Announcement of General Information and Courses in the Colleges of

Architecture and Design
Arts and Sciences
Business and Information Technology
Engineering

For the Academic Year 2018–19
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VISIT THE CAMPUS
Lawrence Technological University welcomes prospective students, family members, employers, and others to visit. While on campus, prospective students are encouraged to discuss their educational plans with admissions staff and to meet current Lawrence Tech students, professors, or deans. Call the Office of Admissions at 800.225.5588 to arrange an appointment or to request additional information. The Office of Admissions is open (except holidays) Monday – Thursday, 8 a.m. – 7:30 p.m., and Friday, 8 a.m. – 4:30 p.m. If you plan to visit during the summer, please contact the Office of Admissions for summer hours.

ABOUT THIS GRADUATE CATALOG
This Graduate Catalog is a compendium of opportunities available at Lawrence Technological University. It includes information on academic programs, requirements for admission and graduation, rules, regulations, and expectations. Failure to read this Graduate Catalog does not excuse students from the requirements and regulations described herein. While every effort is made to provide accurate and current information, the University reserves the right to change rules, policies, fees, curricula, courses, and other programs described to reflect faculty or administrative action. This Graduate Catalog is accurate as of the publication date. Course descriptions are available online through BannerWeb at my.ltu.edu. For information about undergraduate programs, refer to Lawrence Tech’s Undergraduate Catalog.

STUDENT IMAGES
Lawrence Technological University reserves the right to use images of student work and of students on campus, or at any of its offsite locations, for the purpose of promoting the University. Students not wishing to be photographed should notify the registrar in writing when they register each semester.
Academic Calendar

**FALL 2018 SEMESTER**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 9 – August 26</td>
<td>Registration open – no late fees apply</td>
</tr>
<tr>
<td>August 26</td>
<td>Last day to register for traditional semester courses without a late fee</td>
</tr>
<tr>
<td>August 27</td>
<td>Traditional semester courses begin; add/drop period begins LATE REGISTRATION FEE applies</td>
</tr>
<tr>
<td>September 1 – 3</td>
<td>Labor Day break (no classes in session)</td>
</tr>
<tr>
<td>September 3</td>
<td>Last day to add/register for a class on BannerWeb</td>
</tr>
<tr>
<td>September 4</td>
<td>Classes resume after Labor Day break</td>
</tr>
<tr>
<td>September 4 – September 7</td>
<td>All adds and registrations require Instructor and Department Chair approval on paper registration form</td>
</tr>
<tr>
<td>September 7</td>
<td>Last day to drop traditional semester courses with refund (no refund for classes dropped after September 7)</td>
</tr>
<tr>
<td>September 8</td>
<td>Withdrawal period begins for traditional courses; LATE TRANSACTION FEE applies for each course added</td>
</tr>
<tr>
<td>September 18</td>
<td>Faculty Assessment Day – all day and evening courses are cancelled</td>
</tr>
<tr>
<td>November 20</td>
<td>Last day of classes before Thanksgiving break</td>
</tr>
<tr>
<td>November 23</td>
<td>Last day to withdraw from traditional semester courses</td>
</tr>
<tr>
<td>November 26</td>
<td>Classes resume after Thanksgiving break</td>
</tr>
<tr>
<td>December 14</td>
<td>Last day of traditional semester classes before Final Exams</td>
</tr>
<tr>
<td>December 17 - 20</td>
<td>Traditional semester Final Exams</td>
</tr>
<tr>
<td>December 20</td>
<td>Fall 2018 semester ends</td>
</tr>
<tr>
<td>December 27</td>
<td>Grades due for traditional semester courses</td>
</tr>
</tbody>
</table>

**SPRING 2019 SEMESTER**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 12 – January 13</td>
<td>Registration open – no late fees apply</td>
</tr>
<tr>
<td>January 13</td>
<td>Last day to register for traditional semester without a late fee</td>
</tr>
<tr>
<td>January 14</td>
<td>Traditional semester courses begin; add/drop period begins LATE REGISTRATION FEE applies</td>
</tr>
<tr>
<td>January 21</td>
<td>Last day to add/register for a class on BannerWeb</td>
</tr>
<tr>
<td>January 21</td>
<td>Campus closed for Martin Luther King Day</td>
</tr>
<tr>
<td>Date Range</td>
<td>Event Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>January 22 – 25</td>
<td>All adds and registrations require Instructor and Department Chair approval on paper registration form</td>
</tr>
<tr>
<td>January 25</td>
<td>Last day to drop traditional semester courses with refund (no refund for classes dropped after January 25)</td>
</tr>
<tr>
<td>January 26</td>
<td>Withdrawal period begins for traditional courses; LATE TRANSACTION FEE applies for each course added</td>
</tr>
<tr>
<td>March 9</td>
<td>Last day of classes before mid-semester break</td>
</tr>
<tr>
<td>March 10 - March 17</td>
<td>Mid-semester break</td>
</tr>
<tr>
<td>March 18</td>
<td>Classes resume after mid-semester break</td>
</tr>
<tr>
<td>April 12</td>
<td>Last day to withdraw from traditional semester courses</td>
</tr>
<tr>
<td>May 6</td>
<td>Last day of traditional semester classes before Final Exams</td>
</tr>
<tr>
<td>May 7-10</td>
<td>Traditional semester Final Exams</td>
</tr>
<tr>
<td>May 10</td>
<td>Spring 2019 semester ends</td>
</tr>
<tr>
<td>May 11</td>
<td>Commencement</td>
</tr>
<tr>
<td>May 15</td>
<td>Grades due for traditional semester courses</td>
</tr>
</tbody>
</table>

**SUMMER 2019 SEMESTER**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 15 – May 19</td>
<td>Registration open – no late fees apply</td>
</tr>
<tr>
<td>May 19</td>
<td>Last day to register for traditional semester courses without a late fee</td>
</tr>
<tr>
<td>May 20</td>
<td>Traditional semester courses begin; add/drop period begins LATE REGISTRATION FEE applies</td>
</tr>
<tr>
<td>May 24</td>
<td>Last day to add/register for a class on BannerWeb</td>
</tr>
<tr>
<td>May 24</td>
<td>Last day of classes before Memorial Day</td>
</tr>
<tr>
<td>May 25 – May 31</td>
<td>All adds and registrations require Instructor and Department Chair approval on paper registration form</td>
</tr>
<tr>
<td>May 27</td>
<td>Last day to drop traditional semester with refund (no refund for classes dropped after May 27)</td>
</tr>
<tr>
<td>May 28</td>
<td>Withdrawal period begins for traditional courses; LATE TRANSACTION FEE applies for each course added</td>
</tr>
<tr>
<td>May 28</td>
<td>Classes resume after Memorial Day break</td>
</tr>
<tr>
<td>July 4 - July 5</td>
<td>Campus closed for Independence Day break (no classes in session)</td>
</tr>
<tr>
<td>July 8</td>
<td>Classes resume after Independence Day break</td>
</tr>
<tr>
<td>July 12</td>
<td>Last day to withdraw from traditional semester</td>
</tr>
<tr>
<td>July 26</td>
<td>Summer 2019 semester ends</td>
</tr>
<tr>
<td>July 31</td>
<td>Grades due for traditional semester courses</td>
</tr>
</tbody>
</table>
The University reserves the right to make adjustments to the academic calendar as necessary.

Please note that for courses that start or end at times other than indicated or are of a different length, DIFFERENT dropping, adding and refund dates apply. It is the student’s responsibility to be aware of these dates. Final grades for Open Learning courses are due from the instructor on the Wednesday of the following week after the class ends. Dates for Open Learning courses are available at Open Learning schedules or by calling the Enrollment Services Office at 248.204.2280.

IT scheduled downtime for upgrades and maintenance:

Weekend of September 21, 2018
Holiday Break – December 22, 2018 – January 1, 2019
Spring Break – March 10-17, 2019
Weekend of May 24, 2019
Weekend of August 3, 2019
Possible Is Everything

Leading-edge, technology-infused academic programs. Dynamic campus life. NAIA, varsity, junior varsity, club, and intramural athletics. Proven career placement. Lawrence Technological University is for students who dare to believe everything is possible and know that possible is everything. An independent, accredited university founded in 1932, Lawrence Tech offers more than 100 academic programs at the associate, bachelor's, master's, and doctoral degree levels. The University is composed of Colleges of Architecture and Design, Arts and Sciences, Business and Information Technology, and Engineering. Approximately 3,100 students are enrolled in full-time, part-time, day, evening, weekend, online, credit, and non-credit programs.

Lawrence Tech combines the benefits of a close, caring, small-college atmosphere with the academic depth and scope of a larger university. Lawrence Tech takes a personal approach to education, and the University attracts students who think big and dare to make a difference. They're highly motivated students with a tremendous will to succeed, to excel, and to seek out the best in whatever they do.

Lawrence Tech has a reputation for excellence. Most students claim that the University's programs are rigorous and challenging – programs that unapologetically demand commitment. It is because of these high standards and their educational preparation that Lawrence Tech graduates report (in numbers well above national norms) that they arrive in the workplace feeling prepared and ready to do their jobs.

Independent studies also confirm that Lawrence Tech students rapidly achieve placement success. The Brookings Institution ranks LTU fifth among U.S. colleges and universities for boosting graduates’ earning potential. Payscale reports that salaries of LTU bachelor's graduates are among the top 15 percent of all U.S. universities. Lawrence Tech provides a rigorous, high-quality education – an education that clearly pays off. In addition, 86 percent of students are employed or registered for graduate school at commencement, above the national average.

The heritage and educational philosophy of the University is summed up in just three words in the University motto, adopted shortly after Lawrence Tech was founded in 1932 – “theory and practice.” It means that Lawrence Tech seeks to explain not only why something should work, but also how it works in real situations and applications. Many LTU faculty have years of successful industrial and professional experience in addition to their academic credentials. They've learned what succeeds in the “real” world, and they’ll try to make sure that students do, too.

The University also maintains close partnerships with the industries and professions that its students and graduates serve in order to provide students with the skills employers need. Lawrence Tech’s proximity to some of the world’s leading industrial, technological, business, and scientific enterprises also gives students the opportunity to participate in co-ops, internships, part-time jobs, and networking opportunities. For example, 61 of the top 100 automotive suppliers to North America are headquartered in Michigan, and 1,250 foreign firms from 40 countries operate in the Detroit region.

Lawrence Tech students are strongly encouraged to interact with the professional world throughout their academic program. A number of professional societies are active on campus and help students network with men and women already working in specific fields. Many of the academic programs also require participation in professional projects that seek to solve real
problems facing practicing architects, engineers, managers, scientists, and others. The projects expose students to a host of real-world challenges, and Lawrence Tech students regularly earn top awards in competitions that pit them against students from other colleges and universities.

MISSION, VALUES, VISION, AND CAUSE
Lawrence Technological University was founded as an independent nonprofit institution of higher learning. On a regular basis, the University community – including trustees, administrators, staff, faculty, students, and alumni – meets to review, establish, and achieve the ambitious goals set forth in the Strategic Plan, to reflect upon hopes for the future, and to elucidate the purposes for which Lawrence Tech operates and serves. The latest edition of Lawrence Tech’s Strategic Plan can be viewed at www.ltu.edu/strategicplan.

Part of this planning process is to review and direct the evolution of the mission, values, vision, and cause statements that guide Lawrence Tech’s progress. These statements are:

Mission
To develop innovative and agile leaders through a student-centric learning environment and applied research embracing theory and practice.

Values
Character and Integrity
Theory and Practice
Teamwork and Trust
Student-focused and Caring

Vision
To be recognized for transformative STEM and Design education that develops leaders with an entrepreneurial mindset and global perspective.

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

ACCREDITATION AND MEMBERSHIPS
Lawrence Technological University is accredited by the Higher Learning Commission (HLC) (www.hlcommission.org, 312.263.0456). The HLC accreditation report is on file in the University’s library and is available for public review by patrons. Various graduate and undergraduate degree are additionally accredited through appropriate national professional agencies:

Architecture: NAAB
Business and Information Technology: AACSB, ACBSP, IACBE
Chemistry: American Chemical Society
Engineering: ABET
Game art, graphic design, industrial design, interaction design, interior design, and transportation design: NASAD
Interior architecture and design: CIDA

Lawrence Tech’s institutional memberships include:

Advanced Acceptance Program
American Association of Collegiate Registrars and Admissions Officers
American Association of University Administrators
American Library Association
American Society for Engineering Education
Association of College Administration Professionals
Association of College Admissions Counselors (national, Michigan, and Ohio)
Association of College and University Housing Officers
Association of Collegiate Business Schools and Programs (ACBSP)
Association of Collegiate Schools of Architecture
Association of Fundraising Professionals
Association of Independent Technological Universities (AITU)
Association of International Educators (NAFSA)
Association of the United States Army
Association of Title IX Coordinators (ATIXA)
Association to Advance Collegiate Schools of Business (AACSB)
Automation Alley
Building the Engine of Community Development in Detroit (BECDD)
College Board
Council for Advancement and Support of Education
Council for Higher Education Accreditation
Council of Interior Design Accreditation
Detroit Athletic Club
Detroit Economic Club
Detroit Regional Chamber of Commerce
Detroit Zoological Society
Digital Manufacturing and Design Innovation Institute
Educational Teleconsortium of Michigan
EDUCAUSE
Engineering Society of Detroit
Higher Learning Commission
International Assembly for Collegiate Business Education (IACBE)
Leave a Legacy Southeast Michigan
MI-AHEAD
MichBio
Michigan Academy of Science, Arts and Letters
Michigan Association for Foreign Student Affairs
Michigan Association of Collegiate Registrars and Admissions Officers
Michigan Campus Compact
Michigan Community College Virtual Learning Collaborative
Michigan Economic Developers Association
Michigan Independent Colleges and Universities (MICU)
Michigan Israel Business Bridge
Michigan Student Financial Aid Administrators
Michigan Venture Capital Association
Midwest Association of Student Financial Aid Administrators
National Academic Advising Association
National Architectural Accreditation Board
National Association of Colleges and Employers
National Association of Independent Colleges and Universities
National Association of Intercollegiate Athletics
National Association of Schools of Art and Design
National Association of Student Financial Aid Administrators
National Defense Industry Association
National Financial Aid Association
Oakland Country Workforce Development Board
Partnership for Philanthropic Planning
Planned Giving Roundtable of Southeast Michigan
The Sloan Consortium
Southfield Arts Commission
Southfield City Centre
Southfield SmartZone
TiE - Detroit (The Indus Entrepreneurs Organization)

Lawrence Tech is also a member of nearly all chambers of commerce in the surrounding counties of Oakland, Wayne, and Macomb, including Southfield and Greater Detroit, and the U.S. Chamber of Commerce.

Faculty and staff are additionally members of a wide variety of local, state, and national professional organizations appropriate to their disciplines. Professional organizations with active student chapters at Lawrence Tech are listed in the Services for Students section of this Catalog.

DAY, EVENING, WEEKEND, AND ONLINE CONVENIENCE

Lawrence Tech’s graduate programs are designed for traditional students as well as for working professionals. The great majority of the University’s bachelor's degree classes are offered in day and evening schedules that complement each other. Lawrence Tech is one of only a few universities to offer a complete selection of bachelor’s and graduate degree programs in the evening. No stranger to providing the convenience of evening classes, Lawrence Tech pioneered some of the nation’s first such programs in 1932.

A growing number of graduate degrees, certificates, and courses are offered online. Others are delivered in hybrid mode, meaning that some class sessions are held in the classroom while others are held online.

Graduate and undergraduate classes are usually offered on a semester calendar – two semesters of 16 weeks. The fall semester begins in late August and ends in mid-December. The spring semester begins in January and ends in mid-May. There is also a summer session that offers students the opportunity to accelerate and continue academic progress or make up deficiencies. Certain programs may also be offered on special schedules that accelerate class meetings over shorter periods. Consult the registrar about these opportunities.

CLASSES AND FACULTY

Lawrence Tech’s moderate size encourages close interaction among students, faculty, and staff. Classes are generally small, especially for upperclassmen, and individual initiative is stressed.

Lawrence Tech has more than 400 full- and part-time faculty members. Faculty exemplify the University’s motto of “theory and practice,” by bringing both academic experience and a wealth of personal real-world research, business, or industrial experience to the classroom or laboratory. In addition to courses taught by Lawrence Tech’s full-time professional faculty, it isn't unusual for students in appropriate disciplines to take classes taught by adjunct faculty who are successful corporate executives, practicing accountants, managers, entrepreneurs, engineers,
architects, attorneys, and scientists. Such exposure is deliberate on the part of the University and seeks to help students develop an awareness of the most current real-world problem-solving applications of their academic studies.

Lawrence Tech students find their professors are normally easily accessible and are eager to discuss individual questions, academic progress, or concerns outside of class. The University has a tradition of an “open door” policy with faculty, department chairpersons, deans, the president, and other administrative staff.

**DIRECT STUDENT INTERACTION**
The successful Lawrence Tech student generally arrives on campus with a full measure of ability and self-initiative. Self-initiative is Lawrence Tech’s term for a proper combination of motivation and self-reliance. These students appreciate the institutional position that the University exists for, and interacts with, the student – not relatives, spouses, or friends wishing to represent them. The fact that Lawrence Tech students are of a maturity that requires no such representation helps ensure that they are prepared for responsible full- or part-time employment during their academic career and, following graduation, for professional employment or continued study.

**AFTER GRADUATION**
About 80 percent of Lawrence Tech’s more than 35,000 degree-holding alumni reside in Michigan and the Midwest, but alumni also live all over the world. Lawrence Tech’s Alumni Association is the international forum for active graduates. The association’s website, [www.ltu.edu/alumni](http://www.ltu.edu/alumni), provides access to everything from lifetime email accounts and events calendars to job search assistance. The association holds meetings and sponsors a variety of activities and services for members in southeastern Michigan and formal and informal chapters elsewhere in Michigan and other states, including Arizona, California, Florida, and Georgia. Several chapters based on academic interest are also active. The Office of Alumni Relations coordinates alumni activities and serves as a campus liaison for alumni worldwide.

**CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT**
Continuing education and professional development are vital components in career development and are reflected in today’s critical need to prepare for the future. Lawrence Tech’s Professional Development Center assists organizations and individuals in maintaining their competitive edge in today’s marketplace by improving skills, knowledge, and productivity, whether focused on technical, production, managerial, administrative, or executive issues. Lawrence Tech offers many special non-degree academic opportunities. Services range from one-time onsite training sessions to customized development of entire training curricula. The Professional Development Center utilizes a range of resources, calling upon the extensive skills and talents of a variety of consultants, instructors, curriculum designers, trainers, and educational developers, whose services are complemented by a support staff that works closely with every client.

Working with the colleges of the University, the Professional Development Center designs, develops, and delivers non-degree credit programs in Six Sigma, lean training, project management, leadership and executive coaching, and insurance studies. Other services include:

- Public programs in the form of seminars, workshops, conferences, and symposia which serve the professional development needs of alumni and the University's constituent audiences;
Lawrence Technological University

- Employee development and training programs, which are typically offered off campus to business, industry, government, and professional associations;
- Mentoring and career coaching; and
- Consulting.

For further information on professional development programs and/or related meeting services, contact the Professional Development Center at 248.204.4050.
Your Campus and Community

Lawrence Technological University's 107-acre campus is located at the center of the nation's #1 region for engineering, technology, and architecture in the Oakland County city of Southfield, a suburban community of more than 70,000 people.

Lawrence Tech's location is one of the University's greatest assets, providing many nearby opportunities for students to network with practicing professionals, participate in career-related organizations, and find internships, co-ops, and full- and part-time employment during college and after graduation. Southeastern Michigan is a hub of American business and industry. It is a manufacturing and corporate center, the site of some of the world’s outstanding technological accomplishments, and a focal point for cultural activities and recreation. With more than $42 billion in goods exported from the area, the Metro Detroit region ranks sixth nationally in total exports.

Within a 15-mile radius of campus are world headquarters for many of the nation’s leading research, industrial, and manufacturing firms. And while the area’s economy is substantially more diverse than in the days when the region was dubbed the world’s auto capital, fully one third of all U.S. auto production still takes place within 70 miles of the campus – in some of the planet’s most sophisticated, highly automated, and innovatively managed work environments.

Lawrence Tech is part of the Oakland County/Automation Alley SmartZone, one of the state’s foremost concentrations of and magnets for high-tech business and enterprise.

Oakland County is one of the wealthiest counties in the nation and ranks in the top 10 when compared to counties of similar size on selected indicators of prosperity and is a lead exporter, with businesses producing $14.6 billion in merchandise exports. The county is a leading center of international commercial activity and home to more than 1,000 firms from 40 countries. More than one-third of Michigan’s research and development facilities are located in the county, and 64 of the global 100 automotive original equipment manufacturers have operations in the county. In addition, Oakland County has one of the leading high tech workforces anywhere in the nation. Job creation and diversification are transforming Oakland County's economy from manufacturing-based to knowledge-based through Oakland County's Emerging Sectors initiative. Since inception, the initiative has generated $4.6 billion in private investment and has created and retained more than 81,000 jobs.

Nearby recreational opportunities abound – more than 1,400 lakes, five ski areas, nearly 30 public fishing sites, and more golf holes per capita than any other place in the country. Major entertainment facilities within a half-hour’s drive include the DTE Energy and Meadow Brook outdoor music theaters, Little Caesars Arena (home of the Detroit Red Wings and Detroit Pistons), Ford Field (home of the NFL Detroit Lions), and Comerica Park (home of the MLB Detroit Tigers). Additional attractions include the Cranbrook Museums, the Detroit Zoo, the Detroit Institute of Arts, Detroit Historical Museum, Motown Museum, The Henry Ford, Charles H. Wright Museum of African American History, and more.

UNIVERSITY BUILDINGS

The Gregor S. and Elizabeth B. Affleck House, designed by Frank Lloyd Wright and completed in 1941, was given to LTU in 1978 by the late Afflecks' children, Mary Ann Lutomski and Gregor P. Affleck. The home is located in the nearby city of Bloomfield Hills. It is considered an outstanding example of Wright's Usonian work. The Affleck House is managed by the College of Architecture and Design.
The **Alumni House**, built in 1959 and substantially upgraded in 1996, houses the offices and facilities for non-degree professional training and business acceleration.

The **Applied Research Center** houses labs and offices for the Blue Devil Motorsports student teams (Formula SAE, Formula Hybrid, Baja SAE, Supermileage SAE, and SAE Aero Design); the transportation design program’s clay modeling studio; a wind tunnel; and the Johnson Controls Vehicle Engineering Systems Laboratory, which features a unique 4 x 4 chassis dynamometer.

The **Architecture Building**, completed in 1962, houses classrooms, studios, and faculty offices for the College of Architecture and Design. A 325-seat auditorium is also located here, as well as a gallery for changing exhibits.

The **Art and Design Center** houses College of Architecture and Design studios and computer labs.

The **Wayne H. Buell Management Building**, completed in 1982, is a 115,000-square-foot structure dedicated to the memory of Lawrence Tech’s third president. It houses the College of Business and Information Technology, library, dining commons (Real Food on Campus, [RFoC]), and bookstore. The Offices of the President and the Provost, are also here. A fully enclosed two-story atrium hosts a variety of special events and offers a pleasant spot for students to eat, study, or visit with friends. The atrium also features an ATM, Einstein Bros. Bagels, and a Provisions on Demand (P.O.D.) express outlet.

Connected to the Engineering Building is the **Center for Innovative Materials Research** (CIMR), a state-of-the-art laboratory for the research, development, and testing of carbon-fiber composites and other advanced materials, such as ceramics and polymers for defense, homeland security, automotive, and infrastructure applications. Dedicated in 2008, CIMR was made possible by an $11 million cooperative research agreement with the Army Research Lab and the U.S. Army Tank-Automotive Research, Development and Engineering Center – an unprecedented federal partnership with a private Michigan university.

The **Detroit Center for Design + Technology** (DCDT) on Woodward Avenue in downtown Detroit is home to a number of the College of Architecture and Design’s academic, research, outreach, and community programs.

The **Edward Donley Residence Hall**, opened in 2002, provides modern, fully furnished air-conditioned apartment-style units and accommodates more than 200 students. The Edward Donley Residence Hall was dedicated in 2016 in honor of alumnus and dedicated LTU supporter Ed Donley, BME’43, HD’76, HD’87. See the Housing section of this Catalog for additional information.

The **East Residence Hall**, opened in 2018, accommodates 308 freshman students. The four-story building features furnished community-style rooms that each accommodate two students. The building has communal laundry, two bathroom facilities on each floor, a game room, bike storage facility, a music practice room, and lounges throughout.

Lawrence Tech’s **Engineering Building** was the first building on the Southfield campus when it opened in 1955. Expanded in 1987, the building contains classrooms, laboratories, and offices for the College of Engineering.
The **Enterprise Center** office complex was acquired by the University in 2015 and will ultimately accommodate offices for academic programs, business accelerator space, the Southfield SmartZone, and Southfield Michigan Works!

The **General Services Building** houses the offices of the University architect, athletic coaches, Campus Safety, and Mail Services.

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

The **Quadrangle** at the center of campus features crisscrossing paths, granite benches, Champion trees, a grassy bioswale that filters rainwater, and Ockham’s Wedge, a sculpture by world-renowned artist Beverly Pepper. The Quad also caps a field of 120 geothermal wells that heat and cool the Taubman Center, which has no gas hookup.

