Adjunct faculty members are recognized for their contributions by individual academic departments. One such recognition program is the Patrick Scullion Adjunct Faculty of the Year award in the College of Management, established in 2004 with an endowment gift.

3b3-3b4: Improving Instructional Effectiveness

Lawrence Tech provides services to support improved pedagogies.

Lawrence Tech demonstrates openness to innovative practices that enhance learning.

Lawrence Tech supports faculty in keeping abreast of the research on teaching and learning, and of technological advances that can positively affect student learning and the delivery of instruction.

Faculty members actively participate in professional organizations relevant to the disciplines they teach.

Lawrence Tech provides a number of services to help faculty members improve their teaching skills. All University courses and faculty members are evaluated by their students each semester. The University and academic departments routinely experiment with innovative practices to improve instruction. Faculty members are encouraged to participate in professional organizations, and to use new technology and media for their classes. Faculty members are also supported in producing scholarship on teaching and learning.

Instructional Templates and Rubrics

The Center for Teaching and Learning (CTL) enhances educational excellence and innovation at Lawrence Tech. The CTL assists faculty in incorporating innovative pedagogies and methodologies into the classroom by providing financial support, workshops, and consultation. The CTL also supports campus initiatives such as assessment, accreditation, leadership, and entrepreneurship.

The Center for Teaching and Learning (CTL) provides an online faculty orientation program for new faculty each semester covering topics such as instructor presence, classroom engagement, and the use of online learning tools. A weekly online professional development presentation is delivered in Lawrence Tech’s Wimba Web collaboration environment. Topics have included video production, streaming videos, using the tablet PC, professional organizations for eLearning, and classroom lecture capture.

Each Lawrence Tech course is supported by a Blackboard course shell using a University-wide content template. All LTU Online Blackboard courses use a more sophisticated Blackboard template which focuses on online learning and includes a student orientation module and a “faculty only” content area.

Several colleges and academic departments have developed standard syllabus templates for use in all of their courses. See (C3-12-“Syllabus Template”) for an example. A number of assessment rubrics have been developed by the Assessment Committee, academic departments, and LTU Online. See (C3-13-“Blackboard Grading Rubrics”) for examples of rubrics used for LTU Online courses. The Center for Teaching and Learning and eLearning Services are collaborating to make an online library of assessment rubrics available to faculty members.

Center for Teaching and Learning

The Center for Teaching and Learning (CTL) provides services to support improved pedagogies. Faculty members receive several awards each year focused on teaching excellence. See (C2-19-“Employee Recognition Awardees”) for a list of awardees.

The Marburger Fund for Excellence in Achievement presents an annual Faculty Person of the Year award. Faculty members are nominated by their faculty peers, administrators, staff, or students.

The Henry and Barbara Horridt Excellence in Teaching Award is presented to a faculty member who has distinguished himself or herself in the classroom as an outstanding teacher. Lawrence Tech faculty, adjunct faculty, and instructors who have taught at the University for at least five years are eligible to receive the award.

The annual Teaching and Learning Using Technology Award is presented to a deserving faculty member each spring. Criteria for the award include demonstrating innovative use of technology to support learning strategies, the discipline-specific nature of the innovation, and feedback on how the innovation increased student engagement, knowledge, and performance.

Adjunct faculty members are recognized for their contributions by individual academic departments. One such recognition program is the Patrick Scullion Adjunct Faculty of the Year award in the College of Management, established in 2004 with an endowment gift.

Lawrence Tech provides services to support improved pedagogies.

Lawrence Tech demonstrates openness to innovative practices that enhance learning.

Lawrence Tech supports faculty in keeping abreast of the research on teaching and learning, and of technological advances that can positively affect student learning and the delivery of instruction.

Faculty members actively participate in professional organizations relevant to the disciplines they teach.

Lawrence Tech provides a number of services to help faculty members improve their teaching skills. All University courses and faculty members are evaluated by their students each semester. The University and academic departments routinely experiment with innovative practices to improve instruction. Faculty members are encouraged to participate in professional organizations, and to use new technology and media for their classes. Faculty members are also supported in producing scholarship on teaching and learning.

Instructional Templates and Rubrics

The Center for Teaching and Learning (CTL) provides an online faculty orientation program for new faculty each semester covering topics such as instructor presence, classroom engagement, and the use of online learning tools. A weekly online professional development presentation is delivered in Lawrence Tech’s Wimba Web collaboration environment. Topics have included video production, streaming videos, using the tablet PC, professional organizations for eLearning, and classroom lecture capture.

Each Lawrence Tech course is supported by a Blackboard course shell using a University-wide content template. All LTU Online Blackboard courses use a more sophisticated Blackboard template which focuses on online learning and includes a student orientation module and a “faculty only” content area.

Several colleges and academic departments have developed standard syllabus templates for use in all of their courses. See (C3-12-“Syllabus Template”) for an example. A number of assessment rubrics have been developed by the Assessment Committee, academic departments, and LTU Online. See (C3-13-“Blackboard Grading Rubrics”) for examples of rubrics used for LTU Online courses. The Center for Teaching and Learning and eLearning Services are collaborating to make an online library of assessment rubrics available to faculty members.

Center for Teaching and Learning

The Center for Teaching and Learning (CTL) provides services to support improved pedagogies. Faculty members receive several awards each year focused on teaching excellence. See (C2-19-“Employee Recognition Awardees”) for a list of awardees.
C3: Creating Effective Learning Environments

Lawrence Tech's library, technology, and learning resources are developed with faculty participation. The growth of Lawrence Tech's doctoral programs has resulted in the active participation of doctoral students in defining new services needed to support their studies. Projects such as the Foundations of Excellence in the First College Year provide an active linkage between student success and classroom experiences, student life, and student services.

Writing Across the Curriculum

An example of responding to assessment funding was the development of plans to improve student writing skills during the 2008-2009 academic year. Following a review of assessment plans and outcomes, the provost asked all academic departments to develop positive plans for improving student writing. See (C3-15/-Writing Across the Curriculum) for a summary of these improvements.

3c1: Assessment results inform improvements in the formal curriculum, pedagogy, instructional resources, and student services.

As described in Criterion Two, Lawrence Tech has developed a comprehensive strategic planning process that includes assessment as a major element. Assessment results inform the academic program review, budget, and the campus master planning processes.

3c1: Assessment-Driven Improvements to Learning Environments

Lawrence Tech provides an environment that supports all learners and respects the diversity they bring.

Lawrence Tech provides a diverse and supportive learning environment at the University, college, and department levels. Several initiatives related to diversity and support are reviewed in this section.

Honors Program

Lawrence Tech’s Honors Program is designed to provide opportunities and resources for engagement in advanced learning. The Honors Program works closely with academic departments to develop curricula that are challenging and engaging. The Honors Program provides rigorous academic challenges, enhances intellectual and social development, promotes creative thinking and critical thinking, and develops leadership through academics and service.

The Honors Program encompasses 21 credit hours of the core curriculum required of all undergraduates plus nine credit hours of course work in the student’s major. Honors classes treat subject matter at a deeper level to enhance the quality and learning of the course.

Honors coursework is offered in stand-alone honors courses, regular classes with an “honors option,” or special sections of standard courses. Honors students who have satisfied all applicable criteria will graduate “with honors” and be recognized on diplomas and transcripts.

Dean of Students

The Office of Student Affairs is headed by the dean of students and provides a number of support services to promote students’ academic and personal growth. Services include counseling, career services, and co-op education. The office is also responsible for a variety of events designed to enhance campus life and for programs to assist minority students to succeed in the University. See (C3-16/-Lawrence Tech Student Handbook) for a review of student services, which is provided to all students and posted online.

The Office of Student Activities is responsible for social, cultural, and athletic activities outside the formal curriculum, coordinating over forty student organizations. Students are encouraged to participate in campus activities, clubs, or professional organizations early in their collegiate careers. Faculty and staff members provide assistance to clubs and organizations.

Student Activities supports student engagement and relevant traditions involving the entire University community, and creating student leadership positions where student representatives can practice multicultural competence, fiscal responsibility, and ethics. Progress is measured by logging attendance at events, focus meetings with student leaders at the end of each semester, and by facilitating discussions with Student Government.

Traditions that have been created and maintained include the Blue Devil Mascot program, Miss Lawrence Tech Scholarship Pageant, and the Golf Cart Parade. The Blue Devil mascot, established in 2006, is portrayed by student actors who make appearances at campus events. The Miss Lawrence Tech Pageant is affiliated with the Miss Michigan and Miss America organizations. Other student activities include Greek Week activities, fundraising for charity programs, blood drives, and student debates on current social issues.

Student Government

The Student Government is recognized by the University as officially representing the student body. The Student Government includes representatives from all recognized campus groups and appropriates funds for many student social and entertainment activities. The Student Government is also authorized to levy fines for such offenses as improper driving, improper parking, or littering. See (C3-17/-Student Government) for the constitution, which is also included in the Student Handbook. The Student Government has a number of committees including judicial, finance, charity, honors and awards, and social. E-mail, bulletin boards, and banners as well as club announcements are used to communicate information about upcoming events.

Welcome Week Events for New Students

The University stages a Welcome Week for new students during the opening days of the fall semester. In addition, the Discovery program for new freshmen starts three days before classes begin, culminating in a new freshmen convocation. Events include presidential receptions for day and evening students, a campus picnic, special field house activities, and a convocation luncheon for new students. The
Welcome Back Concert is the closing event of the Welcome Week festivities.

**Student Organizations and Honor Societies**

The number of active clubs and organizations varies each year depending upon student interest. Students interested in starting a club are encouraged to propose new organizations to the Office of Student Activities. See (C3-18-“Student Organizations and Honor Societies”) for a list of active student organizations.

**Greek Life**

The Interfraternal Council (IFC) provides coordination and communication among the University’s nine Greek social organizations. The IFC sponsors several activities each year, including Greek Week, Spirit Week, and service projects. Hazing and alcohol abuse are concerns on every campus. Lawrence Tech schedules a New Member Hazing Education workshop after each membership rush. New and current members are also encouraged to attend the Training for Intervention Procedures alcohol education workshop taught by Greek student leaders.

**Students Planning Activities Monthly (SPAM)**

Students Planning Activities Monthly (SPAM) coordinates activities that enhance and enrich the quality of student life. SPAM sponsors over 30 performances yielding an average of 150 attendees per performance.

**Artists’ Guild**

The Artists’ Guild brings together students with a deep interest in the arts to aid one another in their aesthetic development. The Guild collaborates with the humanities department to produce an annual anthology called Prism. Submissions are accepted from students, faculty, and staff in the areas of visual art, poetry, and short stories.

**Society of Dramatic Arts**

The Society of Dramatic Arts (SODA) organizes and presents at least one dramatic performance each semester. SODA members develop skills in all areas of stage production. Recent productions have included Taming of the Shrew, Dracula, Death of a Salesman, Flaming Idiots, Arsenic and Old Lace, David and Lisa, and The Importance of Being Earnest.

**Activities for International Students**

A traditional Thanksgiving celebration is held each fall. Originally designed for international students, all students are now invited with over 300 students participating in the event. In 2009, student volunteers worked with the dining services staff to bake 50 sweet potato and 50 pumpkin pies. Half of the pies were donated to Forgotten Harvest and the other half were served at the Thanksgiving dinner. In addition, international students organize celebrations of their own cultural traditions and holidays. All students are invited to participate in the celebrations. These celebrations are included as leadership experiences in the undergraduate leadership curriculum.

**University Housing**

University Housing provides a safe community-based living environment for residential students. University Housing also provides programming to assist students in making the transition from parental supervision to independent living while promoting social, academic, and leadership growth.

University Housing coordinates Safety Officers in housing procedures and student crisis situations. The dean of students and a psychologist are available on call.

Each residence hall feature both one- and two-bedroom fully-furnished suites. All hallens, full baths, living and eating spaces, Internet service, cable television services, and other amenities. The $12 million renovation of University Housing-North residence hall is designed for freshmen and sophomores, with a full kitchen, appliances, and washer/dryer in each suite. University Housing-South features a full kitchen in each suite, washers-dryers in common laundry areas, and lounge areas. Each residence hall is staffed by a full-time employee who also supervises student community leaders.

There are currently 545 available beds in the two University Housing residence halls configured as one- or two-bedroom suites. Occupancy trends for both housing units in the fall semester have increased steadily and are now routinely at 97%-98%. See (C3-18-“University Housing Rates and Occupancy”) for historical housing rates and occupancy statistics.

University Housing is engaged in several significant improvement initiatives. The new dining services contract with ARAMARK provided renovations of the cafeteria and other dining venues as well as creation of new student meal plans. Two new living-learning communities will be implemented in fall 2010 to focus on cultural awareness and community service. The community leader training program is being redesigned to include online training modules, online discussion forums, and professional development programs.

**Future Housing Plans**

As the University continues to enhance recruitment efforts for national and international students, on-campus housing demands will continue to increase. Future housing plans call for 1,000 residential students housed within four residence halls:

- University Housing-North – 210 students
- University Housing-South – 240 students
- First-Year Residence Hall – 250 students
- Special Interest Residential Village – 300 students

Adding a first-year residence hall provides students the option to progress to University Housing-North, University Housing-South, or the Special Interest Residential Village. University Housing-North would be renovated to meet the housing needs of international students. The proposed Special Interest Residential Village would accommodate up to 300 students, student staff, and a residence hall coordinator residing in the community center.

**Dining Services**

Lawrence Tech has contracted dining services for more than ten years. Starting in July 2010, ARAMARK became the University’s dining services provider. ARAMARK manages the University dining commons, serves meals at special school functions, and manages vending and canteen services across the campus.

Student meal plans have evolved considerably over the past several years to appeal to changing student tastes, provide a healthier selection of foods, and provide international options. ARAMARK provides meal plans with a mix of “all you can eat” meals and “flex dollars” for use across campus. New dining experiences include a Real Food on Campus concept where students can choose new daily offerings seven days per week.

An Einstein Bros Bagels shop is now located in the Buel Building Atrium and a Provisions on Demand shop is located in the University Technology and Learning Center where students can purchase coffee, salads, and sandwiches. Students are also able to order pizza and other items to be delivered to the dorms. The new ARAMARK meal plans represent a significant cost savings to students. See (C3-20-“Dining Services Meal Plans”) for more information about meal plans and rates.

**Student Recreation**

The Student Recreation Department provides opportunities for student participation in a variety of recreation and fitness programs, intramural leagues, club sports, and special events. Student Recreation receives most of its funding from the University’s operating budget and some through a Student Activity Fee. Student Recreation performs periodic surveys of participants to assess the department’s effectiveness in meeting the needs of students. Student Recreation provides an annual summary of recreation activities and participation. See (C3-21-“Student Recreation Annual Reports-2004-2009”) for copies of these reports.

**Field House**

Field House attendance for FY2009 totaled over 53,000, with over 1,300 individuals participating in 47 different intramural sports. The most popular sports included basketball, flag football, indoor soccer, boot camp, personal training, and club hockey. Over 250 students participated in the Fitness Club. The 100 Days of Fitness promotion recruited 95 participants who earned fitness points and rewards after 100 days of various workout regimens.

**Club Sports**

Club sports are determined by student interest and support. Current club sports are men’s ice hockey and soccer, women’s volleyball, and a mixed martial arts club. Past club sports included men’s rugby, golf, cricket, and bowling. Games are scheduled with NCAA campuses in the area although the games are not counted as part of opponents’ varsity conference standings. Almost 200 students participated in club and extramural sports during the 2008-2009 academic year. Club sports are funded through the Student Activities Fee plus player fees for uniforms, travel, and ice rink rental. These fees range from $100 for soccer to $700 for ice hockey.
The NAIA seeks to create an environment in which every student-athlete, coach, official, and spectator is committed to the true spirit of competition through five tenets: respect, integrity, responsibility, servant leadership, and sportsmanship. Lawrence Tech’s focus on leadership and character education fits well with the NAIA’s focus. Elevating Lawrence Tech athletics to intercollegiate status also provides another avenue to recruit qualified and engaged students to the University.

Organizing for Student Services

This section describes campus service departments which contribute to Lawrence Tech’s learning environment. Lawrence Tech has a one-stop center as part of the consolidation of student services in the A. Alfred Taubman Student Services Center, and Registrar, Financial Aid, and Student Accounting were integrated to form the Enrollment Services unit. LTU’s Enrollment Services unit has been recognized as an exemplary practice, with many colleges and universities visiting Lawrence Tech to learn about its design and implementation.

Enrollment Services

Enrollment Services integrates Admissions, Registrar, Financial Aid, Student Accounting, and data processing into a single operating unit. The Admissions area focuses on the various aspects of student recruitment and admission. Student segments first time freshmen, transfer students, women, minorities, international students, part-time students, and graduate students. Recruitment programs have been developed to bring prospective students to campus, maintain contact with inquiries and applicants, and maintain relationships with high schools and employers.

Lawrence Tech currently seeks prospective undergraduate students based on geographic location, high school GPAs and test scores, and interest in specific fields of study. Admissions has expanded its recruiting focus to the national market, recruiting students from Minnesota, Illinois, Missouri, New York, Florida, Ohio, Texas, Wisconsin, Pennsylvania, Massachusetts, as well as in Canada. Admissions staff members participate in over 30 national college fairs and have travelled to Oman, United Arab Emirates, Qatar, Bahrain, Saudi Arabia, Kuwait, Jordan, Turkey, Germany, Colombia, Venezuela, and Brazil to recruit international students.

Admissions uses a number of Internet and social media tools to connect with prospective students. The College Board’s College Search Web site search.collegesearch.com allows students to search for a college based on personal interests, majors, location, tuition, and other factors. The Zinch website, zinch.com lets Lawrence Tech target specific students based on criteria such as location, anticipated major, GPA, and test scores. The Hobson’s suite of enrollment management tools hobsons.com provides a system for communicating with prospective students. Hobson’s provides students with an individually tailored Web site and enables Admissions to manage communications, e-mails, letters, and offers of admission. Lawrence Tech is one of only 415 colleges and universities to use the College Board’s Common Application. This program is open only to institutions which promote access by evaluating students using a holistic selection process.

Office of the Registrar

The Registrar’s office operates the registration process and maintains all official student records, transcripts, class rolls, and grades. All incoming student documents are imaged and other paper records are being imaged and linked to the Banner system. Files are routed electronically rather than being sent via paper. The new Curriculum Advising and Program Planning service will allow students and advisors to perform audits on progress toward graduation. Students considering a change of major will be able to view remaining required courses in their new program before meeting with a faculty adviser. Lawrence Tech uses the Schedule25 scheduling system to support course scheduling in Banner, and has implemented a Web version of the Prodigy system to manage multi-user classes and special events. This flexible system allows users to manage spaces and other resources by identifying the resources most applicable to their specific event. All classes and events across the University can be viewed by visiting score.ltu.edu. Approximately 1,200 students petition to graduate each year. Department chairs are provided with a list of students in their programs who have filed a petition, chairs audit their records and notify students if they have outstanding requirements. Degrees and honors are awarded in Banner by the Registrar’s Office upon approval of academic departments. Lawrence Tech’s commencement ceremonies are held each May at the Cobo Arena in downtown Detroit.

Academic schedules are set approximately one year in advance. Approximately 4,000 traditional semester sections and 2,800 credit hours of online courses are scheduled each year. The registrar is implementing “blocked dates” for open learning classes will help students identify add, drop, and withdrawal dates while continuing to offer schedule flexibility.

Financial Aid and Veterans Affairs manages all financial aid operations and coordinates services for military veterans. Financial aid awards were discussed in detail in Criterion Two. The data processing center supports the overall functions of Registrar, Financial Aid, and Student Accounting.

The Business Services Office collects, manages, and disburses funds for student accounts and other fees. The office prepares internal and external reports, audited financial statements, tax filings, and governmental accounts. Electronic billing statements replaced mailed billing statements in 2009 and are sent to the student’s registered e-mail addresses. Although located with Enrollment Services, the Business Services office reports to the Office of Finance and Administration.

Campus Bookstore

The Lawrence Tech Bookstore, located in the Buell Building Atrium, provides textbooks and other materials required for academic courses. Barnes and Noble College Bookstores has leased and operated the bookstore since 1995.

Campus Safety

The Campus Safety department coordinates crime prevention, risk mitigation, emergency management, and public service for the University. Campus Safety provides 24-hour dispatch services, maintains a status line for campus closing, and provides campus escort and motorcycle assistance services. Campus Safety routinely meets with the Student Government, Faculty Senate, Staff Senate, and other groups to collaborate on safety issues.

An unarmed security force patrols the campus 24 hours per day, seven days per week. Officers are not empowered to make arrests but maintain a close relationship with the Southfield Police Department through a direct communication link.
Officers carry control devices and may use them only if a person is at immediate risk of serious harm. Security vehicles are equipped with LED overhead lights and strobes, public address systems, and electronic air horns. Video cameras are installed throughout the campus.

Lawrence Tech has implemented a campus emergency response plan and notification system to inform the campus community of weather or safety emergencies via e-mail or text messaging. Campus Safety and the dean of students office has established a Safe Student and School Program to promote early recognition of students whose behavior warrants intervention to protect their safety or the safety of others. Faculty, staff, and students are encouraged to report instances of suspicious behavior or persons exhibiting warning signs of personal crisis, alcohol or drug abuse, or behavioral anomalies.

Lawrence Tech’s annual security report, which details Clery Part I and Part II data for the previous three years is available on the campus safety Web site lu.edu/campus_safety and is discussed further in the Federal Compliance section. Safety progress is measured by reducing the number of preventable negative incidents on campus. Negative events occurring on properties adjoining the campus, while recorded in annual security reports, fall under the jurisdiction of the Southfield Police Department.

3c3c-3c4: Student Advising and Development

3c3: Advising systems focus on student learning, including the mastery of skills required for academic success.

3c4: Student development programs support learning throughout the student’s experience regardless of the location of the student.

Lawrence Tech has developed a number of interdepartmental advising, academic support, and mentoring services. The University recognizes that academic success requires involvement of faculty, academic departments, service units, and other support programs. The services established at Lawrence Tech are designed to increase opportunities for academic success, encourage relationships with faculty and student peers, and enhance students’ sense of belonging.

Academic Advising

Full-time faculty members provide academic advising to undergraduate, graduate, and doctoral students. Advising expectations are documented in the Faculty Handbook and advising procedures are posted online. Some adjunct faculty members provide advising in engineering, architecture, and other areas. The interaction between faculty members and advisees develops with time so that faculty members become mentors for the student and guide them in career choices and professional development.

The Arts & Sciences Undeclared Students (ASUD) program uses teams of academic advisors to work with undeclared students at the beginning of each semester. Advisors guide undeclared students with course selections, prospective major choices, and other issues. First year engineering students are advised by faculty members in the College of A&E & Sciences since they take most of their courses in the college. A team of first year student advisors are coordinated by the Office of Leadership and First Year Programs.

Academic Achievement Center

The free Academic Achievement Center (AAC) offers tutoring services in a number of subject areas on a walk-in basis. The AAC also provides academic accommodations to differently-abled students in collaboration with the Disability Services Office.

Established in 1996, the AAC has reported to the associate provost since 2005 as a University-wide service. Approximately 9,000 students signed in to the AAC office during each of the past three academic years. Students most often use tutoring services, quiet study, test proctoring, group study, and placement and assessment services. Over 2,300 hours of tutoring and more than 900 exams were proctored during the 2008-2009 academic year. The highest tutoring levels are for students in mathematics, computer science, writing, English as a Second Language (ESL), and engineering courses.

The AAC also provides support for architecture, biology, chemistry, and engineering courses. A new writing center opened in 2009 in response to recommendations made by the Foundations of Excellence project.

The AAC provides an “early warning system” for at-risk students in the fourth week of classes. Midterm grades are mailed to first year students at their permanent addresses in the fall and spring semesters. The AAC also provides a range of workshops, academic pre-courses, study skills materials, and academic success materials.

A number of collaborative relationships are maintained including training and support of the University Housing community leader program, the Arts & Science Scholars program, and the Student Union. The AAC promotes the use of technology for teaching and learning by incorporating technologies such as the Web ride Web collaboration system for online tutoring. Tutors keep logs recording the number of students they tutor, duration of tutoring, areas tutored, and subjective comments about student progress. This data is used to measure the effectiveness of tutoring based on comparative course GPA and numbers of Withdraw or Incomplete grades.

Pre-Course Program

The AAC offers a pre-course program for students enrolled in 18 different courses in chemistry, English, engineering, mathematics, computer science, and architecture. Pre-courses were launched in 2007 with support from the University’s King-Chavez-Parks grant from the state of Michigan.

Pre-courses are designed in collaboration with faculty members and are approved by department chairs. Courses are offered the week before classes start, and consist of 12 hours of instruction delivered over four consecutive days. Pre-courses are led by AAC tutors who excel in the target courses. Students are charged $475 for each pre-course, of which $400 is used to fund instructor stipends.

English as a Second Language

Lawrence Tech’s ESL program helps students acquire the language skills needed to succeed in their programs. International students must achieve a minimum score of 550 on the paper-based Test of English as a Foreign Language (TOEFL) exam, 213 on the computer-based exam, or 70 on the Web exam to be accepted from Lawrence Tech’s ESL requirements. The International English Language Testing System is also accepted by Lawrence Tech with a minimum score of 6.5.

Students scoring below the minimum are required to enroll in ESL classes from 12 (50% of academic load) to 24 (100% of academic load) contact hours per week until minimum scores are achieved. Qualified students may enroll concurrently in ESL and selected academic courses with appropriate supervision. See (C3-22”TOEFL Scores-Spring 2008”) for representative TOEFL scores for international students.

First Year Program

Established in 2004, the Office of First Year Programs provides a range of services to first year students. Nearly half of Lawrence Tech’s first year students and their parents interact with the office.

In addition to establishing faculty advising connections, each first year student is connected to a returning Lawrence Tech student for the academic year. The office communicates several times with parents of first year students under the age of 21. Recently the Office of First Year Programs was integrated into the Leadership Program as the Office of Leadership and First Year Programs.

University Seminar

The University Seminar course also serves as the first course in the Undergraduate Leadership Curriculum. It is a one-credit course which emphasizes goal setting, time management, study skills, transition to college life, and familiarity with the resources and services available at Lawrence Tech. The University Seminar promotes development of student peer groups and initiates a relationship between students and their advisors. A three-hour abbreviated version of the University Seminar has been developed to meet the needs of transfer students, and a one-hour version has been developed to support new and transferring online students. There is also a two-credit-hour version of the University Seminar provided to students in the Lawrence Tech Scholars program.

Office of International Programs

More than 450 international students from over 40 countries study at Lawrence Tech. Lawrence Tech’s international student population is among the top four percent of institutions in the United States. The Office of International Programs (OIP) is responsible for certification of Lawrence Tech’s Student Exchange Visitor Program and sponsors F-1 and J-1 students. Lawrence Tech migrated to the SEVIS II system in March 2010. The new system focuses on visa status and resolving compliance issues with federal agencies. OIP supports academic departments by managing research, teaching, and study opportunities for faculty and students.
Criterion Three

are issued at the start of each semester. Letters to faculty testing environments, adaptive equipment, and accommodations to permit students with
be referred to outside counseling services and programs addressing issues of gender, cultural crisis counseling. The counselor also provides
of learning activities that focus on different cultures, backgrounds, and races. Events and programs include welcome receptions, student organizations, and lectures focused on social, cultural, and academic issues. Through these experiences, students from all backgrounds gain a broader understanding of the people who make up the global community.

Student Engagement
The Office of Student Engagement encourages students to engage in a wide variety of learning activities that focus on different cultures, backgrounds, and races. Events and programs include welcome receptions, student organizations, and lectures focused on social, cultural, and academic issues. Through these experiences, students from all backgrounds gain a broader understanding of the people who make up the global community.

Disability Services
Lawrence Tech makes reasonable accommodations to students with disabilities to fulfill academic requirements. Students with disabilities by submitting a request to the Disability Services Office. Accommodations are provided on an individual basis and include textbooks on tape, note-takers, testing environments, adaptive equipment, and referral to outside resources. Letters to faculty members explaining student accommodations are issued at the start of each semester.

3c5: A Technology-Enabled Learning Environment

Copyright © 2021 Lawrence Tech. All rights reserved.

3c5: Lawrence Tech employs, when appropriate, new technologies that enhance effective learning environments for students.
As a technological university, Lawrence Tech prides itself on its robust technology infrastructure, student technologies, and eLearning environment. Significant investments in technology services have resulted in an exemplary teaching and learning environment which is enabled by the latest technologies. These investments include developing the first fully wireless campus in the state of Michigan in 2001, the unique student tablet-laptop program, adoption of the Blackboard learning management system, use of appropriate classroom technologies as learning tools, deployment of Web collaboration and video services, and significant improvements to the University Library’s digital holdings.

eLearning Services
The eLearning Services unit was established in 2009 through the consolidation of the Verraldr Instructional Technology Resource Center and the LTU Online initiative. eLearning Services’ mission is to “enhance teaching and learning through the thoughtful use of learning technologies.”
eLearning Services provides full-time and adjunct faculty members with the learning technology resources necessary to assist them in teaching and course delivery. Services include eLearning support, course development, media production, online evaluation and assessment, classroom technologies, and the LTU Online initiative.
eLearning Services collaborates closely with the Help Desk, Center for Teaching and Learning, IT Service Delivery, and University Library to provide a seamless suite of services to Lawrence Tech faculty and students. The Help Desk provides first-level support for hardware, network, and enterprise software. The Center for Teaching and Learning focuses its efforts on pedagogical development and provides a range of seminars on teaching techniques. IT Service Delivery is responsible for the campus IT infrastructure, wireless network, and enterprise eLearning software. The University Library provides an extensive collection of digital books and journals which can be easily integrated into the University’s Blackboard learning management system.

Learning Management Environment
Most eLearning services are delivered within the University’s Blackboard learning management system. Students access Blackboard through the my.ltu.edu portal. The Blackboard environment includes:
- Blackboard Community and Learning Systems version 9
- Blackboard Content System
- SafeAssign plagiarism detection
- Wimba Live Classroom and Voice Tools
- Wimba Pronto instant messaging platform
- Respondus Lock-down Browser
- Panopto CourseCast
eLearning Services also supports classroom display technologies and the University’s videoconferencing facility. A new classroom display configuration has been proposed along with a three-year plan to implement the configuration into all Lawrence Tech classrooms.
eLearning Services supports classroom video capture using student videographers and producers, hand-held capture for faculty and students, and lecture hall capture using the Panopto CourseCast system. Impatica for PowerPoint is used by faculty and students to create narrated PowerPoint presentations which play within the Blackboard environment. eLearning Services maintains a streaming video service and a YouTube University site. Wimba, Lawrence Tech’s provider of Web collaboration services, featured Lawrence Tech’s eLearning environment in its 2009 list of Wimba Modern Marvels for its use of Wimba to connect students from around the country to the University’s RoboList program.

Faculty Outreach and Professional Development
eLearning Services has established a number of innovative approaches to supporting the use of eLearning technologies by faculty and students, including:
- The Wimba Wednesdays program where faculty interact to learn about eLearning technologies
- The eLearning Web site elearning.ltu.edu which houses all documentation and training about the University’s technology and eLearning services
- An online faculty orientation program at the start of every semester
- Consultation and travel support for faculty members submitting scholarly articles on teaching and learning using technology
- A seed grant program awarding the development of tablet PC instructional materials and online learning modules
- Pilot programs in Second Life and other new media

Lawrence Tech is an institutional member of a number of professional and academic organizations related to teaching and learning including the Educational Technology Consortium of Michigan, EDUCAUSE, EDUCAUSE Learning Initiative, New Media Consortium, and the Sloan Consortium.

LTU Online
Lawrence Tech developed a number of hybrid and fully online courses during the early 2000s. The LTU Online initiative has grown steadily despite enrollment challenges for the University’s graduate programs over the past two years. LTU Online’s long-term goals are documented as objective 6.1 of the strategic plan:
- By 2015, LTU Online will be a priority strategy in retention and enrollment.
- A leader in exploring new delivery technologies and methodologies, and attain the enrollment goal of 2,000 attributed students.

LTU Online provides a range of services including design and development of online and hybrid programs, financial support for online development and teaching, training and support for online faculty, and development of standards and templates. These services provide the University with a unified approach to developing online modules, courses, and programs to support traditional, hybrid, and online academic programs.
The success and maturity of the LTU Online initiative has prompted Lawrence Tech to submit a request for institutional change to offer any of its academic programs in hybrid or online mode subject to internal approvals. Please see the Institutional Change Request for Online Programs for more information.
Lawrence Tech’s Information Technology Infrastructure Service Delivery unit provides infrastructure, systems, and services to the campus. Technology governance provides an institutional steering committee consisting of the provost, associate provost, vice president for finance and administration, and executive director of eLearning services. In addition, two advisory groups have been formed to provide input on administrative and academic initiatives.

Campus Infrastructure

See (C-3-23-Information Technology Infrastructure*) for a diagram of the campus infrastructure. The diagram is organized as a network-centric view showing the campus telecommunications system, campus network, servers and applications, and areas of risk and future investment.

Lawrence Tech has made significant investments over the past few years in upgrading the campus infrastructure to a Gigabit network, upgrading to a new 802.11n wireless network, implementing a virtual server environment, and improving the student network. Improvements to Internet bandwidth and use of hosted services for video streaming and some eLearning applications have resulted in a campus infrastructure that is both robust and flexible.

Lawrence Tech’s Internet services are provided by the Merit Computer Network, headquartered in nearby Ann Arbor, which serves all of Michigan’s public universities and many private institutions. In fall 2009, Internet bandwidth was increased from 30MB to 75MB per second, plus an additional 15MB per second for services such as Microsoft updates and Internet2. Internet traffic was also prioritized to new critical applications and teaching tools to have precedence over recreational usage. Lawrence Tech is also collaborating with Merit to pilot new bandwidth utilization tools.

Lawrence Tech’s wireless network, installed in 2001 as the first fully wireless campus in Michigan, was replaced in fall 2009 by a new 802.11n high-capacity Xirrus network. The network covers all floors of all buildings and many outdoor spaces. All campus hard-wired connections are being inventoried and repaired as needed. These initiatives ensure high quality access to wired and wireless users and support classroom lecture capture and other video applications.

The virtual server and storage area network environments were installed in 2008 and have proved to be excellent investments. Reliability and capacity have been improved by adding memory, disk space, server blades, and network connections within the virtual environment. Users are being sured about future server and storage needs to provide planning data for future investments.

Lawrence Tech deployed the Google Apps for Education suite in 2009 to replace the University’s legacy e-mail system. The Google Apps suite includes e-mail, document sharing, calendaring, Web site creation, and chat services for faculty and students.

Lawrence Tech’s Banner administrative information system was upgraded to Version 8 in 2010. A Banner configuration group comprised of representatives from human resources, admissions, finance, registrar, and other areas meets biweekly to monitor Banner issues and plan improvement initiatives.

Security Initiatives

Following a serious virus outbreak in fall 2007 that impacted most computers on campus, Lawrence Tech has made a number of upgrades to its security environment. A packet shaper limits bandwidth available for downloading illegal video and audio files. Core services are isolated and role-based security is being implemented. The campus is moving to a single sign-on environment and users are required to change passwords periodically and use more complex passwords. Wireless network users will be asked to authenticate with Lawrence Tech credentials or be assigned public Internet access.

These security improvements address requirements of the Higher Education Reauthorization Act of 2008, which directs institutions to document procedures for ensuring the identity of students enrolled in distance learning courses and for controlling downloading of illegal content. These issues are addressed in the Federal Compliance section.

Tablet-Laptop Program

Lawrence Tech was one of the first institutions in Michigan to institute a laptop computer program in 2000, and then to establish the first wireless campus in the state of Michigan. As a result of a site visit to Virginia Tech in 2007, Lawrence Tech moved many students and faculty members to tablet PCs in 2008. Tablet PCs enable faculty and students to use features such as collaborative classroom presentations and annotation to improve the learning experience. The College of Architecture & Design continues to use laptops due to their larger screen sizes. MacBooks are used for students in the imaging, transportation design, and media-related fields.

Lawrence Tech’s tablet-laptop program was initially funded with a student technology fee, but costs were later incorporated directly into student tuition rates. Graduate students may opt to lease a machine for $95 per credit hour, but most graduate students own their own laptops.

Lawrence Tech’s tablet-laptop program is unique among the nation’s student computing programs, as the University provides not only productivity software, but also discipline-specific software for students in all undergraduate programs. The Help Desk requests information from all academic departments each spring about discipline-specific software to include in the upcoming software image. See (C-3-24-Tablet-Laptop Software Images*) for the fall 2010 tablet, laptop, and Macbook software images.

The University base software image is valued at $12,000 per device, and discipline-specific software is valued at up to $15,000 per device. See (C-3-25-Tablet-Laptop Hardware and Software Value*) for an overview of fall 2010 hardware options and a software value analysis by disciplinary area.

Other Software Licensing Programs

The University maintains Microsoft Software Development Network (MSDN) licenses in the College of Management, Electrical and Computer Engineering, and Mathematics and Computer Science. This program enables students to download complete versions of dozens of Microsoft operating systems, server software, developer applications, and productivity software in addition to software provided by the Tablet-Laptop Program. Faculty, staff, and students may also use Microsoft operating systems and Microsoft Office 2007 on both work and home machines through licensing with Microsoft, with graduates retaining the software licenses. Faculty, staff, and students may use the Autodesk Education Master Suite and Education Suite for Entertainment Creation on their work or home machines. A wide range of Adobe software is also available to faculty, students, and staff through a software licensing arrangement.

Media Services

The Media Services Department provides a number of services to the University community including provision of portable audio sound systems, monitors, projectors, and recorders. A production studio facility provides a professional environment to capture broadcast quality analog or digital content.

3c6: Continuously Improving Learning Resources

3c6: Lawrence Tech’s systems of quality assurance include regular review of whether its educational strategies, activities, processes, and technologies enhance student learning.

Lawrence Tech continuously improves its learning environment, educational strategies, and technological environment. Some improvements are associated with the University’s assessment initiative while others stem from special initiatives such as the Foundations of Excellence project. Others result from ongoing collaboration between faculty members and service units. This section describes several examples of continuous improvement of Lawrence Tech’s learning environment.

Foundations of Excellence in the First College Year

Lawrence Tech was one of a handful of universities selected to participate in the 2008-2009 cohort of the Foundations of Excellence in the First College Year, a national project on higher education excellence. The project, sponsored by the National Policy Center on the First Year of College, helped Lawrence Tech evaluate and improve the overall experience of first year students.

Lawrence Tech worked with the National Policy Center to receive current best practices in recruiting, admitting, orienting, supporting, advising, and teaching first year students. Four subcommittees comprised of faculty, staff, and students analyzed data and prepared reports in the following areas: philosophy, organization, learning, faculty, transitions, all students, diversity, roles and purposes, and improvement. See (C-3-26-“Foundations of Excellence Dimensions Reports”*) for these documents.
Based on survey findings, focus group results, and subcommittee deliberations, key recommendations were made to support improvements in Lawrence Tech’s first-year experiences:

- Define learning outcomes related to academic, personal, and career success for the University Seminar course through systemic assessment
- Provide first-year advisor training to College of Arts & Sciences faculty members, and consider inviting emeritus faculty to serve as advisors
- Survey students on the effectiveness of Discovery Days content and update the program to provide more orientation and content for international students
- Develop benchmarks and intended outcomes for student engagement
- Assess the impact of the AAC’s early warning system on student performance
- Develop a training program for faculty teaching the University Seminar course

### National Survey of Student Engagement

Lawrence Tech implemented the National Study of Student Engagement survey in 2008 to assess student engagement throughout their undergraduate experience in five areas:

- Level of Academic Challenge
- Active Learning
- Student-Faculty Interaction
- Enriching Educational Experiences
- Supportive Campus Environment

Over 1,100 Lawrence Tech students in Lawrence Tech’s three primarily undergraduate colleges were invited to participate in the NSSE survey, and 329 responses were received. Student focus groups were conducted in April 2009. The survey findings showed that levels of academic challenge, student-faculty interaction, enriching educational experiences, and supportive campus environment for first-year students were in line with geographic and Carnegie Class peers, but that senior ratings were significantly lower. Ratings for active and collaborative learning were significantly higher than peers for freshman students, but were significantly lower for seniors. See (C3-27-“National Survey of Student Engagement Reports”) for benchmark comparisons and faculty-student comparisons.

### 3d. Improving Learning Resources

#### Criterion 3d: Lawrence Tech’s learning resources support student learning and effective teaching

Lawrence Tech has made significant investments in constructing new learning facilities, building a robust eLearning infrastructure, and improving faculty teaching and assessment skills. The wireless network, tablet-laptop program, technical support, and training enable faculty members to leverage these resources in the classroom.

The campus master planning process has documented future learning environment needs. A thorough audit of hardware and software systems has identified links between systems, risk areas, replacement schedules, and investment needs. The Library and eLearning Services collaborate with students and faculty to identify emerging trends and services to improve the learning environments with digital learning resources and eLearning technologies.

#### 3d1: Laboratories, Libraries, and Other Facilities

Lawrence Tech provides a wide range of laboratories, auditoria, studios, performance spaces, and library facilities to meet the educational needs of its students and faculty.

### Academic Laboratories

Academic laboratories are maintained by colleges and academic departments. Computer laboratory facilities are maintained by college departments and IT Service Delivery. See (C3-28-“Academic Laboratories”) for details on Lawrence Tech’s academic laboratories.

The Department of Natural Sciences has almost 11,000 square feet of laboratory and equipment space located on the second and third floors of the Science Building. There are ten physics labs and storerooms, five biology labs and storerooms, and ten chemistry labs and storerooms. Between 2006 and 2009, the University invested $315,000 to upgrade its chemistry, physics, and biology laboratories. As a result of the NSSE survey, college-level action plans were developed to address these issues. The NSSE survey will next be administered in the 2010-2011 academic year.

The College of Engineering provides a number of advanced research and teaching laboratories to support students and faculty. Laboratories for mechanical engineering, materials, structural testing, vehicle dynamics, fire testing, and aerodynamics are available. The Center for Innovative Materials Research is one of the most advanced structural testing laboratories in the nation.

The College of Architecture & Design maintains studio spaces for architecture and design students. NAAB accreditation includes a requirement for a “written studio culture policy with a plan for its implementation and maintenance.” Each undergraduate student, after the freshman year, is provided with design studio space for their exclusive use in the Architecture Building, Art & Design Center, or University Technology and Learning Center (UTLC) building. The UTLC studios were specifically designed to meet NAAB accreditation criteria. The college maintains 29 architecture studios supporting 16 students per studio. The college also provides five class-based architecture studios supporting 18 students per section, an interior design studio of approximately 60 stations, and four studios supporting 64 transportation design students. Imaginative use of a dedicated 16-station studio plus additional on-demand spaces.

#### Computer Laboratories

Lawrence Tech requires a small number of computer labs due to the tablet-laptop program and campus wireless network. This is consistent with national trends for fewer on-campus computer laboratories. High-end workstations loaded with appropriate software are available in three campus computer labs. These are open labs, although faculty may reserve a lab for individual class meetings. The computer labs also provide student access to high-speed laser printers. Additional printers are available in the University Library and both residence halls.

The civil and mechanical engineering departments maintain computer laboratories featuring a number of software packages including graphing, design, and analysis applications. The College of Management maintains a computer laboratory featuring Oracle and other specialized software supporting the Management Information Systems program.

### Auditoria and Performance Spaces

Lawrence Tech provides several auditoria and performance spaces for student, faculty, professional, and community activities. All spaces are served by the campus wireless network. Auditoria in the Science and Architecture buildings are used for lectures, large meetings, and plays. The Architecture auditorium is equipped with lecture capture technology. The Lear Auditorium is equipped with fixed audio-visual technology and can easily be configured for teleconferencing.

The Architecture Gallery is designed for displays of architecture and design projects and can also be configured for meetings and receptions. The Buell Building Atrium and Cafeteria can be configured for a range of activities. The Alumni Hall in the A. Alfred Taubman Student Services Center can be configured for receptions, the Boardroom is fully equipped for teleconference capability.

### University Library

The University Library provides access to print and digital library resources to students, faculty, staff, and the community. Students use the Library in person or online and are assisted by seven professional librarians. The Library supports faculty members through consultation and classroom visits. A faculty governance committee advises the Library on collection and service issues. See (C3-29-“Faculty Library Committee”) for the charter of the governance committee.

The FY2010 Library acquisitions budget was $486,000 and the total Library budget was approximately $1,041,816. More than 40% of the Library budget is devoted to collection development, 50% for personnel, and 10% for operations. The Library budget has shown a steady but steady annual budget increase over the past ten years.

### Print and Image Collection

The total print and microfilm volume count is 134,437 with approximately 1,000 print journal titles. Faculty members are polled for book and journal subscription suggestions and these are typically fulfilled. Academic departments can establish course resources for students.
All proposed curricula are reviewed to ensure availability of print and digital library resources. Additional funding is sometimes needed to support new degree programs.

The Architecture Resource Center serves the multimedia needs of architecture and design students. A 95,000 item slide collection has been supplemented by over 8,000 digital images. The Center is managed by a curator reporting to the Library director.

Despite the push for electronic resources, print collections continue to have value for library users. The Library’s goal for developing its collection is to maintain a strong and viable print collection of books and periodicals. Except in the fields of architecture and design, print journals are being replaced by digital versions. Circulation levels have declined over the years at many institutions as more materials are available online. Figure 47 shows the Library’s print circulation levels for the past four years.

Digital Collections
The Library is responsible for operation of library systems including the SisliDynaX Symphony Integrated Library System, EZProxy authentication system, AtoZ, LinkSource, Millenium, and about 100 database systems with 45 unique interfaces. Lawrence Tech spends approximately $116 per FTE student on digital library holdings. The five most used databases in 2009 were Gale, Business Source Complete, ScienceDirect, Academic One File, and Expanded Academic ASAP. Figure 48 shows trends in online searching and full-text displays. See (C3-30-“University Library Digital Holdings”) for a complete listing of digital holdings and costs.

The Library’s goal for growing its digital collection is to complement the print collection while increasing access for on and off-campus users. Strategies to meet this goal include:
- Identify and evaluate online sources and discontinue services that are duplicative or have low long-term usage
- Establish a funding to purchase new products during the annual budget cycle
- Evaluate the potential cost of absorbing databases currently funded by the state of Michigan
- Consider purchase rather than lease of digital backfiles
- Implement an electronic interlibrary loan system to deliver PDF copies of documents

Patron Services
The Library is open for approximately twelve hours per day and provides meeting space in addition to traditional library services. All reference stacks are accessible and professional reference services are available. Computer workstations, photocopy machines, and a student printer are available. Over 1,300,000 pages per year are printed on the Library’s public printer.

Visitor counts show a steady increase in library entrances over the last few years. The addition of public computers and a public printer has helped improve attendance. Figure 49 shows visitor counts from FY2005 through FY2008. The Library participates in the statewide MelCat borrowing system that allows students to select items from over 300 statewide libraries which are sent free to Lawrence Tech. The Library also provides a traditional interlibrary loan program for books and journal articles not available via MelCat. Lawrence Tech is a net lender with 1,644 books supplied and 588 books received between 2003 and 2008. The Library’s dissertation service assists doctoral candidates in the completion, binding, and delivery of their dissertations for online publishing. All Lawrence Tech dissertations are available for worldwide viewing via ProQuest.

TEACH Act and Copyright Compliance
Lawrence Tech has developed a comprehensive approach to copyright and fair use posted on the Library’s Web site. The Library provides services to assist faculty, staff, and students in complying with federal copyright law including:
- An agreement for faculty, staff, and students to follow copyright laws
- Information and training about the TEACH Act and copyright rules
- Assistance with fair use practices and conducting copyright royalty investigations

Visioning for a New Library Facility
The present Library in the Buell Building is the fourth library location to serve the campus. The Library has seen few physical changes since 1982. The University recognizes the need for a more modern library to provide quiet personal study spaces, flexible collaboration spaces, and integrated technologies. More faculty members are reinvigorating their curricula by including a physical visit to the Library for instruction. A redesign of the Library space is included in the current campus master plan.

3d2-3d3: A Focus on Improving Learning Resources
3d2: Lawrence Tech evaluates the use of its learning resources to enhance student learning and effective teaching.
3d3: Lawrence Tech regularly assesses the effectiveness of its learning resources to support learning and teaching.

Lawrence Tech practices continuous improvement for its learning resources and student services areas. The University’s Assessment Committee, IT Steering Committee, Strategic Planning Implementation Review Committee, Library Committee, and other groups help guide service development. This section highlights examples of how continuous improvement has improved the learning environment and support services for Lawrence Tech students.

Academic Achievement Center Surveys
The AAC surveys students about pre-courses and analyzes student performance in the supported courses. Student evaluations of the pre-courses are almost uniformly positive. For the 2008-2009 academic year, students taking pre-courses performed better in ten of thirteen courses and course withdrawal rates were lower for all courses. Based on student feedback, the AAC now offers the majority of its pre-courses in August, with only a few pre-courses scheduled in January.

University Housing Survey
University Housing conducted a survey of residential students in 2006-2007. Over 340 students responded to the survey. Results were compared to participating institutions, institutions in Lawrence Tech’s Carnegie class, and a subset of six benchmark institutions selected by the University. See (C3-31-“Housing Survey”) for detailed survey results. Three areas emerged as priorities for improvement, with these and other improvements undertaken based on the survey:
- Learning Outcomes - Community leaders are now required to engage in more personal interactions with residents, and to provide students with information on time management and study skills
- Satisfaction with Facilities - Hallways were repainted, bathrooms renovated, room-dimming curtains installed, and cloth mattresses replaced with vinyl mattresses

Figure 47: University Library Print Circulation
Figure 48: Full-Text Searches and Displays
Figure 49: Library Visitors

<table>
<thead>
<tr>
<th>Year</th>
<th>Faculty/Staff</th>
<th>Students</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>80,000</td>
<td>90,000</td>
<td>5,000</td>
</tr>
<tr>
<td>2007</td>
<td>82,000</td>
<td>92,000</td>
<td>7,000</td>
</tr>
<tr>
<td>2008</td>
<td>84,000</td>
<td>94,000</td>
<td>9,000</td>
</tr>
<tr>
<td>2009</td>
<td>86,000</td>
<td>96,000</td>
<td>11,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Searches</th>
<th>Displays</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>50,000</td>
<td>60,000</td>
</tr>
<tr>
<td>2006</td>
<td>55,000</td>
<td>70,000</td>
</tr>
<tr>
<td>2007</td>
<td>60,000</td>
<td>80,000</td>
</tr>
<tr>
<td>2008</td>
<td>65,000</td>
<td>90,000</td>
</tr>
<tr>
<td>2009</td>
<td>70,000</td>
<td>100,000</td>
</tr>
</tbody>
</table>
Tablet-Laptop Survey

An extensive survey of students and faculty was conducted in 2009 to help guide the future of the tablet-laptop program. See (C3-32, "Student and Faculty Laptop Surveys-2009") for complete survey results.

The survey showed that 87% of Lawrence Tech students use laptops in class for half or more of class time, with 42% of students using laptops during all classes. Blackboard is used in class by 88% of students, and 84% of students use their laptops for in-class assignments, labs, and quizzes. Not surprisingly, 80% of students use e-mail while in class and 40% of students use instant messaging in class. 54% of students said that Lawrence Tech’s tablet-laptop contributed to their decision to attend the University, and 73% of students believe that the program has saved them money on computer hardware and software. 93% of students believe that the use of laptops is necessary for academic success in their field of study. 84% of students believe that the software image prepares them to enter their chosen profession. Only 12% of students said they would prefer to provide their own laptop and software.

The faculty survey showed that 88% of Lawrence Tech faculty members have a University laptop, with 45% of faculty members also owning their own laptops. Over 90% of faculty members use a laptop when teaching, with over 90% of faculty members using Blackboard and 81% of faculty members using software provided on the laptop image. Other faculty uses of laptops include departmental software, personal software, email, SafeAssign for plagiarism checking, and digital library resources. For faculty members using tablet PCs, 69% use inking for document annotation, 64% use the Write-On tool, and 31% use Classroom Presenter. Snipping and OneNote are also used by many faculty members. When asked if their courses are designed to utilize the software provided on the laptop, 73% of faculty completely or somewhat agreed. 64% of faculty members sometimes or always require their students to use their own laptops in class. 71% of faculty members somewhat or completely believe that students learn more effectively in class because of the tablet-laptop program. 80% of faculty members wished the University to maintain its tablet-laptop program in the current student technology environment.

Help Desk Satisfaction Survey

The Help Desk contacts all faculty members who received a laptop asking for feedback on service and support. Feedback is used for continuous improvement and to raise first-call resolution rates. Follow-up calls are made to users to ensure that incidents have been resolved satisfactorily and to determine if additional follow-up is needed.

3d4: Supporting the Use of Technology

Lawrence Tech provides an extensive support system for student and faculty use of technology. The Help Desk serves as the first point of contact for laptops, tablets, enterprise productivity tools, and enterprise eLearning technologies. The BMC trouble ticket system is used to log and track issues that cannot be resolved during the first contact. The Help Desk refers more complex issues to eLearning Services or IT Service Delivery for resolution, and coordinates closing of trouble tickets with these groups.

Help Desk

The Help Desk is located on the ground floor of the A. Alfred Taubman Student Services Center and is staffed by six professional staff and several student assistants. The Help Desk provides walk-in, telephone, and email support for computers, the wireless network, and enterprise eLearning tools. The Help Desk also creates network and e-mail accounts, assigns network drive and printer permissions, creates enterprise mailing lists, handles password resets, and issues campus-wide e-mail messages. The Help Desk orders desktop computers, purchases and deploys network printers, and supplies paper and toner to public printers. The Help Desk is responsible for the distribution of tablets and laptops with a distribution checklist providing a framework for educating users about proper use of tablets and laptops. The Help Desk provides on-the-spot shell and battery replacement, re-imaging, replacement hard drives, and a laptop loaner program.

The Help Desk is staffed from 8:00am to 6:30pm Mondays through Fridays. After-hour and weekend support is provided via e-mail with staff scheduled on a rotating basis to provide coverage. Evening and weekend coverage is coordinated with eLearning Services to provide support for Blackboard and other enterprise e-learning resources.

The eHelp Online Knowledge Base

The Help Desk and eLearning Services maintain the eHelp knowledge base at flu.edu/ehelp, providing documentation, training videos, and software information. eLearning Services maintains a Blackboard site for collaboration and training for hybrid and online instructors.

3d5-3d6-3d7: Support for Innovation in Learning Resources

Lawrence Tech’s systems and structures enable partnerships and innovations that enhance student learning and strengthen teaching effectiveness.

3d7: Budgeting priorities reflect that improvement in teaching and learning is a core value of Lawrence Tech.

Lawrence Tech is sensitive to maintaining the right balance between outstanding teaching, applied research, and service. The Lawrence Tech student experience is centered on outstanding teaching, and Lawrence Tech provides many resources to improve faculty teaching skills and to practice innovation. This section highlights several programs providing incentives to faculty members to participate in these activities.

Center for Teaching and Learning Workshops

The CTL provides workshops and resources to faculty members to improve their teaching skills. The CTL and the Research Support Services Committee collaborated to host Scholarship of Teaching and Learning Poster Session. Nine faculty submitted posters to the session with approximately 30 faculty members attending the event. External judges used a scoring rubric to judge each poster, with five faculty posters receiving awards and cash honorariums.

Laptop and Tablet PC Grants

A competitive program for technology-based faculty development has been in place since 2002. Stipends are provided to faculty members preparing hybrid or online courses, using tablets or laptops to improve instruction, and implementing technologies to improve teaching and learning. A new initiative provides up to eight stipends to teams of faculty members developing discipline-specific materials using tablet software such as Classroom Presenter, WhiteOn, OneNote, Snip It, Ink Flash Cards, Journal, or Inking.

Online and Hybrid Course Development Stipends

Faculty members participating in building totally or online academic programs in collaboration with LTU Online receive a $3,000 stipend, formal training, and extensive professional support to develop each online course that is part of an online program approved by their department. Online courses are periodically refreshed with stipends paid to collaborating faculty. Since the inception of LTU Online in 2006, over 90 online courses have been developed for delivery on Lawrence Tech’s “online” campus, and a number of courses have been refreshed.

To increase the number of hybrid and online graduate programs, eLearning Services has instituted a competitive program to fund three $1,500 stipends to teams of faculty to develop three fully online modules to support programs targeted to future hybrid or totally online programs. Modules may use advanced Blackboard features, Google applications, Second Life, Wikis, Blackboard Scholar, or other technologies. Instructional design for these projects follow the course development methodology used by LTU Online.

Conference Support for Teaching and Learning Using Technology

eLearning Services is committed to working with Lawrence Tech faculty members to publish peer-reviewed scholarly journal articles and conference presentations highlighting efforts to improve teaching and learning using technology. eLearning Services staff members collaborate with interested faculty members, sometimes serving as co-authors of papers or conference presentations. Faculty members whose conference proposals are accepted receive travel funds to attend the conference.
support from eLearning Services to facilitate their active participation at the conference.

**Kern Innovative Teacher Initiative**

Lawrence Tech is in the process of integrating problem-based learning and active collaborative learning in 75% of the engineering curricula through the KIT Initiative. Two cohorts of 15 professors each have been working on freshmen and sophomore courses. Two additional KIT cohorts will participate in the modification of junior and senior courses over the next two years.

**Conclusion**

We believe that Lawrence Tech meets Criterion Three. Lawrence Tech’s learning environment, commitment to professional accreditation, and its mature assessment initiative directly respond to Criterion Three, which calls on the institution to allocate resources and processes to “provide evidence of student learning and teaching effectiveness that demonstrates it is fulfilling its educational mission.”

Lawrence Tech has extended its assessment focus to include master’s and doctoral programs. Faculty members understand the importance of assessment within their programs and courses as a improvement process for student learning. The annual Assessment Day, where faculty report and discuss assessment results and plan the upcoming year’s assessment initiatives, underscores the commitment of the University to engage all faculty members on a continuing basis to improve assessment and student learning.

Lawrence Tech has undergone a significant evolution of its student services following establishment of a dean of students and enrollment services functions. The University’s one stop center for providing student services is a model for other universities. A broad range of student activities and support services help ensure student success.

Lawrence Tech has made significant and ongoing investments in its information technology, eLearning services, and library resources. The University’s e-learning environment is state-of-the-art and provides many enterprise services not available at other institutions. Lawrence Tech has also established a range of support services for faculty members to improve their teaching skills, and for faculty members and students to effectively use the University’s technology services.

**Opportunities for Improvement**

Lawrence Tech’s students have traditionally come from Southeast Michigan. National and international recruiting will increase the demand for residential housing. Constructing a new freshman residence hall will provide more social opportunities for residential students and support the transition of Lawrence Tech from a primarily commuter school to a residential-commuter institution. Participation in NAIA, intercollegiate athletics will increase leadership, recreational, and social opportunities on campus. The University recognizes that the surrounding community does not provide the range of social opportunities available at many residential universities.

Lawrence Tech has made significant institutional progress in the assessment of student learning. Some academic departments have an excellent understanding of assessment and actively use assessment results to drive program improvement. Other departments need additional support to continuously improve student learning using assessment data. Assessment practices for Lawrence Tech’s graduate programs are less comprehensive than those used in undergraduate programs, due in part to the University’s historic focus on undergraduate assessment. The University has increased its focus on master’s and doctoral assessment and will continue these efforts.

Despite significant investments in laboratories and equipment, Lawrence Tech’s engineering and science programs are hampered by lack of space and antiquated buildings. The proposed new engineering and science building will help alleviate this problem. The College of Architecture & Design, one of the largest and most respected schools of its type in the state of Michigan and one of the most respected professional schools of its type in the nation, is hampered by lack of space which limits the college’s ability to grow.

Lawrence Tech recognizes that its course evaluation system can be improved. The current evaluation focuses on course delivery and instructor presence but not enough on what students actually learn, which limits the use of course evaluations in the assessment process. While the University understands that course evaluations are indirect assessment measures, more can be done to use course evaluations to continuously improve courses and programs, and to inform students of how improvements are related to their feedback.

Lawrence Tech continues to pursue additional professional accreditations of academic programs including biomedical engineering, computer science, transportation design, architectural engineering, and engineering technology. The University can do more to publicize the professional accreditation of its undergraduate and graduate programs. The Master of Business Administration program has been accredited by the ACBSP and IACBE for many years. A formal examination of the costs and benefits of seeking accreditation by the Association to Advance Collegiate Schools of Business (AACSBB) is being conducted.
Criterion Four: Lawrence Tech promotes a life of learning for its faculty, administration, staff, and students by fostering and supporting inquiry, creativity, practice, and social responsibility in ways consistent with its mission.

Criterion Four addresses how Lawrence Tech acquires, discovers, and applies knowledge. This not only includes faculty research and scholarly activities, but also how students are involved in the research process, how the University supports faculty and students in their quest for new knowledge, and how the University applies new knowledge to continuously improve institutional performance.

Lawrence Tech has focused on the enhancement of student learning at all levels in the past ten years. These efforts have helped develop a more cohesive learning community and have better prepared graduates to thrive in the world of tomorrow. Both students and faculty have strived to create a mindset of lifelong learning to ensure success in our professional and personal lives. The University has focused not only on learning but on the importance of continuous learning throughout our lifetimes.

The University lays a broad foundation for lifelong learning with its Core Curriculum, which is the foundation of a well-educated person, enabling graduates to continuously reflect on our past, present, and future way of life, as well as economy, and literature. The University supports the Core Curriculum and its academic programs with an excellent learning environment enabled by the latest technologies and pedagogies. President Walker emphasizes that the motivation behind Lawrence Tech’s tablet-laptop initiative is not to simply use technology, but to enhance student learning. The University’s support of creative teaching techniques, and the recognition of faculty scholarship in teaching, assessment, and learning also demonstrate the University's commitment to student learning as its first priority. The Core Curriculum is designed to create a foundation of inquiry, allow students to experience the joy of learning, and develop each student’s potential to become a well informed critical thinker who has the tools to shape the future.

Lawrence Tech has always been committed to providing access to higher education to all those who are motivated to learn and achieve. The University continues to pursue this calling in today’s very complex and interrelated world. Lawrence Tech began as an intimate campus in 1932 during the nation’s most severe depression, and this legacy of service and hope lives on today with the dedication of our faculty and staff to provide our students with a caring and stimulating learning environment. This dedication is reflected in the University’s strategic plan, its academic programs, its student support services, and its use of technology to advance learning.

Lawrence Tech’s interdisciplinary research efforts bring different perspectives to students’ academic experiences. Lawrence Tech also provides professional development and informational events for faculty through the Center for Teaching and Learning, eLearning Services, and the Faculty Senate. Lawrence Tech’s three doctoral programs have set expectations for original student and faculty research.
Lawrence Tech has established an intellectual property policy, Research Support Services Committee, Institutional Review Board, and other services to support development of faculty and student research. A research seed grant program provides mini-grants to support development of faculty research agendas and grant proposals.

4a. Developing a Culture of Learning

Criterion 4a: Lawrence Tech demonstrates, through the actions of its board, administrators, students, faculty, and staff, that it values a life of learning.

In the 78 years of its history, Lawrence Tech’s focus has been transformed from providing adult undergraduate education to serving traditional undergraduate students, master’s, and doctoral students, and the community through its research, scholarship, and academic outreach efforts.

Over the past ten years, Lawrence Tech has implemented three professional doctoral programs built on the practitioner-scholar model. A statement of scholarly expectations focused on applied research and peer-reviewed scholarship has been developed and is included in the new Faculty Handbook. Students and faculty have increased the quality and quantity of their applied research and scholarly outputs.

Professional development opportunities have been provided to faculty, staff, and administrators to improve their teaching and research skills. Lawrence Tech also provides tuition discounting for faculty and staff to demonstrate its commitment to the growth of employees’ families through education.

“My educational background at Lawrence Tech greatly prepared me for the professional world. The design and technical skills – in both architecture and engineering – provided me with the foundation to build my career and, ultimately, my own business. As I celebrate more than 10 years of business ownership, I continue to value the excellent education I received.”

-Beverly Hannah Jones, B.S. Architecture ‘85, B. Arch. ‘88, President and CEO Hannah & Associates, Inc.

4a1-4a2-4a3: Supporting a Learning Culture

4a1: Lawrence Tech’s planning and pattern of financial allocation demonstrate that it values and promotes a life of learning for its students, faculty, and staff.

4a2: The board has approved and disseminated statements supporting freedom of inquiry for Lawrence Tech’s students, faculty, and staff, and honors those statements in its practices.

4a3: Lawrence Tech supports professional development opportunities and makes them available to all of its administrators, faculty, and staff.

Supported by the Board of Trustees, Lawrence Tech faculty and administration have established a climate of academic freedom that emphasizes professional responsibility and improves the University’s academic programs. The University supports faculty members in developing and sustaining active research agendas, and provides professional development opportunities for all employees. The Faculty Handbook includes a statement on academic freedom and lays out principles to balance faculty workload between teaching and research. Each college implements the provisions in the Faculty Handbook to meet their individual missions.

Academic Freedom

Lawrence Tech subscribes to principles of academic freedom in the classroom and in faculty and student research. Faculty and administration have clearly articulated the rights and responsibilities associated with academic freedom in the Faculty Handbook. Academic freedom is also addressed in the Student Code of Conduct.

Lawrence Technological University is an institution that encourages the intellectual and personal growth of its students as scholars and citizens. In this pursuit, the University recognizes that the transmission of knowledge, the pursuit of truth, and the development of individuals require the free exchange of ideas, self-expression, and the challenging of beliefs and customs.

Academic freedom is essential to the achievement of these purposes.

4a4-4a5: Faculty and Student Achievements

4a4: Lawrence Tech publicly acknowledges the achievements of students and faculty in acquiring, discovering, and applying knowledge.

4a5: The faculty and students, in keeping with Lawrence Tech’s mission, produce scholarship and create knowledge through basic and applied research.

Lawrence Tech faculty and students are producing significantly more scholarly and applied research work than ten years ago. Scholarly expectations for faculty members have been defined to help move Lawrence Tech toward a balanced focus on both teaching and research.