The **Lloyd E. Reuss Residence Hall**, opened in 2015, accommodates 150 upperclassmen students. The two-story building features five living areas with 16 double-occupancy units. Each area has its own lounge with kitchenette space. Amenities include a central laundry on both floors, a multi-purpose room, game room, and two conference-type spaces. See the Housing section of this Catalog for additional information.

The **Don Ridler Field House**, built in 1987, memorializes Don Ridler, the beloved coach and athletic director who led Lawrence Tech basketball teams of the 1940s and 1950s to national prominence. The building includes a 1,500-seat gymnasium, exercise track, weight and conditioning room, saunas, racquetball courts, and locker facilities.

The **Science Building**, opened in 1967, has been extensively renovated and equipped with upgraded computer, lab, and multimedia equipment. It contains classrooms, laboratories, and faculty offices for the College of Arts and Sciences – including the Departments of Natural Sciences; Mathematics and Computer Science; and Humanities, Social Sciences, and Communication. The 303-seat Mary E. Marburger Science and Engineering Auditorium is located at the south end of the building.

The **South Residence Hall**, opened in 1977, provides fully furnished air-conditioned apartment-style units for nearly 400 students. See the Housing section of this Catalog for additional information.

Lawrence Tech’s **A. Alfred Taubman Student Services Center**, named for a former student and one of the University’s most generous benefactors, is a 42,000-square-foot facility at the center of campus that provides convenient one-stop access to the Offices of Admissions, Financial Aid, the Registrar, Cashier, Dean of Students, Career Services, International Programs, Student Engagement, Clinical Counseling Services, University Housing, Laptop Help Desk, Academic Achievement Center, Disability Services and more. The building, which was completed in 2006, is also Leadership in Energy and Environmental Design (LEED) Silver-certified. It functions as a living laboratory of energy-efficient technologies, including a soaring atrium and vegetated “green” roof.

The **A. Alfred Taubman Engineering, Architecture, and Life Sciences Complex, Home of the Marburger STEM Center** opened in the fall of 2016 with new facilities for LTU’s robotics program, science labs, and biomedical engineering labs, as well as space for multidisciplinary
Lawrence Technological University

student collaboration. It, too, has many sustainable features. The building connects the Science and Engineering buildings.

The University Services Building houses the Department of Finance and Administration, Business Services, Human Resources, University Advancement, Marketing and Public Affairs, LTU Online, and e-Learning Services.

Lawrence Tech’s University Technology and Learning Center, opened in 2001, is an 87,000-square-foot building housing a variety of technology labs, as well as architecture and design studios. It also houses the University Gallery, Maibach Inter-Faith Lounge, Lear Auditorium, Denso Interactive Center, and Media Services Studio. The building connects to the Architecture and Engineering buildings.

Athletic fields are used for football, soccer, lacrosse, and flag football games.
Services for Students

ZAVEN MARGOSIAN ACADEMIC ACHIEVEMENT CENTER (AAC)

Mission
The AAC supports 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.

Services Offered

Tutoring is available for architecture and design, chemistry, biology, computer science, engineering, ESL conversation, mathematics, physics, and writing-intensive courses. Tutors include LTU faculty members and exemplary students who have successfully completed the courses they tutor. Students may walk into the AAC or schedule an appointment to work with a tutor any weekday during regularly scheduled hours or meet with a tutor online. Visit www.ltu.edu/aac/tutoring.asp to view the tutor schedule.

Academic Success Workshops are offered every semester. The workshops are designed to aid students in their pursuit of academic excellence. The workshops are designed to help students improve skills such as effective listening and note-taking, goal setting, effective reading of textbooks and literature, research, and time/stress management.

Pre-Courses are free workshops offered before the fall semester starts. Pre-courses introduce students to the material that will be covered in specific classes while refreshing them on material they learned in the past and need to review. Visit www.ltu.edu/aac/precourses.asp to view the schedule and register online.

The Writing Center helps LTU students become better writers. Writers at any stage in the writing process can work one-on-one with peer and faculty tutors in a constructive process that will empower them to write well. Workshops are also offered each semester.

Supplemental Instruction (SI) is offered in select natural science courses. It is a peer-led program designed to allow students to interact as they learn. Students participating in the SI sessions discuss important concepts and develop strategies for learning the subject.

Study Tables is a program designed to help student-athletes and student organization members succeed in their courses. Time slots in the AAC are provided to the student-athletes and student organization members for study. The AAC staff monitors the program.

Testing Services (proctored testing) is offered for students who are unable to complete exams/quizzes during regularly scheduled class time. To use this service, students must contact the AAC at least 24 hours in advance to schedule an appointment. Visit www.ltu.edu/aac/exam-proctor.asp for additional information.

The AAC is located in the A. Alfred Taubman Student Services Center in room C201.
ACADEMIC COUNSELING AND TUTORIAL SERVICES

All new students, both freshmen and transfers, are expected to attend orientation sessions prior to or during their first semester on campus. During these sessions, student opportunities, responsibilities, and regulations are discussed, and registration is completed. A number of University counselors are available for academic advice, counseling, and registration assistance.

The Academic Achievement Center works with the Office of Disability Services to provide tutorial and testing services for students with disabilities. Contact the Office of Disability Services at 248.204.4100. Also see Disability Services.

ACTIVITIES AND ORGANIZATIONS

Whatever your particular interests or needs, you can find a campus activity or organization that will provide not just fun and friendships but also opportunities to hone your professional and leadership skills. Joining a campus club or organization can help you prepare for life after college or simply provide a great way to relax and recharge. As they look back on their college years, alumni often say that some of their most rewarding experiences came from their participation in co-curricular activities.

So take a look at the list that follows, choose one (or several) activities and become involved! And remember to let the Office of Marketing and Public Affairs know what your organization is doing. The marketing staff can help with publicity and regularly reports news of campus activities to the press, radio, and television.

Students interested in forming new organizations should contact the Office of Student Engagement. Student Government approval is necessary for official recognition and funding assistance. To be eligible to run for office in any campus organization, students must have a cumulative GPA of at least 2.3. They will be asked to withdraw from office at the end of any semester in which their semester GPA falls below 2.0.

Student Government

Lawrence Tech’s Student Government is recognized by the University administration as the official representative for the entire student body. It offers the opportunity for students to better themselves and their University through involvement in campus activities. The Student Government provides an avenue for every student to express concerns, while endorsing Lawrence Tech organizations, clubs, and teams.

The Student Government is composed of three interacting branches working in cooperation with each other.

- Student Administration (president and executive vice president)
- Student Senate (senators and senate leader)
- Student Judiciary (parliamentarian and Judicial Review Committee)

The president and executive vice president are elected each spring. Students may join the Student Senate, even as freshmen, during a campus election in September. They may represent their college, area of residency, or student interest. Meetings are bi-weekly and legislative. Funding bills, resolutions, and other matters are discussed and implemented. There is compensation for all Student Government positions! If you have any questions or would like to run for a Senate seat, please contact stugov@ltu.edu.

Student Government Informational Board
Student Government also coordinates campus activities, which enhance and enrich the quality of student life at Lawrence Tech by addressing the needs and interests of its diverse student body. The board is also involved in planning University-wide events, such as Homecoming, Winterfest, and the Blue Devil Bash. To get involved, contact the Office of Student Engagement at 248.204.3142 or email stugov@ltu.edu.

Registered Student Organizations **
American Chemical Society (ACS)*
American Institute of Architecture Students (AIAS)*
American Society of Biochemistry and Molecular Biology*
American Society of Civil Engineers (ASCE)*
American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)*
American Society of Mechanical Engineers (ASME)*
Anime Club
Arab American Association of Engineers and Architects (AAAEA)
Architectural Engineering Institute (AEI)*
Association of Indian Students
Biomedical Engineering Society (BMES)*
Blue Devil Broadcasting
Chinese Student Association
Club Track and Field Team
DECA
Fishing Club
Institute of Electrical and Electronics Engineers (IEEE), Southeastern Michigan Chapter*
International Society of Physics Students (ISPS)*
National Organization of Minority Architects (NOMAS)*
OUT! at LTU with Friends
Saudi Student Association
Society of Suicide Awareness and Prevention
Spanish Speaking Student Association
Student Athlete Advisory Committee
Theta Tau (Co-ed Professional Engineering Society)*
Veterans of America

* Professional Organization
** This list is by no means exhaustive. Students should contact the Office of Student Engagement for a complete and updated list of all registered student organizations and groups on our campus.

Other
Chi Epsilon Honor Society
Lambda Iota Tau Honor Society
Tau Beta Pi Honor Society

Greek Life
(greeklife@ltu.edu, greekcouncil@ltu.edu, sorority council@ltu.edu, ifc@ltu.edu)
Social fraternities and sororities are regulated on campus by three governing bodies which assist the individual Greek life organizations in maintaining standards, while also creating opportunities to collaborate and socialize. The Greek Council provides long-term support of Greek life on campus and coordinates and organizes “All Greek” events. The two other councils,
the Interfraternity Council (IFC) and the Sorority Council, provide oversight specific to a particular type of Greek organization.

Greek life not only provides opportunities for students to perform civically and socially and to develop long-term relationships, as well as leadership and communication skills, but they also take academics just as seriously.

**Interfraternity Council**
Composed of the elected officers and representatives of the fraternities at Lawrence Tech, the IFC provides leadership for six fraternities and improves communication among the various fraternities on campus.

**Sorority Council**
Composed of representatives from each of the four sororities at LTU, the Sorority Council provides leadership and improves communication among the sororities on campus.

**Greek Letter Organizations**
**Fraternities**
- Alpha Sigma Phi
- Phi Beta Sigma
- Phi Kappa Upsilon
- Sigma Phi Epsilon
- Sigma Pi

**Sororities**
- Chi Omega Rho
- Delta Phi Epsilon
- Delta Tau Sigma
- Kappa Beta Gamma

**ATHLETICS AND INTRAMURALS**
The following programs are administered by the Department of Student Recreation, Athletics, and Wellness, located in the Don Ridler Field House.

**Varsity Athletic Programs** The Lawrence Technological University Department of Student Recreation, Athletics, and Wellness is committed to providing a competitive, culturally diverse, and gender-equitable sports program that operates within the rules and regulations of the University and the National Association of Intercollegiate Athletics (NAIA). The department, along with its student-athletes, strives to uphold the five “Champions of Character” core values of respect, responsibility, integrity, servant leadership, and sportsmanship. The Blue Devils currently compete in:

- Men’s and Women’s Basketball
- Men’s and Women’s Bowling
- Men’s and Women’s Cross Country
- Men’s and Women’s Golf
- Men’s and Women’s Lacrosse
- Men’s and Women’s Soccer
- Men’s and Women’s Tennis
- Men’s and Women’s Volleyball
- Men’s Hockey (ACHA)
- Baseball
Softball
Football

Club Sports  Each club sport is a student-led organization composed primarily of students, faculty, and staff. Each club is formed, developed, governed, and administered by the student membership of that particular club, working with the LTU recreation staff. The key to the success of this program and each club is student leadership, interest, involvement, and participation. The recreation staff is available to students for consultation on concerns and ideas and for administrative assistance.

Intramural Sports  Lawrence Tech offers a comprehensive intramural sports program free for all students and field house members. The intramural sports calendar can be found at www.imleagues.com/ltu. Intramural sports include, but are not limited to, basketball, flag football, table tennis, indoor soccer (futsal), dodgeball, golf, broomball, badminton, and racquetball. A current LTU ID is required for all student participants. All participants are required to sign up online at www.imleagues.com/ltu. Any questions about the Department of Student Recreation, Athletics, and Wellness should be directed to sturec@ltu.edu.

Fitness and Wellness  The fitness and wellness program consists of Team Fitness, Bootcamp, and Yoga Core Fusion. Classes are free of charge to all students, faculty/staff, and members of the Don Ridler Field House. Each class is taught by exciting and energetic certified instructors. The schedule changes from semester to semester and alterations or additions will be posted on www.LTUAthletics.com.

For more information about any of these programs, visit www.LTUAthletics.com, email sturec@ltu.edu, or call 248.204.3850.

ATM (CASH)  There is an automated teller machine (ATM), hosted by Michigan First Credit Union, located in the atrium of the Buell Management Building, which is available any time the building is open. This unattended station allows withdrawals, deposits, or account transfers, using debit cards with Cirrus, Plus, Pulse, Star, or Quest network logos or a Visa, MasterCard, Discover, or American Express credit card and a personal identification number. For local Michigan First Credit Union branches, call 800.664.3828.

BOOKSTORE  The bookstore is located in the Buell Management Building. Books, supplies, snacks, and Lawrence Tech apparel and gifts may be purchased. Textbooks may be purchased online at lawrence-tech.bncollege.com. Book rentals and eBooks are also available. Fall and spring semester hours are Monday through Thursday, 9 a.m. –7 p.m., Friday, 9 a.m. –2 p.m, and Saturday 9 a.m. – 1 p.m.. For other times, call 248.204.3030 or visit lawrence-tech.bncollege.com.

BUILDING HOURS  In general, campus facilities are open from 7 a.m. to 10 p.m. seven days a week, excluding holidays. Students may use the facilities 24 hours per day provided the dean of their college, a faculty member, or faculty advisor has approved and forwarded to the Department of Campus Safety an extended-access authorization via email. Faculty members and faculty advisors should check with the dean of their respective college regarding the policy on allowing extended access to the facilities of that college. The dean, faculty member, or advisor may forward extended-access authorizations via email to ltu_safety@ltu.edu. Please allow 24 hours advance
notice for extended hours requests. Individuals found not in compliance with this policy may be subject to the University discipline system. Students using campus facilities, especially after hours, must carry their Lawrence Tech identification card with them and must present it if requested to do so by a Lawrence Tech Campus Safety officer.

CAMPUS DINING
Real Food on Campus (RFoC), located on the second floor of the Buell Management Building, is open during the fall and spring semesters and provides “all-you-care-to-eat” meal options that include staffed food stations – comfort food, deli, exhibition, grill, pizza and pasta, market (soups and salads) – and a bakery. Campus Dining also oversees the Einstein Bros. Bagels and a Provisions on Demand (P.O.D.) express outlet in the Buell Management Building atrium, which offers grab-and-go salads and sandwiches, snacks, and beverages.

Lawrence Tech offers residential and commuter meal plans and Blue Devil Dollars. Meal plans are used at the RFoC. Blue Devil Dollars work like a debit card and can be used at all Lawrence Tech dining locations. **Lawrence Tech requires all residential students to participate in a meal plan.**

As the exclusive food service vendor for the University, Aramark has the exclusive right to provide all food services, including catering and concessions, for all University purposes, including events offered by student organizations. Questions regarding this policy may be directed to the director of campus dining at 248.204.3203.

CAREER SERVICES
The Office of Career Services is much more than a place where students can go to find a job when they graduate. The Office of Career Services provides a wide variety of services and programs that can help students develop their career plans and establish career goals by identifying their abilities, values, and interests and then targeting occupations that reflect those abilities, values, and interests.

Services include career advising, on-campus employment, cooperative education and internships, career workshops, resume critiques, mock interviews, career fairs, employer presentations, and on-campus interviews. Lawrence Tech’s online career resource center, Handshake (ltu.joinhandshake.com) lists opportunities for students and alumni. Handshake also allows students to create a professional profile, upload their resumes, follow employers’ news feed, register for career fairs and expos, research employers, and much more.

The Office of Career Services is located in Room C404, A. Alfred Taubman Student Services Center, and is open daily from 8:30 a.m. to 4:30 p.m. Appointments can be made on your Handshake account or by calling 248.204.3140.

The office also posts student employment opportunities. Students may work on campus in the colleges, departments, and offices, such as Campus Dining; Student Recreation, Athletics, and Wellness; and the University Bookstore. Students may view available positions through Handshake ([ltu.joinhandshake.com](http://ltu.joinhandshake.com)) Student assistants are a great asset to the University.

Need help writing a resume? Contact the office to meet with a Career Services staff member for assistance.
COMPUTER AND ONLINE LEARNING RESOURCES
The LTU Laptop Initiative has been transformed into an integral component of the LTuZone™. In addition to providing access to industry-standard software and the hardware, the LTuZone™ includes onsite and remote technical support of its software and hardware, allowing students to focus on their learning.

A uniform suite of up to date industry standard software applications with an industry retail value of more than $75,000 is installed on each laptop. Software applications specific to each college are included, ensuring that LTU students have all the software resources required for their declared majors.

Each fall semester, specially configured high-performing laptops, complete with software, are available to all undergraduate students (including direct-entry architecture and architectural engineering majors) after program conditions are met.

Undergraduate students may obtain a laptop upon registration, payment of a $500 security deposit, and acceptance of the terms and conditions of a laptop agreement. The term of the agreement is up to one year. Graduate students may also obtain a laptop for a charge of $95 per credit hour if laptops are still available at the end of the undergraduate laptop distribution period. Laptops are distributed at the beginning of every semester and each June to incoming freshmen during Orientation and Registration. Identical configuration laptops are also provided to Lawrence Tech faculty, providing seamless interaction between students and faculty in the classroom.

All students, faculty, and staff are provided a LTU email account with all the associated functions of Google Apps for education, including unlimited file storage using Google Drive. Wireless networking is available across the entire campus, making access possible anywhere in the academic cluster and the residence halls. Students may use several public printers across campus located in the Help Desk, the Engineering Building, the library, the Architecture Building, and each of the residence halls.

Computer and Network Use Policy
Access to modern information technology is essential to Lawrence Technological University’s mission of providing the students, faculty, and staff of the University with educational services of the highest quality. The pursuit and achievement of the Lawrence Technological University mission of education, research, and public service requires that the privilege of the use of computing systems and software, internal and external data networks, as well as access to the internet, be safely available to all members of the University community.

The preservation of that privilege for the full community requires that each faculty member, staff member, student, and other authorized user comply with institutional and external standards for appropriate use in order to protect both student and LTU information. Policies and resulting technologies reflect the University goal to protect an individual’s physical and information safety.

To assist and ensure such compliance, Lawrence Technological University established the Computer and Network Use Policy, which can be found at http://www.ltu.edu/ehelp/policies-and-procedures.asp. This policy should be read in conjunction with other University policies; it supplements, and does not supersede, these policies.
Printers
HotSpot printers are located in the library (pay at the desk), in the printLab (Architecture Lounge), and in the atrium of the Buell Management Building. Black-and-white prints are free. There is a charge for color printing.

The Architecture printLab provides students and faculty with an array of services, ranging from wide-format and three-dimensional printing and support studio spaces that facilitate trimming/assembly, screen printing, and bookmaking projects.

Specialized printers produce large-format CAD plots, as well as photo-quality prints and posters. After hours, 24/7 self-service black-and-white printing is available on the public printer near the printLab, as well as color laser printing and scanning on the HotSpot printer in the lobby adjacent to the printLab.

Public Printer Access
The following black-and-white printers are available to all Lawrence Tech faculty, staff, and students, and may be installed on laptops without special permissions:

<table>
<thead>
<tr>
<th>Printer Name</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>C203</td>
<td>Help Desk</td>
</tr>
<tr>
<td>E152</td>
<td>Engineering Building Lounge</td>
</tr>
<tr>
<td>M113A</td>
<td>Library</td>
</tr>
<tr>
<td>APTN1</td>
<td>Donley Residence Hall</td>
</tr>
<tr>
<td>APTS1</td>
<td>South Residence Hall</td>
</tr>
<tr>
<td>APTL1</td>
<td>Reuss Residence Hall</td>
</tr>
<tr>
<td>S202</td>
<td>Arts and Sciences Lounge</td>
</tr>
<tr>
<td>ACRC-Ricoh</td>
<td>Architecture Lounge</td>
</tr>
<tr>
<td>AADC-Ricoh</td>
<td>Art and Design Center</td>
</tr>
</tbody>
</table>

Note: In order to save paper and cut costs, print jobs will not print until they are released. The residence halls have an attendant who will release prints but self-release stations with instructions are located at the other locations.

Hot Spot Printing
Printing is available directly via email from a smartphone, laptop, or tablet to one of our convenient campus locations:

- printLab (Architecture Lounge)
- Buell Management Building (atrium)
- Architecture Resource Center (A131)
- Library

Send an email to papercut@ltu.edu with the document you want to print attached. Then visit any of the four locations above. Use the release station to release/pay for your print.

- Black-and- white printing is free
- Color printing is $.50/page for 8.5” x 11”; $1/page for 11” x 17”
- Payment is available through PayPal or directly at the device by payment card
Help Desk
The Help Desk, located in the Taubman Student Services Center (C203), provides walk-in support to all students, faculty, and staff, including problem diagnosis; laptop distribution, return, and repair; wireless network configuration; password changes; email setup; and more. Laptop diagnosis and minor repairs are handled on the spot. Other repairs are made within 24 to 48 hours, and a loaner laptop is provided if needed. Computer and other device repair is limited to LTU-owned equipment.

Help Desk hours are Monday–Thursday, 8 a.m.–6:30 p.m., and Friday, 8 a.m.–4:30 p.m., during the fall and spring semesters. Telephone support is also provided during these hours at 248.204.2330. The Help Desk also provides after hours and weekend support via email at helpdesk@ltu.edu. Hours are reduced during breaks and the summer months. For more information about Help Desk services and the laptop program, visit www.ltu.edu/ehelp.

My.ltu.edu
Lawrence Tech’s comprehensive e-learning and services portal, my.ltu.edu, offers an expanding variety of resources and conveniences. Among them is Blackboard, a comprehensive and flexible e-learning software platform that delivers the University’s course management system, customized institution-wide portals, online communities, and an advanced architecture that provides for Web-based integration with the University’s administrative systems.

The University’s learning management system offers students the 24/7 access to professors and fellow students that is not available in the typical classroom environment. Professors post their syllabi online, as well as class lectures and assignments, for immediate retrieval anytime, anywhere. Other features available through Blackboard are discussion boards for posting questions to and receiving answers from other students and the professor in the class; Virtual Chat Room capabilities for asynchronous communication with the entire class; the ability to submit assignments to professors; Web conferencing; instant messaging; podcasting; and many others.

LTU Online
LTU Online delivers fully online versions of degree and certificate programs for working students. Today’s global work environment may prevent students from taking on-campus classes. LTU Online is designed to help address these challenges and bring the quality of a Lawrence Tech education to students wherever their work or family takes them.

LTU Online offers core and elective courses in these programs:

- Master of Architecture
- Master of Business Administration
- Master of Civil Engineering
- Master of Construction Engineering Management
- Master of Engineering Management
- Master of Science in Industrial Engineering
- Master of Science in Information Technology
- Graduate Certificate in Cybersecurity
- Graduate Certificate in Project Management

Other degree and certificate programs are under development; students should visit LTU Online (www.ltu.edu/ltuonline) for current information.
All LTU Online degree and certificate programs are academically equivalent to on-campus programs and are fully accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools.

DEAN OF STUDENTS
The Office of the Dean of Students, located in the A. Alfred Taubman Student Services Center (C405), serves as the central resource for activities that are coordinated through the Division of Student Affairs. The dean of students serves as the primary advocate for students and works to ensure that students are offered a quality college experience. Staff members in the Division of Student Affairs provide services to help students successfully complete their academic studies and coordinate opportunities for fellowship, fun, and rewarding college experiences. The Office of the Dean of Students offers personal, confidential, and nonbiased assistance in addressing any concerns a student may have regarding his or her rights or responsibilities as a member of the campus community. Services coordinated by the Office of the Dean of Students include:

Student Events and Activities
Annual social events to encourage students to interact with other students on campus are coordinated by the Office of the Dean of Students. Popular programs include the fall semester Welcome Back Picnic, New Student Convocation, movie nights, and “Pushing Honey Through” certificates for supportive family members of graduating students. Students can also enjoy Homecoming in the fall and Winterfest in the winter months and a host of sporting events.

Student Code of Conduct/Academic Honor Code Adjudication
Honesty, integrity, and caring are essential qualities of an educational institution, and a concern for values and ethics is important to the whole educational experience. The Student Code of Conduct outlines the rights and responsibilities and expected levels of conduct of students in the University community. Fundamental to the achievement of community among the members of the University is the recognition by all such members that each shares a responsibility to observe University regulations. This obligation, which is an extension of the citizen’s responsibility to observe the law of the land, is an essential corollary to participation in the academic rights afforded to members of the University. A student voluntarily joins the Lawrence Technological University community and thereby assumes the obligation of abiding by the standards prescribed in the Student Code of Conduct. The University, through the Office of the Dean of Students, maintains the exclusive authority to impose sanctions for behaviors that violate the Student Code of Conduct. The Student Code of Conduct can be found at www.ltu.edu/myltu/code-conduct.asp. The Academic Honor Code, which is Section C.1. of the Student Code of Conduct, can be found at www.ltu.edu/myltu/honor-code.asp.

Support Services
Students needing assistance with personal or academic challenges during their college career are welcome to contact staff in the Office of the Dean of Students, who can act as liaisons between students and faculty. Academic study skills development and strategies are provided by staff in the Academic Achievement Center.

DISABILITY SERVICES
The Office of the Dean of Students (248.204.4100) coordinates Lawrence Tech’s compliance with Sections 503 and 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act. The University does not discriminate against students with disabilities in recruitment, admission, or treatment after admission. In addition, the University makes reasonable accommodations to permit students with disabilities to fulfill academic requirements and
provides effective auxiliary aids to ensure that they are not excluded from programs because of their disabilities. Eligibility for accommodations is determined on an individual basis.