The University’s three doctoral programs have resulted in significant student research accomplishments and honors. The QUEST program in the College of Arts & Sciences provides undergraduate students with research opportunities. The many interdisciplinary programs developed at Lawrence Tech in the last four years – Biomedical Engineering, Mechatronics Systems Engineering, and Architectural Engineering – provide faculty and students with the opportunity to work on interdisciplinary research projects.

Faculty Scholarship Defined

Scholarship enhances the educational experience and builds institutional reputation, both of which benefit the University professionally and financially. Scholarship can be achieved individually or collaboratively with colleagues and students. Scholarship activities fall into three categories: fundamental research, applied research, and creative works. While scholarship is often focused on the faculty member’s area of expertise, the scholarship of teaching and learning is also highly valued. Peer-reviewed publication within at least one of these categories is essential for tenure and promotion.

Fundamental Research

The essence of fundamental or basic research is the generation and dissemination of new knowledge to extend the boundaries of a discipline. Fundamental research is often supported by external sources although the work may be unfunded, such as materials for book publications. Examples include:

- Publishing in scholarly journals, conference proceedings, or book chapters
- Publishing books, monographs, or software subject to peer review
- Presenting invited or peer-reviewed papers at professional meetings

Applied Research

The essence of applied research is the use of existing knowledge and techniques to produce significant new work applied to specific problems. Applied research includes innovative applications of theory to practice as well as scholarship associated with teaching and learning. Examples include:

- Conducting applied research contracts or grants with potentially proprietary results
- Publishing textbooks, laboratory manuals, reference material, software, or instructional materials by an independent third party subject to peer review
- Editing for major peer-reviewed journals
- Receiving a patent
- Developing and disseminating new pedagogies or learning technologies subject to peer review
- Consulting or engaging in professional service drawing upon the scholarly expertise of the faculty member

Creative Works

Creative work evolves from original thought or imagination. This work must be subject to judgment by refereed sources through juried
Faculty Scholarship
In late 2009, the provost issued the University’s first comprehensive report of faculty research publications, creative work, and professional activities. The report recognizes the scholarly, creative, and professional service accomplishments of the faculty at Lawrence Tech for the past year and demonstrates the University’s commitment to scholarship and research productivity. See (C4-01-“Faculty Research and Scholarly Publications”) for a copy of the report.

College of Architecture & Design
Scholarly achievements for the 22 members of the full-time faculty and administration of the College of Architecture & Design included:
- 37 publications and submitted publications
- 52 conference, invited, or scholarly paper presentations and exhibitions
- 20 papers or professional projects
- 111 community or professional service activities

These activities provide evidence of the faculty’s professional and academic development. They have led to increased visibility for the college and the University, as well as providing important services and outreach to the community.

College of Arts & Sciences
Research and scholarly accomplishments from the faculty and administration of the College of Arts & Sciences included:
- 39 articles published in or submitted to peer-reviewed journals
- 2 books
- 36 conference presentations and performances
- 39 grants pending

Faculty recognition support the college’s outreach efforts, resulting in over 40 newspaper articles, television news items, Web articles, and YouTube videos.

College of Engineering
Research and scholarly contributions by faculty and administration of the College of Engineering included:
- 38 scholarly publications and journal articles
- 62 peer-reviewed publications at conferences
- 32 conference presentations, invited talks, and posters
- 11 regional and national awards
- Seven patents
- 31 grants received totaling $4,121,910
- 12 grants pending
- Six books
- Three keynote presentations

The college believes that scholarship and involvement in the community are important to sustain excellence in engineering education and research. These accomplishments have contributed to the recognition of the college and the University at the national level.

College of Management
Faculty research and scholarly contributions for the full-time faculty and administration of the College of Management included:
- 10 scholarly publications
- 39 conference presentations
- Three regional and national awards
- One patent
- Two grants for $103,000, and one pending grant for $381,104
- 11 books and book chapters
- 32 chapter dissertations
- 46 professional or scholarly organization memberships

Sponsored Research
Sponsored research is supported by the provost and vice president for university advancement through the Research Support Services Committee. Administration of sponsored research is primarily the responsibility of the principal investigators with periodic reviews conducted by the Office of Technology Partnerships, Office of Finance and Administration, and the provost.

See (C4-02-“Research Funding History-FY2003-FY2010”) for a complete list of sponsored research projects since 2003, and (C4-03-“Current Sponsored Research Projects”) for a list of active projects. See (C4-04-Examples of Sponsored Research”) for a discussion of the types of research projects funded and proposed.

Centers of Excellence in Applied Research
Objective Five of the University’s strategic plan called for the development of Research Centers of Excellence to support priority areas distinguished by strong academic programs, applied research, and industry partnerships. The goal of the initiative is to reach an annual level of $10 million in applied research awards. Plans for each area are being developed which include a business plan, academic plan, research plan, organizational structure, and funding models:
- Leadership – Focusing on global leadership, entrepreneurship, nonprofit management, and the Undergraduate Leadership Curriculum
- Materials – Focusing on bridges, armored lightweight vehicles, body armor, and nanotechnology
- Mobility – Focusing on automotive powertrain, intelligent mobility mechanics, robotics and sensor systems, modeling and simulation, and transportation design
- Energy – Focusing on coal and nuclear energy, alternative energy, hydrogen fuel cells, energy storage systems, and thermal management
- Sustainability – Focusing on stormwater management, green buildings, alternative energy, environmental chemistry, and architectural engineering
- Urban Planning and Design – Focusing on community master planning, transportation systems, regional planning, and the Detroit Studio
- Life Sciences – Focusing on drug discovery, biomedical devices, diagnostics, medical technology, and psychology

Research Seed Grant Program
Lawrence Tech encourages faculty members to have an active research agenda that includes fundamental and applied research, scholarship in the faculty member’s professional field, scholarship in teaching and learning, and the production of creative works. The Research Support Services Committee administers an internal funding opportunity for Lawrence Tech faculty members to support research and creative endeavors with the goal of developing proposals for external funding. These seed grants are funded from a portion of the University’s indirect costs resulting from externally funded projects. Awards are granted through a competitive application process with recommendations from department chairs and deans and with final decisions made by the provost. All full-time faculty members are eligible to apply, but applications from pre-tenured faculty are given preference. Projects that emphasize new methods, theoretical approaches, and curriculum or laboratory improvements are encouraged. Teams of two or more eligible faculty may submit proposals for interdisciplinary projects.

Applications are accepted in August and January. Applications may request amounts up to $3,000 and are subject to the availability of funds. Seed grants have a one year duration, with all unexpended funds reverting to the funding pool. Faculty members must disseminate the results of funded projects through publication in peer-reviewed outlets or in media appropriate to their endeavor. Faculty members are required to display their work at a Learn All About It luncheon session.

The University recognizes that seed grant programs have a long payback period. At least ten seed grants were awarded during the 2008-2009 academic year, with at least one of the grant recipients successfully competing for research funding. Fifteen seed grant applications were received in spring 2009 and six grants were funded.

Student Scholarship
Many Lawrence Tech students are honored for their academic accomplishments at the doctoral, graduate, and undergraduate levels. Lawrence Tech hosts a number of student honor societies including:
- Chi Epsilon (Chi Epsilon chapter), the national civil engineering honor society
-Eta Kappa Nu (Theta Upsilon chapter), a national honor society for electrical and computer engineering students
- Pi Tau Sigma (Phi Iota chapter), the national honor society for mechanical engineers
- Sigma Iota Epsilon, a national honors society of the Academy of Management (ACM)
-Sigma Pi Sigma honors outstanding scholarship in physics
- Tau Beta Pi (Michigan Eta chapter), a national honor society for junior and senior engineering students
-Tau Sigma Delta, the only nationally recognized honor society in the fields of architecture, landscape architecture, and allied arts.

More than 50 students have received their doctorates from Lawrence Tech. Complete information about doctoral dissertations is provided in the Institutional Change Request for Doctoral Programs. Doctoral students have made many presentations at professional conferences.
and have published a significant number of articles in peer-reviewed academic journals. Lawrence Tech doctoral students have also won several awards related to their dissertation work. Lawrence Tech recognizes the linkage between scholarship and the quality of its academic programs. This understanding is reflected in this excerpt is from the Evidence of Scholarly Achievement document included in the Faculty Handbook.

4a: Continuous Improvement through Research and Scholarship

Lawrence Tech and its units use scholarship and research to stimulate organizational and educational improvements. Lawrence Tech's Center for Innovative Materials Research (CIMR) is recognized internationally for its focus on materials and structures, energy, automotive engineering, and military applications. This advanced facility was made possible by an $11 million cooperative research agreement with the Army Research Lab (ARL) and the U.S. Army Tank-Automotive Research, Development, and Engineering Center (TARDEC) – an unprecedented federal partnership with a private university – made possible through the outstanding research achievements of Dr. Nabil Grace.

The CIMR facility is a state-of-the-art laboratory for the research, development, and testing of carbon fiber composite materials for bridges and other infrastructures and defense applications. Much of the University’s current applied research has centered on new and innovative applications for carbon fiber composites. Lawrence Tech maintains a laboratory at TARDEC, a facility in Warren, the nation’s laboratory for advanced military automotive technology, supports ongoing research initiatives.

Lear Entrepreneurial Center

For Lawrence Tech, scholarship will enhance the educational experience of our students and build our reputation as a provider of higher education. This has ramifications to student recruitment, student enrollment, and corporate and community relationships. A first rate educational experience and name recognition of an institution bestows an honor and prestige on external relationships and ultimately benefits Lawrence Tech both professionally and financially.

All aspects of scholarship – fundamental and applied research, publication in peer-reviewed journals, presentations at professional conferences, and creative works – contribute to the faculty’s capacity to improve academic programs, their teaching skills, and student advising. Several University initiatives related to the linkage between scholarship and academic programs are described below.

Center for Innovative Materials Research

The most visible product of Lawrence Tech’s focus on faculty research is the Center for Innovative Materials Research (CIMR). Opened in 2006, the CIMR is recognized internationally for its focus on materials and structures, energy, automotive engineering, and military applications.
University undergraduates take. The Core Curriculum prepares students to achieve leadership roles in a diverse world while contributing to their community by providing graduates with the:

- Capacity to evaluate conflicting ideas
- Savvy to seek alternative solutions to problems
- Perseverance to succeed in difficult projects
- Experience of working in, and leading, teams
- Ability to read and analyze challenging works
- Poise to articulate ideas orally and in writing
- Competency to simplify complex problems through the manipulation of symbols
- Discipline to apply scientific principles to improve understanding
- Confidence to be creative
- Knowledge of the past that informs the role of citizens in a society.

The Core Curriculum is organized around courses in the humanities, communication, mathematics, plus one upper-division elective in the humanities or social sciences.

- Humanities – Students analyze many of the best books in science, literature, philosophy, and politics, and defend their interpretations with oral presentations, and well-reasoned papers. Four courses in the humanities include:
  - Foundations of the American Experience
  - Development of the American Experience
  - World Masterpieces 1
  - World Masterpieces 2

- Communication – Two courses in written, oral, and visual communication include:
  - English Composition
  - Technical and Professional Communication

- Mathematics – Students master the skills needed for their profession and gain an understanding of the impact of mathematics on Western culture. Students are exposed to mathematical concepts appropriate to their field of study. Students also gain expertise in the use of computers in their major field of study.

- Natural Science – Students enroll in two courses to help them understand scientific thinking, its limitations, and its implications on other fields of thought.

The Core Curriculum’s in-depth knowledge, inclusion of calculus for almost all students, and focus on humanities and communication contribute to Lawrence Tech’s reputation for a challenging yet rewarding undergraduate experience.

4b2: Evolving the Core Curriculum

Lawrence Tech regularly reviews the relationship between its mission and values and the effectiveness of its general education.

Lawrence Tech has continued to improve the Core Curriculum based on assessment findings. The Undergraduate Leadership Curriculum reinforces the Core Curriculum while extending the undergraduate experience to include leadership and service. Efforts are underway to integrate entrepreneurship across the undergraduate curriculum, and sustainability is being evaluated for its place in the undergraduate experience. These common curricular elements speak directly to the University’s vision of “producing leaders with an entrepreneurial spirit and global view.”

Assessing the Core Curriculum

Lawrence Tech has established 17 outcomes associated with the five Core Curriculum goal groups. Many of these outcomes are assessed within the students’ major programs, others are assessed within Core Curriculum courses, and others via the Writing Proficiency Examination and specialized assessment instruments. Assessment results are documented in 

<table>
<thead>
<tr>
<th>Focus</th>
<th>University Seminar</th>
<th>Leadership Models and Practices</th>
<th>Leadership Seminar Series</th>
<th>Leadership Capstone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduction to Lawrence Tech, leadership concepts, personal skills, service learning, and global awareness.</td>
<td>Introduction to leadership styles and approaches.</td>
<td>Leadership in various settings. Participate in seminars and co-curricular experiences.</td>
<td>Develop leadership portfolio, including a reflection on the capstone project.</td>
</tr>
</tbody>
</table>

The Undergraduate Leadership Curriculum

Lawrence Tech’s Undergraduate Leadership Curriculum is the first outside the United States military service academies to require all undergraduate students to enroll in core courses and co-curricular experiences focused on leadership development. The Undergraduate Leadership Curriculum extends the University’s Core Curriculum so students graduate with the technological knowledge, general education foundation, and leadership skills needed to be successful in their professional and personal lives.

The goal of the Undergraduate Leadership Curriculum is for undergraduates to develop, practice, and exhibit leadership and entrepreneurial skills. This goal is supported by these outcomes:

- Graduates will have experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities
- Graduates will have experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills
- Graduates will have experiences that promote the ability to analyze unfamiliar situations, assess risks, and formulate plans of action
- Graduates will be aware of the importance of lifelong learning
- Graduates will have experiences that promote a global and sociopolitical perspective

Lawrence Tech has continued to improve the Core Curriculum based on assessment findings. The Undergraduate Leadership Curriculum reinforces the Core Curriculum while extending the undergraduate experience to include leadership and service. Efforts are underway to integrate entrepreneurship across the undergraduate curriculum, and sustainability is being evaluated for its place in the undergraduate experience. These common curricular elements speak directly to the University’s vision of “producing leaders with an entrepreneurial spirit and global view.”

Assessing the Core Curriculum

Lawrence Tech has established 17 outcomes associated with the five Core Curriculum goal groups. Many of these outcomes are assessed within the students’ major programs, others are assessed within Core Curriculum courses, and others via the Writing Proficiency Examination and specialized assessment instruments. Assessment results are documented in 

<table>
<thead>
<tr>
<th>Focus</th>
<th>University Seminar</th>
<th>Leadership Models and Practices</th>
<th>Leadership Seminar Series</th>
<th>Leadership Capstone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduction to Lawrence Tech, leadership concepts, personal skills, service learning, and global awareness.</td>
<td>Introduction to leadership styles and approaches.</td>
<td>Leadership in various settings. Participate in seminars and co-curricular experiences.</td>
<td>Develop leadership portfolio, including a reflection on the capstone project.</td>
</tr>
</tbody>
</table>

The Undergraduate Leadership Curriculum

Lawrence Tech’s Undergraduate Leadership Curriculum is the first outside the United States military service academies to require all undergraduate students to enroll in core courses and co-curricular experiences focused on leadership development. The Undergraduate Leadership Curriculum extends the University’s Core Curriculum so students graduate with the technological knowledge, general education foundation, and leadership skills needed to be successful in their professional and personal lives.

The goal of the Undergraduate Leadership Curriculum is for undergraduates to develop, practice, and exhibit leadership and entrepreneurial skills. This goal is supported by these outcomes:

- Graduates will have experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities
- Graduates will have experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills
- Graduates will have experiences that promote the ability to analyze unfamiliar situations, assess risks, and formulate plans of action
- Graduates will be aware of the importance of lifelong learning
- Graduates will have experiences that promote a global and sociopolitical perspective

Lawrence Tech has continued to improve the Core Curriculum based on assessment findings. The Undergraduate Leadership Curriculum reinforces the Core Curriculum while extending the undergraduate experience to include leadership and service. Efforts are underway to integrate entrepreneurship across the undergraduate curriculum, and sustainability is being evaluated for its place in the undergraduate experience. These common curricular elements speak directly to the University’s vision of “producing leaders with an entrepreneurial spirit and global view.”

Assessing the Core Curriculum

Lawrence Tech has established 17 outcomes associated with the five Core Curriculum goal groups. Many of these outcomes are assessed within the students’ major programs, others are assessed within Core Curriculum courses, and others via the Writing Proficiency Examination and specialized assessment instruments. Assessment results are documented in 

<table>
<thead>
<tr>
<th>Focus</th>
<th>University Seminar</th>
<th>Leadership Models and Practices</th>
<th>Leadership Seminar Series</th>
<th>Leadership Capstone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduction to Lawrence Tech, leadership concepts, personal skills, service learning, and global awareness.</td>
<td>Introduction to leadership styles and approaches.</td>
<td>Leadership in various settings. Participate in seminars and co-curricular experiences.</td>
<td>Develop leadership portfolio, including a reflection on the capstone project.</td>
</tr>
</tbody>
</table>

The Undergraduate Leadership Curriculum

Lawrence Tech’s Undergraduate Leadership Curriculum is the first outside the United States military service academies to require all undergraduate students to enroll in core courses and co-curricular experiences focused on leadership development. The Undergraduate Leadership Curriculum extends the University’s Core Curriculum so students graduate with the technological knowledge, general education foundation, and leadership skills needed to be successful in their professional and personal lives.

The goal of the Undergraduate Leadership Curriculum is for undergraduates to develop, practice, and exhibit leadership and entrepreneurial skills. This goal is supported by these outcomes:

- Graduates will have experiences that promote a high level of professionalism and integrity, responsible decision making, confidence in approaching opportunities, and pride in their abilities
- Graduates will have experiences that promote the understanding of themselves and others, sensitivity to other cultures in the context of globalization, and interpersonal skills
- Graduates will have experiences that promote the ability to analyze unfamiliar situations, assess risks, and formulate plans of action
- Graduates will be aware of the importance of lifelong learning
- Graduates will have experiences that promote a global and sociopolitical perspective

Lawrence Tech has continued to improve the Core Curriculum based on assessment findings. The Undergraduate Leadership Curriculum reinforces the Core Curriculum while extending the undergraduate experience to include leadership and service. Efforts are underway to integrate entrepreneurship across the undergraduate curriculum, and sustainability is being evaluated for its place in the undergraduate experience. These common curricular elements speak directly to the University’s vision of “producing leaders with an entrepreneurial spirit and global view.”

Assessing the Core Curriculum

Lawrence Tech has established 17 outcomes associated with the five Core Curriculum goal groups. Many of these outcomes are assessed within the students’ major programs, others are assessed within Core Curriculum courses, and others via the Writing Proficiency Examination and specialized assessment instruments. Assessment results are documented in 

<table>
<thead>
<tr>
<th>Focus</th>
<th>University Seminar</th>
<th>Leadership Models and Practices</th>
<th>Leadership Seminar Series</th>
<th>Leadership Capstone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Introduction to Lawrence Tech, leadership concepts, personal skills, service learning, and global awareness.</td>
<td>Introduction to leadership styles and approaches.</td>
<td>Leadership in various settings. Participate in seminars and co-curricular experiences.</td>
<td>Develop leadership portfolio, including a reflection on the capstone project.</td>
</tr>
</tbody>
</table>
4b3: Assessing Graduate Programs

Lawrence Tech assesses how effectively its graduate programs establish a knowledge base on which students develop depth of expertise. Graduate programs at Lawrence Tech operate in a distributed fashion with coordination provided by the associate provost and dean of graduate studies. This arrangement provides a balance between program assessment and applied research. Undergraduate students can be recruited for future enrollment in graduate programs by allowing qualified students to apply up to six credit hours of 5000-level coursework to an appropriate graduate program.

Dissertation Processes

Doctoral dissertations are written under the supervision of doctoral qualified faculty members with an active research agenda. One or more colleagues, or external academics or industry specialists serve as advisors for the dissertation. Dissertations are thoroughly reviewed by the dissertation committee before acceptance, with students required to participate in an oral defense and often a public presentation. All Lawrence Tech doctoral students are expected to prepare and submit articles related to their research to appropriate peer-reviewed journals.

4b4-4b5-4b6: Preparing Students for Professions and Lifelong Learning

Lawrence Tech demonstrates the linkages between curricular and co-curricular activities that support inquiry, practice, creativity, and social responsibility. Learning outcomes demonstrate effective preparation for continued learning.

Lawrence Tech’s cause statement speaks directly to these sub-criteria by focusing on developing students who are “critical thinkers, leaders, and lifelong learners.” The Undergraduate Leadership Curriculum provides students with the opportunity to define themselves as leaders and contributing members of their communities. The QUEST program in the College of Arts & Sciences provides research opportunities for undergraduate students, and the Innovation Showcase event highlights senior research projects. Most senior students are involved in senior capstone projects in which they apply and integrate the knowledge and skills acquired during their first three years.

Lawrence Tech students gain significant experience in the use of modern information technologies to prepare them for the global workplace. All undergraduate students use industry-standard software in their academic research projects. Most senior students are involved in senior capstone projects in which they design, build, and operate solar powered houses. Lawrence Tech was the only Michigan team to design and build their own solar powered houses.

Student Competitions

Competitive academic and professional activities prepare students for productive professional lives and support inquiry, creativity, and practice. Lawrence Tech students have competed for many years in competitions against students from other institutions. Lawrence Tech hosted the Solar Decathlon for many years, bringing thousands of participants and media representatives to the campus. Competitions provide students with co-curricular experiences as well as internship and full-time employment opportunities.

Formula SAE – The Formula SAE team designs, fabricates, and races a small, open-wheel, formula-style autocross racing car powered by a 2000cc engine. The final products compete and are critiqued by experienced judges. Each entry undergoes a technical inspection and high-performance trials in acceleration, skidpad, autocross, fuel economy, and endurance. Judges also consider each team’s presentation, engineering design, problem-solving skills, innovative thinking, and teamwork.

Aero Design – The Aero Design team designs, fabricates, tests, and flies a radio-controlled heavy lift cargo plane using a standard engine. The objective of the competition is to airlift the most weight possible given certain constraints such as linear dimensions, takeoff and landing distances, and cargo bay dimensions.

Formula Zero – The Formula Zero team developed a zero-emission hydrogen fuel-cell racing cart for the 2008-2009 competition, sponsored by the Shell Hydrogen and other European companies. This service competition demonstrates the commercial viability of this promising new technology. Lawrence Tech and UCLA were the only U.S. universities entered in the competition, with Lawrence Tech placing first in the design category.

Concrete Canoe – Civil engineering seniors participate in the American Society of Civil Engineers’ Midwest Regional Concrete Canoe competition. Other teams include the University of Michigan and Michigan Technological University. Canoes are prototyped from off-road vanes and consist of 50% recycled materials.

Solar Decathlon – Sponsord by the U.S. Department of Energy, the Solar Decathlon brings together teams from 20 universities across the United States, Europe, and Canada to design in building, and operating solar-powered houses. Lawrence Tech was the only Michigan team chosen for the 2007 competition. The ALOE/TERRA home used solar photovoltaic panels to supply all projects that foster the learning environment of engineering students. The University intends to expand the focus on entrepreneurship to all academic programs. Sustainability Education A Sustainability Education Task Force was established in 2009 to study the state of sustainability education across the University’s academic programs. The task force made recommendations to help the University become a leader in sustainability education. The University intends to implement sustainability education across all academic programs. The task force made recommendations to help the University become a leader in sustainability education. The University intends to implement sustainability education across all academic programs.
• Mathematical Contest in Modeling – Students from the College of Arts & Sciences participate in the Mathematical Contest in Modeling competition sponsored by the Consortium for Mathematics and Its Applications. This international competition presents student teams with open-ended problems for which they build mathematical models, obtain solutions, and write papers proving the feasibility of the model and solution.

• Global Innovation Tournament – Organized by Stanford University, the Global Innovation Tournament is a team competition where students challenge assumptions, seize opportunities, and think creatively to solve a real problem over a three-day period. Lawrence Tech’s team videos – including Engineers without Borders, Blue Devil Productions, and Sublime Fire – were produced and placed on YouTube for public viewing.

Inspiring and Provocative Guest Speakers

Lawrence Tech brings a wide variety of speakers and viewpoints to the campus for student focused lectures. See (C4-09 ‘Guest Speaker Series’) for a listing of recent campus speakers.

4c. A Global, Diverse, and Virtual Future

Criterion 4c. Lawrence Tech assesses the usefulness of its curricula to students who will live and work in a global, diverse, and technological society.

Lawrence Tech’s vision speaks directly to the value of the University’s academic programs in the future success of its graduates in a global, diverse, and technological society by focusing on “proposing leaders with an entrepreneurial spirit and global view.” Lawrence Tech graduates demonstrate skills in technology use, information-seeking, teamwork, and collaboration, allowing graduates to “hit the ground running” in complex global work environments.

Lawrence Tech’s international student population of approximately 15% makes for a very diverse and global campus environment where all students learn about diverse cultural values and traditions, and become aware of global diversity. Celebrations such as Diwali, Eid, Chinese New Year, and Thanksgiving teach students to value and respect differences. Lawrence Tech exposes students to the global environment through study abroad programs, student and faculty exchange programs, and the global experiences of full-time and adjunct faculty members. Many Lawrence Tech alumni hold leadership positions in international firms and share their experiences with undergraduate and graduate students. Dissertation committee members add global perspectives to the research experiences of doctoral students. Global issues are included in the standards of several of Lawrence Tech’s professional accreditation organizations.

4c1. Academic Program Review

4c1. Regular academic program reviews include attention to currency and relevance of courses and programs.

Lawrence Tech has formal processes for establishing new academic programs and courses. Professional accreditation of many of Lawrence Tech’s academic programs provide an ongoing program review and improvement. The University has continuously improved its program and course development processes for undergraduate, master’s, and doctoral programs.

Academic Program Review Committee

Lawrence Tech established an Academic Program Review Committee (APRC) in 2004 as a successor to today’s Academic Program Planning and Review process. The APRC supported objective 4.2 of the strategic plan and to increase the viability and sustainability of the University’s academic programs. The APRC aligned the existing program planning process with support services – library, technology, space, and academic support – to improve academic program quality, student services, and communication between academic and service units.

The APRC developed a program proposal template, flowchart, and checklist to guide faculty members in developing new program proposals. (See (C4-10 ‘APRC Template and Checklist’)) for these documents. The APRC meets with faculty members in an advisory capacity to ensure a consistent proposal framework and appropriate input from University service units. The APRC is being integrated with the Academic Program Planning and Review process described below.

Academic Program Planning and Review

Lawrence Tech’s first cycle of Academic Program Planning and Review was initiated in 2009 with feedback provided to program directors in 2010. A number of recommendations for improving academic programs were promoted for inclusion in future planning and budgeting cycles.

In addition, several University improvements were proposed:

• Low enrollment programs will be evaluated against multiple criteria such as potential cost, worth of offering the program, how the program supports core requirements in other majors, and contribution to the mission of the University

• Alumni should be used to recruit undergraduate and graduate students to the University, especially at the regional and national levels

• Industry advisory boards should be actively used to provide student project and internship opportunities, and to engage advisory board members with the University

Marketing for on-campus and online graduate programs needs to be improved

• Practices for faculty load and compensation for directed studies, internships, master’s theses, and doctoral dissertations should be reviewed

• Engineering programs need to be updated to strengthen the entrepreneurial and innovation components and to rely less on Southeast Michigan as a source of students

• Marketing approaches should address Lawrence Tech’s competitive position against public universities in Southeast Michigan and private universities nationally

• Undergraduate programs should focus on increasing the level of student engagement for juniors and seniors

• The balance between full-time and adjunct faculty should be reviewed for all programs

• Research support services should be improved to ensure that the University’s academic programs develop their research agendas while balancing teaching and research responsibilities

These proposed improvements will be discussed in the meeting between the provost, associate provost, deans, and faculty program directors for future implementation.

New Program Offerings

Lawrence Tech has aggressively recast its existing academic programs and inaugurated new programs based on input from faculty, industry advisors, students, and market research. Recent new programs include bachelor’s degrees in biomedical engineering, industrial operations engineering, molecular and cell biology, chemical biology, transportation design, and media communication. Certificates in energy engineering and aerodynamical engineering have been created. A number of new certificates have been developed in the last year to serve
the needs of displaced professional workers so they can gain skills for employment in new sections of Michigan’s economy. New master’s degree programs include mechatronic systems engineering, architectural engineering, construction engineering management, and the MBA in Entrepreneurial Leadership. In addition, most of these programs are offered in hybrid or online modes to provide the flexibility needed by today’s students.

The undergraduate degree in molecular and cell biology is the first such undergraduate degree program in Michigan, although several other universities offer undergraduate concentrations.

The five-year architectural engineering program provides students with both a bachelor’s and master’s degree and is one of the few such programs in the United States. By combining an architectural design core with an engineering curriculum, the program prepares students with both the architectural design perspective and engineering skills needed to engineer structures. Program graduates will be qualified to become licensed engineers.

The innovative 3+ master’s master in architecture curriculum is designed for students who have a bachelor’s degree in a field other than architecture. The program can be completed in three academic years plus two summers. Students without the prerequisite mathematics, physics, or portfolio requirements can take courses at Lawrence Tech before entering the program.

4c2–4c3: Preparing Students for a Global and Diverse Future

4c2: In keeping with its mission, learning goals and outcomes include skills and professional competencies for a diverse workforce.

4c3: Learning outcomes document that graduates have gained the skills and knowledge they need to function in diverse local, national, and global societies.

Lawrence Tech’s vision of “producing leaders with an entrepreneurial spirit and global view” is supported by a number of local, national, and global learning opportunities. Many of these opportunities involve service learning and are described in Criterion Five. This section highlights several of the opportunities available to Lawrence Tech students to prepare them for leadership positions in local, national, and global firms.

Office of Career Services

The Office of Career Services supports the University’s mission by developing relationships with employers who will employ students in internship, co-op, or full-time positions. Job listings are maintained in technical and non-technical areas. Career planning assistance is provided through workshops, career fairs, employer presentations, and referral to online sources. Students have access to assessment and interest resources such as the Strong Interest Inventory, Discover, and TypeFocus to research career options.

Employer engagement is fostered through TechX2 Career Expo, a co-op and internship recruitment fair, and an architecture and design professional development day. Career Services sponsors many networking receptions of 30 hours or more with prospective employers with experienced workers. Through these efforts and the Recovery Starts Here networking receptions, over 200 new employers have formed relationships with Lawrence Tech students.

All students and graduates have access to CareerQUEST, an interactive database of employers and job postings provided by the National Association of Colleges and Employers. Almost 4,300 Lawrence Tech students have established CareerQUEST accounts. Over 1,200 job openings were posted in the past year through over 1,600 registered employers.

Lawrence Tech’s co-op education program serves undergraduates by matching students’ academic programs and interests with industry-based work programs. Prospective companies are visited to discover how companies and student needs can be mutual. Co-op students write technical reports based on their experience, and are evaluated by both the company and the University.

Entrepreneurial Internship Program

The entrepreneurial internship program, supported by the Kern Family Foundation, creates internships to help students develop their entrepreneurial skills in a work environment. Junior or senior engineering students can intern with area employers related to their academic programs. Lawrence Tech provides a partial match of up to 400 hours of internship employment, enabling smaller employers to offer competitive wages to talented engineering students.

Global Curricular Components

In addition to participating in the College of Architecture & Design’s Detroit Studio to gain experience in urban settings, architecture students have the opportunity for international studies in Paris and China. These study abroad opportunities are discussed in more detail in Criterion Five.

Lawrence Tech provides a Master of Global Leadership and Management degree for senior civilian leaders in the Department of Defense. The Senior Service College Fellowship program was developed in cooperation with the Defense Acquisition University (DAU) and the TACOM Life Cycle Management Command in nearby Warren. Lawrence Tech’s program is the second such program in the country. SSSF fellows earn their master’s degree in just 18 months, including a partial match of up to 400 hours of internship.

Lawrence Tech offers a Master of Business Administration with a focus on global leadership and management and a Master of Science in Global Operations and Project Management to prepare business leaders for the challenges of managing sustainable global companies. To facilitate global curriculum development, faculty members prepared a Global Leadership Resource Guide which includes lectures, projects, assignments, peer-reviewed journals, books, conference, and professional associations dealing with global leadership issues. See [C-11-“Global Leadership Resource Guide”] for a copy of the document.

4c4: External Consultation on Academic Programs

4c4: Curricular evaluation involves alumni, employers, and other external constituencies who understand the relationships among the courses of study, the currency of the curriculum, and the utility of the knowledge and skills gained.

Lawrence Tech’s heritage of close collaboration with industry is reflected in the composition of the Board of Trustees, accomplished and active alumni, and active advisory boards comprised of industry, community, and academic representatives.

Industry Advisory Boards

Most academic programs have active industry advisory boards that provide advice on emerging needs and trends in the discipline. The College of Architecture & Design sought feedback from its industry advisory board to redesign its Integrated Design Studio sequence. The Engineering advisory board provided valuable advice in starting and building the program. Doctoral programs in the College of Business Management used both industry and academic advisory boards to inform the redesign of both programs. The Academic Program Planning and Review reporting template requires information on the input of industry advisory boards as well as changes made in response to their advice.