For additional information on eligibility for services, accommodations, and student responsibilities, visit www.ltu.edu/myltu/disability.asp or contact the Office of Disability Services at 248.204.4100 or disability@ltu.edu to set up an appointment. Students who believe that the University may not be meeting these responsibilities or who believe that they have been otherwise discriminated against based upon their disability may contact the Section 504 officer in the Office of the Dean of Students, Lawrence Technological University, 21000 West Ten Mile Road, Southfield, MI 48075-1058.

**DTE ENERGY ONE-STOP CENTER**
Located on the third floor of the A. Alfred Taubman Student Services Center, the DTE Energy One-Stop Center assists students with records and registration, financial aid, and student accounting transactions. The center is open Monday and Tuesday, 9 a.m.–5:30 p.m., and Wednesday through Friday, 9 a.m.–5:30 p.m.

**FAX SERVICE**
Fax services (send only) are available at the bookstore, which is located in the Buell Management Building atrium. There is a small fee for this service.

**FIELD HOUSE/RECREATION**
The Don Ridler Field House includes a gymnasium, weight and conditioning room, running track (1/11th mile), two racquetball/wallyball courts, fitness room, spirit shop, and men’s and women’s locker rooms with showers and saunas. Fitness and wellness programs are available to all members.

**Field House Hours**
*September–Mid-May*
- Monday 6:30 a.m.–midnight
- Tuesday 8 a.m.–11 p.m.
- Wednesday 6:30 a.m.–midnight
- Thursday 8 a.m.–11 p.m.
- Friday 6:30 a.m.–10 p.m.
- Saturday 9 a.m.–8 p.m.
- Sunday 12 p.m.–10 p.m.

*Mid-May–August*
- Monday 6:30 a.m.–10 p.m.
- Tuesday 8 a.m.–10 p.m.
- Wednesday 6:30 a.m.–10 p.m.
- Thursday 8 a.m.–10 p.m.
- Friday 6:30 a.m.–9 p.m.
- Saturday 9 a.m.–5 p.m.
- Sunday 12 p.m.–5 p.m.

**HOUSING**
Housing at Lawrence Tech provides more than just a room in which to sleep and study. The living and learning environment that is fostered within University Housing supports students’ academic, social, cultural, and personal growth. The University Housing staff is committed to assisting residents in all aspects of their collegiate experience by providing a safe and healthy
environment in which to pursue their academic goals, promoting the ideals of community living by emphasizing personal responsibility and respect for others, creating opportunities for student involvement and personal development, and offering advice and information to residents.

The friendships that develop among University Housing residents is unequaled by any other living option. Residents who take advantage of this environment tend to improve both their academic performance and their satisfaction with their college experience. Each residence hall community offers opportunities for students to get involved in numerous activities and programs.

Lawrence Tech has four residence halls: Edward Donley Hall, South Hall, Lloyd E. Reuss Hall, and LTU’s newest residence, East Hall, which is reserved for first-year residents. East Hall features furnished community-style rooms that accommodate two students. The building has communal laundry and two bathroom facilities on each floor. Reuss Hall also features furnished community-style rooms that accommodate two students. Reuss is home to our two Living, Learning Communities—Leadership and Sustainability. Donley Hall and South Hall feature furnished one- and two-bedroom apartment-style suites that accommodate two to four students, depending on the size of the suite. Both buildings include private bathrooms, and full kitchens. Washers, dryers, and dishwashers are available in each suite in Donley Hall. Free laundry facilities are located within South. All the residence halls provide air-conditioning, cable television, and wireless connectivity. Free parking close to each building is available for residents. Reuss, Donley and South are reserved for upperclassmen students only.

Anyone seeking on-campus housing should complete a Housing Application and Contract via their Slate account with Admissions and pay the application fee. Students are encouraged to apply for housing as soon as they are admitted.

Applicants must be admitted to Lawrence Technological University in order to live in University Housing. Students may apply for University Housing before registering for classes but will not be allowed to take occupancy of their assigned room until they are registered. Graduate students must maintain one course (three to four credit hours) per semester to live in housing. For more information, please contact the Office of University Housing at 248.204.3940.

Lawrence Technological University encourages all students with 59 credits or less, including international students, to reside in on-campus housing.

Renter’s Insurance
See Student Insurance.

IDENTIFICATION CARD
Lawrence Tech’s student identification card (ID card) combines a photo with a proximity chip/magnetic strip/bar code and a cash debit option that allows students to load their card with Blue Devil Dollars, which can be spent at all Lawrence Tech dining locations. The ID card also serves as the student’s library card and should be presented at the circulation desk when checking out books or using the Reserve Desk. Instructions for applying for a card are provided to new students during Orientation and Registration (O & R). There is a $10 replacement charge for lost ID cards. Replacement ID cards must be purchased at the DTE Energy One-Stop Center. If an ID card is damaged and needs to be replaced, the student must present it at the DTE Energy One-Stop Center to have the replacement charge waived. Identification cards are provided to currently enrolled Lawrence Tech students.
INTERNATIONAL STUDENTS
The Lawrence Tech community places great value on the cultural and intellectual diversity that international students bring to the University. The Office of International Programs serves as the primary contact for international students and scholars on campus. This population includes undergraduate, graduate, and doctoral students and research scholars.

The Office of International Programs advises foreign nationals on status maintenance, government regulations, visa requirements, and work authorization, and provides a host of other resources. The office works to resolve student compliance issues with Homeland Security and United States Citizenship and Immigration Services (USCIS), as well as to process and update documentation. This includes updating and maintaining the Student and Exchange Visitor Information System (SEVIS) to comply with government reporting requirements, authorizing F-1 work authorization for Curricular Practical Training and Optional Practical Training, STEM extensions, J-1 academic training, program extensions, and other SEVIS updates. The office also works to update faculty, staff, and students on government regulations and issues impacting international students studying in America.

The Office of International Programs provides a mandatory and comprehensive orientation, held the week before classes begin each semester, to support international students in acclimating to their new environment. Students also take placement exams and meet with their academic advisors during this time to register for classes.

The Office of International Programs designs and implements events that increase global and cultural awareness among all Lawrence Tech students. The office provides outreach programs and workshops on a myriad of topics, including employment, cultural transition, academic issues, campus resources, and programming.

The Office of International Programs is located in the A. Alfred Taubman Student Services Center in room C405 and can be reached at 248.204.4100 or by emailing international@ltu.edu. Normal office hours are Monday – Friday, 8 a.m. – 4:30 p.m. and evenings by appointment.

LAPTOP SUPPORT HELP DESK
See Computer and Online Learning Resources.

LIBRARY
Lawrence Tech’s library is conveniently located on the lower level of the Buell Management Building, one flight below the atrium. The room boasts an attractive indoor garden area for year-round greenery. The library houses a broad selection of books, periodicals, online databases, full-text electronic books and periodical articles, microforms, and other material that has been selected to enhance the curriculum areas of the University. Collection strengths include engineering, technology, architecture, and management. The library also maintains graduate theses and dissertations from all LTU graduate students. Among the library’s unique resources are the 3,000-volume working library of the late renowned architect Albert Kahn.

The professional librarians, on duty during all scheduled hours, are skilled in locating information both in the Lawrence Tech collection and at numerous other institutions. They also provide individualized and group instruction on how to use the library efficiently. Students have full access to the stacks for browsing and independent research and can always count on getting personalized reference assistance from a reference librarian.
While the library’s discovery catalog is available to the public on the Lawrence Tech website (www.ltu.edu/library), premium content, including databases and full-text material, tailored to serve the needs of Lawrence Tech curricula, is available online via password-protected links. Students can access this content using their campus network log-in information whether on- or off-campus. The library hosts more than 359,232 print and electronic books and more than 45,059 print and electronic journal titles.

When an item is not available on campus or online, the library has negotiated agreements with several local academic and public libraries for direct borrowing privileges or, in some cases, for borrowing through a special arrangement. As an alternative, materials can be requested and shipped directly to Lawrence Tech from Michigan libraries via the MelCat service or from libraries across the nation through the use of interlibrary loan. It is recommended that students always make the Lawrence Tech library their first stop when beginning a research project.

Library Account
All students have a special library account that may be accessed through the “My Account” feature of the library’s online catalog (http://ltu.worldcat.org), or there is a link for your library account on the homepage. Once logged in, students may place requests directly from the catalog, review their account for items checked out, view fines, save searches and titles to a folder, etc. For questions about how to use this feature or for any other questions, contact the library at 248.204.3000 or email to refdesk@ltu.edu.

Loan Privileges
Lawrence Tech students may borrow most material from the library for three weeks, and can renew most items if no one else is waiting for the material. Certain special materials circulate for shorter periods. Reference materials and many Reserve Desk items must be used in the library. Students with fines or lost-item charges of $10 or more may not borrow library materials until the fines are cleared.

As a general rule, the library does not purchase current textbooks, nor can these be borrowed via interlibrary loan. If the library should own a textbook, it will be placed at the Reserve Desk for in-library use.

Renewals
Students may renew material through their online library accounts, or by calling the Circulation Desk at 248.204.3009, as long as no one else has already requested the item.

Overdue Materials
There is a daily charge for overdue items; please see the library website for specific details. Email notices are sent three days before an item is due to remind users to return or renew the material.

Lost-Item Charge
This includes replacement value and a $15.00 service charge. Patrons with lost-item charges or excessive overdue fines are not allowed to check out materials and an Academic Hold will be placed on their records.

Other Services
In addition to curriculum-based materials, the library also carries a large selection of DVDs, a browsing collection of popular books, and a small collection of graphic novels. The staff
Lawrence Technological University

maintains a presence on Web 2.0 sites such as Facebook, streaming information of interest for Lawrence Tech students.

The library also hosts a public printer (M113a) and two scanners, along with black-and-white and color photocopiers, a microform scanner, and 12 student computer workstations. Color prints are available at the library via the

The LTU library participates in a network of librarians offering a 24/7 chat reference service called "Research Help Now!" During library hours, it is best to call or email the library (248.204.3000 or refdesk@ltu.edu) directly for assistance, but after hours, "Research Help Now!" is there whenever a librarian's help is needed.

LOCKERS
Lockers in the Architecture Building and the University Technology and Learning Center (UTLC) are assigned by the College of Architecture and Design, 248.204.2880.

LOST AND FOUND
The Department of Campus Safety (248.204.3945) is the clearinghouse for found articles. Campus Safety delivers all found Lawrence Tech laptop computers to the Laptop Help Desk (248.204.2330). For other items, Campus Safety will attempt to contact their owners if they are both identifiable and members of the LTU community. Please note that items in lost and found are discarded after 30 days.

MOTOR VEHICLES AND PARKING
Vehicle Registration
Every member of the LTU community must register their vehicles and display an LTU Parking Permit to park on LTU’s campus. This system was put in place to insure that students, staff, and faculty have adequate parking on campus and that the lots are used by authorized personnel only. Any member of the LTU community who parks an unregistered vehicle on LTU’s campus may receive an LTU Violation Notice. There is no charge for the Parking Permit. To obtain a Parking Permit, visit the Department of Campus Safety’s office, which is located in room G102 in the General Services Building. Make sure to bring the following items and information:

- A valid driver’s license
- A valid vehicle registration
- Banner ID card
- "Optional" Completed vehicle registration form (available as a fillable PDF at: https://www.ltu.edu/campus_safety/parking-registration.asp)

The Parking Permit must be displayed in the registered vehicle. Multiple vehicles may be registered, but each one requires a separate Parking Permit.

Campus Parking
There are several parking lots on campus for faculty, staff, and students, but there are rules and regulations to use them.

- All parking lots are lined and vehicles are to be parked within the designated spaces.
  There is no parking on the diagonal-lined areas in any parking lot.
- No parking is permitted on any campus drive.
- Authorized and assigned parking belongs to an LTU department and/or one individual.
Vehicles parked illegally will be issued LTU Violation Notices. Chronic violations may result in towing.

ONLINE STUDENT SERVICES
Lawrence Tech offers convenient online student services. Students can register for courses, view their academic records and account balances, make tuition payments, and conduct financial aid transactions through BannerWeb from any location at any time.

Students may register online using their nine-digit student identification number and their PIN. Students are required to meet with their advisor prior to registering for classes. In order to be allowed to register, students must not owe a balance from previous semesters.

Students may also view and print an unofficial copy of their student transcript, provided they do not have a hold on their records (the result of owing the University money) that prohibits this function. See also Computer and Online Learning Resources.

OPEN DOOR POLICY
The president’s door is always open to students. Usually after consultation with instructors, department chairs, college deans, the dean of students, the provost, or other responsible administrative offices, students will find that any concerns will be satisfactorily addressed. If not, students may contact the president’s executive assistant, who will prepare a briefing and arrange a convenient appointment between the student and the president.

POSTAL AND PACKAGE SERVICES
The Department of Mail Services is a subdivision of Lawrence Tech Campus Safety. Mail Services delivers and picks up incoming and outgoing campus mail and packages. Mail Services may be reached by telephone at 248.204.3718. At the residence halls, mail and packages are delivered to the Information Desks, where stamps may also be purchased. Mail Services is located in room G100 in the General Services Building and is open from 7 a.m. until 3 p.m. on weekdays. Mail Services is closed on weekends and holidays.

United Parcel Service (UPS) has an outbound package kiosk located outside the General Services Building on the southeast side of the building near the garage door.

RAFFLE OR CHARITABLE GAMING EVENT GUIDELINES
The Michigan Bureau of the State Lottery Charitable Gaming Division (State Lottery) generally does not qualify the following for licensing: teams, classes, clubs, and other groups sponsored by the school or school district. Applications in support of these functions should be submitted in the name of the school or school district. Also, college fraternities and sororities are specifically prohibited under Act 382 of the Public Acts of 1972, as amended, for conducting gambling activities in Michigan.

Any student organization requesting to host a gambling tournament or raffle must first contact the Office of Student Engagement to receive guidance on completing the appropriate forms and applications. The student organization is responsible for submitting the application(s) and/or form(s) to the State Lottery along with the required application fees. Additionally, the student organization must obtain a signed letter from the director of Student Engagement summarizing and approving the raffle or charitable gaming event.
The application review process will take approximately six (6) weeks for the State Lottery to complete. Students should seek guidance from the Office of Student Engagement approximately eight (8) weeks prior to the event. If you have any additional questions or if you would like to view the sample forms from the State Lottery, please follow the links contained within this section.


RALLIES/MARCHES/PROTESTS

Student organizations, student groups, and/or individual students who desire to hold a rally, march, demonstration, and/or protest on the LTU campus should contact the Office of Student Engagement two (2) days prior to holding the event.

The professional staff member for the Office of Student Engagement will inform the representative student for the various organization, group, or individual what the requisite steps are in order to complete the necessary forms for space reservation on campus, use of public-address equipment or amplified sound, and notification to the Campus Safety department.

SAFETY AND SECURITY

A safety team patrols Lawrence Tech 24 hours a day. No metropolitan area is immune from criminal activity. All students should take an active role in assuring their personal safety. Students should immediately report a suspicious person, object, or activity to the Department of Campus Safety.

The Department of Campus Safety is open 24 hours a day and located in room G102 in the General Services Building. The office can also be reached by dialing 3945 from any campus phone or 248.204.3945 from any other phone. For emergencies, dial 911 from any campus phone to be connected to Campus Safety; otherwise, dial 911 from any other phone to contact the appropriate emergency service.

In full compliance with the Federal Crime Awareness and Campus Security Act of 1990 (also known as the Clery Act), as amended through July 1, 2003, and the Campus Sex Crimes Prevention Act of 2000, Lawrence Technological University makes security information available to LTU students, faculty, and staff, applicants for admission, newly hired employees, and the general public. Statistics on campus crime may be examined at the Department of Campus Safety during business hours. Campus safety and security statistics for the prior academic year are available at http://ltu.edu/crime-reports.

Remember, “If you see something, say something.”

SPIRIT ROCK

The Spirit Rock exists to provide students and student organizations the opportunity to express their spirit and pride in Lawrence Technological University and various LTU sanctioned student organizations. To maximize this opportunity, students are expected to respect the following regulations:

- The rock is not to be moved.
- Derogatory, profane, or obscene words, images, or messages on the rock are prohibited.
• There is no limit to the number of times the rock may be painted in total or by any one organization.
• With the exception of painting, the physical condition of the rock shall not be altered in any way that will change its shape, size, or orientation.

STUDENT ENGAGEMENT
The Office of Student Engagement, located on the second floor of the Taubman Student Services Center (C205), provides programs and services for the entire LTU community. The Student Engagement team coordinates a variety of opportunities for students to become involved on campus, in the City of Southfield and throughout the Metropolitan Detroit area. The core mission of the Office of Student Engagement is to encourage the intellectual, social, and civic development of students individually and through various student groups and organizations.

This office seeks to advance LTU’s strong commitment to diversity in assisting in the recruitment, retention, and graduation of all students, and in particular, historically underrepresented groups on our campus (students of color, women, religious and ethnic minorities, and LGBTQ students), by developing and implementing strategies that support students in the attainment of academic excellence and social success.

Student Engagement serves as a support and advocacy network through which students from underrepresented groups are provided effective assistance during their academic tenure. Programs include welcome receptions; cultural programs that provide forums to enhance the intellectual, social, and personal development of students; discussions and speakers who focus on relevant social, cultural, and academic issues.

Study Abroad
Lawrence Tech offers a wide variety of opportunities for students looking to study abroad for a full semester or participate in other international experiences that range from one week to an entire summer. Study Abroad is a wonderful opportunity to explore a new country and a new culture. Many students take advantage of their extra time to also visit places outside of their host city or even host country.

Study Abroad programs have expanded to include opportunities in Germany, France, England, Italy, and Mexico, to name a few, as well as volunteer abroad opportunities. The university also hosts educational tours every summer to different countries around the world, sometimes for credit.

Going overseas for a summer term or a semester is the best way to develop as a leader with a global view. There is no better way to understand and appreciate the history, culture, and language of foreign society than to participate in an international experience opportunity.

Programs and Services
Among the many programs and services provided and/or supported by Student Engagement are:

Day trips to Detroit, Chicago, and Cedar Point
Freshmen Welcome Weekend
Homecoming Week
Lawrence Tech Dance Team
“Blue” the Mascot
Partnerships with the City of Southfield and the Boys & Girls Club Field Zone
Programming that promotes community on campus and in the City of Southfield
Student Government
Greek Life
Student Organizations
Welcome Week
Winterfest Week
Destress Festival (Fall and Spring)

Tech Transit
Tech Transit serves students by providing transportation service to hot spots around Lawrence Tech’s campus and the city of Southfield. For more information, visit the Tech Transit website at www.ltu.edu/transit.

STUDENT AFFAIRS
The Division of Student Affairs coordinates efforts, programs, and services that support the development of a vibrant learning community on campus. The division’s purpose is to support students, staff, and faculty in achieving the mission of Lawrence Tech by creating communities that foster and support student learning and development.

Offices included in the division are the Office of the Dean of Students; Academic Achievement Center; Campus Dining; Career Services; Clinical Counseling Services; Disability Services; First-Year Programs; International Programs; Student Engagement; Student Recreation, Athletics, and Wellness; University Housing; and the campus switchboard. The Office of the Dean of Students serves as the central resource for activities coordinated by the Division of Student Affairs. Events, programs, and services provided through these offices are designed to enhance student involvement and student leadership development.

STUDENT COMMUNICATIONS/EMAIL
Lawrence Tech’s official method of communication with students is through the use of University email. All students are issued a free ltu.edu email account. They are expected to check their Lawrence Tech email accounts frequently and regularly for notices related to enrollment and financial matters, including important deadlines and dates.

Students’ email account IDs are composed of the first letter of their first name and the first eight letters of their last name followed by a number if there are duplicates. Email can be accessed off campus at webmail.ltu.edu. For assistance, contact the Help Desk at 248.204.2330.

Students should note that when using Canvas, their Lawrence Tech email address is loaded to their courses as their default email address. This means that when posting notices on discussion boards, etc., within Canvas, students’ Lawrence Tech email accounts are visible to others within the class. Students can change their default email address within Canvas to route their Canvas email to another account.

Canvas also functions as a major communications and safety hub of the University, with student groups, professional organizations, and administrative offices having their own organizations within Canvas.
STUDENT INSURANCE
Students needing health insurance can go to the official site of the Affordable Care Act (www.healthcare.gov). International students should go to the Office of International Programs where there are several different choices for health insurance.

Lawrence Technological University advises all students living in the residence halls to obtain personal property insurance (renter’s insurance). Many students may have their personal property covered under their parents’ homeowner’s insurance policy; check with the insurance provider to determine applicable coverage. Personal property insurance for those students not covered by their parents’ homeowner’s policy or for students seeking additional coverage is available through National Student Services, Inc. For additional information, visit www.nssi.com.

STUDENT LOUNGES
Student lounges are located in the fireplace area of the Engineering Building and in the lobbies of the Science Building and UTL C. The atrium of the Buell Management Building provides a spacious area for socializing and an Einstein Bros. Bagels and P.O.D. (Provisions on Demand), which are hosted by Campus Dining. The Commuter Student Lounge is in S202 of the Science Building.

STUDENT RECORDS
Lawrence Tech students may view their academic transcripts, account information, and other student-related information through BannerWeb at my.ltu.edu. Student records are located in a secure area that requires the student’s Banner identification number (excluding the initials) and PIN to access the information.

VETERANS
The University is approved for admission of students receiving veteran subsidies. Financial status of veteran students is established through the presentation of the appropriate government forms to the School’s Certifying Official in Student Accounting. Students receiving Veterans Administration Educational Assistance benefits are held to the same standards of academic progress and social conduct as all other students. LTU provides information about students receiving Educational Assistance benefits to the Veterans Administration in accordance with federal mandate.

Questions regarding GI Bill benefits, Michigan National Guard educational benefits, or any funding related to veterans should be directed to the Veterans Education Hotline at 888.442.4551. Veterans may also contact the U.S. Department of Veterans Affairs (www.benefits.va.gov/gibill) with questions concerning program eligibility. Veterans Affairs provides a wide range of benefits to veterans.

The monthly allowance for Lawrence Tech veterans is based on the veteran’s number of credit hours, number of dependents, and enrollment in a qualified program according to Veterans Affairs guidelines. All veterans receiving GI benefits are expected to maintain Satisfactory Academic Progress (see www.ltu.edu/financial_aid/sap_policy for details). Veterans Affairs regulations permit only a two-semester probation period unless there are mitigating circumstances as determined by Veterans Affairs. The University will inform Veterans Affairs and the student when the student does not meet academic standards of progress and is no longer eligible for benefits.

The State Approving Agency (SAA) has imposed the following requirements on LTU in order for students to receive veteran’s benefits. 1. Satisfactory Grade (Cumulative GPA & Probation): All
students receiving veteran’s benefits must comply with the Academic Probation and Suspension guidelines of the University. A student who is placed on probation may not be continued on probation more than two semesters in order to raise the cumulative GPA to that required for graduation and come off probation. If the student fails to come off probation, the U.S. Department of Veterans Affairs (USDVA) will be notified in writing. 2. Withdrawal and Last Date of Attendance: The veteran's certification office will inform the USDVA of any change in semester hours and dates of attendance. 3. Credit for Previous Training: All students who are requesting veteran's benefits when enrolling at LTU will be given credit for previous training, where appropriate. The total length of the training program will be reduced proportionately. The student and the USDVA will be advised in writing of the credit given to the student and the appropriate reduction in the total length of the program. All students receiving veteran’s benefits must have transcripts and other documents showing credit for previous training on file in the Registrar's Office by the end of the first semester of enrollment. Failure to do so will result in no further certification for veteran’s benefits until those transcripts have been provided.
Retrospective

“All the worthwhile and precious things in life are only obtained through continuous and exacting effort, and their worth is in direct proportion to the effort put forth for their attainment.”

Russell E. Lawrence
1889–1934

It was a firm belief in the future that motivated Russell E. Lawrence to found a university in 1932 – in the midst of the economic chaos of the Great Depression. While less farsighted individuals made predictions of gloom, Russell Lawrence and his brother, E. George Lawrence (who led Lawrence Technological University from 1934 to 1964), turned a dream of preparing students for leadership in the new technical era into reality.

For nearly 85 years, Lawrence Tech has continued to prosper and accelerate its growth, hone its educational philosophy of theory and practice, build important community and professional alliances, and forge partnerships with the firms, organizations, and industries who hire Lawrence Tech alumni.

Wayne H. Buell, who served as president from 1964 to 1977 and as chair of the board and chief executive officer until 1981, worked to build a firm foundation for the University’s early emergence as a technological leader. He first advanced the notion that Lawrence Tech was a private college serving a public purpose.

Lawrence Tech’s first residence hall, the Buell Management Building, the Don Ridler Field House, a major addition to the engineering facilities, the return of graduate programs, and the massive growth of computer facilities marked the presidency of Richard E. Marburger, who served as president, 1977 –93, and also as chair of the Board of Trustees and chief executive officer, 1981–93.

Charles M. Chambers became president in 1993 and served as chancellor in 2006. During his presidency, he oversaw significant enhancement of the University’s international reputation as a distinguished center of technological education and research. A Strategic Plan and Campus Master Plan were adopted to guide the University. Other achievements include: construction of the University Technology and Learning Center, the Edward Donley Residence Hall (formerly North Housing), the A. Alfred Taubman Student Services Center, and the Center for Innovative Materials Research; a redeveloped campus quadrangle; establishment of a Faculty Senate; conversion of the computer system to a client server model with full Internet2 connectivity and online library access; creation of Michigan’s first completely wireless laptop campus; and expanded bookstore, dining, and student activity facilities.