Professional Association Chapters

Lawrence Tech focuses on academic programs leading to professional and licensed careers includes opportunities to participate in professional association chapters on campus including:

• American Institute of Architecture Students (AIAS)
• Association for Business Process Management Professionals (ABPMP)
• Association of Fundraising Professionals (AFP)
• Data Management Association (DAMA)
• Society for Information Management (SIM)
• Society of Automotive Engineers (SAE)
• The Open Group (TOG) and Association of Open Group Enterprise Architects (AOGEA)

Doctoral Dissertation Sponsorships

Most DEMS students conduct their research work embedded in the workplace. Local firms represented in DEMS program include Chrysler, PGF Technology, Delphi, General Dynamics, General Motors, Aeolus, Barnes Group, and Ford Motor Company.

Many DMIT students are sponsored by their employers with students conducting prototyping or actual research within their firms. Firms represented in DMIT dissertation efforts include Ford Motor Company, DTE Energy, General Motors Acceptance Corporation, and Chrysler Corporation.

Employer Survey

An employer survey of 200 companies that recruit Lawrence Tech graduates was conducted in early 2002. Almost half of the employers surveyed had actively supervised Lawrence Tech graduates. The overall satisfaction rate with Lawrence Tech graduates was 3.9 on a five-point scale, with higher scores from larger organizations with a history of hiring Lawrence Tech graduates. Employers rated Lawrence Tech...
graduates well prepared for employment, with graduates competing most often with graduates from the University of Detroit-Mercy, the University of Michigan, University of Michigan-Dearborn, Oakland University, Michigan State University, Michigan Technological University, and Kettering University. Co-op education experiences proved to be an excellent pathway to obtaining a future job.

4c6. Faculty expect students to master the knowledge and skills necessary for independent learning in programs of applied practice.

Lawrence Tech supports creation and use of scholarship by students in keeping with its mission.

4c7. Lawrence Tech provides curricular and co-curricular opportunities that promote social responsibility.

Lawrence Tech’s motto of “theory and practice” is embodied in the University’s academic programs. Students leave Lawrence Tech with the ability to apply their knowledge professionally to real-world situations. Most undergraduate programs require a research project and capstone presentation, often by a team of students. Many students participate in co-op or internships while gaining first-hand experience with real-world business problems. Many Lawrence Tech students find employment in their fields even before they graduate.

Lawrence Tech’s graduate students are typically employed as professional practitioners and bring real-world problems into the classroom and research projects. Graduate students are encouraged to be active members of professional groups, and doctoral students are required to conduct independent research to peer-reviewed journals in their field of study.

Lawrence Tech provides an increasing number of co-curricular and service learning opportunities. The Undergraduate Leadership Curriculum requires service learning as part of the student’s leadership portfolio. The College of Arts & Sciences’ QUEST program provides research opportunities for undergraduate students. The College of Architecture & Design’s Detroit Studio provides students with opportunities for professional practice in urban settings.

QUEST Program

Lawrence Tech’s QUEST program is a co-curricular experiential learning initiative for highly motivated students in all four colleges, coordinated by the College of Arts & Sciences. Beginning in their sophomore year, students choose three projects from five categories for completion during their career at Lawrence Tech. QUEST students create and manage a portfolio, give a presentation, and gain hands-on experience working under the guidance of a professor, staff member, alumnus, or administrator. Over two dozen QUEST projects are currently active in arts, leadership, and research areas. See (C4-12-QUEST Program Brochure) for more information about this unique program.

The Detroit Studio

The College of Architecture & Design’s Detroit Studio was established in 1999 in the New Center area north of downtown Detroit. The Detroit Studio provides students with an enriched educational experience through community-based architectural, urban design, and community development projects. Students interact with the public, design professionals, business leaders, and municipal officials. Projects conducted at the Detroit Studio are shared through exhibitions, community presentations, lectures, field trips, and publications.

Student projects have included densification studies, master plan development, urban farming initiatives, corridor studies, and revitalization plans. Student projects have received radio and print media coverage and have been exhibited in South Beach Michigan, Washington DC, Ontario, and Korea. An urban agriculture project received a National Research Grant Award from the Boston Society of Architects. The most rewarding aspect of the Detroit Studio experience is that students learn how to use design and urban planning as tools to advance ideas to promote social learning and community building.

Center for Sustainability

Lawrence Tech’s Center for Sustainability provides a network of interdisciplinary academic, research, and professional programs to advance sustainable design and development. The Center provides undergraduate students and professionals with opportunities to learn about sustainability on multiple levels. The Center also undertakes meaningful research for faculty and students in collaboration with professional, industrial, environmental, and governmental organizations. The Center collaborates with the Detroit chapter of the American Society of Heating, Refrigeration, and Air Conditioning Engineers to sponsor an ongoing series of seminars on sustainability.

Faculty members in the Colleges of Architecture & Design and Engineering have demonstrated a wide range of scholarship in sustainability in areas such as urban farming, zero-energy urban housing, wetlands preservation, digital mapping, and eco-design. Many of these research projects involve students and take place in community settings, and some projects have research ties in Sweden, Japan, Korea, Great Britain, and the Middle East.

Great Lakes Stormwater Management Institute

The Great Lakes Stormwater Management Institute focuses on creating positive environmental changes in the Great Lakes region through research, education, and practical application of low impact development and stormwater management techniques. Several proposals are pending and the Institute is already a resource to several organizations including Michigan Sea Grant, Southeast Michigan Council of Governments, and Alliance of Downriver Watershed. The Institute seeks interdisciplinary research projects with architectural engineering and urban design students and faculty.

Sustainability on Campus

Lawrence Tech has applied its motto of “theory and practice” to implement sustainable initiatives on the campus. Lawrence Tech recently added 33 geothermal wells to the original 88 wells sunk 300 feet beneath the University Quadrangle to provide heating and cooling for the A. Alfred Taubman Student Services Center through a system of tubing, pumps, and fans. The original 88 wells were sunk in grid cells of 12 by 17 feet, which resulted with the field overheating during the summer. The new wells are placed in grid cells of 25 by 25 feet.

Lawrence Tech has collaborated with the Michigan-based Champion Tree Project to plant cloned trees around campus. Lawrence Tech’s location within the Rouge River watershed, with two tributaries flowing through campus, provides the opportunity for the University to establish a sustainable reforestation effort. Support for this initiative has been voiced by Michigan’s two U.S. senators. To date, half a dozen trees have been planted on the University Quadrangle near the amphitheater.

Lawrence Tech Housing has reduced energy consumption and water usage while increasing recycling. Student rooms now have individual recycling containers. The number of 90-gallon recycling bins used has increased from 6 to 13. Compact fluorescent bulbs and low-volume faucet aerators have been installed. Student print jobs in the residence halls are now released as students request them rather than printing automatically.

Student Recreation started the Blue Devil Bike Rental Program to encourage sustainable commuting on campus. Over 150 riders took advantage of the program in its first year of operation.

4d. Responsible Scholarship and Research

Lawrence Tech provides support to ensure that faculty, students, and staff acquire, discover, and apply knowledge responsibly.

At the core of academic integrity and responsibility at Lawrence Tech are the Student Code of Conduct, the Academic Honor Code, and the Faculty Handbook, all of which speak to integrity of students and faculty research and scholarship.

Lawrence Tech has established several programs to ensure that faculty and student research is conducted responsibly. Expectations for faculty scholarship and research include submitting their scholarly works to peer-reviewed journals and conferences, providing an external mechanism to ensure academic integrity. The Research Support Services Committee provides consultation and approval for sponsored research proposals, and the Institutional Review Board provides review and approval of research involving human subjects.

Doctoral dissertation committees provide internal and external supervision of doctoral student research to ensure that professional and academic standards of conduct are followed. The QUEST program and senior projects provide planning and review frameworks to ensure integrity in undergraduate research. Numerous national and international student competitions
provide oversight for undergraduate research and practice in professional settings. University-sponsored incentive programs such as research and learning seed grants use a peer review model for awarding funding to faculty members, and track progress using project plans and annual reports.

4d1-4d4: A Responsible Research Environment

4d1. Lawrence Tech’s academic and student support programs contribute to the development of student skills and attitudes fundamental to responsible use of knowledge.

4d2. Lawrence Tech follows explicit policies and procedures to ensure ethical conduct in its research and instructional activities.

4d3. Lawrence Tech encourages curricular and co-curricular initiatives that relate responsible use of knowledge to practicing social responsibility.

Lawrence Tech’s core values include character and integrity, and these are values expressed clearly in the academic honor code developed over the years by faculty members and administrators. This historic commitment is reinforced by policies governing research integrity.

Academic Honor Code

Every member of the Lawrence Tech community is charged with upholding the University’s core values. Lawrence Tech’s Academic Honor Code, shown in {C1-22-“Academic Honor Code”}, The Honor Code lays out specific academic dishonesty offenses including plagiarism, bribery, cheating, misrepresentation, conspiracy, fabrication, multiple submissions of academic work, unauthorized collaboration, and sabotage. Alleged infractions of the Honor Code are identified by and/or reported to course instructors. Instructors inform their chair or dean in writing of the alleged infraction, and the chair or dean investigates allegations and requests responses from students. The chair or dean determines whether violations have occurred and applies the sanction associated with these infractions. Lawrence Tech students explicitly commit to upholding the Honor Code and to reporting alleged violations. Undergraduate students are required to submit the following statement on each assignment:

“I have neither given nor received unauthorized aid in completing this work, nor have I presented someone else’s work as my own.”

Graduate students sign an Honor Code pledge when they begin their graduate studies:

“I pledge that on all academic work that I submit, I will neither give nor receive unauthorized aid, nor will I present another person’s work as my own.”

Institutional Review Board

Increased levels of student and faculty research spurred creation of Lawrence Tech’s Institutional Review Board (IRB). The IRB is comprised of an interdisciplinary team of faculty and staff and maintains the highest level of ethical standards to ensure protection of all human subjects.

The IRB follows standards set forth in the Department of Health and Human Services’ Code of Federal Regulations, 45 CFR 46. The IRB Web site includes links to training videos, an application form, consent templates, human subject recruitment template, and confidentiality agreement template. See (C4-13-“Institutional Review Board Documents”) for copies of application forms and templates.

Doctoral Research Process Model

Dissertation supervision uses a stage-gate process where the dissertation is subdivided into major phases, each of which is associated with a dissertation course. The dissertation committee, guided by the chair, reviews interim student work and submits comments to the student at the end of each phase. Students must receive approval for each phase before proceeding to the next phase. The process ensures integrity and frequent academic review of interim results. See (C4-14-“DMIT Dissertation Process Model”) for more information.

QUEST and Senior Projects

Undergraduate students participating in the QUEST research program or senior projects follow formal processes to propose, implement, and report on their projects. QUEST students complete a proposal form and budget worksheet to support project selection. Progress is tracked and a student portfolio is constructed. Students document project outcomes using a project completion form. The process ensures research quality and provides undergraduate students with insight about how research projects are conducted.

4d4-4d5: Research Oversight and Intellectual Property Policy

4d4. Lawrence Tech provides effective oversight and support services to ensure the integrity of research and practice conducted by its faculty and students.

4d5. Lawrence Tech creates, disseminates, and enforces clear policies on practices involving intellectual property rights.

Lawrence Tech established the Research Support Services Committee to provide oversight and support for faculty and student research. The University has also established intellectual property and royalty policies to address ownership of works by faculty, students, and the University.

Intellectual Property Policy

Lawrence Tech established its Intellectual Property Policy in 2005, shown in {C4-15-“Intellectual Property Policy”}. The policy addresses both institutional and academic works. Institutional works are created for a University purpose and paid for with University or external funding. Academic works are created by faculty or students in the course of their educational endeavors and are not created with significant University resources.

The University makes no copyright claim for academic works unless it provides additional compensation or release time. The University does claim the royalty-free right to retain, copy, or distribute a limited number of student theses, dissertations, or other materials for educational purposes.

The University claims all rights to institutional works and to all complete courses taught by faculty members within the University. Faculty members hold rights to the individual course components – lecture notes, handouts, demonstrations – produced by the faculty member’s efforts. Course components may also be used by other University faculty with appropriate attribution. Faculty members may petition their dean for permission to use significant components of a course they developed for delivery at other institutions.

Patents and Royalties

The University encourages the development of inventions and technologies by faculty. The University claims sole ownership of the invention with royalties shared with the inventor. The University and inventor may choose to place the invention into the public domain. If the University decides not to proceed in a timely manner to patent or license an invention, faculty may obtain ownership with approval by the provost. Figure 51 shows the royalty distribution framework used for University-owned inventions. The royalty guidelines provide incentives to inventors to develop and commercialize inventions, and to the University for investing in commercialization of high potential inventions.

Faculty Compensation for Grants and Contracts

Lawrence Tech provides several compensation options for faculty working on externally funded grants or contracts. Compensation is calculated as a proportion of the faculty member’s annual base salary corresponding to time to be spent on the grant or contract activity as specified in the grant or contract budget. Compensation may take the form of release time, additional compensation up to 20%, or summer salary of up to three months. Faculty cannot receive compensation for any portion of project to which the University contributes the faculty member’s time as a
shared cost. See (C4-16-“Grant and Contract Compensation Policy”) for more information.

Research Support Services Committee

The Research Support Services Committee provides guidance and oversight to faculty and students as they propose and administer research grants. The Committee tracks funding proposals during identification, development, and approval phases. The Committee also administers the Faculty Research Seed Grant program to assist faculty in developing research agendas to compete for external funding. The Committee also manages the operation of the Institutional Review Board, and manages the indirect cost recovery program in cooperation with the Office of Finance & Administration.

Project and Proposal Development

Lawrence Tech has defined processes to help manage research projects and proposal development. These processes use a life cycle approach that begins with faculty members designing a research project and concludes with filing all required project reports. See (C4-17-“Research Project and Proposal Development”) for graphic representations of these processes.

Indirect Cost Recovery

Lawrence Tech has negotiated an approved indirect cost rate of 48% with the U.S. Department of Health and Human Services for use on federal grants, contracts, and other agreements. The rate excludes equipment over $5,000 or for portions of subcontracts exceeding $25,000. Indirect costs are transferred monthly using the following formula:

- 25% to a professional discretionary account for use by the faculty member
- 25% to a dean’s discretionary account within the faculty member’s college
- 25% to the Research Support Services Committee for Faculty Research Seed Grants
- 25% to the University general fund

Graduate Research Assistantships

Lawrence Tech has established a pool of 16 graduate research assistant positions, with each college receiving up to four assistantships. The assistantships cover the full cost of tuition for the duration of recipients’ graduate degrees. Graduate research assistants work on faculty research projects for twenty hours per week in addition to completing their studies. The deans manage the selection and assignment of graduate assistants.

Conclusion

We believe that Lawrence Tech meets Criterion Four. Lawrence Tech’s record of research and scholarly accomplishments by faculty and students directly responds to Criterion Four, which calls on the University to “promote a life of learning for its faculty, administration, staff, and students by fostering and supporting inquiry, creativity, practice, and social responsibility in ways consistent with its mission.” Lawrence Tech provides a range of opportunities for students to practice their learning and leadership skills. The Core Curriculum, Undergraduate Leadership Curriculum, and the QUEST program provide undergraduate students with the potential for academic achievement. The University’s three doctoral programs have produced over 50 dissertations and have been accompanied by significant faculty scholarship. The University’s linkages with global businesses provide faculty members and students with access to business leaders with global experience. The University has developed academic programs with global perspectives, such as collaborating with the Defense Acquisition University to provide academic programs to senior civilian defense employees who manage global operations. Lawrence Tech’s academic integrity policies are well understood by students and faculty members. The University has established intellectual property policy, compensation, royalty, and indirect cost policies. The University’s distribution of research indirect costs supports the research agendas of academic departments and provides seed grants to faculty members developing their own research agendas. The Research Support Services Committee provides oversight of research projects and an Institutional Review Board monitors research involving human subjects.

Opportunities for Improvement

The research support environment at Lawrence Tech is still in a formative stage. An increasing number of faculty members actively engage in sponsored research, and the activities of the Research Support Services Committee are naturally focused around the needs of these lead faculty. The University recognizes the need to provide guidance and consultation to more faculty members to develop their research agendas and prepare grant proposals. The University also recognizes the need to provide start-up funding to promote new faculty members, especially in applied and experimental fields where laboratory instrumentation is necessary.

The University has had the opportunity to receive focused congressional earmark funds related to defense and military research applications. The University recognizes that continuous encouragement and support of faculty to apply to competitive grants is a priority. The University also recognizes the need to link research competitiveness and fundraising to support academic program development. The evolution of Lawrence Tech from a primarily teaching institution to a balanced teaching and research institution requires additional investment for funding graduate research assistantships. Graduate research assistantships will provide the University with greater recruiting opportunities for Ph.D. students, especially for international and out-of-state students. These efforts are linked with the accompanying Request for Instructional Change for Doctoral Programs.

The University has extended its approach to the Core Curriculum by implementing a comprehensive Undergraduate Leadership Curriculum. The University is in the process of incorporating entrepreneurship into the curriculum. The University must determine how best to incorporate sustainability into the curriculum at a comparable level. Lawrence Tech’s rich undergraduate focus on leadership, entrepreneurship, and sustainability has the potential of being carried into graduate programs and to support new research opportunities.
Criterion Five. As called for by its mission, Lawrence Tech identifies its constituencies and serves them in ways both value.

Criterion Five addresses how Lawrence Tech engages with the community. This includes not only how the University provides services, but also how the University learns and benefits from these experiences. Lawrence Tech has demonstrated a commitment to its community engagement activities as exemplified by President Walker’s inaugural address:

Giving something back to the greater community is part of being an effective professional, and students will gain the personal satisfaction and growth that comes from helping other people.

Lawrence Tech’s community engagement includes initiatives such as the AmeriCorps program, the College of Architecture & Design’s Detroit Studio, the College of Management’s Center for Nonprofit Leadership and Management, and the Ferndale University High School program.

In recognition of these and other efforts, Lawrence Tech received the Community Engagement Classification from the Carnegie Foundation for the Advancement of Teaching in 2008. Only nine universities in Michigan – and only 119 nationwide – received the Carnegie designation for curricular engagement, outreach, and partnerships. This chapter highlights many of the service initiatives that demonstrate Lawrence Tech’s belief that it is “a private institution with a public purpose.”

5a. Building Relationships with Constituents

Criterion 5a: Lawrence Tech learns from the constituencies it serves and analyzes its capacity to serve their needs and expectations.

Service at Lawrence Tech begins with outstanding community services provided by its leaders. Members of the Board of Trustees serve on a voluntary basis. Board of Trustees Chairman Lloyd Reuss received the 2009 George W. Romney Award for Lifetime Achievement in Volunteerism in October 2009 from the Detroit Chapter of the Association of Fundraising Professionals. President Walker is a member of various boards of directors of charitable, professional, and economic associations.

Many faculty members participate with local community organizations and are leaders within their disciplines. Students participate in service learning and co-curricular activities, and apply their leadership skills to improve the community.

5a1-5a2: A Legacy of Service

5a1: Lawrence Tech’s commitments are shaped by its mission and its capacity to support those commitments.

5a2: Lawrence Tech practices periodic environmental scanning to understand the changing needs of its constituencies and their communities.

Lawrence Tech has historically provided service to many constituencies. The University’s commitment to sustaining community...
engagement and service resulted in receiving the Carnegie Community Engagement classification in 2008, the only technological university in Michigan to achieve this honor.

**Carnegie Community Engagement Classification**

Lawrence Tech is recognized by the Carnegie Foundation for the Advancement of Teaching for its exemplary community engagement and outreach efforts. The community engagement classification is a recent addition to the Carnegie classification system for U.S. colleges and universities. Universities apply by submitting required documentation describing the nature and breadth of their community engagement, which is not represented in available national higher education datasets. The University cited fifteen specific programs in its application including University High School, Kids’ Farm, and Math Counts. See (C5-01/“Carnegie Community Engagement Partnerships”) for a listing of these programs.

**Faculty Expectations**

The Lawrence Tech Faculty Handbook describes how faculty members are evaluated on their service activities for promotion, tenure, and merit.

Faculty members should describe service to the University, profession, and community. This description should indicate the role played and the outcome of the service activity.

Lawrence Tech searches for new faculty members who have community engagement and industry experiences in areas important to Michigan’s economy. Faculty professional contributions include both innovation initiatives and professional service. Innovation initiatives include outreach programs, nonprofit board service, unsponsored research, and curriculum development. Professional activities include activities such as reviewing proposals, chairing professional committees, serving as professional consultants, and working with our students to meet their community service expectations.

5a3-5a4: A Diverse and Active Constituency

5a3. Lawrence Tech demonstrates attention to the diversity of the constituencies it serves.

5a4: Lawrence Tech’s outreach programs respond to identified community needs.

Lawrence Tech students, faculty, and administrators participate in a broad range of on-campus and off-campus volunteer activities that address the diversity of the Southeast Michigan community. On-campus activities include Red Cross blood drives, canned food collections, holiday gift giving programs for needy children, holiday meal programs, and many more. Students are involved in many off-campus activities including the Gleaners Food Bank, Forgotten Harvest, Evans Drain clean up, Dearborn Animal Shelter, the Leg Art Center, and the Southfield Community Service Day.

**Focus: HOPE Partnership**

Lawrence Tech was a founding partner of Focus:HOPE’s manufacturing engineering program. This award-winning program serves disadvantaged youth of Detroit by providing them with a college education and employment opportunities in engineering and technical fields. Originally funded by the National Science Foundation, Lawrence Tech has been a program partner for 15 years and graduates more students than all other partner schools combined.

**Student Community Service**

To commemorate the life and legacy of Dr. Martin Luther King Jr., Lawrence Tech students participate in a two-part service event in honor of King’s commitment to others. Volunteers perform improvement projects such as painting, cleaning, and other forms of beautification, and mentoring students from the University High School. Lawrence Tech students also joined an existing partnership between the University of Michigan-Dearborn, Henry Ford Community College, Madonna University, and the United Way of Southeastern Michigan to provide over 800 student volunteers to local community agencies to inspire long-lasting and positive change throughout the metropolitan Detroit area.

The Lawrence Tech chapter of the American Institute of Architecture Students (AIAS) raises funds in support of Freedom by Design, which uses the talents of architecture students to impact the lives of people in their community through modest design and construction solutions such as bathing aids, stair modification, and door improvements.

The Society of University Leaders develops inclusive leadership development through service and community engagement. Through their volunteer work, students develop a mindset of teamwork, communication, inclusiveness, empowerment, and community building.

Media Communications students complete each semester to create 30-second promotional videos for a designated nonprofit. The first nonprofit served was “3 or 5” which raises awareness about the scarcity of clean drinking water.

**Center for Nonprofit Leadership**

Lawrence Tech’s Center for Nonprofit Leadership and Management collaborated with students from Iowa’s Grinnell College on the Detroit Social Innovation Project. Grinnell funded internships for two students through its Wilson Program in Enterprises and Leadership, who collaborated with Professor Jerry Lindman for their summer exploration of innovative programs serving the city of Detroit. See detroitsocialinnovation.ring.com for an overview of the project including blogs and student-produce videos.

The Center collaborated with the Association of Fundraising Professionals to sponsor a symposium, A Philanthropic Covenant with Black America, in July 2009 which discussed current research on giving and volunteering practices of the African-American community. The Center also collaborated with the Detroit Social Innovators Network and Colton Group to sponsor the Workshop on Earned Income Ventures by Nonprofits in November 2007 to discuss best practices in nonprofit social ventures and earned income strategies.

**AmeriCorps**

Lawrence Tech received a grant in 2009 from the Michigan Campus Compact to fund an AmeriCorps VISTA member at the University to expand community service opportunities for students. The initiative promotes experiential learning incorporating civic engagement in support of the Undergraduate Leadership Curriculum. The VISTA program provides opportunities to participate in volunteer fries, National Make a Difference Day, Alternative Spring Break, Alternative Weekends, and National Family Volunteer Day.

In 2010 Lawrence Tech received two additional VISTA grants. By expanding community partnerships with Southfield-based nonprofit agencies, the VISTA program ensures that students graduate with a leadership education and community service experiences.

**STEP Parent Training Program**

Lawrence Tech psychology professor Dr. Matt Cole and clinical psychology students studied up with Southfield’s Hope United Methodist Church to offer a training program for improving parent-child relationships. Funded by a grant from the Southfield Community Foundation, the six-week parent training program helped build communication skills and drug awareness skills through role playing and teaching exercises.

**5a5: Internal Benefits of Outreach**

In responding to external constituencies, Lawrence Tech is well-served by programs such as continuing education, outreach, customized training, and extension services.

Lawrence Tech learns from its community engagement, bringing community events to life in the classroom and providing learning and research opportunities for students and faculty members. In addition to community outreach through academic programs, Lawrence Tech’s Professional Development Center and Office of Corporate and Foundation Relations provide economic development services to Michigan businesses.

**Scholarship Related to Engagement and Service**

A number of faculty research projects feature service components. The Center for Innovative Materials Research provides advanced technological services and support for the Michigan Department of Transportation and the U.S. Army to develop new materials for bridge construction and military armor. Several College of Engineering faculty members have delivered short courses to the U.S. Army Tank-Automotive Research, Development, and Engineering Center (TARDEC) and the Eaton Corporation.

Faculty members in the College of Architecture & Design have published several peer-reviewed papers describing the Detroit Studio program, Detroit Repertory Theatre Project, Quinn AME Church Project, Troy Maple Road Corridor Study, and Open House International UK.
and the commitment to engage with its identified communities. Lawrence Tech is a member of over 50 professional organizations that engage the University with academic and administrative innovation around the country. See (C5-02-“Professional Memberships”) for a complete listing. This section highlights some of the University’s capabilities for community engagement.

Communicating With the Community

The Office of Marketing and Public Affairs coordinates media relations for the University. The campus maintains relationships with WWJ, WUAA, and other radio and television stations. University administrators support media relations and visits from members of the news media also are included in the annual report to the community.

Great Lakes Innovation and Technology Report

Lawrence Tech collaborates with WWJ radio and the Great Lakes Innovation and Technology Report at www.citylocal.com/shows/glitr. Periodic morning meetings hosted by WWJ technology editor Matt Roush on the Lawrence Tech campus focus on a range of topics including renewable energy, information security, computer graphics, sustainable architecture, and job creation. A symposium on renewable energy in February 2010 drew 250 people to the Lawrence Tech campus.

Leaders and Innovators Program

Lawrence Tech collaborates with WWJ radio and the Great Lakes Innovation and Technology Report (GLITR) to sponsor the Leaders and Innovators program. This program recognizes individuals who lead regional transformation and inspire others to act likewise. A weekly honoree is highlighted in GLITR. The Grant Thornton Leader and Innovator of the Year Award is presented during Lawrence Tech’s Innovation Showcase Weekend in April. See www.edu.edu/experts for more information about this community-focused program.

Experts Program

Lawrence Tech faculty and staff members participate in the Experts Program, where media outlets can identify University experts to comment on breaking news and issues of importance to the community. The Experts Program lists about 25 experts in 100 topic areas and is available on the Web site. See (C5-02-“Experts Program”) for more information about this program.

Government Relations

Lawrence Tech supports federal and state relations through contracts with MU Capital Consulting and LGL Consulting respectively. These Michigan firms work closely with the Office of Corporate and Foundation Relations to advance the University interests at the federal and state levels.

The University’s federal relations efforts focus on securing funding for applied research and congressional appropriations, and on maintaining relationships with Michigan’s congressional delegates. The University has two receptions each year in Washington for Michigan members of congress and their staffs. The October 2009 reception was attended by eight members of congress, senior staff, and a representative from Governor Granholm’s Washington office.

The University’s state relations efforts focus on gaining support from state agencies for the University’s state grant and contract applications, and to seek support for state programs benefitting higher education.

Branding and Marketing

Lawrence Tech has made significant investments in marketing and branding since the 2001 site visit. The University launched a comprehensive design of its Web site in 2003 and updated the design again in 2009. The Web content management system enables departments to maintain page content while ensuring a consistent design layout. A new University logo was unveiled in 2008 along with comprehensive identity standards, Web guidelines, and style guides.

Lawrence Tech engaged Hanon McKendry of Grand Rapids, MI, to conduct a brand review in 2006 focusing on brand awareness with traditional college-bound students, adult returning students, and working professionals seeking graduate education. The University then engaged the Program Group in 2007 to identify the most distinguishing brand position, with almost 900 current and prospective students, faculty and staff, alumni and donors, and members of the public participating in the study. The brand of “Leadership through Theory and Practice” provided the natural flow of water into the Clinton River from its upper watershed in Oakland County. The study assesses the issues faced by people using the Clinton River and its watershed lakes, including water quality, fish and wildlife habitat, recreational opportunities, and the effects of lake level controls.

Faculty Recognition

Lawrence Tech recognizes faculty members for their community engagement activities. Recent examples include computer science professor Dr. C.J. Chung, who received a Marburger Award in 2007 for his work in leading the Robofest program, which involved over 1,400 high school students and 576 teams in 2007. Architecture professor Dr. Donald Carpenter, associate professor of civil engineering, leads a three-year $228,000 study to identify improved management techniques to restore a more natural flow of water into the Clinton River from its upper watershed in Oakland County. The study assesses the issues faced by people using the Clinton River and its watershed lakes, including water quality, fish and wildlife habitat, recreational opportunities, and the effects of lake level controls.

Criterion 5b. Lawrence Tech has the capacity to engage with its identified communities and strengthen relationships with the cities of Southfield, Detroit and others in Southeast Michigan to enhance to economic development. The strategic plan also calls for the University to engage in partnerships with international educational institutions to achieve an international student enrollment goal of fifteen percent, offer degree programs at international locations, and expand student and faculty exchange programs.

5b: Support for Constituent Relationships

Criterion 5b. Lawrence Tech has the capacity to engage with its identified communities and strengthen relationships with the cities of Southfield, Detroit and others in Southeast Michigan to enhance to economic development. The strategic plan also calls for the University to engage in partnerships with international educational institutions to achieve an international student enrollment goal of fifteen percent, offer degree programs at international locations, and expand student and faculty exchange programs.
also supports an active study abroad program. This section highlights several initiatives linking academic programs to the community.

Local Service Opportunities
The Office of Leadership Programs maintains a database of civic engagement and leadership opportunities including the United Way, American Red Cross, American Cancer Society, Gleaners Food Bank, and Light the Night. Students initiate and complete service learning projects in freshman and sophomore leadership courses. The College of Architecture & Design’s Detroit Studio emphasizes community participation through its design and planning projects. Architectural design projects conducted in community-based, urban design, and sustainable development. Architecture students also participate in service learning activities in other metropolitan Detroit communities, and Windsor, Ontario.

For three years, 120 students in Building Systems I classes in the College of Architecture & Design have helped construct homes for Habitat for Humanity. Their participation provides affordable housing to the community while offering students hands-on experience with the construction process.

The Center for Nonprofit Leadership and Management provides graduate students with supervised internship opportunities as part of a nonprofit internship course. The internship course connects students with potential nonprofit employers and provides meaningful service to the community. Recent examples of nonprofit internship placements include the Detroit Zoo, Osborn Microenterprise Program, and Proving Innocence.

Global Service Opportunities
The Office of Leadership Programs offers an opportunity for students to use their education and life experiences to bring decent, environmentally friendly housing solutions to children affected by civil war, natural disaster, or poverty. Lawrence Tech students participated in a housing construction project during a ten-day build in Les Cayes, Haiti. Some students plan to return to Haiti to construct a medical center for the Pwoje Espwa orphanage.

A program in Zhejiang Province, China, provides opportunities for Lawrence Tech students to teach English and American culture to Chinese students. High school students provide free weekend tours and excursions for visiting teachers.

Study Abroad Opportunities
Lawrence Tech offers a wide range of opportunities for students to study abroad for a full semester or summer. Many students extend their study abroad experience to visit places outside of their host city. Programs are available in Great Britain, South Africa, Italy, Germany, and Mexico. See bit.edu/about for more information.

The College of Architecture & Design’s Paris program provides students with the opportunity to explore the architecture, urban fabric, and literature of this famous city. Students participate in an international architectural design studio, and work on a Paris-based design project focused on the insertion of contemporary architecture into the historical fabric.

Lawrence Tech offers student exchange programs with universities in Germany, Mexico, Denmark, Switzerland, France, China, India, Malaysia, Korea, and the Middle East. The European Project Semester is an engineering senior design experience conducted in Denmark, with Lawrence Tech students participating on a team of international business and engineering students working on industry or government sponsored design projects.

Support for Faculty Engagement
Faculty members receive release time to participate in community engagement projects such as Robofest, QUEST, and the Detroit Studio. The University’s research seed grant program considers proposals focused on community service. Faculty members have received summer salary support for community engagement activities such as the Rouge River watershed study, partnership development with TARDEC, summer camps for entrepreneurship and science, and curriculum development focused on community outreach and economic development. The Faculty Senate has approved sabbatical requests for community engagement activities.