Lewis N. Walker was named interim president in February 2006, became president in July 2006, and chancellor in July 2012. He had previously served as provost, the University’s chief academic officer, and executive vice president. Under Walker, Lawrence Tech aggressively expanded programs in emerging economic sectors such as robotics, defense, and sustainability, including “fast track” certificate programs to help professionals retool themselves for new careers. He was committed to developing the leadership skills of Lawrence Tech’s students and worked with faculty to add a leadership component to the curricula of all undergraduate programs. He forged partnerships with universities worldwide that brought international students to campus and provided further opportunities for Lawrence Tech students.
to study abroad. He also oversaw the reinvigoration of student life and return of varsity sports to campus.

Virinder K. Moudgil, Lawrence Tech’s seventh president, assumed office in July 2012. He has had a long career as a professor and university administrator and was an active researcher in the molecular mechanisms of steroid hormone action and the hormonal regulation of breast cancer. At LTU Moudgil has presided over the construction of the A. Alfred Taubman Engineering, Architecture, and Life Sciences Complex Home of the Marburger STEM Center and the Lloyd E. Reuss and East Residence Halls. He also launched the Global Village program to help all LTU students learn more about other cultures and the interconnectedness of the world economy.

Lawrence Tech was founded on the principle that every person should have the opportunity for a college education. From the beginning, there were no restrictions on entering students relating to race, sex, color, creed, or national or ethnic origin – only the requirement that students qualify for admission and have the desire to succeed. Working students could earn a baccalaureate degree by attending evening programs, day programs, or a combination of the two – a feature unique in 1932 and still remarkable today.

The school was originally called Lawrence Institute of Technology. Its present name, Lawrence Technological University, was approved on January 1, 1989, by the State of Michigan, and more clearly describes Lawrence Tech’s undergraduate and graduate mission.

Lawrence Tech was founded as a college of engineering with only a few hundred students and a handful of faculty. Today it offers more than 100 programs in four colleges, with a total enrollment of approximately 4,500 students, and employs more than 400 full- and part-time faculty. In terms of enrollment, Lawrence Tech is among Michigan’s largest independent colleges.

In 1950, associate programs were added to Lawrence Tech’s baccalaureate offerings. In 1952 the College of Management was re-established, having its origins in an earlier industrial engineering curriculum. Master’s degree programs in management were launched in 1989. The College of Architecture and Design evolved in 1962 from the former architectural engineering department and in 1993 launched a Master of Architecture program. The College of Arts and Sciences was established in 1967. Master’s degree programs in engineering were begun in 1990 and in Arts and Sciences in 1997. Doctoral programs were launched in 2002.

Concurrently, there has been an enormous expansion and improvement of facilities. The University’s first campus was located in Highland Park, in a building leased from Henry Ford adjacent to the huge manufacturing facility where he built the Model T and perfected the moving assembly line. As enrollment grew, the University acquired acreage in Southfield and in 1955 opened its first building on what had been a General Mills research farm. The campus has since expanded to more than 107 acres and 17 major buildings, as well as the Frank Lloyd Wright-designed Affleck House in Bloomfield Hills, which was donated to the University in 1978, and the Detroit Center for Design + Technology in Midtown Detroit.

In 1977, Lawrence Tech shed its “commuter” classification by opening the nine-story South Residence Hall (formerly South Housing). The 1980s and 1990s were distinguished by the opening of the Wayne H. Buell Management Building and the Don Ridler Field House, numerous improvements to existing buildings, and a substantial increase in state-of-the-art...

In 2011 competitive athletics returned to campus with the University's entry into the National Association of Intercollegiate Athletics.

The University also offers programs at learning centers in southeastern and northern Michigan, as well as international programs in Asia, Europe, Mexico, and the Middle East.
Admission to the University
The University has a selective admissions process – the objective of which is to identify men and women who have the highest potential for advancement in their chosen field of study. While the applicant’s academic record is a reliable measure for the prediction of academic success, the admissions decision is more complex than admitting students on the basis of a numerical formula. With this intent, Lawrence Technological University considers, in addition to the applicant’s previous academic record, factors that demonstrate an aptitude for successful study.

For the admission requirements for any of Lawrence Tech’s undergraduate degree programs, see the Undergraduate Catalog.

ADMISSION TO GRADUATE PROGRAMS
To begin the application process, apply online at www.ltu.edu/apply. In order to be considered for a graduate program, students must submit the following to the Office of Admissions:

1. Completed Application for Graduate Admission (www.ltu.edu/apply)
2. Application fee (nonrefundable)
3. Official transcripts of all completed college work
4. Any additional material as required by the college offering the degree (i.e., GMAT/GRE scores, resume, letters of reference, portfolio, etc.). These requirements are described under the specific program of interest later in this Catalog and online.

Application materials received will be carefully evaluated by the college’s Graduate Admissions Committee. To facilitate this process, the graduate applicant must provide all documentation at the time designated by each college. After the application has been reviewed by the committee, the student will be notified of the results by the Office of Admissions. The Office of Admissions will be the student’s point of contact from the application stage through the start of classes; the only exceptions are for certain events specified by the pertinent college.

In general, a cumulative undergraduate GPA of at least 3.0 is required for regular admission to the graduate programs. For specific admission requirements, please see the program listings, which follow in this Catalog and online.

GRADUATE ADMISSIONS TESTS
Certain programs may require one of the standardized graduate tests for admission. The GMAT and GRE exams are administered regularly throughout the United States and various foreign countries. Arrangements to take the test should be made by visiting www.mba.com for the GMAT or www.ets.org/gre for the GRE.

TRANSFER STUDENTS
Policies pertaining to transfer students from other accredited graduate programs may be found later in this Catalog in the description of the specific program of interest. Each graduate program establishes its own policies on transfer credit. Students considering transferring to Lawrence Tech from other universities must follow the same admission requirements as described above in the Admission to Graduate Programs section. Any questions concerning credit evaluations must be resolved by the end of the first semester at Lawrence Tech.

Students may be required to submit additional evidence (e.g., course syllabi, catalog descriptions, portfolio, and tests/examinations) in order to justify the transfer of credits. The college’s Graduate Admissions Committee may require the applicant to demonstrate proficiency
in the subject either through an interview or a written examination prepared by faculty members who have expertise in the subject/discipline.

NON-DEGREE SPECIAL STUDENTS
Graduate students who elect to take courses but who do not wish to pursue a degree program may enroll for one semester as a special student by submitting the following to the Office of Admissions:

1. Completed Application for Graduate Admission, which can be found at www.ltu.edu/apply (This application is good for one semester. A student must reapply for each semester he or she wishes to be a non-degree student.)
2. Application fee (nonrefundable)
3. Unofficial copies of transcripts from institutions attended

Special students must meet the normal requirements for graduate admission. Lawrence Tech students have enrollment preference over special students.

A special student who wishes to obtain regular admission to a graduate program must make a regular application to that program and meet all admission requirements.

Credit for courses taken while a special student may be applied toward the degree if approved by the college’s Graduate Admissions Committee as part of the admissions process. When courses taken as a special student are applied toward a degree, the cumulative GPA will be computed from all graduate courses taken at Lawrence Tech.

INTERNATIONAL STUDENT ADMISSION REQUIREMENTS
International students must have above-average grades in their post-secondary academic coursework and meet all graduate admission requirements. In addition, the following items must be submitted to the Office of Admissions no later than 90 days before the start of the desired semester of enrollment:

1. Completed Application for Graduate Admission (www.ltu.edu/apply) signed by the student
2. Application fee in U.S. currency (non-refundable)
3. Official transcripts from all colleges attended sent directly from the issuing institutions
4. Course-by-course WES evaluation of official college transcripts (see www.wes.org) if requested by the Office of Admissions
5. Evidence of English proficiency
6. Documentation of support
7. Documentation of Support Verification Form
8. Visa Transfer Form (for F-1 students transferring from a U.S. college or university)
9. Foreign address
10. Copy of passport

ENGLISH AS A SECOND LANGUAGE (ESL)
Lawrence Tech’s ESL Institute offers two programs for qualifying students. The ESL Institute’s full-time program is designed for individuals seeking an intensive English language program. The four levels of the program are scheduled during Lawrence Tech’s traditional semesters. The ESL Bridge program is designed for individuals who have a score of at least a 500 on the TOEFL. Qualifying students may enroll in both ESL and academic coursework through the ESL Bridge program.
ADMISSION DECISION CLASSIFICATIONS

Regular Admission
Student meets all academic requirements and has submitted all required documents.

Conditional Admission
Student meets all the academic requirements but additional documents are needed to complete the application file. Most commonly a condition is a final transcript or confirmation of a degree.

Provisional Admission
Student is admitted with provisions by the academic department. The provisions are identified by faculty to improve areas of deficiency. Supplemental coursework or a minimum GPA requirement are frequently specified provisions. Provisions are reviewed by a faculty advisor on a semester-by-semester basis.

Provisional Conditional Admission
Student is admitted but is required to take supplemental coursework identified by faculty or meet a minimum GPA requirement. Provisions will be reviewed with a faculty advisor on a semester-by-semester basis. Student also needs to submit additional documents to complete the admission file.

Denied
Upon review of application materials, student does not meet the requirements for admission.

CHANGING MAJORS
Currently enrolled students wishing to change majors must fill out the Change of Curriculum form, which can be obtained at the DTE Energy One-Stop Center or at www.ltu.edu/registrars_office/forms-to-print.asp. Evaluation of credits and admission into the new program will be determined by the program’s Graduate Admissions Committee.

INTERRUPTION OF STUDIES
Students who do not enroll for classes during a period of three calendar years must reapply for admission. Readmission is not automatic; admission policies, curricula, and requirements of the academic programs at the time of readmission will apply. Students returning less than three calendar years from their previous enrollment may register in their original program without readmission. However, returning students who wish to change colleges or have transfer credit from other institutions must fill out the Change of Curriculum form, which can be obtained at the DTE Energy One-Stop Center or at www.ltu.edu/registrars_office/forms-to-print.asp. These students will be subject to the curricula and requirements of the chosen program upon their return.

RETURNING ALUMNI
The application fee is waived for Lawrence Tech alumni applying to master’s and doctoral programs.

ADMISSIONS ADVISING AND TOURS
The Office of Admissions is open year-round (except holidays). Admissions counselors are available on a walk-in basis on weekdays. Students are encouraged to call the Office of Admissions at 248.204.3160 or email graduateadmissions@ltu.edu if they have any questions, require information, or would like to schedule a tour of the campus.
Tuition and Fees
Lawrence Technological University sets tuition rates with the one goal of providing students with the best possible learning experience. The emphasis is on quality. Concurrently, the University has a long tradition of prudent management that has allowed it to contain costs and provide students with extraordinary value for their tuition investment, but never at the expense of Lawrence Tech’s primary emphasis.

Tuition at Lawrence Tech is used to cover many of the costs associated with a student’s learning experience. Remaining expenses are funded through support from the University’s alumni and friends, including gifts from individuals, corporations, and foundations.

Tuition and fees are normally established on an annual basis. However, the University reserves the right to make changes in these charges or to initiate or delete charges without notice. The schedule of current tuition and fees is published separately from this Catalog and is available at www.ltu.edu/registrars_office/tuition_fees or from Lawrence Tech’s Offices of Admissions, Business Services, or Enrollment Services/Registrar.

PAYMENT OF TUITION AND FEES
Tuition and fees are due in two installments each semester. If full payment cannot be made by the deadline, the following options are available:

1. Enroll in Tuition Management Systems, which provides for making monthly payments
2. Provide Billing Authorization Forms (tuition vouchers) when the student’s employer is to be invoiced by the University
3. Apply for student financial aid. Consideration is granted on estimated eligibility and is subject to application timing and accuracy. Students are fully responsible for any charges that are not covered by financial aid

The options stated above are available only when all prior balances have been paid in full. Monthly late charges will be assessed on all accounts with past due balances. Transcripts, diplomas, and/or permission to register will not be issued if an outstanding balance appears on a student’s account.

METHOD OF PAYMENT
Students can make payments on their accounts using any of the following methods:

1. Pay with cash, check, money order, or credit card at the DTE Energy One-Stop Center in the A. Alfred Taubman Student Services Center
2. Mail a check, money order, or appropriate credit card information
3. Phone (248.204.2280) or fax (248.204.2228) appropriate credit card information to the One-Stop Center
4. Use a credit card via BannerWeb at my.ltu.edu
5. Via the drop box located to the side of the entrance to the DTE Energy One-Stop Center

COSTS FOR WITHDRAWAL
Costs for withdrawal are established as stipulated by federal regulations. The date credit for withdrawal will be received can be obtained from Enrollment Services/Office of the Registrar.
A full tuition refund will be granted for all drops completed within the Drop/Add period. Official Drop/Add period dates for each semester are available at www.ltu.edu/registrarsoffice/calendar_final_exam.index.asp.

After the Drop/Add period, no refunds are provided. Activity fees, graduation fees, and course fees are nonrefundable and are not included in the withdrawal credit calculation. Balances remaining after drop adjustments are made must be paid based upon the University policy for payment of tuition and fees. Credit balances will be refunded.

The semester begins on the first day of classes as listed in this Catalog, unless otherwise indicated.

The date of withdrawal is the date the student’s drop form is validated by Enrollment Services/Office of the Registrar, the postmark date of the letter of withdrawal, or the date the student completes the withdrawal on BannerWeb at my.ltu.edu.

All students withdrawing from classes may have their financial aid eligibility adjusted or canceled for the semester and will be subject to Lawrence Tech’s federal Return to Title IV and Satisfactory Academic Progress policies. For additional information, see Financial Aid in this Catalog.

STUDENT TUITION APPEAL PROCESS

Students who seek to drop classes after the tuition refund deadline and wish to receive a refund of any type or to have the late registration or the late transaction fee waived, should submit a Tuition and Fee Appeal Form to Enrollment Services/Office of the Registrar, along with a letter explaining the rationale for the request. All supporting documentation should be submitted at this time (e.g., documentation of a medical issue). The appeal will not be accepted or reviewed without all information in hand.

The DTE One-Stop Center will prepare a packet of information for the Appeals Committee that includes the student’s current semester schedule, the tuition statement for the current semester, and a list of the student’s courses and grades. The Appeals Committee (comprised of representatives from various departments on campus) reviews each student request and makes a determination as to whether to grant an exception to University policy. The Committee may also contact the student’s instructor(s) to inquire about the student’s attendance record and current grade in the course. The Office of the Registrar then sends a letter via email to the student with the decision.

Students should be aware that if an exception is made, the amount of their financial aid may be impacted and in some circumstances they may potentially owe the University money.

It is important to note that exceptions to University policy are made only in rare circumstances, such as a debilitating illness. Requests made because of difficult work schedules or class schedules may not be considered.
Financial Aid

Financial assistance at Lawrence Technological University is granted without regard to an applicant’s race, sex, color, age, handicap, marital status, or national or ethnic origin. Both new and enrolled students interested in federal, state, and institutional financial aid programs are strongly encouraged to complete the Free Application for Federal Student Aid (FAFSA). The primary application piece required for federal, state, and institutional financial aid consideration, the FAFSA can be completed online at www.fafsa.ed.gov; it is also accessible at www.ltu.edu/financial_aid/

The FAFSA must be completed annually; applications for aid commencing in the fall semester can be submitted no earlier than October 1 for the upcoming year. To maximize their chance of receiving financial aid, students are encouraged to complete the FAFSA by March 1.

All financial aid applications will be processed, and eligibility will be established, based on the availability of funds. Also, some students are selected for a review process called Verification. Verification requires that students and/or spouses provide tax transcripts and other important information prior to the review of their application. If students are selected for Verification, they will be notified by the school that they must provide the needed information. This information should be delivered or mailed to the DTE Energy One-Stop Center in the A. Alfred Taubman Student Services Center, or emailed to enrollmentservices@ltu.edu as soon as possible for early consideration.

In order to make the application review and awarding processes as smooth as possible students must provide accurate and timely information and documentation. Generally speaking, it can take between two and six weeks from the time the FAFSA is submitted to the time an award notice is prepared and sent.

New students at Lawrence Tech are notified of their financial aid awards beginning in December. Returning students are notified of their awards beginning in mid-May.

Students should visit http://www.ltu.edu/financial_aid for up-to-date financial aid information and links to scholarship search websites. Students should contact the DTE Energy One-Stop Center at 248.204.2280 or enrollmentservices@ltu.edu if they have any questions regarding the financial aid application process or their eligibility status.

STUDENT LOANS

Federal Direct Unsubsidized Stafford Loans

The Federal Direct Unsubsidized Stafford loan program carries both annual and cumulative (lifetime) limits. The SAR (Student Aid Report) lists students’ cumulative loans, but it is important that students also keep records of all their loan transactions. Students can also look up their loan history online at www.nslds.ed.gov. Payment options can be viewed at www.studentaid.ed.gov/sa/.

It is very important that the FAFSA be completed every year. All federal loans must be accepted and originated one month prior to the end of the semester or period of enrollment to allow adequate time for processing and disbursement of funds.
Stafford Loan Maximums per Year

<table>
<thead>
<tr>
<th>Student Level and Dependency Status</th>
<th>Maximum Unsubsidized Stafford</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate/professional</td>
<td>$20,500</td>
</tr>
</tbody>
</table>

Lifetime Limits (from all schools attended):

<table>
<thead>
<tr>
<th>Student Level and Dependency Status</th>
<th>Maximum Stafford (unsubsidized)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate/professional</td>
<td>$138,500*</td>
</tr>
</tbody>
</table>

*The graduate debt limit includes loans received for undergraduate study.

If students reach their lifetime loan limit, they cannot receive any more of that type of loan. If they exceed their limit, aid already disbursed will be returned to the lender or may have to be repaid by the students. Students are encouraged to borrow only what they need for educational expenses and to keep track of their cumulative debt. Alternative lending may be an option if students need additional loan funding to assist them with continuing their education.

Students are responsible for the interest on an Unsubsidized Stafford loan while in college and until the loan is paid in full. Payment options can be viewed at www.studentaid.ed.gov.

Students must be enrolled at least half-time (three credit hours) in an eligible degree program at Lawrence Tech to qualify for this loan. Graduate students may borrow up to the maximum listed above per year based on full-time enrollment (six credit hours). Loan eligibility is evaluated each semester and subject to change due to changes in enrollment status. Need is not a factor for this loan, and the student is responsible for paying interest on the loan during the grace and deferment periods. Payment options can be viewed at www.studentaid.ed.gov.

If you have graduated from LTU and are not enrolled in a new degree program but continue to register for courses, you are not eligible for financial aid. You must be enrolled in a new degree program and registered at least half time to be eligible for financial aid.

Federal Direct Graduate and Professional PLUS Loans
(For Graduate and Doctoral Students)
The Federal Direct Graduate and Professional PLUS loan program offers graduate and professional students the opportunity to borrow federal funds up to their cost of attendance minus all other aid sources. To apply for a Grad PLUS loan, graduate and professional students must fill out the FAFSA, pass a credit check, complete Grad PLUS Entrance Counseling, sign the Master Promissory Note online, and apply for the maximum Stafford loan for which they qualify. PLUS loans may be used for tuition, housing, food, books, and some transportation expenses. For questions, contact enrollmentservices@ltu.edu or go to studentloans.gov for additional information.

Alternative Loans
In addition to the Stafford loans, graduate students have access to a variety of alternative loans. The application process and terms for alternative loans vary by program and credit worthiness and may require a co-borrower. Visit www.ltu.edu/financial_aid/loans for additional information.
WORK-STUDY PROGRAMS
The Federal Work-Study Program is designed to help students pay for their education by providing opportunities for them to be employed and earn a paycheck during the semester. Students may work on campus in a variety of capacities, such as in academic departments, administrative offices, libraries, or in landscaping and maintenance. A student must demonstrate financial need as determined by completion of the FAFSA to be eligible for the work-study programs. Contact the Office of Career Services at 248.204.3140 for a listing of available work-study positions.

For information on the Federal Work-Study program, visit www.studentaid.ed.gov.

JOB SEARCH SERVICE
The Office of Career Services maintains a database of available part-time and full-time jobs with businesses and industries seeking candidates from Lawrence Tech. Opportunities are posted on a regular basis.

ADDITIONAL FINANCIAL AID INFORMATION

Basis for Awards
Students with the greatest need, as determined by standard federal methodology (resulting from completion of the FAFSA), receive the highest consideration for need-based funding depending on the availability of funds and the timing of the application. Students meeting published application deadlines will have a greater chance of receiving preferred types of financial aid funds.

Basic Costs
Personal expenses for room, board, clothing, recreation, laundry, travel, books, and incidentals vary according to individual lifestyle. An estimate for the total cost of a student’s education can be made by adding tuition and fees to these items. The Office of Financial Aid provides an estimated cost of attendance at https://ltu.studentaidcalculator.com/survey.aspx. This estimate can be used to determine eligibility for need-based funding. Cost minus the Expected Family Contribution (EFC) is the basis for determining the need for financial aid. The EFC is calculated based on the information provided on the FAFSA each year.

Satisfactory Academic Progress
All students receiving financial aid are required to maintain satisfactory academic progress. Graduate students must maintain a minimum GPA of at least 2.75 to remain eligible for financial aid. Failure to achieve this standard will result in the suspension of eligibility until a cumulative GPA of 2.75 is reached. Please note that a college or department may require more than a 2.75 GPA to remain in satisfactory academic standing.

Students are also expected to make normal progress toward graduation by completing at least 67 percent of all attempted credit hours. Students who withdraw from or drop one-third or more of the courses in which they have enrolled during the year will not meet the standards of academic progress for financial aid consideration.

In addition, students will not be eligible for aid once they have attempted 150 percent of the total number of credit hours required to complete their program of study. Students should consult their academic advisor to determine the appropriate course load to assure academic success and completion of their degree within the specified number of credit hours.
Contact the DTE Energy One-Stop Center or visit www.ltu.edu/financial_aid/sap_policy for information regarding the appeal and renewal procedure when standards of progress are not met.

**U.S. Citizenship**
Students must be U.S. citizens or eligible non-U.S. citizens as defined by the U.S. Department of Education to qualify for financial aid programs. Federal regulations and University policy significantly limit the types of financial assistance for international students.

**Defaulted Student Loans**
Students who have defaulted on student loans, owe a refund on a grant, or owe college tuition will not be eligible for any financial aid until the obligation is fulfilled and monies are paid back to the University, the federal government, the state government, or the lender of interest.

**Verification of Financial Statement and Other Application Information**
Lawrence Tech reserves the right to request federal IRS income tax documentation from its students, along with a verification form for the entire family for the financial information provided. Students refusing to provide family income tax or other documentation information will be denied financial aid. For families who are not required to file a federal tax form, other types of verification will be required.

**Financial Aid and Credit Hour Reduction**
Financial aid may be reduced or canceled if a student takes less than six credit hours per semester. Award amounts for need-based financial aid are based on the number of credit hours attempted and a student’s demonstrated financial need. Students planning to drop all or part of their classes should contact the DTE Energy One-Stop Center to discuss the effects on their financial aid awards for the semester.

**Refunds of Excess Financial Aid**
When financial aid and other payments exceed a student’s charges, the student is entitled to a refund. Student accounting will refund excess financial aid to the student, parent, or other payment source within 14 days of the posting of a credit balance. A check will be mailed to the current mailing address on file, or students can elect to have the check directly deposited.

**Cancellation of Loan**
Federal Direct Stafford and Federal Direct PLUS loan borrowers have the right to cancel their loan disbursements within 14 days of the disbursement notice. Should students decide to cancel the disbursement of their federal loans, they should contact the DTE Energy One-Stop Center at enrollmentservices@ltu.edu in writing within the specified time period. By canceling the disbursement, students will be responsible for any unpaid tuition and fees, as well as repayment of loan funds already paid to them.

**Enrollment Status**
All initial awards are based on full-time status. Grant awards will be prorated for enrollment of less than full-time, and student loan eligibility will be reevaluated and may change due to changes in enrollment status. Students must be enrolled in an eligible degree program, and most funds require at least half-time (for graduate students, three or more credit hours) enrollment status. Student awards are subject to change due to changes in enrollment status and/or funding levels at any time.
If you have graduated from LTU and are not enrolled in a new degree program but continue to register for courses, you are **not eligible** for financial aid. You must be enrolled in a new degree program and registered at least half time to be eligible for financial aid.

**Adjustments to Aid**
Within certain time limits, tuition adjustments may be made to the student’s financial account. There are times, however, when students receive no tuition credit/refund for dropped courses. See the Tuition and Fees section of this Catalog or visit [www.ltu.edu/registrar_office/tuition-and-fees](http://www.ltu.edu/registrar_office/tuition-and-fees). It is the student’s responsibility to know these dates and adhere to them.

**Withdrawal from Lawrence Tech**
Students may be billed for a portion or all of their incurred charges if they withdraw from the University. The bill calculated as a result of withdrawal will depend on the effective date of the withdrawal, the percentage and amount of institutional refund, and/or the last date of class attendance.

Students must also terminate any work-study employment. If students have received any federal loans, they should contact the lender and complete an [exit interview](https://www.ltu.edu/financial_aid). Students’ eligibility for financial aid will be determined, or recalculated, by the use of federally mandated procedures which may affect the aid already applied toward their account or previously refunded to them. Depending on when the withdrawal occurs, students may be required to repay all or part of the aid received.

If a student receiving Title IV funds completely withdraws from classes through 60 percent of the term, the University is required to determine how much of the financial aid was earned up to the time of withdrawal ([https://www.ltu.edu/financial_aid/title-iv-funds.asp](https://www.ltu.edu/financial_aid/title-iv-funds.asp)). The University and/or the student must return unearned Title IV funds to the federal government. This situation could result in the student owing aid funds to the University, the government, or both.