Center for Nonprofit Leadership and Management
The Center for Nonprofit Leadership and Management in the College of Management provides education, applied research, and outreach in nonprofit management and social enterprises. The Center brings together best management practices to support the nonprofit community with career exploration, developing competencies in nonprofit organizations, and networking to identify service opportunities.

The Center offers a MBA degree with a concentration in nonprofit leadership and management, plus a graduate certificate available both on-campus and online. The Center supports an active research and service agenda including the Osborn Microenterprise Project funded by the Skillman Foundation’s Good Neighbors Initiative. In September 2009, the Center hosted a Russian delegation in a full-day seminar on non-governmental organization accountability, transparency, and governance. A delegation from Ukraine visited the University in August 2010.

Center for Global Leadership and Understanding
The Center for Global Leadership and Understanding in the College of Management provides a program of education, research, and outreach. Guided by a nineteen-member advisory board, the Center offers workshops for local business topics such as the transformation of the automobile industry, global perspectives on leadership, and the global financial crisis. The Center identifies global research opportunities for students and faculty members. The Center has also sponsored an essay contest for high school students on the characteristics of global citizenship.

“I have confidence in the quality of a Lawrence Tech graduate. I’ve found they have a command of the basics, a practical application of knowledge, and a superior work ethic. They understand the importance of community, teamwork, and communications.”

—David J. Ruby, S.E., P.E., President, Ruby & Associates, PC

Lawrence Tech supports a number of collaborations with K-12 schools, community colleges, and universities. The University highlights its relationships with Michigan community colleges in various printed and Web promotional materials. Lawrence Tech has a number of partnerships with universities in China, India, Europe, the Middle East, and Canada. Articulation agreements provide opportunities for international students to receive Lawrence Tech and joint degrees.

University High School
Lawrence Tech High School (UHS) is a Lawrence Tech sponsored outreach to the nearby Ferndale Public Schools, with Lawrence Tech faculty participating in curriculum design and Lawrence Tech students providing tutoring support. UHS is a coeducational college preparatory public high school for students committed to academic success.

UHS focuses on career pathways including engineering, design, planning, manufacturing, purchasing, logistics, marketing, sales, and service. Students are required to enroll in four years of math, science, language arts, and social studies. The first senior class in 2008 had a 100 percent graduation rate. Approximately 80 UHS students participate in a dual enrollment program with Lawrence Tech and attend classes at the Southfield campus during their senior year. Lawrence Tech also provides dual enrollment opportunities in partnership with approximately ten regional high schools.

5c. Responding to Constituent Needs
Criterion 5c. Lawrence Tech demonstrates its responsiveness to those constituencies that depend on it for service.

Lawrence Tech responds to the needs of its constituents by providing a wide range of activities and programs. Constituents include community organizations, K-12 school districts, community colleges, and universities. This section highlights some of these relationships.

5c1. Collaborative Partnerships
5c1. Collaborative ventures exist with other higher learning organizations and education sectors.

Lawrence Tech supports a number of collaborations with K-12 schools, community colleges, and universities. The University highlights its relationships with Michigan community colleges in various printed and Web promotional materials. Lawrence Tech has a number of partnerships with universities in China, India, Europe, the Middle East, and Canada. Articulation agreements provide opportunities for international students to receive Lawrence Tech and joint degrees.

Lawrence Tech High School
University High School

Criterion Five
Entrepreneurship Tour extremetour.org on attend Lawrence Tech in fall 2010. Lawrence Tech provides scholarships to three high school seniors for their Leadership and Understanding awarded technical documents. The Center for Global submitting poetry, short stories, essays, and open to sophomores and juniors from regional physics, language arts, and AP courses. Lawrence Tech has held a writing contest Lawrence Tech hosted the Extreme Science sponsors Camp Infinity, a five-day girls' technology camp. The College of Arts & Sciences sponsors Camp Infinity, a five-day outreach program for girls providing hands-on projects in mathematics and science.

Camp topics include alternative energy, autonomous robotics, biomedical engineering, entrepreneurship, gaming, graphic design, and transportation design. Lawrence Tech Summer Science Institute is one of America's oldest STEM enrichment programs. The College of Engineering sponsors the MathCounts program for middle school students as well as STEM programs for Girl Scouts and Boy Scouts. The University also sponsors the Oakland County science Olympiad for middle and high school students. Extreme Science Saturdays are offered during the school year by the Department of Natural Sciences. Lawrence Tech offers several college level courses at regional high schools including Introduction to Engineering, Introduction to Psychology, and Business Law. Several high schools now offer Lawrence Tech's Calculus 1 and Calculus 3 courses, and Troy High School offers Lawrence Tech's Differential Equations course. Lawrence Tech has focused on increasing the number of female students in STEM fields, collaborating with the Michigan Council of Women in Technology and Society of Women Engineers to provide programming and networking opportunities to encourage young women to pursue STEM careers. The University has also collaborated with AT&T to sponsor a girls' technology camp. The College of Arts & Sciences sponsors Camp Infinity, a five-day outreach program for girls providing hands-on projects in mathematics and science.

Community College Articulation Agreements
Lawrence Tech has developed articulation agreements with a number of Michigan community colleges to accept transfer credits and offer courses and/or academic programs on their campuses. See (CS-04-“Community College Articulation Agreements”) for complete information.

Lawrence Tech also collaborates with the Southfield Public Schools and nearby Oakland Community College (OCC) on a 2+2+2 program designed to encourage students to consider careers in engineering. Students complete their last two years of high school, two years at OCC, and the last two years as Lawrence Tech engineering students. During the high school phase, students receive tutoring, field trips, and the opportunity to participate on an engineering design team.

Collaborative Relationships with Universities
Lawrence Tech maintains several formal and informal relationships with regional universities to partner in program development and delivery. The University also collaborates with a number of universities on faculty research projects. Lawrence Tech developed its Master of Science Education degree in 1986 to provide additional high school science teachers in Michigan. Lawrence Tech collaborates with the University of Detroit-Mercy for program design and teacher certification at the master's degree level. The program supports teachers through extensive summer and summer courses. Lawrence Tech and Marygrove College offer a collaborative Master of Education Technology degree program, which students benefit from Marygrove's strength in teacher preparation and Lawrence Tech's leadership position in technology-based professional education. Students complete some program requirements at each institution with the degree awarded from their home institution.

The College of Management collaborated with Eastern Michigan University's College of Technology for two years to co-sponsor a Digital Revolution lecture series. Lawrence Tech and EMU students met at the Ypsilanti Marriott Conference Center for seven evening sessions delivered by prestigious speakers from around the world. One lecture series focused on the promise and challenges of technology from birth to old age, and a second series focused on paperless government, digital archiving, cybersecurity, and intellectual property. Lawrence Tech waived fall 2005 semester tuition and fees for students suffering financial hardship due to Hurricane Katrina. The University offered to accommodate displaced students in its residence halls and waived requirements for advance deposits and residency fees.

International Academic Agreements
Lawrence Tech has worked with like-minded universities around the world to sign over 20 academic collaborations (CS-05-“International Academic Agreements”) for summaries of these agreements. Original copies of all agreements are available for review in the Provost’s Office.
Criterion Five

5c2. Transfer Policies

Lawrence Tech’s transfer policies and practices create an environment supportive of the mobility of learners.

Lawrence Tech enters into transfer and articulation agreements with accredited universities and community colleges across the United States. Articulation agreements and transfer guide sheets for students receiving associate’s degrees from community colleges are available on the Web site ltu.edu/futurestudents under the Transfer tab. The University evaluates transfer credits from foreign universities using the World Education Service (VES). See the Federal Compliance section for complete information about Lawrence Tech’s transfer policies and practices.

5c3-5c5: Sustainable Partnerships

5c3. Community leaders testify to the usefulness of Lawrence Tech’s programs of engagement.

Lawrence Tech’s programs of engagement give evidence of building effective bridges among diverse communities.

5c4. Lawrence Tech participates in partnerships focused on shared educational, economic, and social goals. Lawrence Tech has long maintained relationships with community, civic, and charitable organizations in Southeast Michigan including the Detroit Regional Chamber of Commerce, Engineering Society of Detroit, government leaders, and many others. This section highlights those relationships focusing on education, economic, and social goals.

Membership Organizations

Lawrence Tech is an institutional member of many professional organizations including:

- Engineering Society of Detroit
- Society of Automotive Engineers
- Society of Manufacturing Engineers
- Boy Scouts of Southeast Michigan
- Eight Mile Boulevard Association
- American Arab Chamber of Commerce
- Asian Pacific Chamber of Commerce
- German Chamber of Commerce
- Lebanese American Chamber of Commerce

Relationships

- Microenterprise and Nonprofit Initiatives

The Center for Nonprofit Leadership and Management managed the Osborn Microenterprise and Entrepreneur Development Program, a comprehensive program designed to provide residents and businesses of Detroit’s Osborn neighborhood the support and services needed to be successful in developing a small business. Funded by the Skillman Foundation, Knight Foundation, Comerica Bank, and Matrix Human Services, the project served over 90 individuals and businesses from an entrepreneurial development center housed in Detroit.

The Center hosted a one-day statewide microenterprise conference in collaboration with the National and Detroit Local Initiative Support Corporations, Community Economy Development Association of Michigan, and the Federal Reserve Bank of Chicago. The conference brought together national community microenterprise experts from across Michigan to provide best practices and insights on the use of information technology.

The Center sponsors an annual seminar on campus in collaboration with the DTE Energy Foundation and Crain’s Detroit Business. The seminar attracts over 200 nonprofit professionals to honor nonprofit leaders and share best practices. The Center also collaborates with the United Way on BoardWalk, a series of seven workshops focusing on building the capacities of nonprofit boards.

The Center sponsors the Learning Circle for Nonprofit Financial Executives. This free peer-driven group of nonprofit executives meets regularly on the Lawrence Tech campus to share best practices. The Center has also sponsored a Boot Camp for Fundraisers and Grantseekers to improve fund-raising and grant-seeking strategies and tactics.

5c6: Partnerships and Contractual Relationships

5c6. Lawrence Tech’s partnerships and contractual arrangements uphold the organization’s integrity.

Lawrence Tech maintains a number of partnership and contractual relationships. Partnership relationships with community colleges, regional universities, and international universities have been discussed earlier in this chapter.

Lawrence Tech contracts several of its campus operations to outside firms. Barnes and Noble College Bookstore operates the LTU Bookstore. ARIMARK provides dining and facility management services. The Merit Computer Network provides the University’s Internet services. Plante & Moran serves as the University’s auditor. A range of vendors provide technology, marketing, and other consulting activities. All services contracts are managed by the Office of Finance & Administration.

Lawrence Tech has played a significant role in the economic life of Southeast Michigan since its founding in 1932. This section highlights some of Lawrence Tech’s economic development activities.

President Russell Lawrence may well have established the world’s first business incubator when he provided space and services to “baby industries” on the Highland Park campus. Dr. Walker and Dr. Chambers have served for many years as directors of the Oakland County Workforce Development Board. Assistant Provost Lisa Kujawa and Dean of Students Kevin Finn have involved faculty members and students in Oakland County’s Ignition Works program.

5d. Constituents’ Views of Lawrence Tech’s Services

Lawrence Tech constantly assesses the effectiveness of its service initiatives and scans the environment for new opportunities consistent with its vision, mission, and values. This section focuses on the outcomes of the University’s service efforts.

5d1-5d2: Assessment of Outreach Efforts

5d1. Lawrence Tech’s evaluation of services involves the constituencies served.

5d2. Service programs and student, faculty, and staff volunteer activities are well-received by the communities served.

The University, through its memberships, partnerships, and industry relationships, receives feedback on the value of its engagement with the community. The Center for Nonprofit Leadership and Management oversees the ongoing value of the University’s service to the community. Project reports summarize lessons learned and provide input to future projects.

Testimonials are routinely received by the University which attest to the value of its engagement with the community. See (C5-06-“Community Testimonials”) for a representative sample of these documents.

“Lawrence Tech is an institution that deserves the highest applause, the highest salute, because it is a great university and it is one that you can be extremely proud of.”

--Joe Knaulenberg, Member of Congress of the United States
Lawrence Tech maintains ongoing relationships with county executives and officers from both Wayne and Oakland County, and collaborates with Oakland County to help relocate companies to Southeast Michigan. Lawrence Tech is a founding member of both the Automation Alley and Oakland County’s Great Lakes Interchange SmartZones, a state-funded economic development initiative. The University also works closely with the Michigan Economic Development Corporation and the Oakland County Workforce Development Board.

Lawrence Tech helped lure Landon IP to open a Southfield office specializing in professional patent analytics. Landon plans to create almost 300 jobs when it opens a second location in Southfield with a focus on mechanical engineering, electrical communications, physical sciences, and life sciences. Landon approached Lawrence Tech about the availability of mechanical and electrical engineers in the region. Students and faculty members from the College of Architecture & Design participated in the Aafter the Crisis initiative sponsored by the City of Warren and the Macomb County Board of Commissioners. The program involved an international consortium of architecture firms that looked at the real estate crisis in nearby Warren and developed intervention proposals.

Visits by Politicians and Policy-Makers

Visitors to campus have included Members of Congress John Dingell, Gary Peters, Mark Schauer, Dennis Moore (chairman of the Financial Services Committee), Candice Miller, and Sander Levin (chairman of the House Ways and Means Committee). U.S. Senator Carl Levin makes periodic visits to the campus. State and regional political visitors have included Governor Jennifer Granholm, Oakland County Executive L. Brooks Patterson, Wayne County Executive Robert Ficano, and Chair of the Macomb County Board Paul Gieleghem.

In November 2009, Lawrence Tech hosted an official congressional hearing of the Financial Services Committee on improving responsible lending to small businesses. Congressman Gary Peters requested that the event be held at Lawrence Tech, even though the campus is outside his district. Lawrence Tech was chosen due to its focus on entrepreneurship and business development. Lawrence Tech also hosted the Assistant Secretary of Commerce and Congressman Carl Levin for a meeting on the availability of student financial aid in April 2010. Lawrence Tech hosted a luncheon for Congressman Carl Levin and Congressman Sander Levin (chairman of the House Ways and Means Committee). U.S. Senator Carl Levin and Sander Levin (chairman of the House Ways and Means Committee) hosted the Assistant Secretary of Commerce and business development. Lawrence Tech also outside his district. Lawrence Tech was aided design software. The Center for Nonprofit Leadership and Management plans to offer CEU credit for outreaches programs.

Professional Development Center

Lawrence Tech’s Professional Development Center (PDC) operates under contract to Dr. Ben Benson, formerly a faculty member in the College of Management. The PDC delivers training and consulting aligned with the University’s reputation for bridging theory and practice in the areas of accounting, real estate, insurance studies, Lean Training, Sigma Training, executive coaching, project management, and entrepreneurship. See ltu.edu/pdc for complete information on the Center’s services.

Conclusion

We believe that Lawrence Tech meets Criterion Five. Lawrence Tech’s extensive community outreach programs and achievement of the Carnegie Community Engagement Classification directly responds to the Higher Learning Commission’s call for the University to “[identify] its constituencies and serve them in ways both value.”

The University has continuously expanded its sponsorship of community engagement activities while seeking sponsored funding for large-scale initiatives such as the Detroit Studio and the Osborn Microenterprise Project. Innovative partnerships such as the Ferrisdale University High School provide opportunities for young students in the region to receive high-quality educational experience and prepare them for college. The University’s numerous relationships with international universities underscores its commitment to position itself in the global higher education community.

The University’s involvement in regional economic development and charitable activities is long-standing and significant for a university of Lawrence Tech’s size. The University has long viewed itself as “a private university with a public focus,” and continues to demonstrate this commitment in ongoing, innovative, and sustainable ways.

Opportunities for Improvement

Despite its modest size, Lawrence Tech maintains a large number of external relationships. Coordinating these varied relationships is challenging for faculty and staff, especially when faculty members integrate community service into instruction and research. The University recognizes the potential rich source of student service and research opportunities. The University’s longstanding and significant relationships with international universities underscores its commitment to position itself in the global higher education community.

The University recognizes that alumni outreach and engagement remains a challenge. Without intercollegiate athletics or a rich social life in the areas adjacent to the campus, alumni do not have compelling reasons to visit the campus.
Request for Continued Accreditation

Lawrence Technological University has prepared this Self-Study to demonstrate its fulfillment of the Commission’s criteria for accreditation. The Self-Study describes the University’s accomplishments and challenges in a straightforward and transparent manner, and the numerous evidentiary documents provided in the Evidence Repository and Resource Room validate the observations and conclusions drawn in this document.

Summary Statement

Lawrence Technological University is a significantly different institution than it was ten years ago. New academic programs, a culture of doctoral studies, increased levels of faculty research, and significant investments in facilities and information technology have transformed the University’s academic programs and the campus. Each of the Commission’s five criteria for accreditation has been carefully examined in light of Lawrence Tech’s accomplishments over the past ten years as well as its future challenges. The evidence presented shows that the University has met each of the five criteria for accreditation while identifying challenges and areas for improvement.

Criterion One

The University’s mission statement clearly reflects the institution’s history and values, the needs of its students, and its future orientation. The mission is embraced by the Board of Trustees, administration, faculty, and staff. A mature and comprehensive strategic planning process guides University operations with active monitoring by administrators and members of the Board of Trustees. Decision-making and authority are clearly defined for academic and administrative processes.

The University’s leadership is committed to the future success of Lawrence Tech and its students. Faculty members are clearly involved in the governance of the University with primary responsibility for academic programs, admission requirements, and student achievement. The Faculty Senate and Staff Senate are active forces in the life of the University.

The University recognizes that more efforts are needed to define the value of a Lawrence Tech education to prospective students and to define the distinctiveness of each academic program. The University also recognizes that its more complex environment challenges all members of the campus community to share important issues and opportunities for engagement in governance and planning.

Criterion Two

The University is governed by an informed Board of Trustees and led by qualified and experienced administrators. Faculty members with appropriate academic credentials provide high quality academic programs. Strategic planning and financial processes ensure that the University can sustain its mission and respond to future challenges. The University is diversifying its income sources to better position itself to sustain and extend its mission in the future.

A wide range of student services are provided to enhance academic achievement. The physical plant and technological resources have been upgraded to support effective teaching and learning. The University’s planning and budgeting processes provide the flexibility needed to adapt to changing circumstances.

The University recognizes that sustained efforts are needed to develop the public’s perception of Lawrence Tech as a private
The University recognizes the need for continued focus on assessment at the master’s degree level. The proposed Engineering and Science Building will help alleviate space and degree level. The University has experienced significant growth in the quantity and quality of faculty research, and over 50 students have received doctoral degrees from the University’s three doctoral programs. The University has established intellectual property, compensation, royalty, and indirect cost policies in support of faculty and student research. The University supports the research agendas of academic departments and provides seed grants to faculty members developing their own research agendas. The Research Support Services Committee provides oversight of research projects and an Institutional Review Board monitors research involving human subjects. The University recognizes that the research support environment at Lawrence Tech is still in its formative stages, and that additional support is needed by faculty members to develop their research agendas. The University recognizes the need to continuously increase the provision of start-up funding to promising new faculty members. The University also recognizes the need for additional graduate research assistantships to provide greater opportunities for future Ph.D. students.

Lawrence Tech has demonstrated that it meets the University’s vision of becoming a preeminent institution and is consistent with the University’s mission, vision, and values. We request approval of this change request to extend doctoral education opportunities to future students.

Lawrence Tech requests permission to create a new Doctor of Engineering degree program to support doctoral studies across the several professional engineering disciplines supported by the College of Engineering. In addition to adding the Doctor of Engineering degree, Lawrence Tech plans to offer students the option of traditional Ph.D. programs in the Colleges of Engineering and Management. The Ph.D. programs will build on the capabilities and resources of Lawrence Tech’s existing practitioner-scholar doctoral programs to provide students with the opportunity for advanced study focused on fundamental and applied research in Engineering and Management, guided by the active research agendas of faculty members. Successful doctoral programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend doctoral education opportunities to future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online delivery format using existing internal approval processes.

Lawrence Tech requests permission to include doctoral Ph.D. programs in the list of academic programs that Lawrence Tech is seeking for accreditation.

Lawrence Tech requests permission to approve any of its academic programs in hybrid or online delivery format subject to approval consistent with the new definitions of online learning by the Commission, this request includes both fully online programs and hybrid programs comprising 50% or more of program delivery in any one academic program.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to extend doctoral education opportunities to future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.

Lawrence Tech requests permission to include online degree programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request approval of this change request to extend online education opportunities to current and future students.

Lawrence Tech requests permission to offer any of its academic programs in hybrid or online education.
Lawrence Tech was approved by the Commission to offer master's degree programs in 1991 and doctoral degrees in 2001. The University has extended its academic programs to meet the educational needs of its students by providing graduate programs in all four colleges, as well as practitioner-scholar doctoral programs in the Colleges of Engineering and Management. Establishing a culture of graduate and doctoral studies is consistent with the University’s vision of becoming “a preeminent university producing leaders with an entrepreneurial spirit and global view.”

Lawrence Tech presently offers three doctoral programs: Doctor of Engineering Manufacturing Systems (DEMS), Doctor of Management of Information Technology (DMIT), and Doctor of Business Administration (DBA). These programs focus on developing professional leaders whose dissertation research bridges theory and practice. 50 students have received their doctorates from Lawrence Tech while producing a strong record of academic and professional accomplishments.

This request was developed in a climate of continuous improvement and collaboration. The DBA and DMIT programs underwent a substantial program review, upgrade, and integration during 2009 that strengthened both programs through a shared set of core and research courses, shared course schedule, hybrid program delivery, and a new governance structure. The DEMS program has also undergone a program review, and the Board of Trustees approved establishment of a new Doctor of Engineering degree in June 2010. Faculty members in the Colleges of Engineering and Management have collaborated to develop a shared approach to offering Ph.D. programs.

Lawrence Tech requests permission to create a new Doctor of Engineering (DE) degree program to support doctoral studies across the several professional disciplines supported by the College of Engineering. Adding a DE degree program parallels the current offering of general and specialized practitioner-scholar doctoral programs in the College of Management, and provides Lawrence Tech with the opportunity to evolve doctoral programs in both colleges using a consistent and collaborative approach.

Lawrence Tech also requests permission to offer students the option of traditional Ph.D. degree programs in both the Colleges of Engineering and Management. The Ph.D. programs will build on the University’s doctoral culture and research capabilities to provide students with the opportunity for advanced study focused on fundamental and applied research guided by the research agendas of faculty members. The distinguishing features of the practitioner-scholar and Ph.D. programs are discussed later in this request. These institutional changes fall under Commission policy 1.C.2.b (Change in Educational Offering). Lawrence Tech therefore requests a change in its affiliation status to read:

Accreditation at the Doctoral level is limited to the Doctor of Business Administration, Doctor of Engineering, Doctor of Engineering Manufacturing Systems, Doctor of Management in Information Technology, Ph.D. in Engineering, and Ph.D. in Management.
Lawrence Tech currently offers three doctoral programs in the Colleges of Management and Engineering. The Doctor of Engineering Management (DEM) was launched in January 2002 with 15 students, the Doctor of Management in Information Technology (DMIT) was launched in September 2002 with 16 students, and the Doctor of Business Administration (DBA) was launched in January 2004 with 11 students.

Lawrence Tech has chosen not to develop doctoral programs in the Colleges of Architecture & Design or Arts & Sciences at this time. The terminal degree for practicing architects is the Master of Architecture, so the demand for a doctoral program in the College of Architecture & Design is not consistent with its professional focus. The College of Arts & Sciences offers several master’s degree programs, but these programs are not large enough to support expansion to the doctoral level at this time. The University may decide to offer doctoral degrees in the College of Art & Sciences within ten years.

Lawrence Tech’s Approach to Doctoral Programs

Lawrence Tech’s three doctoral programs follow the practitioner-scholar model consistent with the University’s motto of “theory and practice.” This model allows students to pursue full-time professional careers while pursuing advanced graduate degrees. Lawrence Tech faculty members have defined the University’s approach to Ph.D. study as having these characteristics:

- Focus on fundamental or applied research rather than workplace-based research
- Extensive collaboration with faculty members who have an active research focus in the student’s specific area of interest, often supported by outside grants or contracts
- Expectations for campus residency as a graduate research assistant
- Acceptance of internship and final research results in peer-reviewed publications and conference presentations

Ph.D. research at Lawrence Tech will focus on fundamental or applied problems in engineering or management rather than on localized issues found in the workplace. Ph.D. research findings can therefore be used by academic, professional, or policy-making organizations. Ph.D. research can draw on the use of multiple research methods or pilot studies, and hence requires additional focus on related research projects that often require campus residency. The range of Ph.D. coursework may be more narrowly focused on specific aspects of a discipline rather than the broader coverage found in the practitioner-scholar programs.

The Doctor of Manufacturing Engineering Systems program, launched in 2002, offers advanced academic courses and industry-sponsored research experiences in the field of manufacturing systems engineering. The DEMS program serves practicing engineers who seek a high level of technical competence and leadership in this important field. DEMS academic courses offer in-depth knowledge about materials, processes, systems, computer integrated manufacturing, quality, productivity, economics, and management. Faculty members and industry experts jointly advise doctoral candidates on their dissertation research. The program is structured to accommodate working professionals, with most research performed at advanced industry laboratories or facilities.

The DEMS program considers these programs as national benchmarks:
- University of Michigan Ann Arbor – Doctor of Engineering in Manufacturing
- Lamar University – Doctor of Engineering in Industrial Engineering
- University of Detroit Mercy – Doctor of Engineering in Industrial Engineering
- Cleveland State University – Doctor of Engineering in Industrial and Manufacturing Engineering
- University of Massachusetts Lowell – Doctor of Engineering in Mechanical Engineering
- Missouri University of Science and Technology – Doctor of Engineering in Mechanical Engineering
- University of Massachusetts Lowell – Doctor of Engineering in Mechanical Engineering
- University of Oklahoma – Doctor of Engineering

Lawrence Tech’s DEMS program is unique from its competitors in these aspects:
- The DMIT is designed for practitioner-scholars who can pursue advanced studies while maintaining full-time employment
- The DMIT is characterized by specialization in Information Technology and complemented by breadth in management, leadership, and globalization
- The DMIT research model aligns with the University’s motto of “theory and practice” by applying advanced academic knowledge to solving applied research problems
- DMIT dissertation committees consist of a Lawrence Tech dissertation committee chair, a second Lawrence Tech committee member, plus one or two external domain experts who often possess terminal academic degrees
- DMIT courses are designed in hybrid mode with both on-ground and online components

Doctor of Business Administration

Following the successful launch of the DMIT program in 2002, a task force created a plan for a practitioner-scholar Doctor of Business Administration degree. Following Commission approval, the DBA program was launched in January 2004 and is currently serving its seventh cohort of students. The DBA program develops leaders who can think strategically and act decisively in today’s global environment.

DBA students master foundational and advanced principles as well as current and emerging theory. Students acquire the skills and tools necessary to review research literature,
conduct independent qualitative and quantitative research, successfully engage in scholarly writing, and resolve practical issues confronting global organizations.

Lawrence Tech’s DBA program considers these programs as national benchmarks:

- Boston University – Doctor of Business Administration
- Case Western Reserve University – Executive Doctorate in Management Program and several Ph.D. programs
- Cleveland State University – Doctor of Business Administration
- Harvard University – Doctor of Business Administration
- Louisiana State University – Doctor of Business Administration
- Newastle University (UK) – Doctor of Business Administration
- North Central University – Doctor of Business Administration
- Nova Southeastern University – Doctor of Business Administration
- St. Ambrose University – Doctor of Business Administration
- Walden University – Doctor of Business Administration

Lawrence Tech’s DBA is distinct from its competitors in these aspects:

- The DBA program is part-time, year-round, weekend program with students enrolling in four to five courses per year in a blended learning environment.
- The DBA research model aligns with the University’s motto of “theory and practice” by applying advanced academic knowledge to solving applied research problems.
- Upon entry into the program, each DBA student is assigned to a full-time, project advisor who mentors the student until the dissertation phase.
- DBA dissertation committees consist of a Lawrence Tech dissertation committee chair, a second Lawrence Tech committee member, plus one or two external domain experts who often possess terminal academic degrees.

**Doctoral Program Enrollment**

Figure 52 shows enrollment headcounts for the University’s three doctoral programs. Headcount figures do not include students who have stopped out, preparing for qualifying exams, preparing dissertation proposals, or who take longer than one semester to complete a dissertation course.

DEMS enrollment has declined in recent semesters as a direct result of the recession and business failures in the automotive industry and many businesses curtailing dissertation programs. Students’ perceptions of reduced employment opportunities have caused some students to choose alternate fields of study. Some firms are restoring tuition support for advanced degree programs and we expect to see enrollment increases over the next two years.

Enrollment in the DMIT program dropped in 2008 as many earlier students completed their degrees. Some active students delayed their dissertation research classes due to lack of employer-funded tuition assistance. Suspension of admission to the DMIT program in early 2009, resulted in a lack of new students for the 2009-2010 academic year. Admissions have been resumed in advance of the fall 2010 semester.

Enrollment in the DBA program has not seen a significant enrollment decrease due to the recession. This is due to several factors including the broader mix of student backgrounds in the program, lower reliance on employer-sponsored tuition reimbursement, and more aggressive program marketing.

There has been some student attrition from each entering cohort of all three programs. Most attrition has been due to economic or personal factors including change of family status, health, and change of employment. Students performing poorly during the coursework phase of the programs are advised to leave their program. Several students have been dropped from the program as a result of their performance on qualifying exams.

**Graduates and Dissertations**

Over 50 students have received their doctoral degrees from Lawrence Tech since the first students began their doctoral studies in 2002. All three programs have demonstrated a sustainable production of doctoral graduates. See (CRD-01-“Dissertations Published”) for a listing of student dissertation titles. Bound copies of student dissertations are available for review in the Research Room. Dissertations are available to Proquest subscribers at proquest.com and through the University Library.

Fifteen students have completed and defended their DEMS dissertations since the start of the program in January 2002. Dissertation committees were chaired by six different members of the College of Engineering faculty. Virtually all of the dissertations were sponsored by private industry including Chrysler Corporation, Delphi, General Dynamics, Akebono, General Motors Corporation, Ford Motor Company, and others.

Twenty-six students have completed and defended their DMIT dissertations since the start of the program in September 2002. Dissertation committees were chaired by six different members of the College of Management faculty. A number of dissertations were sponsored by private industry including Ford Motor Company, DTE Energy, GMAQ, Chrysler Corporation, General Motors Corporation, and others.

Eleven students have completed and defended DBA dissertations since the start of the program in January 2004. Dissertation committees were chaired by four different members of the College of Management faculty. Dissertations have received industry support from Kelley Services, and Association of Chemical Management Services, and the Haas TCM Group.

Lawrence Tech doctoral graduates and current students are employed in a wide range of industry sectors including financial services, government and military, health care, higher education, information technology, manufacturing, and utilities. Several doctoral graduates operate their own businesses. See (CRD-02-“Graduate and Student Employment”) for a complete listing of employers.

**Doctoral Advisory Boards**

Each of Lawrence Tech’s doctoral programs has an industry or academic advisory board to provide input on curriculum, areas of specialization, and research opportunities. See (CRD-03-“Industry Advisory Board Members”) for a list of advisory board members.

The DEMS program has an advisory board that meets at least one time per year. The DEMS program also receives input from the Mechanical Engineering advisory board.

The DMIT program has an active advisory board that meets twice each year. The advisory board provided extensive input to the redesign of the DMIT and DBA programs. Input was also solicited from Dr. S. Sirac of Miami University, who served as a consultant when the DMIT was originally designed.

The DBA program used an academic board to advise the program on revisions in summer 2009. The board consisted of ten academics with knowledge and experience with practitioner-scholar doctoral programs.

**Campus Culture of Doctoral Studies**

Since approval of Lawrence Tech’s first doctoral program by the Commission in 2001, the University and its faculty have established a culture of doctoral studies that supports both students and faculty members.

- **Academic Outcomes** – The University has successfully graduated 50 doctoral students in three years. All new students have been placed in full-time research positions.
- **Research Outcomes** – Faculty members supervising doctoral students maintain active research agendas, and students select a dissertation chair whose research interest aligns with their own. There are active research opportunities with faculty at the University.
- **Preparation of Future Academics** – Lawrence Tech’s doctoral graduates serve as faculty members or administrators at 19 different universities and colleges including the American University of

![Figure 52 – Doctoral Enrollment Headcounts](image-url)
Faculty Scholarship and Applied Research

The establishment of doctoral programs has contributed to increased levels of faculty research and scholarly publication. Faculty members in the College of Engineering and Management participate in almost 50 different professional or scholarly organizations and demonstrate significant research and scholarship during the 2009-2009 academic year:

- 48 scholarly publications and journal articles
- 62 peer-reviewed publications at conferences
- 71 conference presentations and three conference keynote presentations
- 17 books or book chapters
- 33 grants received totaling $4,274,910 with an additional 13 grants pending
- 14 regional and national awards
- Eight patents

Lawrence Tech faculty members have contributed several peer-reviewed articles and conference presentations related to doctoral education including:

- A retrospective review of the DMIT program
- Outcomes assessment processes
- Improving teaching presence in a virtual classroom
- Achievement motives and motivating strategies for adult learners
- Research writing and publishing
- Classroom lecture capture technologies
- Teaching research methodologies
- Life cycle of a dissertation research project
- Tools and practices to engage academic plagiarism

Student Publications and Professional Awards

Both the DMIT and DE programs require students to submit at least one article to a peer-reviewed journal as a condition of graduation, and the DBA program will institute this requirement in Fall 2010. The proposed DE program includes a publication requirement, and the proposed Ph.D. programs require submission of at least two articles to peer-reviewed journals or conferences prior to graduation.

Acceptance for publication by respected peer-reviewed journals and conferences is a testament to the quality of a Lawrence Tech doctoral education. To date, Lawrence Tech doctoral students have published over 100 peer-reviewed papers and conference presentations.

Many students have submitted multiple articles and have won honors for their scholarly work. See (CRD-04-“Doctoral Student Scholarly Publications”) for a complete list of peer-reviewed publications and conference presentations.

Lawrence Tech doctoral students have won several professional awards or have been otherwise recognized for their professional achievement by organizations. One DEMS student received a patent for his invention of an outrigger lifting device for fuel tankers.

Responding to Needs and Opportunities

Over the past three years, faculty members have carefully considered the future of the University’s doctoral programs in light of their accomplishments and emerging student needs. These findings, along with advice from industry advisory councils and academic colleagues, was used by faculty member to propose significant revisions to the DBA and DMIT programs, propose the new DE program, and propose Ph.D. options for students in both colleges.

Alumni Demand for Programs

Two surveys were taken of 94 students in Lawrence Tech’s Master of Science in Mechanical Engineering and Master of Science in Civil Engineering programs to gauge interest in a Doctor of Engineering program. 62% of respondents indicated that they would consider pursuing an engineering doctorate at Lawrence Tech, with slightly more considering a doctoral degree if their company provided tuition support. Students also observed that the availability of graduate research assistant positions would make it more likely for them to enroll in a Ph.D. program.

Demand for Fulltime Program Options

Lawrence Tech’s collaboration with international universities and recruitment of international students has increased the opportunity to bring traditional graduate and doctoral students to the Southfield campus. Faculty members have noted a significant increase in student interest for a traditional full-time Ph.D. program from international students and students outside Southeast Michigan.

Creation of additional sponsored research opportunities for doctoral students has resulted in increased interest in full-time programs. There are presently twelve master’s degree students fully funded as graduate research assistants for civil and mechanical engineering research projects. Five to seven master’s degree students are employed on an hourly basis as research aides. Civil Engineering supports one post-doctoral research fellow as well as research stipends for two Ph.D. students at the University of Windsor.

Eighteen Civil Engineering master’s students have completed master’s thesis research through funded residencies since 2000. See (CRD-07-“Civil Engineering Thesis Log”) for a complete listing. Each student is expected to complete their degree in 24 months, with three to four students completing research and thesis requirements each year.

Preparing Future Academics

Faculty members have noted a significant interest by students in pursuing academic careers or teaching as an adjunct while maintaining professional employment. Several Lawrence Tech doctoral graduates are employed as faculty at other universities, and some doctoral graduates and current students teach as adjunct faculty members at Lawrence Tech and other institutions. The interest of students in pursuing careers as academicians or researchers encouraged faculty members to develop Ph.D. options for students with advanced research agendas aligned with faculty research projects.

Demand for Hybrid Delivery Options

The deep recession in Southeast Michigan has reduced current opportunities for local student enrollment but has highlighted opportunities for regional and national academic programs. The hybrid delivery model is designed to meet these needs. The hybrid delivery model for the revised DBA and DMIT programs was designed with opportunities such as hybrid delivery model for the IACBE program. The hybrid delivery model for the IACBE program would be largely online but would use three-week residency sessions on the Southfield campus or other locations around the nation.

Doctoral Program Proposals

The DBA and DMIT programs underwent a thorough review and redesign by College of Management faculty members during 2009.
The proposal included development of shared coursework, coordinated course scheduling, hybrid delivery of all courses, and a preliminary design of a Ph.D. option for management students. See (CRD-00-Ph.D. Program Redesign) for the full document. All changes recommended in the proposal were approved by all internal University committees and administrators, and the new programs are being launched in fall 2010.

At the same time, College of Engineering faculty members prepared a proposal for the new DE and Ph.D. programs. The proposal included development of new coursework, design of a Ph.D. option for engineering students, and linkage of doctoral programs with sponsored research opportunities. See (CRD-06-Doctor of Engineering and Ph.D. Program Proposal) for the full proposal. This proposal has been approved by all internal University committees and administrators, and by the Board of Trustees at its June 2010 meeting.

In addition to these documents, all three doctoral programs completed their first full academic program review in fall 2009. These program reviews incorporated the program review and revision plans developed earlier in 2009. The updated programs and proposed new degree programs leverage the resources of both colleges to provide consistent governance frameworks, program design principles, research frameworks, dissertation guidelines, and the potential to explore shared doctoral level coursework. This is a unique approach to collaborative redesign and development of doctoral programs in multiple colleges.

The Proposed Change

Lawrence Tech’s change request for doctoral programs has two components:

- Establishing a professional DE Program in the College of Engineering
- Establishing Ph.D. options for doctoral students in the Colleges of Engineering and Management

The new DE program strengthens the University’s existing doctoral programs by providing four doctoral programs to serve the market for practitioner-scholar students. The DE program provides broader disciplinary coverage than the existing DEMS program in the same way that the DBA program offers broader coverage than the DMIT program in the College of Management.

The University also proposes to establish a Ph.D. in Engineering and a Ph.D. in Management to provide options for students wishing to pursue significant fundamental or applied research in preparation for academic or research careers. Students enrolled in the Ph.D. programs would be required to meet different performance and delivery requirements than students enrolled in the practitioner-scholar programs. Ph.D. students will be supervised by faculty members with active research agendas in related areas.

Doctor of Engineering Degree

The new DE program is a practitioner-scholar doctorate with options in mechanical, civil, electrical, mechatronics, and industrial engineering disciplines. The DE program will also offer more research opportunities as most college research funding is focused on civil engineering (materials, structural engineering) and mechanical engineering (renewable energy, mechatronics materials research). The features of the DE program include:

- Independent research under faculty supervision
- Completion of the dissertation including a public defense
- Participation in courses and seminars
- Poor-reviewed publication associated with dissertation research

The College of Engineering is in an excellent position to offer the DE with a broad range of disciplinary specialties. The college has an outstanding and dedicated full-time faculty with 85% holding terminal degrees. Lawrence Tech is well respected for its engineering programs and its graduates are among the most sought-after engineers in the region. The University will benefit from the new Doctor of Engineering program through an improved national and global reputation in applied research as well as the potential for increased research funding opportunities.

Program Requirements

The curriculum for the DE program consists of new doctoral level courses and existing courses within several academic departments enhanced to provide additional coverage and expectations for doctoral students. All DE students must complete a minimum of 87 hours beyond the bachelor’s degree, an equivalent of 57 credit hours of coursework and dissertation credit beyond the master’s degree:

- Mathematics (3-6 credit hours, including one course transferring from Lawrence Tech’s Master of Science in Mechanical Engineering Program)
- EME6153 Engineering Analysis II
- Doctoral Elective and Required Courses (24 credits from 6000-7000 level courses)
- Doctoral Dissertation (30 Credits)

Program Benchmarking

For mechanical and electrical engineering students, three schools in Southeast Michigan are considered competitors to the proposed DE program: Oakland University, Wayne State University, and University of Detroit-Mercy. For civil engineering, the University of Michigan, Wayne State University, and the University of Windsor are considered regional competitors. Figure 53 compares doctoral programs at benchmark institutions with the proposed DE and Ph.D. program. For purposes of comparison, this chart shows the number of credit hours beyond the bachelor’s degree as this is a common way of viewing engineering doctoral programs.

Program Governance and Advisory Board

Each academic department offering a DE specialization will have a faculty director for its program. A Doctoral Program Governance and Assessment Committee will be established, similar to the model used in the College of Management. The Committee will consist of the program directors and will be chaired by the associate dean of graduate studies and research. The Committee will address issues related to assessment, curriculum, qualifying examinations, dissertation processes, and faculty qualifications for those participating in the doctoral programs.

<table>
<thead>
<tr>
<th>Program Benchmarking</th>
<th>Lawrence Tech</th>
<th>Oakland</th>
<th>Wayne State</th>
<th>UD-Mercy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree</td>
<td>Lawrence Tech</td>
<td>Oakland</td>
<td>Wayne State</td>
<td>UD-Mercy</td>
</tr>
<tr>
<td>Post-BS Coursework</td>
<td>57+</td>
<td>56+</td>
<td>60+</td>
<td>51+</td>
</tr>
<tr>
<td>Mathematics</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Dissertation</td>
<td>30+</td>
<td>24+</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>87+</td>
<td>80+</td>
<td>90+</td>
<td>87+</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td>Lawrence Tech</td>
<td>Oakland</td>
<td>Wayne State</td>
<td>UD-Mercy</td>
</tr>
<tr>
<td>Post-BS Coursework</td>
<td>57+</td>
<td>56+</td>
<td>60+</td>
<td>51+</td>
</tr>
<tr>
<td>Mathematics</td>
<td>6</td>
<td>8</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Dissertation</td>
<td>30+</td>
<td>24+</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>87+</td>
<td>80+</td>
<td>90+</td>
<td>81+</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td>Lawrence Tech</td>
<td>Oakland</td>
<td>Wayne State</td>
<td>UD-Mercy</td>
</tr>
<tr>
<td>Post-BS Coursework</td>
<td>54-60</td>
<td>54-60</td>
<td>60+</td>
<td>50-60</td>
</tr>
<tr>
<td>Mathematics</td>
<td>18</td>
<td>12</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>Dissertation</td>
<td>12 (3+ Years)</td>
<td>12 (3+ years)</td>
<td>30</td>
<td>16 (3+ years)</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>72-78</td>
<td>3+ Years</td>
<td>90+</td>
<td>76+ (3+ years)</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree</td>
<td>Lawrence Tech</td>
<td>Windsor</td>
<td>Wayne State</td>
<td>Michigan</td>
</tr>
<tr>
<td>Post-BS Coursework</td>
<td>54-60</td>
<td>54-60</td>
<td>60+</td>
<td>50-60</td>
</tr>
<tr>
<td>Mathematics</td>
<td>18</td>
<td>12</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>Dissertation</td>
<td>12 (3+ Years)</td>
<td>12 (3+ years)</td>
<td>30</td>
<td>16 (3+ years)</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>72-78</td>
<td>3+ Years</td>
<td>90+</td>
<td>76+ (3+ years)</td>
</tr>
</tbody>
</table>
Each department in the College of Engineering already has an active industry advisory board. Advisory board members are selected because of their engineering background, knowledge of business practices, leadership experience, and their knowledge of the University and its mission.

**Ph.D. Options in Management and Engineering**

Lawrence Tech is also proposing to offer Ph.D. options for doctoral students in the Colleges of Engineering and Management. The Ph.D. options serve students with advanced fundamental and applied research agendas who aspire to become academicians or researchers.

Lawrence Tech has established a culture of doctoral studies since approval of its three doctoral degree programs by the Commission in 2001 and 2003. The proposed DE program balances the University’s practitioner-scholar doctoral offerings by providing one broad and one specialized doctoral offering in each of the University’s two doctoral colleges. Faculty members acknowledge that the existing practitioner-scholar doctoral programs are successful, sustainable, and serve a broad range of student backgrounds and aspirations. It is important that the University sustain its portfolio of practitioner-scholar doctoral programs while implementing new Ph.D. opportunities. The demonstrated increase in faculty scholarship and applied research productivity underscores high-potential research areas. Lawrence Tech’s expanded fundamental and applied research agendas provide potential Ph.D. students with the opportunity to participate in sponsored or non-sponsored research in specialties such as materials, renewable energy, organization development, and information technology.

The success of Lawrence Tech’s doctoral graduates in acquiring academic positions underscores the potential value of the Ph.D. options. Programs such as Civil Engineering may attract a larger percentage of students interested in the Ph.D. option, while programs such as Mechanical Engineering may continue to attract more students interested in the DE program. Some DBA and DMIT students may enter the programs with advanced research agendas and may choose the Ph.D. option to obtain academic credentials.

**External Benchmarking**

College of Engineering faculty members benchmarked several institutions to support the design of the Doctor of Engineering and Ph.D. proposal:

- Oakland University
- University of Detroit Mercy
- University of Michigan-Ann Arbor
- University of Windsor
- Wayne State University

College of Management faculty members conducted an extensive benchmarking study in 2009 that examined ten universities which concurrently offer practitioner-scholar and Ph.D. programs in management or business:

- Benedictine University
- Case Western Reserve University
- Georgia State University
- Gonzaga University
- Harvard University
- Newcastle University (UK)
- Northeastern University
- Nova Southeastern University
- University of Reading (UK)
- Walden University

**Figure 54 – Differences between Practitioner-Scholar and Ph.D. Programs**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Practitioner-Scholar Programs</th>
<th>Ph.D. Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Focus</td>
<td>Remain in industry as senior business or technical leader</td>
<td>Pursue career as researcher or academician</td>
</tr>
<tr>
<td>Admission Criteria</td>
<td>Master’s degree performance, professional or technical credentials, professional accomplishments</td>
<td>Undergraduate or master’s degree performance, GMAT/GRE test scores, prior research, research agenda</td>
</tr>
<tr>
<td>Dissertation Focus</td>
<td>Applied research focused on workplace issues</td>
<td>Large-scale applied or laboratory-based fundamental research</td>
</tr>
<tr>
<td>Supervisor Focus</td>
<td>Active research agenda in student’s proposed field of study</td>
<td>Active and sponsored research agenda in the student’s proposed field of study</td>
</tr>
<tr>
<td>Committee Membership</td>
<td>Academic and expert practitioners</td>
<td>Academics</td>
</tr>
</tbody>
</table>

Factors evaluated included accreditation, specializations, credit hours, admission requirements, size of faculty, program cost, delivery method, and residency requirements. Conversations with doctoral program directors addressed issues such as enrollment history, differences in faculty qualifications between practitioner-scholar and Ph.D. programs, sustainability, and transfer options between programs. See [CRD-08-Practitioner-Scholar and Ph.D. Benchmarking](#) for a copy of the benchmarking study. Figure 54 summarizes the differences between practitioner-scholar and Ph.D. programs gleaned from the benchmark analysis.

Program requirements for practitioner-scholar and Ph.D. programs are quite similar, with some Ph.D. programs focusing more on the dissertation and less on coursework. Some Ph.D. programs use a common core of content and research courses, while other programs are highly customized based on specific student needs and their dissertation research. Faculty qualifications to teach or supervise in both types of programs are similar. Doctorally qualified faculty members may serve as members of dissertation committees, but only faculty members with significant research agendas – usually accompanied by external research support – are generally eligible to serve as Ph.D. committee chairs.

Many institutions offer direct-entry Ph.D. programs from the bachelor level, and some programs support transfer between practitioner-scholar and Ph.D. degrees at certain points. Some institutions, such as Case Western Reserve University, require all doctoral students to begin their studies in a practitioner-scholar program, and later petition for admission to the Ph.D. program subject to their performance and availability of faculty supervisors.

**Ph.D. Program Design**

The benchmarking study and subsequent discussions assured doctoral faculty that Lawrence Tech can establish Ph.D. programs in both colleges while sustaining its practitioner-scholar programs. Faculty members from both colleges, college administrators, and representatives from the provost’s office collaborated to develop Lawrence Tech’s approach to Ph.D. studies.

All Lawrence Tech doctoral students will apply for and be admitted to one of the four practitioner-scholar doctoral programs. Students wishing to enter a Ph.D. program will work closely with their advisors to ensure that their coursework supports development of their research agenda. Ph.D. students will prepare and maintain a research agenda early in their doctoral studies which generates or evaluates, theories, research models, or methodologies. Students will be encouraged to undertake pilot studies as part of developing their research agendas.

Matriculated doctoral students will petition for acceptance into a Ph.D. program at any time from admission up to completion of 18 hours of coursework. Students submit a research prospectus for review by the appropriate Doctoral Governance Committee. Ph.D. applicants will be evaluated by the Committee against these criteria:

- Maintenance of satisfactory academic progress with an overall GPA of at least 3.0 and grades of less than a “D” in doctoral coursework
- Definition of an appropriate fundamental or applied dissertation research topic and endorsement by a faculty member with an active research agenda in the field
- Evaluation of the student’s potential to secure sponsored funding or support faculty application for funding
- Availability of sponsored graduate research assistant and/or adjunct faculty positions within the college
- Committee’s assessment of the student’s potential to successfully complete Ph.D. research based on the research prospectus
- Approval by the associate provost and dean of graduate studies. Students maintain their Ph.D. status with a combination of satisfactory academic and research progress.

Ph.D. students will generally maintain an on-campus residency that includes assignment to research projects as a graduate research assistant, frequent interaction with faculty members, and teaching as an adjunct faculty member. Some students may be able to maintain full-time professional positions while pursuing Ph.D. studies depending on the nature of the research projects to which they are assigned.

Ph.D. students will be required to demonstrate at least two submitted peer-reviewed journal articles or conference presentations prior to defense of their dissertation.
The DE degree program with the Ph.D. option has been approved by the faculty members of the College of Engineering, college administration, Graduate Council, and Deans’ Council. The Board of Trustees approved the proposal at its June 2010 meeting following review by the Academic Affairs Committee.

The Graduate Council and Deans’ Council approved changes to the DBA and DMIT curricula in 2009 including creation of new courses. Board of Trustees approval of these changes was not required. No new coursework is required to support the Ph.D. option in Management.

The Ph.D. program options in the Colleges of Engineering and Management extends existing curricula, with future new coursework approved through the University’s existing course approval process. The Board of Trustees was informed of the proposed Ph.D. option for both colleges at their June 2010 meeting.

The Commission approved the offering of the DEMS and DMIT programs 2001 and the DBA program in 2003. A required Commission monitoring report in 2003 resulted in no negative findings.

The new DE program can be started with minimal investment, as many engineering faculty members already chair DEMS dissertations. No additional infrastructure or classroom resources are required to support the DE program. Ph.D. enrollment will be limited by the number of funded research projects in each college and by the quality of applicants’ research agendas.

Program directors are in place, and doctoral program review committees have been established in both colleges. An associate dean for research and graduate programs was appointed in the College of Engineering in the Spring of 2010. Doctoral Governance Committees receive support and oversight from college deans and the associate provost and dean of graduate studies. Responsibility for academic standards, admission requirements, student performance, curriculum, and awarding of degrees is exclusively the responsibility of faculty members. Establishing expectations for faculty members to teach in the doctoral programs or to chair dissertation committees is shared between faculty members and college administration.

Civil engineering and renewable energy labs are state-of-the-art. A mechatronics laboratory facility is in place and available for mechanical engineering research. Many civil engineering students will conduct dissertation research in the context of grant-funded projects, and many mechanical engineering students will conduct industry-sponsored research.

All doctoral programs have comprehensive student handbooks, faculty guidelines, dissertation guidelines, dissertation templates, and other documentation. The University Library has an extensive collection of relevant academic journals in print and digital format, and assists students with publishing their dissertations. The Institutional Review Board provides oversight for research involving human subjects, and the Research Support Services Committee helps faculty develop funding proposals and monitors progress of funded projects.

The DE and Ph.D. programs are now under way. The DBA and DMIT program revision conducted in 2009 resulted in the redesign of both programs to use shared coursework. The former minor track in the DMIT program was replaced with four DE core courses. The research track courses in both programs were redesigned to address the research needs of both programs, and are now also shared. These changes resulted in significant cost savings for both programs, and support remote delivery of both programs using the framework proposed to the IACBE. eLearning Services is working on developing faculty guidelines to standardize DBA and DMIT courses, and can support redesign of other doctoral courses in the future. As Lawrence Tech doctoral programs evolve, faculty members will continue to evaluate the potential for additional shared coursework and delivery options.

Ph.D. students will generally be included as part of one or more sponsored research projects during their doctoral studies. Departments may also appoint doctoral students as adjunct faculty members to teach selected undergraduate or graduate courses. The University recognizes the need to provide a pool of bridge funding for brief periods between funded research projects. The University is evaluating these needs and plans to administer bridge funding through the provost’s office via petitions from the college Doctoral Governance Committees.

Little University-level marketing existed for the DEMS, DMIT, and DBA programs, with the programs marketed largely by word-of-mouth in Southeast Michigan and via the University’s Web site. The University recognizes that targeted and sustained marketing efforts are needed to extend the reach of the University’s masters and doctoral programs beyond Southeast Michigan. Other marketing and outreach initiatives will include:

- Outreach to Lawrence Tech graduates and informing current students of master’s and doctoral opportunities
- Outreach to regional businesses, specifically those with employee tuition reimbursement programs
- Marketing to international students through Lawrence Tech’s international outreach efforts
- Marketing to national and global faculty members seeking terminal academic degrees

### Impact of Change on Previously Identified Challenges

The establishment of Ph.D. program options for Engineering and Management extends existing curricula, with future new coursework approved through the University’s existing course approval process. The Board of Trustees was informed of the proposed Ph.D. option for both colleges at their June 2010 meeting.

### Institution’s Plan to Implement and Sustain the Change

The new DE program can be started with minimal investment, as many engineering faculty members already chair DEMS dissertations. No additional infrastructure or classroom resources are required to support the DE program. Ph.D. enrollment will be limited by the number of funded research projects in each college and by the quality of applicants’ research agendas.

Program directors are in place, and doctoral program review committees have been established in both colleges. An associate dean for research and graduate programs was appointed in the College of Engineering in the Spring of 2010. Doctoral Governance Committees receive support and oversight from college deans and the associate provost and dean of graduate studies. Responsibility for academic standards, admission requirements, student performance, curriculum, and awarding of degrees is exclusively the responsibility of faculty members. Establishing expectations for faculty members to teach in the doctoral programs or to chair dissertation committees is shared between faculty members and college administration.

Civil engineering and renewable energy labs are state-of-the-art. A mechatronics laboratory facility is in place and available for mechanical engineering research. Many civil engineering students will conduct dissertation research in the context of grant-funded projects, and many mechanical engineering students will conduct industry-sponsored research.

All doctoral programs have comprehensive student handbooks, faculty guidelines, dissertation guidelines, dissertation templates, and other documentation. The University Library has an extensive collection of relevant academic journals in print and digital format, and assists students with publishing their dissertations. The Institutional Review Board provides oversight for research involving human subjects, and the Research Support Services Committee helps faculty develop funding proposals and monitors progress of funded projects.

The DBA and DMIT program revision conducted in 2009 resulted in the redesign of both programs to use shared coursework. The former minor track in the DMIT program was replaced with four DE core courses. The research track courses in both programs were redesigned to address the research needs of both programs, and are now also shared. These changes resulted in significant cost savings for both programs, and support remote delivery of both programs using the framework proposed to the IACBE. eLearning Services is working on developing faculty guidelines to standardize DBA and DMIT courses, and can support redesign of other doctoral courses in the future. As Lawrence Tech doctoral programs evolve, faculty members will continue to evaluate the potential for additional shared coursework and delivery options.

Ph.D. students will generally be included as part of one or more sponsored research projects during their doctoral studies. Departments may also appoint doctoral students as adjunct faculty members to teach selected undergraduate or graduate courses. The University recognizes the need to provide a pool of bridge funding for brief periods between funded research projects. The University is evaluating these needs and plans to administer bridge funding through the provost’s office via petitions from the college Doctoral Governance Committees.

Little University-level marketing existed for the DEMS, DMIT, and DBA programs, with the programs marketed largely by word-of-mouth in Southeast Michigan and via the University’s Web site. The University recognizes that targeted and sustained marketing efforts are needed to extend the reach of the University’s masters and doctoral programs beyond Southeast Michigan. Other marketing and outreach initiatives will include:

- Outreach to Lawrence Tech graduates and informing current students of master’s and doctoral opportunities
- Outreach to regional businesses, specifically those with employee tuition reimbursement programs
- Marketing to international students through Lawrence Tech’s international outreach efforts
- Marketing to national and global faculty members seeking terminal academic degrees

### Implementation Timeline

<table>
<thead>
<tr>
<th>Dates</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2010</td>
<td>Board of Trustees approval of Doctor of Engineering curriculum</td>
</tr>
<tr>
<td>Sept 2010</td>
<td>Revised DBA and DMIT programs begin operation</td>
</tr>
<tr>
<td>Oct 2010</td>
<td>Higher Learning Commission site visit and consideration of Request for Institutional Change</td>
</tr>
<tr>
<td>Jan-Apr 2011</td>
<td>Design DE program materials, Web pages, and marketing collateral</td>
</tr>
<tr>
<td>Apr 2011</td>
<td>Anticipated Commission approval of the DE and Ph.D. programs</td>
</tr>
<tr>
<td>Apr-Aug 2011</td>
<td>Begin course development for DE program, and prepare formal requirements for Ph.D. options</td>
</tr>
<tr>
<td>May 2011</td>
<td>Publish Web pages and send mailings to potential DE student applicants</td>
</tr>
<tr>
<td>Jun-Aug 2011</td>
<td>Process applications and schedule first interviews for DE program</td>
</tr>
<tr>
<td>Sept 2011</td>
<td>Begin instruction for first DE students focusing on Mechanical Engineering</td>
</tr>
<tr>
<td>Sept-Dec 2011</td>
<td>Prepare and obtain internal approval for any new coursework required for Ph.D. options</td>
</tr>
<tr>
<td>Jan-Mar 2012</td>
<td>Prepare Ph.D. program materials, Web pages, and marketing collateral</td>
</tr>
<tr>
<td>Apr 2012</td>
<td>Publish Web pages and send mailings to potential Ph.D. applicants</td>
</tr>
<tr>
<td>May-Aug 2012</td>
<td>Process applications and interview first doctoral students intending to apply for the Ph.D. options after matriculation</td>
</tr>
<tr>
<td>Sept 2012</td>
<td>Begin instruction for DE students focusing on Civil Engineering, and accept first doctoral students intending to apply for Ph.D. status</td>
</tr>
<tr>
<td>Sept 2013</td>
<td>Implement additional DE specializations in Electrical, Computer, Mechatronics, and Industrial Engineering. These specializations will be determined using existing university decision making processes.</td>
</tr>
</tbody>
</table>

Figure 55 shows the implementation timeline for launching the new DE program and Ph.D. options for Engineering and Management. The timeline assumes launch of the DE program in fall 2011 and the subsequent launch of the Ph.D. options for Engineering and Management in 2012.
Doctoral Programs

{ Strategies to Evaluate the Change }

Faculty members have identified a number of strategies to evaluate the success of the change following implementation:

- **Sustainable enrollment, retention, and graduation rates** – Enrollment levels will be monitored and faculty members will work with all students to ensure steady progress and retention in each program.

- **Quality of student and faculty research** – The Doctoral Governance Committees will support and monitor the production of peer-reviewed research by current students, graduates, and faculty members.

- **Impact of doctoral programs on sponsored research activities** – Faculty members will integrate doctoral students from practitioner-scholar and Ph.D. programs into sponsored research proposals and will monitor the impact of doctoral students on the number and value of research awards.

- **Development of shared program assessment methods** – Lawrence Tech’s existing doctoral programs have comprehensive assessment plans using a number of direct and indirect measures of student learning outcomes. The qualifying examination and dissertation processes are assessment methods unique to doctoral programs. The DE proposal highlights the assessment plan for the proposed doctoral program. Faculty members will collaborate to develop shared program assessment methods for the proposed Ph.D. options. Assessment results are monitored by the University Assessment Committee via annual reports.

- **Continuous improvement of curricula** – Faculty members will use the results from assessment programs and feedback from their industry advisory boards to continuously improve all doctoral programs.

{ Conclusion and Request }

Lawrence Tech has established a culture of doctoral studies since its approval by the Commission to offer doctoral programs in 2001 and 2003. Three doctoral programs have produced over 50 graduates. Doctoral students, graduates, and faculty members have produced a large number of peer-reviewed journal articles, received numerous professional and academic awards, and received significant career advancement opportunities in business and higher education.

The University has supported the growth of its doctoral programs by establishing digital library resources, a Research Support Services Committee, an Institutional Review Board, and a Research Seed Grant program. Faculty members have completed comprehensive program reviews of the existing doctoral programs, and have restructured the DBA and DMIT programs to share core and research track courses. Governance processes and doctoral program directors are in place. Faculty members in the College of Engineering have proposed a new professional DE program. Faculty members in both colleges have collaborated to design Ph.D. options for Lawrence Tech students that use common requirements, practices, and program governance. Faculty members in both the Colleges of Engineering and Management are fully ready to support the requested changes.

Successful doctoral programs support the University’s vision of becoming a preeminent institution and are consistent with the University’s mission, vision, and values. We request Commission approval of this change to extend doctoral education opportunities to future students.

Lawrence Tech requests approval of its request to offer a professional Doctor of Engineering program and to offer Ph.D. program options in both the Colleges of Engineering and Management. Lawrence Tech therefore requests a change in its affiliation status to read:

Accreditation at the Doctoral level is limited to the Doctor of Business Administration, Doctor of Engineering, Doctor of Engineering Manufacturing Systems, Doctor of Management in Information Technology, Ph.D. in Engineering, and Ph.D. in Management.
Request for Institutional Change: Online Programs

Introduction

In 2007, the Commission approved Lawrence Tech’s request to offer three online degree programs: Master of Business Administration, Master of Engineering Management, and Bachelor of Science in Information Technology (degree completion). Since 2007, the scope of Lawrence Tech’s LTU Online unit has expanded significantly. Almost 600 individual students per semester are enrolled in fully online classes, comprising approximately 15% of all Lawrence Tech students. As most LTU Online programs support mostly graduate programs, a significantly higher percentage of graduate students enroll in fully online degree programs or courses. LTU Online has developed several graduate certificate programs that can be integrated with the Master of Business Administration and Master of Engineering Management degrees. Work has progressed to develop additional fully online degree and certificate programs in anticipation of this Request for Institutional Change. Lawrence Tech has also pursued development of hybridized academic programs requiring periodic on-ground residency in addition to online courses. These hybrid programs are marketed through LTU Online but are clearly advertised as hybrid. The University recognizes the commission’s new definition of online programs to include programs which are 50% or more online, and the University has a number of programs that fall into this category due to the ability of all students to enroll in online courses.

Lawrence Tech has supported LTU Online with significant budget and staffing resources. In early 2009, the University combined the LTU Online office with staff from the former Veraldi Instructional Technology Resource Center to leverage staff skills and provide a campus wide focus for developing technology-enabled courses. The academic, administrative, and course development processes used by LTU Online are mature and function effectively. Academic departments maintain responsibility for program content and approval of instructors. LTU Online compensates instructors for online teaching, and academic departments count online students as part of their overall enrollment. LTU Online provides support services for online instructors, and collaborates with online instructors and program directors to continuously improve the quality of online instruction.

During a time of enrollment stress for the University, LTU Online has sustained constant and significant enrollment growth while maintaining program quality. Online enrollment growth is a specific element of the University’s strategic plan, and is an extension of the University’s historic mission of providing higher education opportunities to working professionals.

Change Being Proposed

Lawrence Tech requests approval to offer any of its academic programs in hybrid or online delivery format using existing University approval processes. Consistent with the new definitions of online learning being adopted by the Commission, this request includes both fully online programs and hybrid programs comprised of 50% or more of online instruction. Permission to offer any degree program online with only internal Lawrence Tech approval falls under Commission policy 1.C.2.b (Change in Educational Offering). Lawrence Tech therefore requests a change in its affiliation status to read:
Online Programs

Program Development

Online degree and certificate programs approved in 2007 included:

- Fully online degree programs
  - Bachelor of Science in Information Technology
  - Fully online certificate programs
  - Nonprofit Leadership and Management
  - Project Management
  - Architectural Management

Lawrence Tech has launched three hybrid programs that include on-ground residency or course requirements. These programs include the Master of Educational Technology and the Master of Architecture, which is only the second such online program in the United States. The University views the development of hybrid programs as a viable approach for offering its master’s and doctoral programs to regional and national audiences. eLearning Services is presently collaborating with faculty members to support the launch of hybrid doctoral programs in fall 2010, as discussed in the Request for Institutional Change for Doctoral Programs. All of these programs, as well as long-standing hybrid programs offering at least 50% of their program content online, will fall under the new Commission definition of online learning.

Lawrence Tech has developed new online certificate programs in Building Information Modeling and Computer Visualization and Workplace Technology. The University has also developed several additional online courses in support of the University’s Core Curriculum and elective requirements for the Bachelor of Science in Information Technology program.

LTU Online is a service unit within eLearning Services, which supports all e-learning and classroom technologies at the University. eLearning Services works closely with faculty members and academic departments to incorporate materials and methods developed for hybrid or online classes into on-campus classes in accordance with the University’s intellectual property policy.

Faculty Support

eLearning Services provides a number of support services for faculty members teaching hybrid and online classes:

- Technical Support – eLearning Services and the Help Desk collaborate to provide support for e-learning technologies for all faculty members and students, including evening and weekend support. The Help Desk provides first-level troubleshooting and problem solving for enterprise e-learning technologies. A comprehensive self-help knowledge base is available at Help.ltu.edu.