Students should always check with the DTE Energy One-Stop Center prior to withdrawal for advice on the impact it will or could have on their financial aid.

**Auditing Classes, Certificate Programs, and Guest Students**
Students who audit classes, are enrolled in certificate programs, or are guest students **are not** eligible to receive financial aid.
Academic Regulations
The policies and procedures described in this Catalog determine the academic status of graduate students enrolled in the University. Exceptions to these policies and procedures may be considered only upon a written request to the Office of the Provost or the designated/appropriate office. In the case of a lapse of future catalogs, the policies, procedures, and curricula in this Catalog will apply to all students. For policies pertaining to undergraduate programs, see Lawrence Tech’s Undergraduate Catalog.

CLASSIFICATION OF STUDENTS
Classification as a part-time or full-time student is based upon the weekly academic load that the student carries. Graduate students are considered full-time when enrolled for six or more credit hours. Graduate students are considered part-time when enrolled for three to five credit hours.

CREDIT HOUR
The University converted from a quarter credit system to a semester system, effective beginning in the fall of 1994. Work completed prior to August 1994 is recorded in standard quarter hours. Work completed after August 1994 is recorded in semester hours. Quarter hours can be converted to semester hours by multiplying the number of quarter hours by two-thirds.

GRADUATE GRADING SYSTEM
A record of grade points is kept in the student’s permanent record and is used to determine his or her overall scholastic average. The following grades are computed in the grade point average:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points per Credit Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
<tr>
<td>WF</td>
<td>0.0 (failure due to non-attendance)</td>
</tr>
</tbody>
</table>

The grades D, D+, and D- are not used in graduate programs.

The following grades are not computed in the grade point average:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>Withdrawal</td>
</tr>
<tr>
<td>X</td>
<td>Audit</td>
</tr>
<tr>
<td>CR</td>
<td>Credit</td>
</tr>
<tr>
<td>NC</td>
<td>No Credit</td>
</tr>
<tr>
<td>I</td>
<td>Incomplete</td>
</tr>
<tr>
<td>DG</td>
<td>Deferred Grade</td>
</tr>
<tr>
<td>NR</td>
<td>No Report</td>
</tr>
<tr>
<td>TR</td>
<td>Transfer Credit</td>
</tr>
<tr>
<td>ZZ</td>
<td>Transfer Courses in Progress</td>
</tr>
<tr>
<td>IP</td>
<td>In Progress (awarded to dissertation courses)</td>
</tr>
</tbody>
</table>
RECOMPUTATION OF GRADE POINT AVERAGE

Graduate students can repeat one course during their academic career and have the initial grade/s removed from their grade point average. The following grades may be repeated and the grade point average recalculated at the graduate level: B-, C+, C, C-, F, and WF. The latest attempt must have resulted in a passing grade. Until that point, all grades will appear on the transcript and will be computed into the grade point average.

The repeat process at the graduate level is not automatic and requires departmental approval. A request for a repeated course to be removed from the grade point average should be submitted to the student’s department chairperson.

To be recomputed, the latest attempt must be the same course as the first and must be part of the University’s normal course offerings. Directed study or special sections may not be used for recomputation purposes.

The University does not guarantee that a course will be offered in a future semester; it may be deleted from the curriculum and subsequently may not be recomputed.

When the recomputation is completed, only the credit hours and grade for the latest attempt will be reflected in the grade point average (assuming the grade received is passing). Courses that are not counted in the grade point average are indicated by an “E” (for exclude) in the column that is labeled “R” (for repeat). The passing course will have an “I” (for include) in the same column.

INCOMPLETE

A grade of “I” is given only under extraordinary circumstances for coursework that has been of satisfactory quality and, in the judgment of the instructor and the instructor’s dean, adequate to justify a reasonable extension of time. It is assigned only in cases in which the student has completed satisfactorily the major portion of the course requirements. Students receiving an “I” may not attend the class during a succeeding semester. Instructors must change an “I” to a grade other than a “W” no later than one calendar year following the end of the semester. After one year, if course requirements are not met, the “I” will be converted to an “F.”

GRADE CHANGES

The electronic entry of grades submitted by instructors at the end of each semester is the official record of grades. Grade changes, when necessary, are done by the instructor with the approval of the department chair and dean. The registrar may determine that the provost’s approval is also required in exceptional or unusual circumstances. Any disputes concerning grades must be resolved within one semester after the course was completed.

DISPUTE OF GRADES

Students who wish to dispute their grades have one semester to address the issue. The appropriate procedure for disputing grades, along with any other aspect of a course, is as follows: The student must first speak with the instructor of the course; if the resolution is not what the student hopes to achieve, the next course of action is to speak with the department chairperson. If the outcome from addressing the issue with the department chair is not what the student hopes to achieve, the student should then address the issue with the dean of the college. If the resolution is not what the student hopes to achieve, the last and final course of action is to speak with the provost. The ruling of the provost is final and not further disputable by the student.
AUDITING CLASSES
Anyone wishing to audit a course must submit an audit request/registration form. This form is available in Enrollment Services/Office of the Registrar. No credit is granted for courses that are audited. Starting with the first day of classes, a student may not change enrollment status from audit to credit or from credit to audit. Full tuition will be charged, and the tuition credit policy applies if the student withdraws.

WITHDRAWAL FROM CLASSES
Students who wish to drop or withdraw from a course or courses must do so online through BannerWeb. The date of the drop or withdrawal will be the date that the student completes the process on BannerWeb. To protect students' right to privacy, drops and withdrawals may not be conducted by telephone or email.

Within certain time limits, full tuition adjustments may be made to the student’s financial account. There are times when students receive no tuition credit/refund for dropped courses. Official Drop/Add dates for each semester are available online on BannerWeb at my.ltu.edu and at www.ltu.edu/registrars_office/academic-calendar-final-exam. It is the student's responsibility to know these dates and adhere to them.

It is important to note that exceptions to University policy are made only in rare circumstances, such as a debilitating illness. Requests made because of difficult work schedules or class schedules may not be considered.

Students studying at Lawrence Tech with an F-1 or J-1 visa cannot drop below full-time status without prior approval from the Office of International Programs.

GRADES FOR COURSES DROPPED
Students who drop a course during the first two weeks of classes during the fall or spring semester will receive a “Drop” on their Registration Form and no grade will appear on their transcript.

Students who withdraw from a course after the add/drop period and within the withdrawal period will receive a grade of “W.”

The last day to withdraw from summer semesters and short courses within the regular fall and spring semester is adjusted for the shorter time period as follows:

<table>
<thead>
<tr>
<th>Class Duration Period</th>
<th>Last Day/Week to Withdraw</th>
</tr>
</thead>
<tbody>
<tr>
<td>up to one week</td>
<td>third day</td>
</tr>
<tr>
<td>up to two weeks</td>
<td>first week</td>
</tr>
<tr>
<td>up to three weeks</td>
<td>second week</td>
</tr>
<tr>
<td>up to four weeks</td>
<td>third week</td>
</tr>
<tr>
<td>up to five weeks</td>
<td>fourth week</td>
</tr>
<tr>
<td>up to six weeks</td>
<td>fifth week</td>
</tr>
<tr>
<td>up to seven weeks</td>
<td>sixth week</td>
</tr>
<tr>
<td>up to eight weeks</td>
<td>sixth week</td>
</tr>
<tr>
<td>up to nine weeks</td>
<td>seventh week</td>
</tr>
<tr>
<td>up to 10 weeks</td>
<td>eighth week</td>
</tr>
<tr>
<td>up to 11 weeks</td>
<td>ninth week</td>
</tr>
<tr>
<td>up to 12 weeks</td>
<td>10th week</td>
</tr>
<tr>
<td>up to 13 weeks</td>
<td>11th week</td>
</tr>
</tbody>
</table>
ATTENDANCE
The class attendance records of students are kept by the faculty. The consequences of absenteeism will be determined by the instructors and will reflect their policy and judgment on the effect of attendance on the students’ final grades.

NON-ATTENDANCE PROCESS
Those students who do not attend courses or who miss a designated number of courses, and who do not withdraw from the courses on their own, will be issued the grade of “WF.” This means failure due to non-attendance and will impact the student’s financial aid award and loans.

It is extremely important for students to attend their course(s). Failure to attend will result in a “WF” grade. A “WF” grade denotes failure due to non-attendance and acts as both a withdraw and a failing grade; non-attendance is indicated by the last date of attendance as reported by the instructor. Furthermore, if an instructor enters an “F” grade at the end of the term with a last date of attendance that indicates failure due to non-attendance, the “F” grade will be converted to a “WF” grade by the Office of the Registrar.

It is very important for instructors to notify Enrollment Services if a student stops attending or has never attended a class. For online courses, non-attendance is lack of participation in the online course (e.g., not submitting assignments or contributing to the online discussions). Non-attendance can be reported any time after the add/drop period.

The non-attendance process is as follows:

- Instructor notifies Enrollment Services of non-attendance via Google form (the link to the form is sent directly to teaching instructors, one monthly-instructors please contact enrollmentservices@ltu.edu if you need the link. This form includes the following fields: Banner ID, name of the student, course CRN and/or title, and the last date the student attended the course
- Enrollment Services contacts the student by email informing him/her that the office has been notified of their non-attendance
- The student has 10 (ten) days to respond by either withdrawing from the course (if it is still within the withdrawal period) or by resolving the issue with the instructor
- If the student does not take action, a “WF” or “WN” grade is issued to the student. A “WF” grade and “WN” grade indicates failure due to non-attendance. A “WN” grade is used for developmental and ESL courses, while a “WF” grade is used for all other courses
- The last date of attendance as reported by the instructor is recorded as a requirement for the Office of Financial Aid

What Is a WF Grade?

- A WF grade indicates failure due to non-attendance
Lawrence Technological University

- It reduces the number of credit hours in which the student is enrolled (e.g., if a student is enrolled in 12 credit hours and receives a WF grade in a 3-credit course, the student’s total enrolled credit hours becomes 9 credit hours)
- It is calculated in the GPA as an “F” grade (see the Recomputation of Grade Point Average policy for more information on retaking the course)

What Is a WN Grade?

- A WN grade indicates failure due to non-attendance in a developmental or ESL course
- It reduces the number of credit hours in which the student is enrolled (e.g., if a student is enrolled in 12 credit hours and receives a WF grade in a 3-credit course, the total enrolled credit hours becomes 9 credit hours)
- It is not calculated in the GPA

After the last date to withdraw for any semester, students are not permitted to withdraw from the course and will receive a grade as determined by the instructor (not a “W”).

Those students who do not attend courses or who miss a designated number of courses, and who do not withdraw from the courses on their own, will be issued the grade of “WF.” This grade will impact the student’s financial aid award and loans.

All withdrawals or drops must be initiated by student action to assure that a “W” will appear on the master grade roster and subsequent transcripts. Faculty may not initiate withdrawal procedures nor may they submit a “W” on the electronic grade entry unless the student has withdrawn.

Drop and withdrawal schedules for each semester may be obtained from Enrollment Services/Office of the Registrar and are available at www.ltu.edu/registrars_office.

SCHEDULE OF CLASSES
Programs for graduate students are outlined in this Catalog. Class schedules giving the particular days and hours of the various classes offered are made available online during registration each semester at www.ltu.edu and on BannerWeb at my.ltu.edu.

GRADE REPORTS
Grades are available online at the end of each semester through BannerWeb at my.ltu.edu. Report cards are mailed only upon student request to Enrollment Services/Office of the Registrar. It is the students’ responsibility to seek their grades at the end of each semester.

CHANGE OF CLASS SCHEDULE
Beginning the first day of classes, students may change their schedule by adding or dropping courses online on BannerWeb at my.ltu.edu. Students are responsible for completing their own Drop/Add procedure and retaining confirmation of the transaction. Classes must be added during the first week of classes.

All changes to students’ schedules are effective on the date conducted via BannerWeb. Students are not permitted to attend courses without being officially registered.
PREREQUISITES FOR COURSES
Students are responsible for successfully completing the prerequisite courses listed in this Catalog for all courses in which they are registered. In those exceptional circumstances where a prerequisite may be waived, the student must request an override from the department head or dean of the college offering the course. If a prerequisite is waived, it is for one semester only and does not exempt the student from taking the waived prerequisite in the future.

A student who is determined to have enrolled in a course without completing the required prerequisites or obtaining an authorized waiver may be required to withdraw at any time during the semester and will forfeit tuition and fees according to the normal University tuition credit policy.

ACADEMIC PROBATION
Failure to Make Academic Progress
Any student whose overall grade point average falls below 3.0 at the end of a semester will be placed on academic probation. Students on academic probation are required to have an advisor’s approval to register or to add or drop any class.

Academic Suspension and Dismissal
Any student whose cumulative grade point average remains below 3.0 at the end of four consecutive semesters (enrolled or not enrolled) will be suspended from the University for a minimum of one calendar year. Students can appeal the suspension by a written request to the department chair of their major.

Students who have been suspended and subsequently readmitted who fail to meet the conditions of their readmission will be dismissed from the University. Students dismissed from the University under these circumstances may not be readmitted.

The University will not accept transfer credit for courses taken at another college or university during a period of one calendar year following suspension.

Excessive Repeating and Withdrawal
Students are expected to successfully complete all the courses in which they are registered and are encouraged to plan their schedules to avoid overloads and conflicts that would interfere with that objective. Any student who engages in excessive withdrawal from classes or who repeats a required course more than once is subject to academic review and may be placed on academic probation regardless of the overall grade point average. Subsequent continuation of this behavior may result in suspension or dismissal. Students may only register for the same course up to three times. After that point, the dean’s signature is required to register. Circumstances demonstrably beyond the students’ control may excuse them from this requirement, but poor scholarship will not.

ACADEMIC STANDING COMMITTEE/READMISSION
Graduate students who have been suspended from the University because of academic reasons may, after one calendar year, submit a written petition for readmission to the dean of students or the chair of the Academic Standing Committee. This petition should be received at least six weeks before the first day of class of the semester in which the student wishes to return.

Evidence of planning, curriculum load, and work activities are taken into consideration when reviewing petitions for readmission. Petitions should be well organized, typed, and should
include the student’s current address, phone number, student number, curriculum, and reasons why the student had previous academic difficulty and why the student now feels he or she can be successful if readmitted.

The petition may include a letter from an employer attesting to competent work and maturity. An official transcript of courses taken at another institution must be submitted at the time the student applies for readmission. However, credit is not allowed for any work taken at another institution for the period of one calendar year following suspension. Once admitted, a student is required to abide by the graduation requirements outlined in the *Graduate Catalog* at the time of readmission. A student’s requirements for graduation may be subject to reevaluation.

Students wishing to reapply to a graduate or professional degree program after having been suspended must also complete a regular application for admission.

Students reapplying to the Master of Architecture program in the College of Architecture and Design must resubmit a portfolio of work completed in previous design courses, including any work they may have done in a professional capacity while away from the academic setting. The work submitted must be in accordance with admission guidelines.

Students who have been suspended and subsequently readmitted and who then fail to meet the conditions of their readmission will be dismissed from the University. Students dismissed from the University under these circumstances may not be readmitted.

**ENROLLMENT AT OTHER INSTITUTIONS**

Students are expected to complete all courses for a Lawrence Tech degree at the University once they have been admitted. Transfer credit is generally not given for courses taken at other institutions after enrollment at Lawrence Tech, unless those courses cannot be completed at the University.

Students enrolled at Lawrence Tech may not take courses at other institutions after admission to Lawrence Tech and expect those credits to transfer without the prior written permission of the Credit Review Committee. Any courses taken in violation of this policy will be denied transfer or additional credit.

To be eligible for guest credit, students must have:

1. Achieved a 3.0 GPA at Lawrence Tech
2. Satisfied the prerequisites for the course(s) that they wish to take at another institution. If prerequisites are in progress for the requested course(s) at the time of submission of the Guest Credit Approval form, a letter from the instructor(s) is required stating the student’s grade in the course(s) as of that date and the instructor’s opinion (at that point in time) of the student’s capability to continue successfully in the requested course
3. Completed the Guest Credit Approval form (available in Enrollment Services/Office of the Registrar or at [www.ltu.edu/registrars_office/forms-to-print.asp](http://www.ltu.edu/registrars_office/forms-to-print.asp))

Students must submit the Guest Credit Approval form to Enrollment Services/Office of the Registrar at least one month before the desired course begins. The Credit Review Committee reviews each request individually; allow four to five weeks for processing. Enrollment Services will send the committee’s decision to the student’s LTU email account.
The student must receive at least a 3.0 in the approved course to have it accepted at Lawrence Tech. It is the student’s responsibility to have the official transcript sent to Enrollment Services/Office of the Registrar at Lawrence Tech. Until the official transcript arrives, the credit will not be placed on the student’s transcript. In addition, only the course will transfer to Lawrence Tech, not the grade. Lastly, approved guest credit courses may not be transferred back to Lawrence Tech to be used in grade point average recomputation.

TRANSCRIPTS (RECORDS)
A permanent record of all credits earned at or transferred to the University is maintained for each student in Enrollment Services/Office of the Registrar. These transcripts are preserved indefinitely. All graduates are mailed an unofficial copy of their academic transcripts at Lawrence Tech as soon as possible after their degree is earned.

At all other times, students are charged a nominal fee for same-day processing of official copies of their Lawrence Tech transcripts. If selecting normal two business day processing, students are not charged for official copies of their Lawrence Tech transcripts. Copies of transcripts will not be released without the student’s authorization in writing. Transcripts will not be issued unless all financial obligations from prior semesters have been settled.

ARCHITECTURAL DRAWINGS AND REPORTS
All two- and three-dimensional architectural drawings and models, as well as reports and other written studies submitted in satisfaction of any required or elective architectural courses, become the property of the University and may be kept or returned at the sole discretion of the dean of the College of Architecture and Design. When such work is kept, arrangements will be made for the students to receive suitable photographic copies as a record of their design work.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)
The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights are:

1. The right to inspect and review the student’s education records within 45 days of the day the University receives a request for access. Students should submit to Enrollment Services/Office of the Registrar written requests that identify the record(s) they wish to inspect. The University Registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the Enrollment Services/Office of the Registrar, where the request was submitted, the University Registrar shall advise the student of the correct official to whom the request should be addressed.

2. The right to request the amendment of any of the student’s education records that the student believes are inaccurate or misleading. Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent to school officials with legitimate educational interests. A school official is defined as a person employed by the University in an administrative, supervisory,
academic, or support staff position (including the law enforcement unit and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a person assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

   Family Policy Compliance Office
   U.S. Department of Education
   400 Maryland Avenue, SW
   Washington, DC 20202-4605

At Lawrence Technological University the following information is considered Directory Information about a student: dates of attendance, major field of study, class level, degrees and awards received, anticipated degree date, and confirmation that the student is enrolled (enrollment status).

In accordance with the provisions of the Family Educational Rights and Privacy Act (FERPA), this Directory Information can be released to the general public and may be listed in the campus directory, if one is published. Students may withhold this information from being released by completing the Student Request for Non-Disclosure Form. By completing this form, students are requesting that information NOT be released to non-university personnel nor listed in the campus directory, if one is published, for one year. This request remains in effect until removed by the student. Please note that in compliance with federal regulations, there are situations in which particular information may be released, upon presentation of official documents, to designated state, local, or government agencies.

Students should consider carefully the impact of their decision to request confidential status. This means that after submission of the form, requests for this information from non-university persons or organizations will be refused. Friends or relatives trying to reach a student will not be able to do so through the University; information that the student is enrolled at Lawrence Tech will be suppressed, so if a loan company, prospective employer, family member, etc., inquires about the student, they will be informed that there is no record of the student’s attendance.

Lawrence Tech will honor the student’s request to withhold this information but cannot assume responsibility for contacting the student for subsequent permission to release the Directory Information. Regardless of the effect upon the student, Lawrence Technological University assumes no liability as a result of honoring the student’s instructions that this information be withheld.

Once a student has designated a confidential classification, it will remain until the student cancels it. If a student wishes the classification removed, the student should submit a signed authorization requesting that it be removed. This authorization form is available in Enrollment Services/Office of the Registrar (www.ltu.edu/registrars_office/forms-to-print.asp).
INTRODUCTION

Academic integrity and honesty are basic core values of Lawrence Technological University. In carrying out its academic mission, Lawrence Technological University, like all universities, depends on the honesty and integrity of its faculty, staff, and students, and for this reason every member of the Lawrence Technological University community is charged with upholding the Academic Honor Code. Actions that breach the Code erode the trust of those who look to universities for honest evaluations of academic work arrived at through honest processes. Violations may also cause individual harm, in that reports of performance made to postgraduate schools, professional societies, and employers would inaccurately represent a student’s progress.

Lawrence Technological University is committed to creating an academic community that values both individual and collaborative efforts that promote learning and discovery. Such a community expects honesty and integrity in the work of all its members. The Academic Honor Code speaks to the work of individual students within the community. It should not be construed as arguing against the important collaborations that also occur among students on campus. This document is intended to clarify the adjudication of issues regarding academic honesty and fair play for students. Instructors are encouraged to review the Violation Reporting Process Flowchart, which is available online, along with the Academic Honor Code and the Violation Reporting Form on the Office of the Dean of Students webpage.

Portions of this document have been adapted from (a) the 2002-03 University of North Carolina at Wilmington Academic Honor Code, (b) the 2002-03 Binghamton University Academic Honesty Code, (c) the 2011 Baylor University Academic Integrity and Honor Code, and (d) the 2011 University of Notre Dame Academic Code of Honor.

A. ACADEMIC INTEGRITY

Students, faculty, and staff are expected to follow established standards of academic integrity and honesty. Academic misconduct entails dishonesty or deception in fulfilling academic requirements and includes but is not limited to cheating, plagiarism, or the furnishing of false information to the University or a University affiliate in matters related to academics. An affiliate of the University is any person, organization, or company who works in conjunction with Lawrence Technological University for the purposes of assisting students in fulfilling their academic requirements. It is therefore this institution’s stated policy that no form of dishonesty among its faculty or students will be tolerated. Although all members of the University community have an obligation to report occurrences of dishonesty, each individual is principally responsible for his or her own conduct.

B. ACADEMIC DISHONESTY OFFENSES

Violation of any of the following standards will subject any student to disciplinary action:

1. Plagiarism
   The term “PLAGIARISM” includes but is not limited to (a) the use, by paraphrase or direct quotation, of the published or unpublished work or creative and/or
intellectual property in print, product, or digital media of another person without full and clear acknowledgment; (b) the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers, reports, or other academic materials; or (c) the appropriating, buying, receiving as a gift, or obtaining by any other means another person’s work and the unacknowledged submission or incorporation of it in one’s own work. Plagiarism is unethical, since it deprives the true author of his/her rightful credit and then gives that credit to someone to whom it is not due. Examples include:

- Quoting, paraphrasing, or summarizing written material, even a few phrases, without acknowledgment.
- Failing to acknowledge the source of either a major idea or an ordering principle central to one’s own paper.
- Relying on another person’s data, evidence, or critical method without credit or permission.
- Submitting another person’s work as one’s own.
- Using unacknowledged research sources gathered by someone else.
- Copying portions or outcomes of two- or three-dimensional creative property of previously published work.
- Copying items from Internet websites without acknowledgment of the source.

2. **Bribery**
The term “BRIBERY” includes the offering, giving, receiving, or soliciting of any consideration in order to obtain a grade or other treatment not otherwise earned by the student through his/her own academic performance.

3. **Cheating**
The term “CHEATING” includes but is not limited to (a) use of or giving to others any unauthorized assistance in taking quizzes or examinations; (b) dependence upon aids beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (c) the acquisition, without permission, of tests or other academic material belonging to a member of the University faculty or staff; or (d) the unauthorized use of any electronic or mechanical device during any program, course, quiz, or examination or in connection with laboratory reports or other materials related to academic performance.

4. **Misrepresentation**
The term “MISREPRESENTATION” includes any act or omission undertaken with intent to deceive an instructor for academic advantage. Examples include:

- Using a computer program generated by another and handing it in as one’s own work unless expressly allowed by the instructor.
- Lying to an instructor to improve one’s grade.
- Lying or misrepresenting facts when confronted with an allegation of academic dishonesty.

5. **Conspiracy**
The term “CONSPIRACY” means planning or acting with one or more persons to commit any form of academic dishonesty in order to gain academic advantage for oneself or another.

6. **Fabrication**
The term “FABRICATION” means the use of invented information or the falsification of research or other findings with the intent to deceive and thereby gain academic or professional advantage.

7. **Multiple Submissions**
The term “MULTIPLE SUBMISSIONS” means submitting substantial portions of the same work for credit more than once, unless there is prior explicit consent by the instructor(s) to whom the material is being or has been submitted.

8. **Unauthorized Collaboration**
The term “UNAUTHORIZED COLLABORATION” means collaborating on projects, papers, computer programs, lab reports, or other academic assignments where such collaboration has been prohibited by the instructor.

9. **Sabotage**
The term “SABOTAGE” means deliberately impairing, destroying, damaging, or stealing another’s work or working material. Examples include:

- Destroying, stealing, or damaging another’s lab experiment, computer program, term paper, exam, or project.
- Removing uncharged library materials with the effect that others cannot use them.
- Defacing or damaging library materials with the effect that others cannot use them.
- Hoarding or displacing materials within the library with the effect that others have undue difficulty using them.
- Interfering with the operation of a computer system so as to have an adverse effect on the academic performance of others.

C. **JURISDICTION**
All students enrolled at Lawrence Technological University are subject to the Academic Honor Code.

D. **RESPONSIBILITY OF THE UNIVERSITY COMMUNITY**
1. **General Responsibility**
It shall be the responsibility of every faculty member, student, administrator, and staff member of the University community to uphold and maintain the academic standards and integrity of Lawrence Technological University. Any member of the University community who has reasonable grounds to believe that an infraction of the Academic Honor Code has occurred has an obligation to report the alleged violation.

2. **Student Responsibility**
Each student shall abide by the Academic Honor Code at all times.
3. **Responsibility of Individual Instructors**
Instructors are encouraged to make their classes aware of the Academic Honor Code during the first week of each term. Instructors should include a reference to the Academic Honor Code in the course syllabus. The Academic Honor Code is understood to be in effect in every course regardless of whether or not the instructor makes explicit reference to it.

4. **Responsibility of the University Administration**
The Office of the Dean of Students is responsible for the publication and dissemination of the Academic Honor Code and any amendments or changes approved by the Deans Council with the recommendation of the Faculty Senate and the Faculty Councils of the colleges. All new University faculty, administrative staff, personnel, and students should be advised of the Academic Honor Code upon becoming members of the University community.

The dean of each college may establish additional steps for addressing violations of the Academic Honor Code that are consistent with the mission and academic programs offered by the college and the Academic Honor Code. Such additional steps must be endorsed by the dean of students, filed, and communicated to all faculty members and students within the college.

5. **Responsibility of the Office of the Registrar and the Office of the Dean of Students**
The Office of the Registrar and the Office of the Dean of Students shall receive and maintain comprehensive records of all matters relating to violations of the Academic Honor Code. The dean of students will receive a copy of the Academic Honor Code Violation Reporting Form completed by the instructor and/or Academic Honor Council, to be included in the student’s academic record.

E. **ACADEMIC HONOR COUNCIL**
1. **Responsibilities**
   a. Determines through the process of a hearing whether an accused student has violated the Academic Honor Code;
   b. Recommends one or more sanction(s), such as rewriting of the assignment, failure of the assignment/exam, failure in the course, suspension, or expulsion (the last two sanctions are limited to second-time violators of the Academic Honor Code), for students who have been found in violation of the Academic Honor Code; and
   c. Assists in educating the University community about the Academic Honor Code.

2. **Composition**
The Academic Honor Council is composed of eight student members and eight faculty members. Each college is represented by two students and two faculty members. The student members shall be appointed annually by the dean of students with the advice of the dean of each college. The faculty members shall be appointed for three-year terms by their respective deans. A chair and vice chair shall be appointed by the provost from among the faculty members appointed to the council. Each student member must have a current and cumulative grade point average of 3.0 or higher at the time of the appointment
and must maintain a current and cumulative grade point average of 2.5 or higher during service.

3. **Jurisdiction**
The Academic Honor Council has exclusive jurisdiction over all academic matters involving dishonorable conduct that are not resolved between the student and the instructor in whose class the incident occurred. The Academic Honor Council automatically conducts a hearing for any incident where the student has been previously found in violation of the Academic Honor Code.

4. **Quorum**
A quorum for an Academic Honor Council hearing is three faculty and two student members. A quorum is not affected by a member of the Academic Honor Council disqualifying him- or herself after a hearing has begun.

In the event a quorum cannot be obtained for a pending matter, and the chair determines that a hearing must occur before a quorum can be obtained using regular Academic Honor Council members, students serving on the Student Discipline Committee may be used as substitutes, provided they otherwise meet the qualifications of the Academic Honor Council members and have received similar training.

5. **Disqualification**
A member of the Academic Honor Council shall disqualify him- or herself if he or she feels that, in reaching a decision as to whether or not an accused student has violated the Academic Honor Code, he or she cannot act on the weight of the evidence without bias or prejudice. The Academic Honor Council may, by two-thirds vote, disqualify one of its members from sitting on a hearing, if that would best serve the interests of the Academic Honor Council and the University.

**F. REPORTING AND ADJUDICATION PROCEDURES**

1. **Reporting a Violation**
A suspected violation of the Academic Honor Code may be reported by any member of the University community who has knowledge of such infraction. The infraction should be reported to the instructor of the course in which it occurred, where applicable. If the course or instructor is unknown, the incident may be reported to the appropriate academic department chairperson or dean, or to the dean of students. Such an accusation should be made within seven (7) calendar days from the time of discovery, unless extenuating circumstances prevent reporting.

2. **Presumption of Non-Violation**
Any student charged with a violation under this Code shall be presumed not responsible until it is proven that the violation of the rule or regulation occurred. The burden of proof shall rest with those bringing the charges and is defined as a preponderance of the evidence.

3. **Responding to Reports of a Violation**
Upon receiving an accusation of a violation or having evidence of a violation, the instructor in charge of the course or materials in question may handle the matter directly with the student or refer it to the Academic Honor Council. In either
situation, the instructor must report the alleged violation to the department chair or dean of the college and to the dean of students by email. The instructor is encouraged to discuss the matter with his or her department chair, dean of the college, or the dean of students. The dean of students will verify if the student has previously violated the Academic Honor Code. If the student has previously violated the Academic Honor Code, the alleged violation will be referred to the Academic Honor Council. In a situation where a student has not previously violated the Academic Honor Code, the instructor may choose to handle the matter directly with the student or refer the matter to the Academic Honor Council.

Course withdrawal does not ensure immunity against the consequences of an Academic Honor Code violation. Should a student successfully withdraw from a course after an alleged violation is reported, the class may be administratively reinstated to the student’s schedule and the appropriate academic sanction imposed. In this situation, the student is not eligible for a refund of tuition and fees.

Additionally, a student is allowed to remain in a course and participate without prejudice until he or she has exhausted all appeals. The findings of an investigation shall not be shared with other students in the course. The instructor is expected to treat the student without prejudice during the investigation of a potential violation and after sanction if the student is allowed to remain in the course.

4. Handling the Matter Directly with the Student for a First Violation
   a. If the instructor handles the matter directly with the student, the issue must be addressed within seven (7) calendar days after discovering the violation. If the instructor would like additional time beyond the seven (7) days to resolve the matter with the accused student, the instructor may ask the dean of students and the department chair or dean of his or her college for an extension. The instructor must make the request for more time within the original seven (7)-day time period.

   b. The instructor will inform the student in writing (email) of the alleged violation, describe the evidence supporting the alleged violation, and request a written response from the student by a certain date. The instructor should copy the dean of students and his or her department chair on all correspondence with the student related to the alleged violation. If necessary, the instructor will conduct an interview with the student. The instructor will determine whether the student violated the Academic Honor Code. If the instructor finds the student guilty of violating the Academic Honor Code, the instructor must file the Academic Honor Code Violation Reporting Form with the dean of students. The report will describe the nature of the violation and the sanction (action taken).

   If the student is found in violation, the instructor may choose from the following sanctions: rewriting of the assignment, failure of the assignment/exam, or failure in the course.
The dean of students will send a copy of the report to the student and retain the original report in the student’s file. The Academic Honor Code Violation Reporting Form is available in the Office of the Dean of Students and online at www.lt.edu/myltu/honor-code.asp.

c. If the faculty member finds the student not guilty of dishonorable conduct in connection with an alleged violation, the allegations are dismissed and the matter is closed. The faculty member is expected to document his or her findings and rationale for dismissing the allegation to his or her dean or department chair and the dean of students.

d. A student found in violation of the Academic Honor Code by an instructor may appeal the findings to the Academic Honor Council. The student must request a meeting with the dean of students to initiate the appeal process.

5. Referring the Matter to the Academic Honor Council
If an instructor believes a student may have violated the Academic Honor Code and chooses to refer the matter to the Academic Honor Council, the instructor must first report the alleged violation to his or her department chair or the dean of the college by email and provide the dean of students with the Academic Honor Code Violation Reporting Form. By providing the dean of students with the report, the instructor is indicating to the dean of students that he or she has chosen not to handle the investigation and instead is referring the case to the Academic Honor Council. The referral must be made within seven (7) calendar days after discovery of the violation.

G. HEARINGS
1. Procedure
   a. Notice to the Grievant and Accused
      Within five (5) calendar days after an alleged violation of the Academic Honor Code has been referred to the Academic Honor Council, the dean of students shall notify in writing the grievant and the accused student of the basis for the alleged violation of the Academic Honor Code; the date, time, and place the violation allegedly occurred; the nature of the evidence upon which the grievant will rely; and the date, time, and place at which the Academic Honor Council will meet to determine if a violation has occurred. The notice must inform both the grievant and the accused of their responsibilities at the hearing. If written evidence will be relied upon in whole or in part to establish a violation, the accused student shall be given an opportunity to examine such evidence prior to the time of the hearing. Ordinarily, such writings shall remain in the possession of the dean of students and subject to the control of the chair of the Academic Honor Council. The dean of students shall make necessary arrangements to afford the accused sufficient access to such writings to permit his or her preparation of an appropriate response to charges based in whole or in part upon such writings.

   b. Hearing Date
The Academic Honor Council must meet to consider an alleged violation of the Academic Honor Code within ten (10) calendar days after the alleged violation is referred to the Academic Honor Council. However, the hearing should not take place until three (3) calendar days after the notification is sent to the student unless the student desires an expedited hearing and waives the three-day waiting requirement. If the hearing should fall during a University holiday, semester break, the summer months, or a time when a quorum of the Academic Honor Council is not available, the chair has the responsibility to schedule the hearing within the earliest reasonable time frame.

c. **Who May Attend**

Only members of the Academic Honor Council, the accused, the grievant, witnesses (while giving testimony), and the dean of students, or his or her designee, may attend a hearing. Lawyers representing the accused or the grievant and character witnesses are specifically excluded. The dean of students, or his or her designee, is present to assist with administrative matters and shall not vote.

d. **The Hearing**

The hearing is presided over by the chair of the Academic Honor Council, or in his or her absence, the vice chair. If the vice chair also is not present, the members of the Academic Honor Council may elect a temporary chair or postpone the hearing. The chair shall select a secretary for the hearing.

The chair is in charge of the hearing and has broad discretion. The chair shall exercise control over the conduct of all persons participating in the hearing and direct the initial questioning to the grievant and the accused and their witnesses. The chair shall act as a hearing examiner by developing the facts and evidence necessary to enable the Academic Honor Council to make a decision as to whether or not the Academic Honor Code has been violated. In so doing, the chair may exclude irrelevant, immaterial, and unduly repetitious evidence. The chair may, at his or her discretion, recess the hearing as often as necessary to ensure fairness to the grievant or the accused.

The hearing shall consist of two phases: (1) the presentation of evidence and (2) the deliberations of the Academic Honor Council. During the presentation of evidence phase, the grievant and the accused shall present to the Academic Honor Council facts and circumstances that will enable the Academic Honor Council to determine whether or not the accused has violated the Academic Honor Code. In presenting their positions, the grievant and the accused may ask others to present testimony or documentary evidence. In order to clarify issues, resolve inconsistencies or conflicts in testimony, or to ascertain facts, each member of the Academic Honor Council may ask questions of any person appearing at the hearing.
e. **Evidence**
The accused and the grievant may present to the Academic Honor Council any evidence, oral or written, that, in the discretion of the chair of the Academic Honor Council, is pertinent to the alleged Academic Honor Code violation or that might shed light on the facts and circumstances surrounding it. It is important for the grievant and the accused to offer all of their evidence at the time of the hearing. The presentation of evidence is audio recorded. Once the presentation of evidence is concluded, and the audio recorder is turned off, the Academic Honor Council may not consider additional evidence or testimony. Witnesses and evidence must be presented at the hearing if a party wants them to be considered by the Academic Honor Council.

It is essential that witnesses with first-hand knowledge of the facts and circumstances surrounding the alleged Academic Honor Code violation appear in person. A contention by a party appearing before the Academic Honor Council that he or she could get a witness to testify, if necessary, is not helpful to the Academic Honor Council. When a witness cannot be present at the hearing, the grievant or the accused may present to the Academic Honor Council a signed, notarized statement from the absent witness. Because the absent witness cannot be questioned by the other party or the members of the Academic Honor Council, this evidence may be given less weight than other first-hand testimony.

f. **Questioning**
In addition to members of the Academic Honor Council, the grievant and the accused may question one another or the witness(es) of either.

g. **Failure to Appear**
If the grievant or the accused fails to appear before the Academic Honor Council on the date and at the time and place specified in the notice, the Academic Honor Council may take the available testimony and evidence and reach a decision on the basis of that evidence. Failure of one party to appear and offer evidence may leave the Academic Honor Council little choice but to decide in favor of the party presenting the only evidence and testimony.

If either party is unable to appear before the Academic Honor Council on the date specified in the notice, he or she should notify the Academic Honor Council chair and explain why. If the Academic Honor Council chair determines that good cause exists for the party’s non-appearance at the scheduled hearing time, he or she shall set a new date for the hearing.

2. **Standard of Proof**
The Academic Honor Council determination shall be made on the basis of whether it is more likely than not that the accused student violated the Academic Honor Code. If a majority of the Academic Honor Council votes that the evidence supports the allegation, the Academic Honor Council shall render a decision that the accused has violated the Academic Honor Code. In finding a student in violation of the Academic Honor Code, the Academic Honor Council has...
determined that the evidence supporting the violation was of greater weight or more convincing than the evidence that was offered in opposition by the student. If the majority of the Academic Honor Council determines the evidence does not support the accusation, the student will be found not in violation of the Academic Honor Code.

3. **Decision of the Academic Honor Council**

After the presentation of evidence is concluded, the chair shall excuse the accused and the grievant from the Academic Honor Council meeting. The Academic Honor Council shall then discuss the evidence presented during the hearing, and when finished, the chair shall poll the members on whether or not they think the evidence supports the allegation that the accused violated the Academic Honor Code.

If a majority of the Academic Honor Council votes that a preponderance of the evidence supports the allegation, the Academic Honor Council shall render a decision that the accused has violated the Academic Honor Code. If less than a majority of the Academic Honor Council votes that the evidence supports the allegation, the Academic Honor Council shall render a decision that the allegation was not substantiated. A voting member of the Academic Honor Council who is not disqualified may not abstain from voting.

If the Academic Honor Council determines that the accused student has violated the Academic Honor Code, it shall also recommend the sanction(s) it believes should be imposed upon the student. The Academic Honor Council must give great weight to the sanction(s) recommended by the instructor, but it may also consider the materials and information presented at the hearing, and the student’s academic and honor code records. Possible sanctions include, but are not limited to, failure of the assignment, failure of the course, probation, suspension, and/or expulsion. In the case of a second violation, the likely sanction is expulsion from the University.

4. **Summary Report and Record of Hearing**

   a. The secretary of the Academic Honor Council shall prepare a summary report of the hearing, including the decision of the Academic Honor Council. The members of the Academic Honor Council shall review this summary; make necessary changes, if any; and indicate their approval of it by signing it.

   b. The record of the hearing shall consist of the audio recording of the hearing and the tangible evidence presented at the hearing.

5. **Notification**

The chair of the Academic Honor Council shall report the Council’s decision to the dean of students. In addition, if the decision is that the Academic Honor Code has been violated, the Academic Honor Council chair shall deliver to the dean of students the record of the hearing, along with the recommended sanction(s). The dean of students will implement the sanction(s) recommended by the Academic
Honor Council. If the Academic Honor Council recommends expulsion, the dean of students will immediately initiate expulsion proceedings.

6. Disposition of Summary Report and Record of Hearing

a. If the Academic Honor Council decides that the Academic Honor Code was not violated, the chair shall destroy the record of the hearing. The dean of students will make a record of the decision without any identifying information and destroy all other information pertaining to the charge. The student may continue in the class without prejudice.

b. If a student is found by the Academic Honor Council to have violated the Academic Honor Code, the dean of students shall maintain the summary report and record of the hearing.

c. The dean of students shall notify the instructor, department chair, and the dean of the college in writing of the Academic Honor Council’s decision.

H. APPEAL PROCESS

1. A decision reached, or a sanction imposed, by the Academic Honor Council may be appealed by the student(s) found to be in violation or the grievant(s) to the Discipline Appeals Committee within seven (7) calendar days of the decision. Such appeals shall be in writing and shall be delivered to the dean of students or designee.

2. The Discipline Appeals Committee is composed of three (3) members: the chair of the Faculty Senate; the associate provost; and the president of Student Government.

3. Except as required to explain the basis of new information, an appeal shall be limited to the review of the verbatim records of the Academic Honor Council hearing and supporting documents for one or more of the following purposes:

a. To determine whether the Academic Honor Council hearing was conducted fairly in light of the charges and information presented, and in conformity with prescribed procedures, giving the complaining party a reasonable opportunity to prepare and present evidence that the Academic Honor Code was violated, and giving the other party a reasonable opportunity to prepare and to present a response to those allegations. Deviations from designated procedures will not be a basis for sustaining an appeal unless significant prejudice results.

b. To determine whether the decision reached regarding the accused student was based on substantial information; that is, whether the facts in the case were sufficient to establish that a violation of the Academic Honor Code occurred.

c. To determine whether the sanction(s) imposed were appropriate for the violation of the Academic Honor Code that the student was found to have committed.

d. To consider new information sufficient to alter a decision or other relevant facts not brought out in the original hearing, because such information
and/or facts were not known to the person appealing at the time of the original Academic Honor Council hearing.

4. If the Discipline Appeals Committee supports an appeal, the matter may be returned to the original Academic Honor Council for a reconsideration of the original determination and/or sanction(s).
   a. In cases involving appeals by students accused of violating the Academic Honor Code, the Discipline Appeals Committee may, upon review of the case, reduce but not increase the sanctions imposed by the Academic Honor Council.
   b. In cases involving appeals by persons other than the student(s) accused of violating the Academic Honor Code, the Discipline Appeals Committee may, upon review of the case, reduce or increase the sanctions imposed by the Academic Honor Council.

5. Following the appeal, the dean of students shall advise the accused student(s) in writing of the determination of the Discipline Appeals Committee and of the sanction(s) imposed, if any. A copy of the notification will be retained in the student’s disciplinary record. Cases involving University suspension and expulsion will be filed in the student’s academic record.

I. EXPULSION PROCEEDINGS

1. Expulsion proceedings will be initiated by the dean of students for students found in second violation of the Academic Honor Code. The student will be contacted by the office of the dean of students for a meeting to explain proceedings of expulsion.

2. Students being expelled will receive written notification from the dean of students indicating the sanction of expulsion and the process for appeal.

3. The sanction of expulsion may be appealed by the accused student to the provost within seven (7) calendar days of the decision. Such appeals shall be in writing and shall be delivered to the dean of students or designee.

4. Except as required to explain the basis of new information, an appeal shall be limited to a review of documents and notes of the Academic Honor Council, the accused student, and supporting documents for one or more of the following purposes:
   a. To determine whether the student received fundamental fairness in the investigative and decision-making processes.
   b. To determine whether the facts in the case were sufficient to establish that a violation of the Academic Honor Code occurred in both cases.
   c. To consider relevant and material new evidence.

5. Following the appeal, the provost shall advise the accused student in writing of the determination of the appeal, and of the sanctions imposed, if any. A copy of the notification will be retained in the student’s academic record and the student’s disciplinary record.
Student Pledges
In adopting this Academic Honor Code, students of Lawrence Technological University recognize that academic honesty and integrity are fundamental values of the University community. The quality of a Lawrence Technological University education is dependent upon the community acceptance and enforcement of the Academic Honor Code. Members of the Lawrence Technological University community pledge to hold themselves and their peers to the highest standards of academic honesty and integrity. An individual who becomes aware of a violation of the Academic Honor Code has an obligation to report this violation.

Undergraduate Students
The following pledge is required on all academic work submitted by undergraduate students at Lawrence Technological University:

“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
All graduate students at Lawrence Technological University are required to sign the student pledge when they start 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.”

STUDENT CODE OF CONDUCT
Lawrence Technological University is an institution that encourages the intellectual and personal growth of its students as scholars and citizens. Linking theory and practice with advanced learning technologies, Lawrence Technological University provides superior undergraduate, graduate, and lifelong learning for leadership, professional achievement, and civic excellence. 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.

Honesty, integrity, and caring are essential qualities of an educational institution, and the concern for values and ethics is important to the whole educational experience. The Student Code of Conduct outlines the rights and responsibilities and expected levels of conduct of students in the University community. Fundamental to the achievement of community among the members of the University is the recognition by all such members that each shares a responsibility to observe University regulations. This obligation, which is an extension of the citizen’s responsibility to observe the law of the land, is an essential corollary to participation in the academic rights afforded to members of the University.

A student voluntarily joins the Lawrence Technological University community and thereby assumes the obligation of abiding by the standards prescribed in the Student Code of Conduct. Students are required to engage in responsible social conduct that reflects credit upon the University community and to model good citizenship in any community. The University, through the Office of the Dean of Students, maintains the exclusive authority to impose sanctions for behaviors that violate the Student Code of Conduct.

All students enrolled at Lawrence Technological University have access to the Student Code of Conduct. Printed copies are available through the Office of the Dean of Students and the Office
of University Housing. The Student Code of Conduct, along with other helpful information, also may be accessed online at www.ltu.edu/myltu/code-conduct.

A. Definitions

1. The term “UNIVERSITY” means Lawrence Technological University.

2. The term “STUDENT” includes all persons taking courses at the University either full-time or part-time, pursuing undergraduate, graduate, or professional studies. Persons who withdraw after allegedly violating the Student Code, who are not officially enrolled for a particular term but who have a continuing relationship with the University, or who have been notified of their acceptance for admission are considered “students,” as are persons who are living in University residence halls, although not enrolled in this institution. This Student Code does apply at all locations of the University, including education centers in Wayne, Oakland, Macomb, and outlying counties in Michigan and centers in other states and foreign countries.

3. The term “FACULTY MEMBER” means any person hired by the University to conduct classroom or teaching activities or who is otherwise considered by the University to be a member of its faculty.

4. The term “UNIVERSITY OFFICIAL” includes any person employed by the University who is performing assigned administrative or professional responsibilities.

5. The term “MEMBER OF THE UNIVERSITY COMMUNITY” includes any person who is a student, faculty member, University official, or any other person employed by the University. A person’s status in a particular situation shall be determined by the dean of students.

6. The term “UNIVERSITY PREMISES” includes all land, buildings, facilities, and other property in the possession of or owned, used, or controlled by the University, including adjacent streets and sidewalks.

7. The term “ORGANIZATION” means any number of persons who have complied with the formal requirements for University recognition.

8. The term “STUDENT DISCIPLINE COMMITTEE” means any person or persons authorized by the dean of students to determine whether a student has violated the Student Code and to recommend sanctions that may be imposed when a regulations violation has been committed.

9. The term “STUDENT CONDUCT OFFICER” means a University official authorized on a case-by-case basis by the dean of students to impose sanctions upon any student found to have violated the Student Code. The dean of students may, in certain circumstances, authorize a student conduct officer to serve simultaneously as a student conduct officer and as the sole member, or one of the members, of the Student Discipline Committee. The dean of students may authorize the same student conduct officer to impose sanctions in all cases.

10. The term “DISCIPLINE APPEALS COMMITTEE” means any person or persons authorized by the dean of students to consider an appeal from a Student Discipline Committee’s determination as to whether a student has violated the Student Code.
11. The term “SHALL” is used in the imperative sense.

12. The term “MAY” is used in the permissive sense.

13. The term “POLICY” means the written regulations of the University as found in, but not limited to, the Student Code, the Student Handbook, the Guidelines for University Living, the University webpage and computer use policy, and Undergraduate or Graduate Catalogs.

14. “LEVEL I” violations of the Student Code are those for which the sanctions may be a warning, disciplinary probation, special restrictions or loss of privileges, fines, restitution, imposed reassignment of course section or housing assignment, or assignments of discretionary sanctions. Level I violations will generally be heard by a student conduct officer.

15. “LEVEL II” violations of the Code are those for which the sanctions may be, in addition to those listed in Level I, suspension from University Housing and/or from the University or expulsion from University Housing and/or from the University. Level II violations will generally be heard by the Student Discipline Committee.

16. The term “COMPLAINANT” means any person who submits a charge alleging that a student violated this Student Code. When a person believes that she/he has been a victim of another student’s misconduct, the student who believes she/he has been a victim will have the same rights under this Student Code as are provided to the complainant, even if another member of the University community submitted the charge itself.

17. The term “ACCUSED STUDENT” means any student accused of violating this Student Code.

B. Student Code Authority

1. The dean of students shall determine the composition of the Student Discipline Committee and Discipline Appeals Committee and determine which Student Discipline Committee, student conduct officer, and Discipline Appeals Committee shall be authorized to hear each matter.

2. The dean of students is that person designated by the University president to be responsible for the administration of the Student Code. The dean of students shall develop policies for the administration of the student conduct system and procedural rules for the conduct of Student Discipline Committee hearings that are not inconsistent with provisions of the Student Code.

3. Decisions made by the Student Discipline Committee and/or student conduct officer designated by the dean of students shall be final, pending the normal appeal process.

4. The Student Discipline Committee may be designated as arbiter of disputes within the student community in cases that do not involve a violation of the Student Code. All parties must agree to arbitration and to be bound by the decision with no right of appeal.
C. Conduct – Rules and Regulations

Acts of academic dishonesty are regulated by procedures outlined in the *Academic Honor Code*. Any student found to have committed the following misconduct is subject to the disciplinary sanctions outlined in Section H:

1. Acts of dishonesty, including but not limited to the following: cheating, plagiarism, or other forms of academic dishonesty; furnishing false information to any University official, faculty member, or office; forgery; alteration or misuse of any University document, record, or instrument of identification; helping or attempting to help another student commit an act of dishonesty; tampering with the election of any University-recognized student organization.