- Training and Collaboration – All new LTU Online faculty members participate in an extensive training program for online instructors offered by the Educational Technology Consortium of Michigan. eLearning Services hosts an online faculty meeting using Wimba at the start of each semester. Agenda items include guest speakers and discussions focusing on topics such as instructor presence, academic integrity, and use of e-learning technologies. Faculty meetings are archived for on-demand playback. Individual and small-group instruction is available on demand and via scheduled seminars. eLearning staff are available for individual consultation at the eLearning office or in faculty offices.

- Iterative Course Development – A structured course development methodology is used to design all LTU Online courses. A wide range of e-learning technologies, digital library resources, and electronic methods are used to develop engaging course content. LTU Online course producers (instructional designers) work with faculty members to design and deploy online courses before their initial use, and evaluate and improve courses during and after each semester. New materials are included in an “instruction-only” area of each course for future deployment.

- Assessment and Evaluation – LTU Online uses an anonymous online student evaluation process for online courses. Reflective learning and other assessment techniques are encouraged rather than traditional multiple-choice exams. A number of assessment rubrics have been developed for use in online and hybrid courses. The Blackboard discussion grader and other evaluation tools assist faculty members in evaluating online contributions.

- Course Templates – A Blackboard course template is used for all LTU Online classes. Online classes are organized using course modules with “theory” and “practice” components consistent with the University’s motto. Courses also include a “Module 0” course orientation to provide background information about the course before the semester begins.

Enrollment and Withdrawals

LTU Online has a portfolio of over 80 online courses taught by over 40 different online faculty members. Enrollment in LTU Online courses has grown consistently since the first offering of 11 fully online course sections in fall 2006, with over 50 online courses now offered in each major semester. Figure 56 summarizes LTU Online enrollment history for major semesters to date. See (CRO-02-“LTU Online Enrollment Statistics”) for complete data.

The withdrawal rate from LTU Online courses is consistently below two percent of all student registrations. The rate increased slightly during the first period of rapid online enrollment growth in fall 2007 and spring 2008, but was reduced through continuous improvement of course orientation procedures and improved faculty engagement.

Students Served

Students enrolling in LTU Online classes are generally graduate students, reflecting the University’s focus on online graduate programs with a small number of online undergraduate completion programs. The most represented student majors are the MBA, BSIT, MEM, and the hybrid Master of Architecture degree program. Other student majors served by LTU Figure 57 shows the most popular student majors served by

Figure 56 – LTU Online Enrollment Data

Figure 57 – Student Majors Served by LTU Online – Spring 2010

Figure 58 – New Students Enrolling in Online Classes
LTU Online in spring 2010. See (CRO-03-Student Majors Served by LTU Online*) for historic student major data. Other majors served include bachelor’s degree programs in Architecture, Engineering Technology, Psychology, Business Management, Computer Science, and graduate programs in Management, Science, Information Systems, Educational Technology, Operations Management, and Mechanical Engineering.

New Students

The number of students new to the University registering for one or more LTU Online courses has increased over 800% between fall 2006 and fall 2009, as shown in Figure 58. See (CRO-04-“New Students Enrolling in Online Courses”) for historic data for all semesters. The percentage of new students compared to total online student population has doubled from fall 2007 to fall 2009, indicating that students may include the availability of online courses as part of their decision to attend Lawrence Tech.

Online Faculty Members

Over 40 online faculty members teach LTU Online courses in each major semester, with some faculty members teaching more than one course. Online faculty members include full-time faculty teaching in an overload capacity, existing adjunct faculty who have undergone training for online delivery, and new adjunct faculty members with prior online experience. All faculty members are approved by academic departments prior to receiving training and online teaching assignments. All faculty members are evaluated each semester by both LTU Online and academic departments.

Of the 60 active online faculty members in spring 2010, 45% hold doctoral degrees and 42% hold master’s degrees. The terminal degree for practicing architects is the Master of Architecture, and the College of Architecture & Design approves several instructors holding professional bachelor’s degrees consistent with their fields. See (CRO-05-“LTU Online Faculty Members”) for a listing of LTU Online faculty members as of March 2010.

Lawrence Tech limits the number of courses taught by adjunct faculty members to three per semester, including online courses. Full-time faculty members may teach one online class per major semester, and the new Faculty Handbook will allow one online course per semester to be included in full-time faculty load calculations subject to approval by the academic department.

Programs in Development

LTU Online is currently collaborating with academic departments on 17 new degree and certificate program initiatives:

- Bachelor of Psychology completion program (hybrid) – Humanities, Social Science, and Communications
- Bachelor of Science in Business Management (completion program) – Undergraduate Management Programs
- Bachelor of Science in Computer Science completion degree (hybrid) – Mathematics and Computer Science
- Doctor of Business Administration (hybrid) – College of Management
- Doctor of Engineering in Information Technology (hybrid) – College of Management
- Graduate Certificate in Information Assurance – College of Management
- Graduate Certificate in Sustainability – College of Architecture & Design
- Graduate Certificate in Technological Health Innovations – College of Management
- Graduate Certificate in Telecommunications Engineering – Electrical and Computer Engineering
- Graduate Certificate in Urban Design – College of Architecture & Design
- Master of Science in Computer Science – Mathematics & Computer Science
- Master of Architecture “UL” program – College of Architecture & Design
- Master of Interior Design (hybrid) – College of Architecture & Design
- Master of Science in Industrial Engineering with specialization in Health Informatics – Mechanical Engineering
- Master of Science in Information Systems – College of Management
- Master of Science in Mechanical Engineering – Mechanical Engineering
- Master of Science in Global Operations and Project Management – College of Management

A number of individual courses have been developed and piloted for many of these programs. New programs will be fully developed and marketed only after Commission approval is received.

AIITU Benchmarking

Lawrence Tech is a member of the Association of Independent Technological Universities (AIITU). Benchmarking visits to four AIITU institutions have explored issues related to academic programs, student services, and information technology. LTU Online staff evaluated three of these AIITU benchmark institutions for the status of their online programs as shown in Figure 59.

Lawrence Tech is the smallest of these AIITU institutions. Rochester Institute of Technology, Illinois Institute of Technology, and Drexel University have mature online programs with Drexel’s program operated as a for-profit subsidiary. IIT offers 10 master’s degree and 11 certificate programs in India and other international locations. With 17 degree and certificate programs under development, the scope of Lawrence Tech’s online degree offerings can grow to be comparable with that of Rochester Institute of Technology following Commission approval of this request.

Approvals Obtained to Implement Change

The University’s 2006 Request for Institutional Change for online programs was approved by the Board of Trustees. The provost and president approved the current request, and the Board of Trustees informed of the request at its June 2010 meeting.

Impact of Change on Previously Identified Challenges

The Commission noted four areas for further organizational attention in its 2006 focused visit. Lawrence Tech has made progress in each area:

- Assessment of learning outcomes
  - The Commission noted that “[a]ssessment of learning outcomes for online programs needs to be more systematic and consistent as these forms of delivery mature.” Lawrence Tech has developed capabilities for assessing oral communication and in incorporating these practices in online courses. The University has also implemented reflective learning as an assessment practice with many online courses already using this technique. LTU Online courses are assessed as part of the University’s regular assessment program.
  - LTU Online has focused on increasing student interaction and instructor presence in online classes.
  - Consistent use of pedagogies
    - The Commission noted that “[f]aculty will need continued assistance to develop a variety of pedagogies that are consistent across several courses.” LTU Online has increased the use of the Wimba Web collaboration suite for instructor office hours and lecture presentations. LTU Online courses are regularly updated and refreshed using new pedagogies and technologies. eLearning Services has established a Media Production unit which has produced over 300 hours of instructional video in its first year of operation.
  - Technical and Library support
    - The Commission noted that “[t]echnical and library support that is continuously available will need to be implemented as the number of students who are not in the immediate area increase.” The University Library has acquired additional digital resources to support online students. The Help Desk and eLearning Services have collaborated to establish the student.knowledge base. The Help Desk has implemented the BMC trouble ticket system and collaborates with eLearning Services to provide extended service hours for all Lawrence Tech students and faculty members.
  - Financial planning for revision of courses and programs
    - The Commission noted that “[t]he financial planning for revision of courses and programs after the first cycle needs to be in place.” LTU Online has fully revised a number of courses and practices continuous improvement for all courses. The Commission also noted “[t]hese new courses and practices will need adjustment of compensation practices.” The new Faculty Handbook will allow one fully online course per semester to be included as part of full-time faculty teaching load.

Figure 59 – AIITU Benchmarking for Online Programs

<table>
<thead>
<tr>
<th>Institution</th>
<th>Grad Enrollment</th>
<th>Undergrad Enrollment</th>
<th>Online Enrollment</th>
<th>Online Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawrence Tech</td>
<td>1,374</td>
<td>2,878</td>
<td>585</td>
<td>3 Master’s, 1 Bachelor’s, 5 Certificates</td>
</tr>
<tr>
<td>IIT</td>
<td>4,749</td>
<td>2,480</td>
<td>Unknown</td>
<td>31 Master’s, 10 Certificates</td>
</tr>
<tr>
<td>Drexel</td>
<td>3,466</td>
<td>10,158</td>
<td>7,738</td>
<td>42 Master’s, 15 Bachelor’s, 42 Certificates</td>
</tr>
<tr>
<td>RIT</td>
<td>2,728</td>
<td></td>
<td>8,808</td>
<td>16 Master’s, 4 Bachelor’s, 12 Certificates</td>
</tr>
</tbody>
</table>
LTU Online has received substantial staffing and budgetary support since its inception in 2006. Starting with one part-time director, two part-time instructional designers, and ten adjunct faculty members, current staffing levels are:

- One full-time director
- Four full-time staff providing course development, multimedia, and support services
- One part-time instructional developer
- One part-time administrative assistant
- Nine student assistants supporting video capture, video production, and classroom technologies
- Over 40 distinct adjunct faculty members

The annual budget allocated to LTU Online and eLearning Services has increased to $1,500,000 as shown in Figure 60. Tuition revenue from fully online courses supports the operation of both LTU Online and eLearning Services.

LTU Online programs are effectively integrated with established University program and course development processes. Ongoing coordination with academic departments supports new program development, support and marketing of existing programs, and continuous improvement of online courses. LTU Online and eLearning Services continually experiment with new e-learning technologies including Second Life and mobile learning. The Panorpto lecture capture system supports online and traditional courses with on-demand lecture streaming. Panoramic photography is being evaluated for use in architecture courses. Google Apps for Education supports real-time document editing, Web site development, and survey design.

### Strategies to Evaluate the Change

Learning outcomes from LTU Online courses are assessed as part of the assessment plans developed by academic departments. LTU Online also administers student course surveys each semester to gauge student satisfaction with course content and teaching effectiveness. Course withdrawal rates are consistently below two percent.

The University’s strategic objective for online programs is to grow online enrollment to 2,000 attributed students by 2015. To achieve this aggressive enrollment objective, LTU Online needs to add at least four new online programs each year and market these programs outside Southeast Michigan. AITU benchmarking supports the achievement of this objective with continued University financial support and a well-managed schedule of program development. A range of initiatives are being developed with academic program directors to improve assessment processes for online courses including:

- Using more sophisticated student testing techniques in the Blackboard environment including proctoring and use of the Respondus Lock-Down Browser
- Using SafeAssign for plagiarism detection
- Using pre- and post-testing in certain courses
- Using innovative assessment design to minimize faculty concerns over student cheating
- Using reflective learning as a method of assessment
- Using Blackboard’s e-portfolio tool to promote faculty and external review
- Evaluating the Blackboard Outcomes System and similar products to expand online assessment capabilities

Faculty members are regularly surveyed and express interest in learning new techniques to engage online students. LTU Online has concluded that the most significant factor contributing to high student performance and low attrition is the level of engagement between faculty members and online students. LTU Online has collaborated with faculty members to improve engagement using a range of techniques including:

- Frequent Communication – Providing weekly “guidance messages” to remind students of weekly expectations. Participating in Blackboard discussion forums on a regular basis.
- Responsiveness – Returning assignments quickly and consistently to students. Maintaining a frequent and predictable presence in the online classroom.
- Modeling Good Academic Behavior – Providing thoughtful and constructive feedback on assignments. Communicating with students using rich language. Reminding students of their academic integrity responsibilities.
- Helping Students Get to Know Instructors – Providing faculty perspectives on the work at hand, including personal experiences and insights. Adding humor and passion about the subject areas to let students see faculty members as individuals. Using video and audio tools to personalize the online classroom.

### Conclusion and Request

Lawrence Tech requests approval of its request to offer any of its academic programs in hybrid or online delivery format subject to existing University approval processes. The University therefore requests a change in its distance learning affiliation status to read:

No prior Commission approval required for distance education programs authorized through the University approval process.

Since 2006, Lawrence Tech has developed a robust and financially sustainable program of online instruction. Course offerings and enrollments have increased steadily with approximately 15 percent of all Lawrence Tech students enrolling in one or more online course each major semester. A number of hybrid programs have also been developed, which fall under the Commission’s new definition of online programs.

Expanding online programs is a key strategy in driving future enrollment growth for the University, with the University’s strategic plan including an objective of enrolling 2,000 attributed online students – largely graduate students – by 2015. This objective is well understood by the University community and has been reinforced by the provost’s call to convert as many graduate programs as possible to hybrid or online delivery. The new Faculty Handbook recognizes the importance of online programs by allowing full-time faculty members to include one fully online course per major semester as part of their teaching load.

LTU Online professional staff use mature development methodologies for online classes that are informed by best practices. The University provides compensation for developing online programs and funding for online adjunct teaching through LTU Online. The University is an active member of the EDUCAUSE Learning Initiative, Sloan Consortium, New Media Consortium, and other professional associations committed to the advancement of online education.

Decision-making processes regarding academic programs are integrated with existing University processes for new programs and courses. A team of faculty members, evaluation of faculty performance, and continuous improvement of online courses. In several cases the processes used for developing and administering online programs are acknowledged across the University as best practices and have contributed to continuous improvement of traditional and hybrid classes.

A vibrant portfolio of online programs supports the University’s vision of becoming a premier online institution and is consistent with the University’s mission, vision, and values. Lawrence Tech requests approval of this change to extend online education opportunities to its students.
General Institutional Requirements

The 24 General Institutional Requirements address issues of mission, authorization, governance, faculty, educational programs, finances, and public information.

{ Mission }

1. The institution has a mission statement, formally adopted by the governing board and made public, declaring that it is an institution of higher education.

   Lawrence Tech’s current mission statement, vision statement, values statement, and cause statement adopted by the Board of Trustees in 2007 are the results of the latest cycle of campus strategic planning:

   MISSION: To develop leaders through innovative and agile programs embracing theory and practice.

   VISION: To be a preeminent private university producing leaders with an entrepreneurial spirit and global view.

   VALUES: Theory and Practice, Teamwork and Trust, Character and Integrity

   CAUSE: The intellectual development and transformation of our students into critical thinkers, leaders, and lifelong learners.

2. The institution is a degree-granting institution.

   Lawrence Tech offers more than 100 undergraduate, master’s, and doctoral degree programs in Colleges of Architecture & Design, Arts & Sciences, Engineering, and Management.

   Lawrence Tech’s programs are offered on its 102-acre campus in Southfield, with education centers in Livonia, Clinton Township, Traverse City, and Petoskey. Lawrence Tech also offers programs with partner universities in Canada, Mexico, Europe, and Asia. Lawrence Tech also offers a growing number of hybrid and online programs.

{ Authorization }

3. The institution has legal authorization to grant its degrees, and it meets all the legal requirements to operate as an institution of higher education wherever it conducts its activities.

   Lawrence Tech has legal authority from the Corporation and Securities Bureau of the Department of Commerce in the State of Michigan to award degrees and certificates at all levels from associate through doctorate. See (GIR-01-"Articles of Association") for official documentation on file from the State of Michigan. Lawrence Tech meets all legal operational
requirements wherever it conducts activities, but has no corporate presence beyond its main campus in Southfield, Michigan.

4. The institution has legal documents to confirm its status: not-for-profit, for-profit, or public.

Lawrence Tech is an independent not-for-profit institution of higher learning and has legal documents on file confirming that status. See (GIR-02-Determination of Nonprofit Status) for official documentation on file from the U.S. Department of Treasury.

{Governance}

5. The institution has a governing board that possesses and exercises necessary legal power to establish and review basic policies that govern the institution.

The University is governed by a Board of Trustees currently consisting of sixteen members, eight advisory members of the corporation, and the president of the University an ex-officio trustee with vote. The Board of Trustees meets regularly three times each year in September, January, and June, and is responsible for the overall policies of the University. Members of the Board of Trustees are listed in the University’s catalogs and in the Introduction of this report.

Each trustee receives a Board handbook which lists the bylaws and charter of the Board, official audits, charter of the Faculty Senate, and other information about the governance and ownership to assure the integrity of the institution.

Lawrence Tech’s Board of Trustees includes individuals who represent the public interest. Most trustees hold or have held officer-level positions in global corporations with headquarters in the region. The chairman of the board is the retired president of the General Motors Corporation. One trustee is a former president of both Oakland University and the Houston Community College System. The president is the only employee of the University serving on the Board of Trustees in an ex-officio capacity.

6. Its governing board includes public members and is sufficiently autonomous from the administration and ownership to assure the integrity of the institution.

Lawrence Tech’s Board of Trustees includes individuals who represent the public interest. Most trustees hold or have held officer-level positions in global corporations with headquarters in the region. The chairman of the board is the retired president of the General Motors Corporation. One trustee is a former president of both Oakland University and the Houston Community College System. The president is the only employee of the University serving on the Board of Trustees in an ex-officio capacity.

7. The institution has an executive officer designated by the governing board to provide administrative leadership for the institution.

Lawrence Tech’s Board of Trustees has designated the president, Dr. Lewis N. Walker, as the chief executive officer to provide administrative leadership for the University.

8. Its governing board authorizes the institution’s affiliation with the Commission.

Lawrence Tech’s Board of Trustees authorizes the University’s affiliation with the Higher Learning Commission of the North Central Association of Colleges and Schools. The University has been continuously accredited by the Higher Learning Commission since 1967. The Board of Trustees also authorizes the affiliation of a number of academic programs with appropriate professional accreditation agencies.

{Faculty}

9. The institution employs a faculty that has earned, from accredited institutions, the degrees appropriate to the level of instruction offered by the institution.

Lawrence Tech employs faculty that have earned the appropriate terminal degree from accredited institutions. The policy of the University requires all tenured track faculty to have terminal degrees in their fields of expertise, and that faculty members teaching in graduate programs hold an earned doctorate in their field of expertise. See Criterion Two for more information on the University’s faculty members.

10. A sufficient number of the faculty members are full-time employees of the institution.

The University employs 129 full-time faculty members distributed between the four colleges providing instruction at the undergraduate, master’s, and doctoral levels. The University employs approximately 300 adjunct faculty to support its academic programs. More information on full-time and adjunct faculty is provided in Criterion Two.

11. Its faculty has a significant role in developing and evaluating all of the institution’s educational programs.

Lawrence Tech faculty members have the primary responsibility for developing and evaluating all educational programs. In addition to teaching, advising students, research work, and community service, faculty members are involved in many University activities including faculty searches, promotion and tenure processes, termination of tenure, sabbatical recommendations, graduate admission standards, program degree requirements, course requirements, and student dismissals. Faculty responsibilities are discussed in Criterion Two of this report.

{Educational Program}

12. The institution confers degrees.

Lawrence Tech awards over 70 degrees at the level of associate of science, bachelor of fine arts, bachelor of science in various curricula, master of architecture (professional and post-professional), master of engineering in various curricula, master of business administration, master of science education, master of educational technology, master of science in computer science, master of science in operations management, master of science in information systems, master of science in technical communications, doctor of business administration, doctor of management in information technology, and doctor of engineering manufacturing systems.

Lawrence Tech awards over 25 undergraduate and graduate academic certificates. See (C1-01-Degree and Certificate Programs) for a current listing of all academic degrees and certificates.

13. The institution has degree programs in operation with students enrolled in them.

Lawrence Tech operates degree programs at the bachelor’s, master’s, and doctoral levels. As of fall 2009 over 3,500 students enrolled in over 100 degree and certificate programs.

14. Its degree programs are compatible with the institution’s mission and are based on recognized fields of study at the higher education level.

Lawrence Tech offers degree programs consistent with its mission and history of providing scientific, engineering, architectural, managerial and other professional degree programs. All programs offered by the University are in recognized fields of study at the higher education level, with many of its degree programs professionally accredited by appropriate accrediting agencies.

15. Its degrees are appropriately named, following practices common to institutions of higher education in terms of length and content of the programs.

Lawrence Tech’s degree and certificate programs are consistent with those offered by similar institutions regarding degree names, level of study, length of study, and graduation requirements. Many of the University’s programs are professionally accredited by recognized accrediting agencies.
16. Its undergraduate degree programs include a coherent general education requirement consistent with the institution’s mission and designed to ensure breadth of knowledge and to promote intellectual inquiry.

All of Lawrence Tech’s undergraduate degree programs include a comprehensive core curriculum requirement consistent with the University’s mission. The University’s Core Curriculum has been developed by the College of Arts & Sciences and constitutes the central component of liberal education required of all undergraduate students. The University has instituted a comprehensive Leadership Curriculum for all undergraduate students, the only university in the United States to do so other than the United States military service academies. The Core Curriculum and Leadership Curriculum are discussed in detail in Criterion Four of this report.

All students admitted to the University’s graduate programs are expected to have completed a general education program at the undergraduate level. The University’s general education objectives and requirements are clearly articulated and published in both the undergraduate and graduate catalogs.

17. The institution has admission policies and practices that are consistent with the institution’s mission and appropriate to its educational program.

Lawrence Tech’s admission policies and practices are consistent with the University’s mission and are appropriate to its educational programs. Admission standards are set by the faculty and are consistent with requirements for similar degrees offered by similar institutions. Admission requirements and processes are described in both undergraduate and graduate catalogs, and on the University’s Web site ltu.edu.

18. The institution provides its students access to those learning resources and support services requisite for its degree programs.

Lawrence Tech provides students with access to a broad range of learning resources, library services, academic support services, and technology services required for their degree programs. All undergraduate students are provided with a tablet or laptop computer and all professional software required for their field of study. The learning environment, technology environment, and support services provided by the University are fully described in the undergraduate and graduate catalogs. All of Lawrence Tech’s undergraduate degree programs include a comprehensive core curriculum requirement consistent with the university’s mission and designed to ensure breadth of knowledge and to promote intellectual inquiry.

19. The institution has an external financial audit by a certified public accountant or a public audit agency for its degree programs.

Lawrence Tech’s financial documents demonstrate the appropriate allocation and use of resources to support its educational programs. The annual budget development operates on a twelve-month cycle from July 1 to June 30. Budget development involves extensive input from administration and faculty as well as a faculty-led capital budget committee. The University’s budgeting processes are discussed in detail in Criterion Two.

20. Its financial documents demonstrate the appropriate allocation and use of resources to support its educational programs.

Lawrence Tech also offers programs with partner universities in Canada, Mexico, Europe, the Middle East and Asia. Lawrence Technological University, ltu.edu, offers more than 100 undergraduate, master’s and doctoral degree programs in Colleges of Architecture & Design, Arts & Sciences, Engineering and Management. Founded in 1932, the 4,500-student, private university pioneered evening classes and today has a growing number of weekend and online programs. Lawrence Tech’s 102-acre campus is in Southfield, and programs are also offered in Detroit, Lansing, Petoskey and Traverse City. Lawrence Tech also offers programs with partner universities in Canada, Mexico, Europe, the Middle East and Asia.

21. Its financial practices, records, and reports demonstrate fiscal viability.

Lawrence Tech’s financial practices, records, reports, and financial ratios demonstrate long-term fiscal viability. Significant improvements in financial management practices occurred in 2005 resulting in consistent financial practices. The record of successful capital campaigns and endowment growth contribute to the University’s long-term viability.

22. The institution’s catalog or other official documents includes its mission statement along with accurate descriptions of:
   - its educational programs and degree requirements;
   - its learning resources;
   - its admissions policies and practices;
   - its academic and non-academic policies and procedures directly affecting students;
   - its charges and refund policies;
   - the academic credentials of its faculty and administrators.

Lawrence Tech’s catalog or other official documents includes its mission statement along with accurate descriptions of:
   - its educational programs and degree requirements;
   - its learning resources;
   - its admissions policies and practices;
   - its academic and non-academic policies and procedures directly affecting students;
   - its charges and refund policies;
   - the academic credentials of its faculty and administrators.

Lawrence Tech publishes its undergraduate and graduate catalogs, student handbook, and other documents on its Web site ltu.edu. These documents contain descriptions of all items listed above. The University’s mission and accreditation status is prominently displayed on its Web site. All University publications include the following statement:

Lawrence Technological University, ltu.edu, offers more than 100 undergraduate, master’s and doctoral degree programs in Colleges of Architecture & Design, Arts & Sciences, Engineering and Management. Founded in 1932, the 4,500-student, private university pioneered evening classes and today has a growing number of weekend and online programs. Lawrence Tech’s 102-acre campus is in Southfield, and programs are also offered in Detroit, Lansing, Petoskey and Traverse City. Lawrence Tech also offers programs with partner universities in Canada, Mexico, Europe, the Middle East and Asia.

23. The institution accurately discloses its standing with accrediting bodies with which it is affiliated.

Notice of Lawrence Tech’s accreditation by the Higher Learning Commission appears on the University’s Web site ltu.edu, student applications, viewbook, student handbook, magazines, and many other documents. Professional accreditation of academic programs is noted on the Web site and in the undergraduate and graduate catalogs.

24. The institution makes available upon request information that accurately describes its financial condition.

Lawrence Tech makes available upon request information that accurately describes its financial condition. See (GIR-04 “Audited Financial Statements”) for audited financial statements from FY2003 to date.

25. The institution makes available upon request information that accurately describes its financial condition.

Lawrence Tech makes available upon request information that accurately describes its financial condition. See (GIR-04 “Audited Financial Statements”) for audited financial statements from FY2003 to date.

26. The institution uses the appropriate financial measures to judge its financial condition.

Lawrence Tech meets all General Institutional Requirements of the Higher Learning Commission.
The Institutional Snapshot provides a range of institutional information from the fall 2008 and fall 2009 semesters. Historic data is available in the Evidence Repository.

### 1. Student Demography Headcounts

#### 1A. Undergraduate Enrollments by Class Levels

Full-time undergraduate enrollment by academic rank and gender is shown in Figure 61. See IS-01-"1A-Undergraduate Enrollment by Class Level" for data from fall 2005 to date. Part-time undergraduate enrollment by academic rank and gender is shown in Figure 62. See IS-01-"1A-Undergraduate Enrollment by Class Level" for data from fall 2005 to date.

#### Figure 61 – Full-Time IPEDS Undergraduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Man</td>
<td>Women</td>
</tr>
<tr>
<td>Freshman</td>
<td>281</td>
<td>71</td>
</tr>
<tr>
<td>Sophomore</td>
<td>273</td>
<td>73</td>
</tr>
<tr>
<td>Junior</td>
<td>259</td>
<td>88</td>
</tr>
<tr>
<td>Senior</td>
<td>327</td>
<td>116</td>
</tr>
<tr>
<td>Total</td>
<td>1,140</td>
<td>348</td>
</tr>
<tr>
<td>Total Full Time Undergraduate Enrollment</td>
<td>1,488</td>
<td>1,564</td>
</tr>
</tbody>
</table>

#### Figure 62 – Part-Time IPEDS Undergraduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Man</td>
<td>Woman</td>
</tr>
<tr>
<td>Freshman</td>
<td>647</td>
<td>124</td>
</tr>
<tr>
<td>Sophomore</td>
<td>108</td>
<td>35</td>
</tr>
<tr>
<td>Junior</td>
<td>130</td>
<td>32</td>
</tr>
<tr>
<td>Senior</td>
<td>247</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>1,132</td>
<td>258</td>
</tr>
<tr>
<td>Total Part Time Undergraduate Enrollment</td>
<td>1,390</td>
<td>1,607</td>
</tr>
</tbody>
</table>
1B. Undergraduate Students by Degree Status

Full-time degree-seeking undergraduate enrollment by ethnicity and gender is shown in Figure 63. See (IS-02-"1B-Undergraduate Enrollment by Ethnicity and Gender") for data from fall 2005 to date. Part-time degree-seeking undergraduate enrollment by ethnicity and gender is shown in Figure 64. See (IS-02-"1B-Undergraduate Enrollment by Ethnicity and Gender") for data from fall 2005 to date.

1C. Graduate/Professional Students by Degree Status

Full-time degree-seeking graduate enrollment by ethnicity and gender is shown in Figure 65. See (IS-03-"1C-Graduate Enrollment by Ethnicity and Gender") for data from fall 2005 to date. Part-time degree-seeking graduate enrollment by ethnicity and gender is shown in Figure 66. See (IS-03-"1C-Graduate Enrollment by Ethnicity and Gender") for data from fall 2005 to date.

1D. Age Range of Undergraduate Students

Full-time undergraduate enrollment highlighting students of 24 years of age or less is shown in Figure 67. See (IS-04-1D-"Age Range of Undergraduate Students") for a more detailed age breakdown of undergraduate enrollment from fall 2005 to date.

Figure 63 – Full-Time IPEDS Degree-Seeking Undergraduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Nonresident Alien</td>
<td>135</td>
<td>17</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>68</td>
<td>33</td>
</tr>
<tr>
<td>American Indian</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>39</td>
<td>13</td>
</tr>
<tr>
<td>Hispanic</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>744</td>
<td>243</td>
</tr>
<tr>
<td>Race/ethnicity unknown</td>
<td>136</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>1,140</td>
<td>348</td>
</tr>
<tr>
<td>Total Full-Time Undergraduate Enrollment</td>
<td>1,488</td>
<td>1,564</td>
</tr>
</tbody>
</table>

Figure 64 – Part-Time IPEDS Degree-Seeking Undergraduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Nonresident Alien</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>98</td>
<td>51</td>
</tr>
<tr>
<td>American Indian</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>519</td>
<td>86</td>
</tr>
<tr>
<td>Hispanic</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>374</td>
<td>91</td>
</tr>
<tr>
<td>Race/ethnicity unknown</td>
<td>107</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>1,132</td>
<td>258</td>
</tr>
<tr>
<td>Total Part-Time Undergraduate Enrollment</td>
<td>1,390</td>
<td>1,607</td>
</tr>
</tbody>
</table>

Figure 65 – Full-Time IPEDS Degree-Seeking Graduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Nonresident Alien</td>
<td>35</td>
<td>1</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>American Indian</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Race/ethnicity unknown</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>15</td>
</tr>
<tr>
<td>Total Full-Time Graduate Enrollment</td>
<td>61</td>
<td>38</td>
</tr>
</tbody>
</table>

Figure 66 – Part-Time Degree-Seeking Graduate Enrollment

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>Nonresident Alien</td>
<td>213</td>
<td>48</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>42</td>
<td>82</td>
</tr>
<tr>
<td>American Indian</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>78</td>
<td>35</td>
</tr>
<tr>
<td>Hispanic</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>476</td>
<td>233</td>
</tr>
<tr>
<td>Race/ethnicity unknown</td>
<td>52</td>
<td>33</td>
</tr>
<tr>
<td>Total</td>
<td>876</td>
<td>437</td>
</tr>
<tr>
<td>Total Part-Time Graduate Enrollment</td>
<td>1,313</td>
<td>1,279</td>
</tr>
</tbody>
</table>

Figure 67 – Age Range of Full-Time IPEDS Degree-Seeking Undergraduate Students

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>24 and under</td>
<td>984</td>
<td>309</td>
</tr>
<tr>
<td>25 and older</td>
<td>1,037</td>
<td>345</td>
</tr>
<tr>
<td>Age unknown</td>
<td>1,021</td>
<td>654</td>
</tr>
</tbody>
</table>

Figure 68 – Age Range of Part-Time IPEDS Degree-Seeking Undergraduate Students

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td>24 and under</td>
<td>800</td>
<td>166</td>
</tr>
<tr>
<td>25 and older</td>
<td>1,032</td>
<td>237</td>
</tr>
<tr>
<td>Age unknown</td>
<td>1,832</td>
<td>403</td>
</tr>
</tbody>
</table>
Figure 69 – Number of Credit-Seeking Students by Residency Status

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-State Resident</td>
<td>2,819</td>
<td>2,840</td>
</tr>
<tr>
<td>Out-of-State Resident</td>
<td>53</td>
<td>71</td>
</tr>
<tr>
<td>Non-US Resident</td>
<td>1,417</td>
<td>1,453</td>
</tr>
<tr>
<td><strong>Total Enrollment</strong></td>
<td><strong>4,289</strong></td>
<td><strong>4,364</strong></td>
</tr>
</tbody>
</table>

Figure 70 – Freshman Applicants, Admitted, and Enrolled Students

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Applications</td>
<td>1,498</td>
<td>1,698</td>
</tr>
<tr>
<td>Number Admitted</td>
<td>760</td>
<td>845</td>
</tr>
<tr>
<td>Number Enrolled</td>
<td>278</td>
<td>272</td>
</tr>
<tr>
<td><strong>Total Enrollment</strong></td>
<td><strong>4,289</strong></td>
<td><strong>4,364</strong></td>
</tr>
</tbody>
</table>

Figure 71 – Undergraduate Transfer Applicants, Admitted, and Enrolled Students

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Applications</td>
<td>564</td>
<td>609</td>
</tr>
<tr>
<td>Number Admitted</td>
<td>344</td>
<td>412</td>
</tr>
<tr>
<td>Number Enrolled</td>
<td>206</td>
<td>277</td>
</tr>
<tr>
<td><strong>Total Enrollment</strong></td>
<td><strong>4,289</strong></td>
<td><strong>4,364</strong></td>
</tr>
</tbody>
</table>

Figure 72 – Graduate Applicants, Admitted, and Enrolled Students

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Applications</td>
<td>918</td>
<td>976</td>
</tr>
<tr>
<td>Number Admitted</td>
<td>632</td>
<td>704</td>
</tr>
<tr>
<td>Number Enrolled</td>
<td>299</td>
<td>352</td>
</tr>
<tr>
<td><strong>Total Enrollment</strong></td>
<td><strong>4,289</strong></td>
<td><strong>4,364</strong></td>
</tr>
</tbody>
</table>

Figure 73 – Undergraduate ACT Test Scores

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Students Submitting Scores</td>
<td>82%</td>
<td>72%</td>
</tr>
<tr>
<td>Average ACT Composite Score</td>
<td>23.6</td>
<td>24.0</td>
</tr>
</tbody>
</table>

Figure 74 – Financial Assistance for Undergraduate and Graduate Students

<table>
<thead>
<tr>
<th></th>
<th>Fall 2008</th>
<th>Fall 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Count</td>
<td>3,019</td>
<td>3,187</td>
</tr>
<tr>
<td>Applied for Aid</td>
<td>1940</td>
<td>1975</td>
</tr>
<tr>
<td>% Applied for Aid</td>
<td>64%</td>
<td>62%</td>
</tr>
<tr>
<td>Receiving Aid</td>
<td>1,695</td>
<td>1,774</td>
</tr>
<tr>
<td>% Receiving Aid</td>
<td>56%</td>
<td>56%</td>
</tr>
<tr>
<td>Receiving Loans</td>
<td>1,254</td>
<td>1,294</td>
</tr>
<tr>
<td>% Receiving Loans</td>
<td>42%</td>
<td>42%</td>
</tr>
<tr>
<td>Receiving Work Study</td>
<td>82</td>
<td>98</td>
</tr>
<tr>
<td>% Receiving Work Study</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Receiving Scholar-Grant</td>
<td>1,499</td>
<td>1,577</td>
</tr>
<tr>
<td>% Receiving Scholar-Grant</td>
<td>50%</td>
<td>49%</td>
</tr>
<tr>
<td>Receiving Academic-Merit Scholarships</td>
<td>1,085</td>
<td>1,114</td>
</tr>
<tr>
<td>% Receiving Academic-Merit Scholarships</td>
<td>36%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Figure 75 – Tuition Discount Rates

<table>
<thead>
<tr>
<th></th>
<th>FY2008</th>
<th>FY2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Aid</td>
<td>$7,219,420</td>
<td>$8,542,296</td>
</tr>
<tr>
<td>Tuition and Aid Payments</td>
<td>$55,316,689</td>
<td>$55,083,120</td>
</tr>
<tr>
<td>Tuition Discount Rate</td>
<td>13.0%</td>
<td>16.2%</td>
</tr>
</tbody>
</table>

1E. Numbers of Students by Residency Status

The number of credit-seeking students by residency status is shown in Figure 69. See (IS-05-*1E-Residency of Credit-Seeking Students*) for data from fall 2005 to date.