2. Disruption or obstruction of teaching, research, administration, disciplinary proceedings, or other University activities, including its public-service functions on or off campus or other authorized non-University activities, when the act occurs on University premises.

3. Physical abuse, verbal abuse, threats, intimidation, harassment, coercion, stalking, and hate crimes or acts that are racially motivated or due to one’s sexual orientation, gender expression, and/or other conduct that threatens or endangers the health or safety of any person.

4. Sexual misconduct, the unauthorized form of any sexual contact with another person without the consent of that person. The Sexual Misconduct Policy can be found on [http://www.ltu.edu/myltu/titleix.asp](http://www.ltu.edu/myltu/titleix.asp). Hard copies of the policy are available in the Office of the Dean of Students.

5. Attempted or actual theft of and/or damage to property of the University or property of a member of the University community or other personal or public property, on or off campus.

6. Hazing, defined as an act that endangers the mental or physical health or safety of a student, or which destroys or removes public or private property, for the purpose of initiation, admission into, affiliation with, or as a condition for continued membership in a group or organization. The express or implied consent of the victim will not be a defense. Apathy and/or acquiescence in the presence of hazing are not neutral acts; they are violations of this regulation.

7. Failure to comply with directions of University officials or law enforcement officers acting in performance of their duties and/or failure to identify oneself to these persons when requested to do so.

8. Unauthorized possession, duplication, or use of keys to any University premises or unauthorized entry to or use of University premises.

9. Violation of any University policy, rule, or regulation published in hard copy, posted on campus, or available electronically on the University website.

10. Violation of federal, state, or local law on University premises or at University-sponsored or supervised activities.
11. Use, possession, manufacturing, or distribution of marijuana, heroin, narcotics, or other controlled substances, except as expressly permitted by law; use or possession of drug paraphernalia. Although many states (Michigan included) have passed laws legalizing medical marijuana, all forms of marijuana continue to be illegal under federal law. Federal law supersedes state law, as a result, institutions are not obligated to accommodate users of medical marijuana in residence halls, on campus, or otherwise. LTU does not allow the use or possession of any form of marijuana on campus.

12. Use, possession, manufacturing, or distribution of alcoholic beverages, except as expressly permitted by the law and University regulations, or public intoxication. Alcoholic beverages may not, in any circumstances, be used by, possessed by, or distributed to any person under 21 years of age.

13. Possession of firearms (including BB, pellet, and air soft guns), ammunition, bows and arrows, explosives, any object that by its intended or actual use may be used to threaten or harm people or damage or destroy property, or other weapons or dangerous chemicals on University premises. Students risk severe University discipline and/or suspension if found with firearms or other dangerous weapons on campus.

14. Participation in an on-campus or off-campus demonstration, riot, or activity that disrupts the normal operations of the University and infringes on the rights of other members of the University community; leading or inciting others to disrupt scheduled and/or normal activities within any campus building or area; intentional obstruction that unreasonably interferes with freedom of movement, either pedestrian or vehicular, on campus.

15. Obstruction of the free flow of pedestrian or vehicular traffic on University premises or at University-sponsored or supervised functions, or violation of any regulations outlined in the Lawrence Tech Campus Safety Guide.

16. Conduct which is disorderly, lewd, indecent, or a breach of the peace; or aiding, abetting, or procuring another person to breach the peace on University premises or at functions sponsored, or participated in, by the University or members of the academic community. Disorderly conduct includes but is not limited to: any unauthorized use of electronic or other devices to make an audio or video recording of any person while on University premises without his/her knowledge, or without his/her effective consent when such recording is likely to cause injury or distress. This includes but is not limited to surreptitiously taking pictures of another person in a gym, locker room, or restroom.

17. Theft or other abuse of computer facilities and resources, including but not limited to: unauthorized entry into a file to use, read, change, or delete the contents or for any other purpose; unauthorized transfer of a file; use of another individual's identification and password; use of computing facilities to interfere with the work of another student, faculty member, or University official; use of computing facilities to send obscene or abusive messages; use of computing facilities to interfere with normal operation of the University computing system; use of computing facilities and resources in violation of copyright laws; any violation of the University’s Computing and Network Policy.

18. Tampering with any telecommunications services, including but not limited to: telephone, cable television, and/or voicemail; providing unauthorized service to another room, suite, or apartment by any means through unauthorized installation of electronic devices, wiring jacks, or extensions.
19. Abuse of the student conduct system, including but not limited to: failure to obey the summons of the Student Discipline Committee, Discipline Appeals Committee, student conduct officer, or University official to appear for a meeting or hearing as part of the student conduct system; falsification, distortion, or misrepresentation of information before a Student Discipline Committee, Discipline Appeals Committee, or student conduct officer; disruption or interference in bad faith with the orderly conduct of a proceeding; attempting to discourage an individual’s proper participation in, or use of, the Student conduct system; attempting to influence the impartiality of a member of a Student Discipline Committee or Discipline Appeals Committee prior to, and/or during, and/or after a student conduct proceeding; harassment (verbal or physical) and/or intimidation of a member of the Student Discipline Committee or Discipline Appeals Committee prior to, and/or during, and/or after a student conduct proceeding; failure to comply with the sanction(s) imposed under the Student Code; influencing or attempting to influence another person to commit an abuse of the student conduct system.

20. Actions that endanger the student, the University or local community, or the academic process, or that cause harm to oneself or others.

D. Jurisdiction of the Lawrence Technological University Student Code

The Lawrence Technological University Student Code shall apply to conduct that occurs on University premises, at University-sponsored activities, and to off-campus conduct that adversely affects the University community and/or the pursuit of its objectives. Each student shall be responsible for his/her conduct from the time of application for admission through the actual awarding of a degree, even though conduct may occur before classes begin or after classes end, as well as during the academic year and during periods between terms of actual enrollment (and even if their conduct is not discovered until after a degree is awarded). The Student Code shall apply to a student’s conduct even if the student withdraws from school while a disciplinary matter is pending. The dean of students shall decide whether the Student Code shall be applied to conduct occurring off campus, on a case-by-case basis, at his/her sole discretion.

The University reserves the right to review student conduct that occurs off campus when such behavior reflects upon the integrity of the University. Students are representatives of Lawrence Technological University. In cases of inappropriate off-campus behavior, the dean of students or designee will investigate and may refer students to the Student Conduct system. This provision is also applicable to students studying abroad.

LTU community members also are responsible for their guests’ behavior should the guests violate any University policies. The University reserves the right to sanction its students for criminal or civil violations, or for a violation of University policy independent of or in addition to any actions taken by a criminal or civil court of law. Where Lawrence Technological University’s interests as a community are clearly involved, however, the University president or designee may assert special authority in determining the future status of this member of the University community.

The residence halls have policies and procedures to which all students are subject. These policies and procedures are described in the University Housing Guidelines. Students are also subject to the policies, rules, and regulations of the colleges/schools in which they are enrolled or taking classes. All academic grievances are handled by the individual colleges/schools.

E. Violation of Law and University Discipline

1. University disciplinary proceedings may be instituted against a student charged with conduct that potentially violates both the criminal law and this Student Code (that is, if
both possible violations result from the same factual situation) without regard to the pendency of civil or criminal litigation in court or criminal arrest and prosecution. Proceedings under this Student Code may be carried out prior to, simultaneously with, or following civil or criminal proceedings off campus at the discretion of the dean of students. Determinations made or sanctions imposed under this Student Code shall not be subject to change because criminal charges arising out of the same facts that gave rise to violation of University rules or regulations were dismissed, reduced, or resolved in favor of or against the criminal law defendant.

2. When a student is charged by federal, state, or local authorities with a violation of law, the University will not request or agree to special consideration for that individual because of his or her status as a student. If the alleged offense is also being processed under the Student Code, the University may advise off-campus authorities of the existence of the Student Code and how such matters are typically handled within the University community. The University will attempt to cooperate with law enforcement or other agencies in the enforcement of criminal law on campus and in the conditions imposed by criminal courts for the rehabilitation of student violators (provided that the conditions do not conflict with campus rules, regulations, or sanctions). Individual students and other members of the University community, acting in their personal capacities, remain free to interact with governmental representatives as they deem appropriate.

If a student is charged with an off-campus violation of federal, state, or local laws, but not with any other violation of this Code, disciplinary action may be taken by the University and sanctions imposed for grave misconduct which demonstrates flagrant disregard for the University community. In such cases, no sanction may be imposed unless the student has been found guilty in a court of law or has declined to contest such charges, although not actually admitting guilt (e.g., “no contest” or “nolo contendere”).

F. Student Code of Conduct Procedures
All suspected violations of the Student Code will be reviewed in accordance with the procedures outlined below.

1. Disciplinary Correspondence
   All disciplinary correspondence will be sent to the student’s official mailing address as listed with Enrollment Services/Office of the Registrar. The University reserves the right to use other reasonable means to notify students.

2. Filing Complaints
   a. Any member of the University community may make a complaint and/or referral or offer information concerning such complaint and/or referral to the Office of the Dean of Students. A complaint or referral made against a student or students alleging violation(s) of the Student Code of Conduct shall be directed to the dean of students for review. Any complaint should be prepared in writing on a University incident report form and should be submitted as soon as possible after the event takes place, preferably within 48 hours.
   b. While action on a complaint of violating a University rule or regulation is pending, the status of the student shall not be altered except for reasons outlined in Section J.

3. Presumption of Non-Violation
Any student charged with a violation under this Code shall be presumed not responsible until it is proven that, more likely than not, the violation of the rule or regulation occurred.

4. Preliminary Investigation
When the dean of students or designee receives information that a student has allegedly violated University rules or regulations, or local, state, or federal law, the dean or designee shall investigate the alleged violation and determine whether further action is necessary. After completing a preliminary investigation, the dean or designee may:

a. Find no basis for the complaint and dismiss the allegation as unfounded, or

b. Contact the student for a discussion and either:
   (1) Dismiss the allegation.
   (2) Identify that the alleged violation(s) equates to a Level I infraction and assign the case to a student conduct officer to conduct a student conduct meeting with the student(s).
   (3) Identify that the alleged violation(s) equates to a Level II infraction and schedule a hearing with the Student Discipline Committee.

5. Summoning a Student for a Student Conduct Meeting
A student conduct meeting is a meeting between a student(s) involved in an alleged violation of the Code and a student conduct officer and may include sanctions. In some cases, the meeting may resolve the matter.

a. The student conduct officer shall provide the student with:
   (1) Written notice of the charge(s) and an outline of rights.
   (2) Review of all available information, documents, exhibits, and a list of witnesses that may testify against the student.

b. Following receipt of the notice of charges, a student:
   (1) May elect not to contest the charges and to accept responsibility for them. If this election is made, the student must sign a waiver of the right to a hearing, and must accept the sanction imposed by the student conduct officer. The decision to waive a hearing and accept the sanction is final and not appealable.
   (2) May contest the charges and elect to proceed to a hearing. The hearing shall be scheduled not less than five (5) nor more than 15 calendar days from the student conduct meeting.

G. Hearing Process
Hearings provide the forum in which parties to an allegation are afforded the opportunity to present information for review by a Student Discipline Committee presided over by the chair of the Committee and moderated by the dean of students. The dean of students is an ex-officio member of the Committee. A time shall be set for a Student Discipline Committee hearing not less than five (5) nor more than 15 calendar days after the student has been notified. The maximum time limit for scheduling of hearings may be extended at the discretion of the dean of students or designee.

Hearings shall be conducted by the Student Discipline Committee according to the following guidelines, except as provided by article J below:
1. In cases in which the Student Discipline Committee has been authorized by the dean of students to conduct a hearing, the recommendations of the members of the Student Discipline Committee shall be considered in an advisory capacity by the dean of students in determining and imposing sanctions.

2. Composition: The Student Discipline Committee is composed of 15 members. Recommendations for membership on the Student Discipline Committee from the deans of each academic college, the faculty, the administration and staff of the University, and the executive committee of Student Government will be sought by the dean of students on an annual basis, or more frequently as needed. At the discretion of the dean of students, general solicitation of the student body for participation may be made. Based upon these recommendations and/or solicitations, candidates who meet eligibility requirements will be invited to apply and interview for participation on the Student Discipline Committee.

3. Term of service: Students shall serve for one academic year and may continue to serve at the discretion of the provost and the dean of students.

4. Student eligibility: All students, full- or part-time, shall be eligible for recommendation to the Student Discipline Committee provided they have maintained a 2.3 cumulative grade point average, are not currently on disciplinary probation, and have not been suspended from the residence halls or the University.

5. Training: All members of the Student Discipline Committee, upon receiving notice of appointment, shall be given all necessary information about their responsibilities and the means for carrying them out.

6. Five students from the Student Discipline Committee will be chosen by the dean of students to hear a proceeding.

7. Hearings normally shall be conducted in private.

8. The complainant, the accused student, and their advisors, if any, shall be allowed to attend the entire portion of the Student Discipline Committee hearing at which information is received (excluding deliberations). Admission of any other person to the hearing shall be at the discretion of the Student Discipline Committee and/or the dean of students or designee.

9. In the case of Student Discipline Committee hearings involving more than one accused student, the dean of students or designee, at his/her discretion, may permit the Student Discipline Committee hearings concerning each student to be conducted either separately or jointly.

10. The complainant and the accused student have the right to be assisted by any advisor they choose, at their own expense. The advisor may be an attorney. The complainant and/or the accused are responsible for presenting his or her own information and, therefore, advisors are not permitted to speak or to participate directly in any hearings before the Student Discipline Committee. A student should select as an advisor a person whose schedule allows attendance at the scheduled date and time for the Student Discipline Committee hearing because delays will not normally be allowed due to the scheduling conflicts of an advisor.
11. The complainant, the accused student, and the Student Discipline Committee may arrange for witnesses to present information to the Student Discipline Committee. The University will try to arrange the attendance of possible witnesses who are members of the University community, if reasonably possible, and who are identified by the complainant and/or accused student at least two (2) business days prior to the Student Discipline Committee hearing. Witnesses will provide information to and answer questions from the Student Discipline Committee. Questions may be suggested by the accused student and/or complainant to be answered by each other or by other witnesses, with such questions directed to the chair, rather than to the witness directly. This method is used to preserve the educational tone of the hearing and to avoid creation of an adversarial environment. Questions of whether potential information will be received shall be resolved at the discretion of the chair of the Student Discipline Committee, in consultation with the dean of students or designee.

12. Pertinent records, exhibits, and written statements (including Student Impact Statements) may be accepted as information for consideration by the Student Discipline Committee, at the discretion of the dean of students.

13. All procedural questions are subject to the final decision of the dean of students.

14. After the portion of the Student Discipline Committee hearing concludes in which all pertinent information has been received, the Student Discipline Committee shall determine by majority vote whether the accused student has violated each section of the Student Code that the student is charged with violating.

15. The Student Discipline Committee’s determination shall be made on the basis of whether it is more likely than not that the accused student violated the Student Code.

16. Formal rules of process, procedure, and/or technical rules of evidence, such as are applied in criminal or civil court, are not used in Student Code proceedings.

17. There shall be a single verbatim record, such as a transcription or tape recording, of all hearings before a Student Discipline Committee (not including deliberations). Deliberations shall not be recorded. Transcriptions and/or tapes made during Student Discipline Committee hearings shall be the property of the University. These materials are confidential. They are made available in case of appeal and, upon request, to the Discipline Appeals Committee hearing the appeal.

18. If the accused student, with notice, does not appear before a Student Discipline Committee hearing, the information in support of the charges shall be presented and considered even if the accused student is not present. If the accused student fails to attend the hearing, it shall be deemed that he or she denies all allegations. When appropriate, a sanction will be determined and the student will be notified in writing.

The Student Discipline Committee may accommodate concerns for the personal safety, well-being, and/or fears of confrontation of the complainant, accused student, or other witness during the hearing by providing separate facilities, by using a visual screen, and/or by permitting participation by telephone, videophone, closed circuit television, video conferencing, videotape, audio tape, written statement, or other means, where and as determined in the sole judgment of the dean of students to be appropriate.
H. Sanctions

1. The following sanctions may be imposed upon any student found to have violated the Student Code:
   a. WARNING – A notice in writing to the student that the student is violating or has violated institutional regulations.
   b. PROBATION – A written reprimand for violation of specified regulations. Probation is for a designated period of time and includes the probability of more severe disciplinary sanctions if the student is found to violate any institutional regulation(s) during the probationary period.
   c. LOSS OF PRIVILEGES – Denial of specified privileges for a designated period of time.
   d. LOSS OF ACADEMIC CREDIT – Failing grade assigned for the course due to academic dishonesty.
   e. FINES – Published fines may be imposed.
   f. RESTITUTION – Compensation for loss, damage, or injury. This may take the form of appropriate service and/or monetary or material replacement.
   g. DISCRETIONARY SANCTIONS – Work assignments, essays, service to the University, or other related discretionary assignments. (Such assignments must have the approval of the dean of students.)
   h. RESIDENCE HALL SUSPENSION – Separation of the student from the residence halls for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.
   i. RESIDENCE HALL EXPULSION – Permanent separation of the student from the residence halls.
   j. UNIVERSITY SUSPENSION – Separation of the student from the University for a definite period of time, after which the student is eligible to return. Conditions for readmission may be specified.
   k. UNIVERSITY EXPULSION – Permanent separation of the student from the University.
   l. REVOCATION OF ADMISSION AND/OR DEGREE – Admission to, or a degree awarded from, the University may be revoked for fraud, misrepresentation, or other violation of University standards in obtaining the degree, or for other serious violation committed by a student prior to graduation.
   m. WITHHOLDING DEGREE – The University may withhold awarding a degree otherwise earned until the completion of the process set forth in this Student Code of Conduct, including the completion of all sanctions imposed, if any.

2. More than one of the sanctions listed above may be imposed for any single violation.

3. Other than University suspension, expulsion, or revocation or withholding of a degree, disciplinary sanctions shall not be made part of the student’s permanent academic record, but shall become part of the student’s disciplinary record. Upon graduation, the student’s confidential record may be expunged of disciplinary actions, other than residence hall expulsion, University suspension, University expulsion, or revocation or withholding of a degree, upon application to the dean of students. Cases involving the imposition of sanctions other than residence hall expulsion, University suspension, University expulsion, and revocation or withholding of a degree shall be expunged from the student’s disciplinary record three (3) years after the student completes all requirements for graduation.
4. In situations involving both an accused student(s) (or group or organization) and a student(s) claiming to be the victim of another student's conduct, the records of the process and of the sanctions imposed, if any, shall be considered to be part of the education records of both the accused student(s) and the student(s) claiming to be the victim because the educational career and chances of success in the academic community of each may be impacted.

5. The following sanctions, in addition to those listed above, may be imposed upon groups or student organizations: loss of selected rights and privileges for a specified period of time, and/or deactivation/loss of all privileges, including University recognition, for a specified period of time.

6. In each case in which a student conduct officer determines that a student has violated the Student Code, the recommendation of the student conduct officer shall be considered by the dean of students in determining and imposing sanctions. In cases in which the Student Discipline Committee has been authorized to determine that a student has violated the Student Code, the recommendation of all members of the Student Discipline Committee shall be considered by the dean of students in determining and imposing sanctions. The dean of students is not limited to sanctions recommended by members of the Student Discipline Committee.

7. Following the Student Discipline Committee hearing, the dean of students shall advise the accused student(s), group, and/or organization (and complaining student who believes she/he was the victim of another student’s conduct) in writing of the Committee’s determination and of the sanction(s) imposed, if any. A copy of the notification will be retained in the student’s disciplinary record. Cases involving suspension or expulsion will also be filed in the student’s academic record.

I. Appeals

1. A decision reached, or a sanction imposed, by the Student Discipline Committee may be appealed by the accused student(s) or complainant(s) to the Discipline Appeals Committee within seven (7) school days of the decision. Such appeals shall be in writing and shall be delivered to the dean of students or designee.

2. Composition: The Discipline Appeals Committee is composed of three (3) members: (a) the chair of the Faculty Senate; (b) the assistant provost for enrollment management; (c) the president of Student Government.

3. Except as required to explain the basis of new information, an appeal shall be limited to review of the verbatim records of the Student Discipline Committee hearing and supporting documents for one or more of the following purposes:

   a. To determine whether the Student Discipline Committee hearing was conducted fairly in light of the charges and information presented, and in conformity with prescribed procedures, giving the complaining party a reasonable opportunity to prepare and present evidence that the Student Code was violated, and giving the accused student a reasonable opportunity to prepare and to present a response to those allegations. Deviations from designated procedures will not be a basis for sustaining an appeal unless significant prejudice results.

   b. To determine whether the decision reached regarding the accused student was based on substantial information; that is, whether the facts in the case, if believed
by the fact finder, were sufficient to establish that a violation of the Student Code occurred.

c. To determine whether the sanction(s) imposed was appropriate for the violation of the Student Code that the student was found to have committed.

d. To consider new information sufficient to alter a decision or other relevant facts not brought out in the original hearing because such information and/or facts were not known to the person appealing at the time of the original Student Discipline Committee hearing.

4. If the Discipline Appeals Committee upholds an appeal, the matter may be returned to the original Student Discipline Committee for reopening of the Student Discipline Committee hearing to allow reconsideration of the original determination and/or sanction(s).

   a. In cases involving appeals by students accused of violating the Student Code, the Discipline Appeals Committee may, upon review of the case, reduce but not increase the sanctions imposed by the Student Discipline Committee.

   b. In cases involving appeals by persons other than the student(s) accused of violating the Student Code, the Discipline Appeals Committee may, upon review of the case, reduce or increase the sanctions imposed by the Student Discipline Committee.

5. Following the appeal, the dean of students shall advise the accused student(s) in writing of the determination of the Discipline Appeals Committee and of the sanction(s) imposed, if any. A copy of the notification will be retained in the student’s disciplinary record. Cases involving University suspension, expulsion, or revocation or withholding of a degree will be filed in the student’s academic record.

J. Exceptional Procedures

1. Interim Suspension
   In certain circumstances, the dean of students or designee may impose a University or residence hall suspension prior to the hearing before the Student Discipline Committee. Interim suspension is an action requiring that a student immediately leave the campus and University property.

   a. Interim suspension may be imposed only: (a) to ensure the safety and well-being of members of the University community or preservation of University property; (b) to ensure the student’s own physical or emotional safety and well-being; or (c) if the student poses an ongoing threat of disruption of or interference with the normal operations of the University. During the interim suspension, the student shall be denied access to housing facilities and/or the campus (including classes) and/or all other University activities or privileges for which the student might otherwise be eligible, as the dean of students or designee may determine to be appropriate.

   b. Any student who is suspended on an interim basis and returns to the campus and University property during the suspension shall be subject to further disciplinary action and may be treated as a trespasser. Permission to be on campus for a specific purpose (e.g., to take an exam, to consult with the dean of students, or to participate in the disciplinary procedures) may be granted in writing by the dean of students or designee.

2. Suspension from the Housing Facilities
The director of residence life or the dean of students or designee may, when charges are served, suspend an accused student(s) from the housing facilities pending the hearing and determination thereof, whenever the continued presence of such a student would constitute a danger to the student or to the safety of persons or property in the housing facilities, or would pose a threat of disruptive interference with the normal conduct of housing facility activities and functions, or the seriousness of the charges warrants such action. The dean of students or designee shall grant an immediate review (by the end of the next business day after the suspension) on request of any student so suspended with respect to the basis for such a suspension, at which time the suspended student may have the right to present statements tending to show that the basis for the suspension from the housing facilities does not exist. Suspension may apply to all housing facilities, an individual residence hall/apartment, or any portion thereof.

3. Residence Hall/Temporary Reassignment and Restriction from Facilities
   The director of residence life or the dean of students or designee may temporarily reassign a resident to another facility and/or restrict a resident from specific campus facilities pending an investigation and/or hearing whenever the continued presence of a resident in a particular campus facility would constitute a danger to the student or to the safety of persons or property in the housing facilities and campus facilities, or the seriousness of the allegations warrants such action. The director of residence life shall grant an immediate review (by the end of the next business day after the temporary reassignment and/or restriction) on request of any resident so reassigned and/or restricted with respect to the basis for such a reassignment and/or restriction.

4. Temporary Restriction from Personal Contact
   The director of residence life or the dean of students or designee may temporarily restrict a student from any personal, verbal, written, telephone, electronic, and third-party contact with another person pending an investigation and/or hearing whenever the contact could constitute a danger to the person or to the safety of the person or property, or the seriousness of the allegations warrants such action. Any student so restricted may obtain an explanation of the basis for such restriction upon request.

5. Withdrawal Prior to Student Conduct Proceedings
   The student who withdraws or fails to return to the University while disciplinary action is pending will be ineligible for readmission until the outstanding matter is resolved. The University reserves the right to formally restrict individual(s) from the campus grounds while such action is pending. Any further readmission would require an appeal in writing to the dean of students or designee and approval by the dean of students or designee.

K. Interpretation and Review
   1. Any question of interpretation regarding the Student Code shall be referred to the dean of students or his/her designee for final determination.
   2. The Student Code will be reviewed every three (3) years under the responsibility of the dean of students with the input of an advisory team.