2. Student Recruitment and Admissions

2A. Number of Applications, Acceptances, and Matriculations

The number of freshman applicants, admitted students, and enrolled students is shown in Figure 70. See (IS-06-*2A-Student Recruitment and Admissions*) for data from fall 2005 to date. The number of undergraduate transfer applicants, admitted students, and enrolled students is shown in Figure 71. See (IS-06-*2A-Student Recruitment and Admissions*) for data from fall 2005 to date.

2B. Standardized Test Scores as a Condition of Admission

Lawrence Tech does not require ACT test scores as a condition of admission, but most students choose to submit ACT test scores with their applications. The percentage of undergraduate students submitting ACT scores and average composite scores are shown in Figure 73. See (IS-07-*2B-Undergraduate ACT Scores*) for data from fall 2005 to date.

3. Financial Assistance for Students

3A. Financial Assistance for Undergraduate and Graduate Students

The number and percentage of undergraduate and graduate students applying for and receiving financial assistance is shown in Figure 74. See (IS-08-*3A-Undergraduate and Graduate Students Applying for Aid*) for applicant data from fall 2005 to date, and (IS-09-*3A-Categories of Financial Aid*) for award data from fall 2005 to date.

3B. Tuition Discount Rates for Undergraduate and Graduate Students

The aggregate tuition discount rates for all students are shown in Figure 75. See (IS-10-*3B-Tuition Discount Rates*) for data from FY2006 to date.

4. Student Retention and Program Productivity

4A. First-Time Student Retention Rate

Retention rates for first-time full-time students by race and ethnicity is shown in Figure 76. See (IS-11-*4A-Retention of First-Time Full-Time Students*) for data from fall 2004 to date.
4B. Graduate and Professional Degrees

The number of graduate degrees awarded by ethnicity and gender are shown in Figure 77. See (IS-12-"4B-Graduate Degrees Awarded by Ethnicity and Gender") for data from 2005 to date, including CIP codes of graduate degrees.

4C. Graduates by CIP Codes

The number of graduates by CIP code clusters is shown in Figure 78. See (IS-13-"4C-Graduates by CIP Codes") for a detailed breakdown by individual CIP codes from 2005 to date.

4D. Pass Rates for Licensure Examinations

Lawrence Tech's engineering and architecture graduates may choose to sit for licensing examinations in their appropriate state(s). See (IS-14-"4D-NCEES Licensing Examination Results") for a collection of examination results from the National Council of Examiners for Engineering and Surveying for civil engineering graduates.

5. Faculty Demography

5A. Full-Time and Part-Time Faculty

The number of full-time and part-time faculty members by highest degree earned is shown in Figure 79. The Master of Architecture degree is the terminal degree in that field. See (IS-15-"5ABC-Full-Time Faculty Characteristics") for data from 2005 to date.

5B. Full-Time and Part-Time Faculty by Gender and Race/Ethnicity

The gender of full-time and part-time faculty members is shown in Figure 80 and 81. See (IS-15-"5ABC-Faculty Characteristics") for data from 2005 to date.

5C. Faculty by CIP Codes

The distribution of all faculty by primary CIP code is shown in Figure 82. See (IS-15-"5ABC-Faculty Characteristics") for data from 2005 to date.
Institutional Snapshot

<table>
<thead>
<tr>
<th>Group</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>1,823</td>
<td>1,856</td>
</tr>
<tr>
<td>Full-time Faculty</td>
<td>96</td>
<td>93</td>
</tr>
<tr>
<td>Adjunct Faculty</td>
<td>166</td>
<td>167</td>
</tr>
<tr>
<td>Staff and Administration</td>
<td>200</td>
<td>219</td>
</tr>
<tr>
<td>Total</td>
<td>2,285</td>
<td>2,335</td>
</tr>
</tbody>
</table>

6. Availability of Instructional Resources and Information Technology

All Lawrence Tech undergraduate students and faculty members receive a personal tablet or laptop computer that includes all productivity and discipline-specific software required for the university’s academic programs. Productivity and professional software is available for download by graduate students, most of whom use their personal laptop computers. The numbers of tablet and laptop computer distributed to students, faculty, and staff are shown in Figure 83.

Lawrence Tech’s campus is served by a wireless network with access available in all classrooms, auditoria, library, and public spaces. Lawrence Tech’s tablet-laptop program and fully wireless campus result in the need for a small number of computer labs, which are listed in Figure 84.

6A. Actual Unrestricted Revenues

Lawrence Tech’s annual unrestricted revenues are shown in Figure 85. See (C2-02-‘Financial Performance-2000-2009’) for complete financial statements from fiscal year 2000 to date.

6B. Actual Unrestricted Expenses

Lawrence Tech’s annual unrestricted expenses are shown in Figure 86. See (C2-02-‘Financial Performance-2000-2009’) for complete financial statements from fiscal year 2000 to date.

6C. Expenses over Revenues

Lawrence Tech’s expenses over revenues are shown in Figure 87. See (C2-02-‘Financial Performance-2000-2009’) for complete financial statements from fiscal year 2000 to date.

<table>
<thead>
<tr>
<th>CIP Code</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>04,14,15</td>
<td>190</td>
<td>178</td>
</tr>
<tr>
<td>26,40,41</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>32</td>
<td>74</td>
<td>63</td>
</tr>
<tr>
<td>9,10,50</td>
<td>40</td>
<td>44</td>
</tr>
<tr>
<td>23,24,30</td>
<td>35</td>
<td>37</td>
</tr>
<tr>
<td>11,27</td>
<td>48</td>
<td>49</td>
</tr>
<tr>
<td>42</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>420</td>
<td>408</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>1,823</td>
<td>1,856</td>
</tr>
<tr>
<td>Full-time Faculty</td>
<td>96</td>
<td>93</td>
</tr>
<tr>
<td>Adjunct Faculty</td>
<td>166</td>
<td>167</td>
</tr>
<tr>
<td>Staff and Administration</td>
<td>200</td>
<td>219</td>
</tr>
<tr>
<td>Total</td>
<td>2,285</td>
<td>2,335</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of Computers</th>
</tr>
</thead>
<tbody>
<tr>
<td>E196 Biomedical Laboratory</td>
<td>8</td>
</tr>
<tr>
<td>E195 Robotics Laboratory</td>
<td>7</td>
</tr>
<tr>
<td>E594a Civil Engineering Laboratory</td>
<td>10</td>
</tr>
<tr>
<td>E14 Electrical and Computer Engineering Laboratory</td>
<td>8</td>
</tr>
<tr>
<td>E152 Public Laboratory</td>
<td>24</td>
</tr>
<tr>
<td>E30 Public Laboratory</td>
<td>21</td>
</tr>
<tr>
<td>M215 College of Management Laboratory</td>
<td>9</td>
</tr>
<tr>
<td>T219 Architecture Laboratory</td>
<td>7</td>
</tr>
<tr>
<td>T221 Architecture Laboratory</td>
<td>16</td>
</tr>
<tr>
<td>T225 Architecture Laboratory</td>
<td>11</td>
</tr>
<tr>
<td>C202 Public Laboratory</td>
<td>13</td>
</tr>
<tr>
<td>Art &amp; Design Center Macintosh Laboratory</td>
<td>14</td>
</tr>
<tr>
<td>University Library Public Stations</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>158</td>
</tr>
</tbody>
</table>
### Figure 85 – Annual Unrestricted Revenues

<table>
<thead>
<tr>
<th></th>
<th>FY2008</th>
<th>FY2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Tuition</td>
<td>$55,316,689</td>
<td>$55,083,120</td>
</tr>
<tr>
<td>Discounts and Awards</td>
<td>($6,709,919)</td>
<td>($8,195,424)</td>
</tr>
<tr>
<td>Registration and Other Fees</td>
<td>$2,875,032</td>
<td>$1,918,461</td>
</tr>
<tr>
<td>Unrestricted Current Year Gifts and Prior Year Pledges</td>
<td>$148,409</td>
<td>$174,182</td>
</tr>
<tr>
<td>5.5% Distribution of Unrestricted Endowments</td>
<td>$167,000</td>
<td>$147,000</td>
</tr>
<tr>
<td>Distribution of Rental Property Cash Flow</td>
<td>$16,444</td>
<td>($390,251)</td>
</tr>
<tr>
<td>Auxiliary enterprises – Housing</td>
<td>$2,434,428</td>
<td>$2,411,449</td>
</tr>
<tr>
<td>Auxiliary enterprises – Other</td>
<td>$377,282</td>
<td>$347,703</td>
</tr>
<tr>
<td>Other Sources</td>
<td>$638,521</td>
<td>$362,880</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>$55,263,885</td>
<td>$51,859,120</td>
</tr>
</tbody>
</table>

### Figure 86 – Annual Unrestricted Expenses

<table>
<thead>
<tr>
<th></th>
<th>FY2008</th>
<th>FY2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instruction</td>
<td>$18,627,627</td>
<td>$18,074,004</td>
</tr>
<tr>
<td>Academic Support</td>
<td>$4,210,370</td>
<td>$4,035,461</td>
</tr>
<tr>
<td>Student Services</td>
<td>$5,337,075</td>
<td>$5,234,967</td>
</tr>
<tr>
<td>Institutional Support</td>
<td>$12,458,822</td>
<td>$11,706,429</td>
</tr>
<tr>
<td>Operation and Maintenance of Physical Plant</td>
<td>$5,711,455</td>
<td>$5,984,380</td>
</tr>
<tr>
<td>Auxiliary</td>
<td>$670,044</td>
<td>$644,818</td>
</tr>
<tr>
<td>Debt Service</td>
<td>$1,947,064</td>
<td>$1,841,453</td>
</tr>
<tr>
<td>Debt Service – Student Services</td>
<td>$604,474</td>
<td>$199,275</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>$1,933,324</td>
<td>$2,566,019</td>
</tr>
<tr>
<td>Transfer to Bond Capital Reserve Fund</td>
<td>$1,253,936</td>
<td>$0</td>
</tr>
<tr>
<td>Capital Expenditures</td>
<td>$1,052,628</td>
<td>$1,557,665</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$54,706,820</td>
<td>$51,844,471</td>
</tr>
</tbody>
</table>

### Figure 87 – Expenses over Revenues

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenue</td>
<td>$55,263,885</td>
<td>$51,859,120</td>
</tr>
<tr>
<td>Total Expenses</td>
<td>$54,706,820</td>
<td>$51,844,471</td>
</tr>
<tr>
<td>Change in Unrestricted Assets</td>
<td>$557,066</td>
<td>$14,649</td>
</tr>
</tbody>
</table>
Federal Compliance

This section provides information related to the 1992, 1998, and 2008 amendments to the Higher Education Act and regulatory changes negotiated between the U.S. Department of Education and regional accrediting agencies.

Title IV Information

Lawrence Tech fulfills its Title IV program responsibilities. All appropriate approvals are included for inspection in the Evidence Repository including program participation and ECAR documents, A-133 audit reports, program reviews, and correspondence regarding federal inquiries.

Lawrence Tech has a history of compliance with federal financial aid regulations with only minor procedural and processing issues reported and resolved over time. The University’s financial aid programs have never been limited or suspended by the federal government. As documented in Criterion Two, the University’s financial ratios all indicate overall financial health.

Types of Aid Awarded

Lawrence Tech awards a wide range of aid types to undergraduate and graduate students as shown in Figure 88.

Student Loan Default Rates

Lawrence Tech’s historic student loan default rates are shown in Figure 88. Lawrence Tech has never been reviewed by the Department of Education for higher-than-average loan default rates.

Satisfactory Academic Progress and Attendance Policies

Lawrence Tech maintains a Satisfactory Academic Progress Policy to monitor financial aid eligibility. The Policy applies to all students who wish to establish or maintain financial aid eligibility, and applies separately to each degree program the student pursues, including semesters in which financial aid was not applied for or disbursed. The policy is clearly posted on the University’s Web site. Specific aid programs may enforce higher standards. Satisfactory academic progress is monitored at least once each academic year.

Required Course Completion Rate

Full-time and part-time students must successfully complete at least two-thirds (67%) of their cumulative credit hours attempted with a grade of D or better to remain eligible for financial aid. Students who blend full-time and part-time enrollment must achieve cumulative progress that satisfies the combined full-time and part-time standards. Financial aid eligibility is suspended when the minimum completion requirement is not achieved.

Duration of Program and Financial Aid Eligibility

Financial aid eligibility is suspended when all credits required for a degree/program are earned, or when a student has attempted 150% of the course work required for degree completion in the student’s program of study.

Grade Point Average Requirements

Undergraduate students who do not maintain a 2.00 Lawrence Tech cumulative GPA at any point following the completion of their third semester of enrollment will be granted one probationary
### Federal Title IV Programs
- Student Loans (Stafford and Plus)
- Pell Grants
- Supplemental Educational Opportunity Grant
- ACG Grant
- SMART Grant
- Bryd Scholarship
- Michigan Work Study
- MI Loans
- Tuition Incentive Program

<table>
<thead>
<tr>
<th>Federal Title IV Programs</th>
<th>State of Michigan Programs</th>
<th>Lawrence Tech Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Loans (Stafford and Plus)</td>
<td>Grants/ Scholarships</td>
<td>Lawrence Tech Buell Unfunded</td>
</tr>
<tr>
<td>Pell Grants</td>
<td>Adult Part-Time Grant</td>
<td>Lawrence Tech Scholarships</td>
</tr>
<tr>
<td>Supplemental Educational Opportunity Grant</td>
<td>Michigan Promise</td>
<td>Lawrence Tech University Honor</td>
</tr>
<tr>
<td>ACG Grant</td>
<td>Merit Award</td>
<td>Lawrence Tech Trustee Scholarship Unfunded</td>
</tr>
<tr>
<td>SMART Grant</td>
<td>Michigan Work Study</td>
<td>Lawrence Tech Employee/Dependent Walers</td>
</tr>
<tr>
<td>Bryd Scholarship</td>
<td>MI Loans</td>
<td>Lawrence Tech Grant</td>
</tr>
<tr>
<td>Perkins Loan</td>
<td>Tuition Incentive Program</td>
<td>Lawrence Tech Transfer Scholarship</td>
</tr>
<tr>
<td>Federal Work Study</td>
<td></td>
<td>Lawrence Tech Trustee Grant</td>
</tr>
</tbody>
</table>

### Figure 88 – Types of Aid Awarded

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawrence Tech Buell Unfunded</td>
<td>Lawrence Tech Scholarships</td>
</tr>
<tr>
<td>Lawrence Tech University Honor</td>
<td>Lawrence Tech Trustee Scholarship Unfunded</td>
</tr>
<tr>
<td>Lawrence Tech Employee/Dependent Walers</td>
<td></td>
</tr>
<tr>
<td>Lawrence Tech Grant</td>
<td></td>
</tr>
<tr>
<td>Lawrence Tech Transfer Scholarship</td>
<td></td>
</tr>
</tbody>
</table>
| Lawrence Tech Trustee Grant

### Financial Aid A-133 Audit

See (GIR-05-“A-133 Audit Reports”) for copies of Lawrence Tech’s A-133 audit reports from FY2002 to FY2009. A noncompliance issue was noted in both the 2008 and 2009 audits regarding the 30-day notification period for students receiving FFEL funds. See (FC-01-“A-133 Audit Responses”) for the University’s responses to these issues.

- In 2008, two students did not receive notification of disbursement of FFEL funds within 30 days. Peak period processing delayed notification by one and three days for these two students. The University changed its production schedule to correct this issue.
- In 2009, one student of 27 students selected for testing did not receive notification of the disbursement of FFEL funds within 30 days. The University determined that 14 of 642 students did not receive notification within 30 days. New Banner programming was completed to correct this issue.

### Program Participation Agreement (PPA)

See (FC-02-“Program Participation Agreement”) for a copy of the University’s PPA, which is in effect through June 30, 2015.

### Eligibility and Certification

Approval Report (ECAR)

See (FC-03-“Eligibility and Certification Approval Report”) for a copy of the University’s ECAR, which is in effect through June 30, 2015.

Recent Program Audits

See (FC-04-“Michigan Program Review”) for a copy of a program review conducted in 2006 by the Student Financial Services Bureau of the State of Michigan.

Inspector General Reports

Lawrence Tech has not been subject to any action by the Inspector General during the ten-year accreditation period.

### Campus Crime Information

Lawrence Tech completes all federally mandated campus crime reports and makes all Clery reports for the past three years available on the Web site ltu.edu/campus_safety. See (FC-05-“Annual Security Reports”) for copies of recent year crime statistics. Data for Clery reports are gathered from daily incident logs, incident reports, personal injury and illness reports, and police reports.

### Credits, Program Length, and Tuition

Lawrence Tech follows accepted practices for assigning credit hours to individual courses and to degree programs. The number of credit hours required for degree programs, certificate programs, and individual courses at Lawrence Tech are consistent with those required by other institutions offering similar programs.

Tuition for Lawrence Tech programs is based on the level of the student. All tuition rates are clearly posted on the University’s Web site. Lawrence Tech has historically charged differential tuition rates for the same academic programs delivered at different delivery locations, but is transitioning to charging the same tuition rates for all delivery locations.

#### Public Notification of Evaluation Visit and Third Party Comment

Consistent with Commission guidelines, the University announced the Commission’s visit and requested third party comment from its stakeholders in several ways in April and May 2010:

- A press release announcing the Commission’s visit was issued.
- Newspaper advertisements were published in the Detroit Free Press and the Detroit News, both of which are circulated across the state of Michigan.
- Notices were posted on the University’s Web site ltu.edu and published in online and print campus newsletters.
- Information about the Commission’s visit and a request for public comment was included in the May 2010 commencement program.

Stakeholders were directed to accreditation.ltu.edu where they could submit online comments to the Commission, and were also invited to send comments by mail to:

Public Comment on Lawrence Technological University
The Higher Learning Commission
Public Comment on Lawrence Technological University
The Higher Learning Commission
30 North LaSalle Street, Suite 2400
Chicago, IL 60602-2504

Copies of third party notifications have been sent to the Higher Learning Commission with their dates of publication. See (INT-02-“Third Party Comment Notifications”) for copies of these documents.

### Figure 89 – Student Loan Default Rates

![Default Rates Graph]

- Lawrence Tech
- Private 4+ Institutions
- 2004: 1.5%
- 2005: 2.5%
- 2006: 3.0%
- 2007: 4.0%
- 2008: 2.75%
- 2009: 2.00%

Semester to raise their GPA to the 2.00 level. Failure to achieve a 2.00 GPA at any point following the probationary semester results in financial aid suspension until the 2.00 GPA is reached. Graduate students are subject to a 2.75 GPA financial aid suspension until the 2.00 GPA is achieved. Failure to achieve a 2.00 GPA at any point during a semester to raise their GPA to the 2.00 level.

### Attendance Policy

Faculty members are provided with printed class rosters and may access online class rosters from BannerWeb and Blackboard. A final class roster is distributed two weeks after the start of the semester and may access online class rosters from BannerWeb and Blackboard. A final class roster is distributed two weeks after the start of the semester.

### Contractual Relationships

Lawrence Tech does not contract with third parties for the delivery of academic content bearing Lawrence Tech’s name. All collaborative partnerships with other institutions clearly state the portions of academic programs delivered by each institution, relevant transfer rules, and rules for awarding degrees.

Lawrence Tech completes all federally mandated campus crime reports and makes all Clery reports for the past three years available on the Web site ltu.edu/campus_safety. See (FC-05-“Annual Security Reports”) for copies of recent year crime statistics. Data for Clery reports are gathered from daily incident logs, incident reports, personal injury and illness reports, and police reports.

### Figure 89 – Student Loan Default Rates

- Lawrence Tech
- Private 4+ Institutions
- 2004: 1.5%
- 2005: 2.5%
- 2006: 3.0%
- 2007: 4.0%
- 2008: 2.75%
- 2009: 2.00%

Semester to raise their GPA to the 2.00 level. Failure to achieve a 2.00 GPA at any point following the probationary semester results in financial aid suspension until the 2.00 GPA is reached. Graduate students are subject to a 2.75 GPA financial aid suspension until the 2.00 GPA is achieved. Failure to achieve a 2.00 GPA at any point during a semester to raise their GPA to the 2.00 level.

### Attendance Policy

Faculty members are provided with printed class rosters and may access online class rosters from BannerWeb and Blackboard. A final class roster is distributed two weeks after the start of the semester and may access online class rosters from BannerWeb and Blackboard. A final class roster is distributed two weeks after the start of the semester.

### Contractual Relationships

Lawrence Tech does not contract with third parties for the delivery of academic content bearing Lawrence Tech’s name. All collaborative partnerships with other institutions clearly state the portions of academic programs delivered by each institution, relevant transfer rules, and rules for awarding degrees.
Federal Compliance Visits to Off-Campus Locations

Lawrence Tech maintains nine off-campus sites in Michigan, two course locations in Michigan, and course locations in Ontario, British Columbia and Shanghai.

The Commission conducted a site visit of Lawrence Tech's campus sites and course locations in April 2009. The Commission visited the sites at Schoolcraft College, Chrysler Technical Center, and Lansing Community College. The Commission's site visit resulted in "adequate" ratings in all categories. See (FC-06-"Multi-Site Compliance Documents") for all Commission documents associated with the site visit.

Advertising and Recruitment Materials

Lawrence Tech centrally manages all advertising and recruitment materials through the Office of Marketing and Public Affairs and the Division of Enrollment Services. Deans, department chairs, and program directors are involved in the design of advertising and recruitment materials for their respective academic programs. All institutional data cited in advertising and recruitment materials are provided by the Office of Institutional Research and Academic Planning.

Lawrence Tech’s accreditation from the Commission is noted in the Future Students section of the University’s Web site ltu.edu and on the provost’s Web site ltu.edu/provosts_office. The accreditation notice also appears on all applications, student publications, University magazines, and many other publications. See (FC-07-"Advertising and Recruitment Materials") for representative samples of these documents.

Organizational Records of Student Complaints

Like most universities, Lawrence Tech uses a distribution system for dealing with student complaints. A task force was established in 2009 to document current complaint processes in a number of departments and to identify potential improvements. See (FC-08-"Student Complaint Processes") for task force findings and recommendations.

Lawrence Tech uses unit-based processes that follow a consistent approach of identifying a complaint, investigating the complaint, bringing parties together to analyze the situation, meeting with the individual making the complaint, making a decision regarding the complaint, and closing the investigation with a letter to all parties.

The following task force recommendations are being implemented:

1. Providing a template to colleges and departments to encourage uniform complaint processes
2. Requesting that each department document its complaint process on its Web site
3. Routinely reviewing the results of complaint processing to determine if there are underlying issues that need to be addressed
4. Routinely updating the complaint processes based on review findings

Transfer Credit Policies

Lawrence Tech enters into transfer and articulation agreements with accredited universities and community colleges across the United States. Transfer guides are created for community college partners for specific degree programs to identify courses eligible for transfer to the University. There are currently 31 transfer guides posted to the University's Web site for use by prospective students and faculty advisers. There are also a number of articulation agreements for community college graduates posted to the University's Web site. There are also 18 transfer guides available for students of four-year institutions wishing to transfer to Lawrence Tech.

A Balanced and Consistent Approach

Lawrence Tech accepts transfer credits only from institutions accredited by a regional accrediting agency, with academic content of the course being the determining factor for transfer decisions. Lawrence Tech evaluates courses from other institutions via a review of transcripts, course descriptions, and syllabi. Articulation agreements signed by Lawrence Tech and other institutions formalize transfer decisions for larger numbers of courses.

Students may only transfer eligible courses for which they have received letter grades of “C” or better. Students transferring from a community college may transfer up to 60 credits toward a Lawrence Tech degree unless overridden by an articulation agreement. Students transferring from a four-year institution may transfer up to 90 credits toward their Lawrence Tech degree. Students with both community college and four-year credits may transfer up to 90 combined credits.

International students are required to provide a World Education Services (WES) transfer evaluation to verify the identity of the institution, document grading criteria, and provide a course-by-course equivalency. Admissions staff have attended AACRAO training on evaluating international transcripts.

Lawrence Tech uses consistent and repeatable processes for evaluating and documenting transfer credit decisions. Formal articulation agreements and transfer guides are posted on the University’s Web site. Lawrence Tech uses the semester system for assigning credit hours to course content. A transfer equivalency table is used to equate quarter hours to semester hours as shown in Figure 90.

Figure 90 – Transfer Equivalency Table

<table>
<thead>
<tr>
<th>Quarter Hours</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.00</td>
</tr>
<tr>
<td>7</td>
<td>4.67</td>
</tr>
<tr>
<td>8</td>
<td>5.33</td>
</tr>
<tr>
<td>9</td>
<td>6.00</td>
</tr>
<tr>
<td>10</td>
<td>6.67</td>
</tr>
</tbody>
</table>

Transfer decisions are posted to students' official academic records following receipt of official transcripts from all previously attended institutions. Students may work with their faculty advisers to select courses based on preliminary findings, but understand these decisions are subject to receipt of all official transcripts.

Innovations in Transfer Practices

Lawrence Tech uses the Banner student information system to store all transfer credit decisions, ensuring consistent decision making over time. All transcript documents are imaged using ImageNow, and Banner Workflow scripts are used to manage the transcript acceptance process.

Communicating Transfer Policies and Practices

Lawrence Tech’s transfer guides and articulation agreements are posted on the University’s Web site for access by prospective students, faculty advisers, and counselors from other institutions. The Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO) maintains a Web site at macrao.org of all institutions with online transfer equivalency guides.

Verification of Student Identity

Lawrence Tech defines distance learning as any computer-mediated instruction outside the classroom. This includes fully online classes, hybrid classes, and hybrid sessions supporting traditional classes. The Commission’s Provisional Policy on Verification of the Identity of Students in Distance and Correspondence Education states that the use of learning management systems with individual IDs and passwords complies with the current negotiated agreement between the Department of Education and the regional accrediting agencies. Lawrence Tech complies with this practice, and has instituted other practices to reduce the potential for students to illegally receive academic credit for distance learning classes.

A task force was established in 2009 to review the University’s practices for verifying student identity and improving those practices in light of new federal regulations. See (FC-09-"Student Identify Task Force Report") for a copy of the report. Several administrative and information technology improvements were recommended to close potential identity loopholes in University processes including use of photo IDs, orientation practices for undergraduate and graduate students, and use of a single-signon environment. Lawrence Tech is also actively exploring additional identity verification technologies including challenge questions and biometrics.

Lawrence Tech provides a Blackboard course shell for each class section at all levels. Students must use their unique Banner ID and password to enroll for courses, and Blackboard rosters are populated via an automatic feed from Banner. Students must therefore use both Banner and Blackboard IDs to participate in distant learning classes.
Faculty members are expected to minimally use Blackboard to post their syllabi and communicate with students. To ensure compliance with federal regulations, Lawrence Tech has asked faculty members to follow these practices for their online and hybrid class sessions:

- Assignments should be accepted only through the Blackboard “assignments” function and not via e-mail or paper
- Instructors should use the SafeAssign product to detect plagiarism detection
- Instructors and students should use Blackboard to send e-mail messages regarding coursework
- Instructors should use submission deadlines and duration periods for Blackboard tests
- Instructors should use test item pools, essay questions, random item generation, personalized test questions, and the Respondus LockDown Browser to minimize the potential for online cheating
- Instructors should use Wimba collaboration sessions, personalized assignments, and telephone conference calls to increase personal contact with students during online class sessions

Combating Unauthorized Distribution of Copyrighted Materials

Lawrence Tech complies with regulations regarding unauthorized distribution of copyrighted materials via peer-to-peer software, and uses all four classes of technology-based deterrents identified by the Department of Education:

- Bandwidth shaping
- Traffic monitoring to identify the largest bandwidth users
- Prompt responses to Digital Millennium Copyright Act notices
- Use of commercial products designed to reduce or block illegal file sharing

Lawrence Tech has implemented a policy on illegal distribution of copyright materials and incorporates this policy into the student code of conduct and disciplinary processes. Lawrence Tech has blocked certain Internet protocols, and firewall rules have been improved to block peer-to-peer file-sharing. Packet shaping is used to limit inappropriate peer-to-peer activity.

Complaints regarding illegal downloading are sent to the Merit Computer Network, the University’s Internet service provider, which forwards complaints directly to the University’s Information Technology Service Delivery unit. The University received only one such complaint in 2009, attesting to the effectiveness of the University’s practices.

Textbook Information

Lawrence Tech complies with regulations that textbook information be included in course schedules prior to students registering for classes. Textbook information is available for viewing from the Lawrence Tech Bookstore Web site lawrence-tech.bncollege.com, which is linked from BannerWeb course registration pages. The information provided meets existing federal requirements including author, title, publisher, copyright date, and ISBN number.

The University makes the course schedule, enrollment, and required textbook information available to the Bookstore on a regular basis. The Bookstore collaborates with the registrar to ensure that textbook information is provided on a timely basis by academic departments.

Changes in Educational Offerings

Lawrence Tech is attaching two Requests for Institutional Change to the Self-Study. The first request asks permission to establish a professional Doctor of Engineering degree program, and to extend the University’s doctoral program offerings to include Ph.D. options in Engineering and Management. The second request asks permission to offer any of the University’s academic programs using hybrid or online delivery using existing University decision making processes. These requests appear as separate chapters in the Self-Study.

Approval of Certificate Programs

The University has submitted information on all certificate programs to the Commission for approval. All Lawrence Tech certificate programs are subsets of existing degree programs. Students can enroll in Lawrence Tech’s academic certificate programs without enrolling in a concurrent degree program, but admission requirements of certificate programs are equivalent to those for the associated degree programs. Students may enroll simultaneously in a degree and a related certificate program resulting in receipt of two academic credentials with only a small increase in the number of credit hours required. At this time, no Lawrence Tech certificate program is eligible for federal financial aid unless taken in conjunction with a degree program.