NON-DISCRIMINATORY POLICY
Lawrence Technological University adheres and conforms to all federal, state, and local civil rights regulations, statutes, and ordinances. No person, student, faculty, or staff member will knowingly be discriminated against relative to the above statutes. Lawrence Technological University is an equal opportunity employer. Inquiries regarding nondiscriminatory policies should be directed to the Division of Student Affairs, 248.204.4100.
SEXUAL HARASSMENT POLICY
It is the policy of Lawrence Technological University to maintain an environment free of sexual harassment for students, faculty, staff, or any other constituency. Sexual harassment is contrary to the standards of the University community. It diminishes individual dignity and impedes equal employment, educational opportunities, and equal access to freedom of academic inquiry. It will not be tolerated at Lawrence Technological University.

What Is Sexual Harassment?
Harassment on the basis of sex is a violation of the Elliott-Larsen Civil Rights Act; Michigan Civil Service Commission Rules; the Office of Federal Contract Compliance regulations; and Title VII of the Civil Rights Act of 1964. According to guidelines issued by the Equal Employment Opportunity Commission in 1980,

“Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature, even between people of the same sex constitutes sexual harassment when:

1. Submission to such conduct or communication is made either explicitly or implicitly a term or condition of an individual’s employment, education, or participation in a University activity; or
2. Submission to, or rejection of, such conduct or communication by an individual is used as the basis for decisions affecting an individual’s employment, education, or participation in a University activity; or
3. Such conduct or communication has the purpose or effect of unreasonably interfering with an individual’s work or educational performance or of creating an intimidating, hostile, or offensive employment or education environment.

“Sexual harassment can also exist when there has been no tangible job detriment (i.e., a significant change in employment status, such as hiring, firing, etc.). Courteous, respectful, pleasant, non-coercive mutual interactions between employees are not considered sexual harassment.

“Personal (i.e., intimate) relationships that occur between persons who are in a supervisory-subordinate work relationship must be reported to the next level of management. In such situations, the department will take appropriate action.” (According to the United States Supreme Court in Oncale v. Sundowner Offshore Services, Inc., No. 96-569, 1998.)

Although these guidelines, based on Title VII, apply specifically to sexual harassment in the workplace, they should be interpreted to apply to students as well under Title IX of the 1972 Education Amendments. As has been pointed out by the National Advisory Council on Women’s Educational Programs (NACWEP), there is a serious problem “of harassment by gatekeepers – those who teach required courses or who have the authority to make critical decisions about a student’s advancement. The extraordinary importance of such positions lends an exceptional degree of significance to every interaction with students, and makes sexual harassment of all types particularly harmful.”

Common Types of Harassment
The NACWEP describes five classifications of harassment commonly reported by students and working women.
1. Generalized sexist remarks or behavior (e.g., “This is a man’s job,” “That’s women’s work,” “Women/men are incompetent at/are better suited to...”). Leering or staring, crude sexual remarks, off-color jokes, suggestive stories, and other related behaviors are also grouped in this category.

“This type of behavior is close to racial harassment in appearance; the sentiments or actions involved are often fiercely anti-male or anti-female and are not intended to lead to sexual activity. They are directed to the (individual) because of gender and can often affect whole classrooms; the offense may be ‘generalized’ both by its nature and its audience. There can be an inherent sexual content in or underlying such remarks that establishes a tone which in its awkwardness is more damaging than many overt acts.” (Frank J. Till, “Sexual Harassment: A Report on the Sexual Harassment of Students, the National Advisory Council on Women’s Educational Programs, August 1980.” Reprinted from Sexual Harassment: Definition and Prevention, State University of New York at Binghamton, 1988. Reprinted with permission.)

2. Inappropriate and offensive sexual advances (e.g., requests for social or sexual encounters, often accompanied by touching).

This type of harassment, while not necessarily threatening, usually makes the recipient uncomfortable. This discomfort may cause the recipient to avoid the perpetrator in the future, thus limiting his or her ability to function properly in the academic environment. Discomfort caused by harassment will almost certainly affect future professional and personal relationships.

3. Solicitation of sexual activity or other sex-related behavior by promise of rewards (e.g., grades, promotions, promises of greater opportunities, etc.).

“This category, in its extreme, literally amounts to an attempt to purchase sexual behavior. In its more blatant forms this type of behavior can be prosecuted as a criminal act ... even ‘banter’ along this vein may cause harm. Students may be mystified and confused by the interaction due to the power of the initiator. This is especially the case where the student propositioned is young or naive, and may fail to fully grasp the significance of the request.” (Till, “Sexual Harassment,” 16.)

4. Coercion of sexual activity by threat of punishment (e.g., refusal to comply with a sexual request or invitation results in a threat of failure, loss of job or promotion, or access to academic referrals).

“What is at stake is often more than one grade or a single recommendation – too frequently it is access to a discipline and so a career is jeopardized.” (Till, “Sexual Harassment,” 17.)

5. Sexual crimes and misdemeanors (e.g., criminal sexual assault [rape, indecent exposure, etc.]) across authority lines (faculty/student or employer/employee) or among colleagues and peers.

“This category refers to acts which, if reported to police authorities, would be considered crimes or misdemeanors.” (Till, “Sexual Harassment,” 22.)

Preventing Sexual Harassment
Although the ultimate burden for prevention of harassment rests with those in supervisory positions, others should be aware that their actions may be construed as harassment. Following
are some suggestions to supervisors, staff, faculty, and students for preventing sexual harassment, regardless of who is the perpetrator and who is the recipient.

- Avoid sexist remarks, off-color stories, or lewd jokes.
- Keep doors open when possible.
- Ask someone to accompany you if you suspect that you may be harassed.
- Make it plain that your intentions are not sexual in nature.
- Make clear, through your behavior, conversation, and actions, that you find sexual harassment offensive and inappropriate.

**Combating Sexual Harassment**

Employees, students, or faculty who feel they are experiencing this form of discrimination should:

1. **Say No Clearly.** Inform the harasser that his or her attentions are unwanted. If the behavior persists, write a memo to the harasser asking him or her to stop; keep a copy.
2. **Document the Harassment.** Record the date, time, and place of each incident. Keep a copy of this record at home.
3. **Get Emotional Support.** Talk to your family and friends.
4. **Document Work Evaluations.** Keep copies of performance evaluations and memos that attest to the quality of your work.
5. **Identify Witnesses/Other Victims.** You are probably not the first person who has been mistreated by this individual. Ask around; you may find others who will support your charge. (Sexual Harassment: What Every Working Woman Needs to Know, cs.utk.edu/~bartley/other/pto5.html)

The least effective way to deal with sexual harassment is to ignore it. Unless the recipient of unwanted sexual attention takes some kind of action (whether formal or informal), the harasser is very likely to continue or even escalate the harassing behavior.

The following suggestions for combating sexual harassment reflect a variety of options, ranging from informal methods to formal procedures.

**Confidential Counseling**

Students may obtain information about or assistance with sexual harassment issues from the Office of the Dean of Students. Staff, faculty, and administrators should seek help from the Office of Human Resources. University representatives can advise and support complainants and witnesses in a confidential setting. The complainant, alleged harasser, and any witness shall be informed that all records of complaints, statements, interviews, contents of meetings, results of investigations, and any other relevant materials will be kept confidential by the employer, except where disclosure is required by a grievance process or pursuant to a legal action.

Unless otherwise authorized by law, disclosure or publication by any person of the complaint, the facts, or the identity of involved parties or witnesses is prohibited and subject to disciplinary action. Discussions with representatives of the above-mentioned offices will not be considered official reports to the University and will not, without additional action by the complainant, result in intervention or corrective action. When intervention and discipline result against the alleged harasser, appropriate reference will be made in his or her file to protect the privacy of the complainant and witnesses.
Informal Resolution Process
At the complainant’s option, a sexual harassment report or complaint will be taken from staff by the Office of Human Resources and from students by the Office of the Dean of Students or any dean, director, department head, the director of residence life, and/or their designees. Each college or other University organization will designate both men and women to receive complaints.

The person who receives a sexual harassment report or complaint will advise the person who makes the complaint about the informal and formal resolution alternatives available. At the complainant's option, the person receiving the complaint can:

- provide information about sexual harassment;
- help the complainant deal directly with the alleged offender;
- assist with or mediate a resolution of the problem within the complainant’s unit; and/or
- help the complainant prepare a written complaint and pursue formal action.

Informal resolution measures should address the particular circumstances. No action will be taken against the alleged offender if the resolution is kept informal. Any discussion with the accused individual should, unless the provost or director of human resources specifically decides otherwise, include the supervisor of accused staff, faculty, or administrator. Any discussion with an accused student will include a member of the Division of Student Affairs and the student’s department chair.

Formal Resolution Process
Either subsequent to or instead of following the informal process, a complainant may elect to make a formal charge of sexual harassment. The University will investigate all formal charges of sexual harassment and take appropriate actions pursuant to the results of the findings.

There are several mechanisms available to pursue a formal charge, and their availability depends on the status of the complainant:

1. A student should notify the Office of the Dean of Students. If this is not possible, then the student may contact the Offices of the President or Provost.
2. A member of the staff, faculty, or administration may notify his or her supervisor, a department head or dean, the Offices of the President or Provost, the Office of Human Resources, or the Office of the Dean of Students. A student-employee may also notify any of these.
3. Contract employees should follow the same procedure followed by staff, faculty, and administrators.

Call the Office of Civil Rights at 216.522.4970 to make a sexual harassment complaint. Report all incidents of criminal sexual assault to the Department of Campus Safety at 248.204.3945 or the Southfield Police Department at 248.354.4720.

Counseling Can Help
Sexual harassment undermines the confidence of a student or employee and adversely affects his/her attitude and job or academic performance. All students and employees may talk, confidentially, to trained counselors in the Division of Student Affairs if they believe they have been sexually harassed.
Counselors can be an immediate source of help by:
Counselors can also help management develop a proactive approach to dealing with sexual harassment issues by incorporating discussions on the topic during workshops, seminars, and/or training sessions.

PARTICIPATION IN THE U.S. DRUG PREVENTION PROGRAM
Lawrence Technological University is committed to promoting and maintaining a work and academic environment that is free from illegal use of alcohol and drugs, in accordance with all federal, state, and local laws as well as the Drug Free Schools and Campus Safety Act. Lawrence Technological University is in compliance with all provisions of the U.S. Department of Education Drug Prevention Program, which is a condition of the University's eligibility to receive federal funds or any other form of federal financial assistance.

Applicable policies are provided in section 701 of the Employee Handbook, section 3.14 of the Faculty Handbook, and in the Policies, Procedures, and Regulations section of the Student Handbook. The University specifically prohibits the unlawful possession, use, or distribution of illicit drugs and alcohol by students and employees on its property or as a part of its activities (except at University functions at which alcohol use is approved). Use of alcoholic beverages at any University function requires the approval of the provost or designee.

Employees, students, and campus visitors age 21 years or older, who consume alcohol at University functions or while on University business where such use is approved, are expected to use alcohol responsibly and not engage in illegal, unprofessional, or disruptive behavior. Violators will be subject to penalties, which may include expulsion or separation from the University. Any employee or student found to be in violation of University policy regarding drugs or alcohol will be subject to disciplinary action up to and including dismissal or expulsion in accordance with applicable disciplinary procedures.

Possession, use, or distribution of illicit drugs, possession or consumption of alcoholic beverages by individuals under 21 years of age and distribution of alcohol without a license or permit issued by a competent legal authority are violations of local, state, and federal laws. It is the policy of the University to cooperate fully in any prosecution based on violation of these laws.

A variety of serious health risks are associated with the use of illicit drugs and the abuse of alcohol. These include permanent damage to the liver, brain, and other vital organs, heart damage or malfunction, including sudden death, and accidents caused by impaired judgment or abilities. Individuals who may have a drug dependency or alcohol abuse problem are advised to contact the Oakland County Drug and Substance Abuse Center, 248.858.5200.
LIABILITY DISCLAIMER
Lawrence Technological University shall not be liable for any injuries to, or property damage or loss suffered by, any student regardless of cause. This disclaimer of liability shall apply to, but not by way of limitation, the following:

- Any injury or damage incurred on property owned by or under the control of the University, or its subsidiaries, such as classrooms, apartments, or other housing, any other structures, all common areas and grounds, and vehicles;
- Any injury or damage incurred as a participant, spectator or otherwise, in any intramural or intercollegiate or other event or contest, athletic or otherwise, or while in transit thereto or therefrom;
- Any injury or damage suffered while engaged in or attending a classroom or related activity, whether required or elective, and regardless of cause;
- Any injury or damage suffered by reason of theft, fire, damage by the elements, or other casualty;
- Any injury or damage suffered by reason of any act or omission of any University trustee, officer, member of the faculty or staff, employee, contractor, or student.
- By applying for admission or readmission to the University, or by continuing their enrollment with the University for a subsequent semester, students accept the foregoing disclaimer and agree to be bound thereby. Emergency referrals are made to community agencies. Any expenses incurred are the responsibility of the student.
Degrees and Graduation

DEGREES
Lawrence Technological University offers curricula leading to the following professional or post-professional graduate degrees or certificates. (For information on undergraduate degrees, see the Undergraduate Catalog, www.ltu.edu/currentstudents/undergraduate-catalog.asp).

College of Architecture and Design
Master of Architecture (also online)
Architecture, Direct Entry (combined bachelor’s and master’s programs)
Master of Interior Design
Master of Urban Design
Master of Fine Arts in Social Practice
Master of Architecture/Master of Business Administration Dual Degree
Master of Architecture/Master of Urban Design Dual Degree
Master of Architecture/Bachelor of Interior Architecture Dual Degree
Master of Architecture/Bachelor of Science in Civil Engineering Dual Degree
Master of Architecture/Bachelor of Science in Construction Management Dual Degree
Master of Architecture/Bachelor of Science in Media Communication Dual Degree
Graduate Certificate in Building Information Modeling (also online)
Graduate Certificate in Geographic Information Systems
Graduate Certificate in Public Interest Design

College of Arts and Sciences
Master of Science in Computer Science – Data Sciences
Master of Science in Computer Science – Intelligent Systems
Master of Science in Technical and Professional Communication
Graduate Certificate in Instructional Design, Communication, and Presentation
Graduate Certificate in Sports Communication
Graduate Certificate in Technical and Professional Communication
Graduate Certificate in Writing for the Digital Age
Post-Baccalaureate Certificate in Premedical Studies

College of Business and Information Technology
Master of Business Administration (also online)
Master of Science in Information Technology (also online)
Master of Business Administration/Master of Science in Information Technology Dual Degree
Master of Business Administration/Master of Engineering Management Dual Degree (also online)
Master of Business Administration/Master of Architecture Dual Degree
Graduate Certificate in Cybersecurity
Graduate Certificate in Project Management (also online)

College of Engineering
Doctor of Engineering in Mechanical Engineering
Doctor of Philosophy in Civil Engineering
Doctor of Philosophy in Mechanical Engineering
Master of Construction Engineering Management (also online)
Master of Engineering Management (also online)
Master of Science in Architectural Engineering
Master of Science in Automotive Engineering
Master of Science in Biomedical Engineering
Master of Science in Civil Engineering (thesis, course-based, or project option) (also online)
Master of Science in Electrical and Computer Engineering
Master of Science in Engineering Technology
Master of Science in Industrial Engineering (also online)
Master of Science in Mechanical Engineering
Master of Science in Mechatronic Systems Engineering
Graduate Certificate in Aeronautical Engineering
Graduate Certificate in Energy Engineering
Graduate Certificate in Fire Engineering
Graduate Certificate in Integrated Project Delivery
Graduate Certificate in Telecommunications Engineering

REQUIREMENTS FOR GRADUATION/GRADUATION DEADLINE
Petitions to Graduate for each semester have specific due dates:

<table>
<thead>
<tr>
<th>Expected date of graduation</th>
<th>Petition to Graduate due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>December 15</td>
</tr>
<tr>
<td>July</td>
<td>December 15 (if attending Commencement) or April 15 (if NOT attending Commencement)</td>
</tr>
<tr>
<td>December</td>
<td>July 15</td>
</tr>
</tbody>
</table>

It is the student’s responsibility to be aware of these dates and adhere to them. Petition to Graduate forms can be downloaded at www.ltu.edu/registrars_office/petition-to-graduate. Students may submit their forms to the DTE Energy One-Stop Center in the A. Alfred Taubman Student Services Center or fax them to 248.204.2228.

Processing Petitions to Graduate after their due date, if approved by Enrollment Services/Office of the Registrar, requires that an additional processing fee be assessed to the student. Further, availability of caps, gowns, and diplomas in time for Commencement cannot be guaranteed.

Students must also pay a graduation fee, which is nonrefundable after one academic year. If students do not complete their graduation requirements as planned within one academic year, a new Petition to Graduate and graduation fee must be submitted.

The Master of Architecture is awarded to graduates who maintain a minimum cumulative 3.0 grade point average (GPA) in all degree program classes. Students who maintain at least a 3.5 cumulative GPA in graduate courses will receive the diploma honor “With Distinction.” No diploma honor is awarded to graduate degrees within the Colleges of Arts and Sciences, Business and Information Technology, and Engineering.
Master’s degrees offered through the Colleges of Arts and Sciences, Business and Information Technology, and Engineering are awarded upon completion of all required coursework within seven (7) years of matriculation. Maintenance of a minimum 3.0 cumulative GPA is required for ALL master’s and graduate certificate programs.
Certificates in English proficiency are issued by LTU’s ESL Institute, an accredited language-instruction program. After the add/drop period of the ESL student’s first semester, a petition to graduate for the certificate will be entered on behalf of the student, and a fee assessed to the student’s account.

The University reserves the right to modify its graduation and other academic requirements as deemed necessary. It will be obligated only by the requirements published in the *Graduate Catalog* and on the University’s website during the academic year of the student’s registration.

**COURSE NUMBER AND LEVEL**
Each course is identified by an alphanumeric course number. The alphabetic prefix represents the subject area.

**College of Architecture and Design**
- Architectural Engineering: EAE
- Architecture and Design: ARC
- Design: DES
- Fine Arts: ART
- Game Art: GAM
- Industrial Design: IDD
- Interior Architecture/Design: ARI
- Transportation Design: ATD
- Urban Design: URB

**College of Arts and Sciences**
- Biology: BIO
- Chemistry: CHM
- Communication: COM
- Creative Writing: CRW
- English as a Second Language: ESL
- Forensic Science: FSC
- Geology: GLG
- Language and Literature: LLT
- Leadership: LDR
- Master of Education Technology: MET
- Mathematics and Computer Science/Math Co-op: MCS
- Media Communication: MCO
- Nursing: NUR
- Physical Science: PSC
- Physics: PHY
- Psychology: PSY
- Science Education: SCE
- Social Science: SSC
- Study Abroad: SAP

**College of Business and Information Technology**
- Accounting: ACC
- Dissertation: DIS
- Doctor of Business Administration: DBA
- Economics: ECN
- Finance: FIN
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**College of Engineering**

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<td>Electrical Engineering Technology</td>
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<td>Engineering Co-Op</td>
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<td>Technology Audio Systems</td>
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</table>

The first number following the alphabetic prefix indicates the academic level of the course:

- 0 = Basic Studies
- 1 = Freshman
- 2 = Sophomore
- 3 = Junior
- 4 = Senior
- 5 = Senior/Grad
- 6 and above = graduate level

Basic Studies courses (course level zero) do not provide degree credit. The last of the four numbers normally indicates the semester hours of credit assigned to the course. For example, ARC 4653 carries three hours credit.

**CATALOG OF ENTRY – LIMITATIONS**

Although graduation requirements of the University may change while a student is enrolled, students are normally expected to meet the graduation requirements outlined in the Catalog that is in effect at the time they matriculate, as long as the courses are still offered by the University. Substitutions may be made for required courses that may no longer be available. However, if the new graduation requirements may be adapted to a student’s current course of study without...
increasing his or her credit hour requirements or existing prerequisites, the new requirements shall prevail.

Students interrupting their studies for three calendar years or more must reapply for admission (see Admission section of this Catalog, Interruption of Studies). If readmitted, the Catalog in effect at the time of readmission is used to determine graduation requirements.

In addition, within the College of Architecture and Design, the requirements outlined in the Addendum to the Graduate Catalog for the Master of Architecture degree for the year of entry into the respective program also apply.
College of Architecture and Design

ADMINISTRATION

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FACULTY

Professors
COLLEGE OF ARCHITECTURE AND DESIGN

GRADUATE DEGREE PROGRAMS IN ARCHITECTURE AND DESIGN
The College of Architecture and Design Lawrence Technological University was created in 1989, having evolved from the School of Architecture, which was established in 1962. The mission of the College is to provide aspiring professionals with a comprehensive education and preparation for careers in design. Lawrence Tech’s design programs emphasize investigation...
The college seeks to develop graduates committed to articulate and socially relevant design, creative inquiry in all disciplines, critical thinking as the basis for design insight, clear communication as a design objective, and professional leadership. Students are encouraged to maintain high standards of excellence: many win significant design competitions and are highly respected by employers. LTU alumni practice and teach throughout the world and hold positions of responsibility in their practices.

The college’s degree programs are accredited, as appropriate, by the National Architectural Accrediting Board (NAAB), the National Association of Schools of Art and Design (NASAD), and the Council for Interior Design Accreditation (CIDA). The college is a member of the Association of Collegiate Schools of Architecture (ACSA).

College policies and procedures are addressed in The Student Companion, which may be found at www.ltu.edu/architecture_and_design/collegepolicies. Additional information about the College of Architecture and Design, its faculty, students, and staff, is available at www.ltu.edu/architecture_and_design.

The College of Architecture and Design offers the following programs, which are described in this Graduate Catalog.

**Single-Subject Degree Programs**
- Master of Architecture
- Master of Interior Design
- Master of Urban Design
- Master of Fine Arts in Social Practice

**Dual Degree Programs**
- Master of Architecture/Master of Business Administration
- Master of Architecture/Master of Urban Design
- Master of Architecture/Bachelor of Interior Architecture
- Master of Architecture/Bachelor of Science in Civil Engineering
- Master of Architecture/Bachelor of Science in Construction Management
- Master of Architecture/Bachelor of Science in Media Communication

**GRADUATION REQUIREMENTS**
To earn a graduate degree, students must complete all courses and satisfy all university requirements pertaining to the degree program in which they are enrolled. Students are required to fulfill all pre-requisite requirements so as to complete courses in the mandated sequence. A master plan for a student’s studies may be formulated in consultation with the student’s academic advisor or with the administrator of student services. All students must maintain a minimum 3.0 cumulative grade point average to earn a graduate degree. Students are expected to meet with and be advised by academic advisors or program directors periodically during their course of study and prior to graduation to ensure that all requirements are being met in a timely fashion.

Transfer students are encouraged to enter any of the degree programs for which they have the interest and qualifications. Transfer students may be asked to enroll in additional courses to ensure correct placement within the program.
ACCREDITATION
Master of Architecture

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for architectural licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, accredits three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

NAAB may grant a program a term of accreditation lasting eight or fewer years, depending on the extent of its conformance with NAAB’s educational standards. The most recent NAAB accreditation review at Lawrence Tech took place in March 2014, after which NAAB granted the school a full, eight-year term of accreditation and cited several points of distinction.

Art and Design Degrees
Lawrence Technological University is an accredited institutional member of the National Association of Schools of Art and Design (NASAD).

DECLARATION OF THE MAJOR AREA OF STUDY
Students must declare which program they will pursue at the time the graduate application is submitted. The catalog and addenda in effect at the time of acceptance into the particular program is the governing determinant of the degree requirements that apply.

GRADUATE PROGRAMS
Master of Architecture

Lawrence Technological University provides three tracks to complete the NAAB-accredited, professional Master of Architecture (M.Arch) degree. The three tracks, the M.Arch DE, M.Arch 36, and M.Arch 3+, are described below.

M.Arch DE: Direct Entry Track (168/169 credit hours)
The direct-entry Master of Architecture track provides students the opportunity to work toward the accredited professional architecture degree beginning immediately from the freshman year of college at Lawrence Tech or by transferring one or two years of lower division college credits earned at other schools into the Lawrence Tech M.Arch DE program. This track is a 168/169 credit-hour degree program. Students enrolled in the direct-entry track must maintain specific academic standards to complete the program and the accredited architecture degree. If students cannot or choose not to enter the upper division (the last 36 credit hours), they can elect to receive the Bachelor of Science in Architecture upon successful completion of all lower-division credits (132/133). Please refer to the admission requirements, below.

M.Arch 36 (36 credit hours)
The M.Arch 36 track is a 36-credit-hour program intended for students who have earned at least a pre-professional degree, the Bachelor of Science in Architecture, or the professional Bachelor of Architecture degree at Lawrence Tech or another institution. This program of academic coursework combines graduate studies in architectural design, theory, and practice and coincides, by design, with the last 36 credit hours of the M.Arch DE program. It completes the required professional coursework, incorporating the NAAB-Student Performance Criteria (SPC)
not addressed in the lower division (Bachelor of Science) program. This course of study includes three architecture electives and a non-architecture elective. Students who are employed while earning the M.Arch should plan to distribute coursework over two to four years. There is no limit to the number of semesters in which students may take to complete their coursework; students are encouraged to do good work and take the time they need to derive the best from the education they are offered at LTU.

Applicants to the M.Arch 36 program are required to demonstrate that they have earned a minimum 3.0 grade point average in the pre-professional (undergraduate) coursework, completed a minimum of 42 credit hours of general education courses, and successfully completed the 14 NAAB Student Performance Criteria (SPC) covered in LTU's undergraduate curriculum. The required SPC are listed below; definitions of these competencies are included in the M.Arch portfolio guidelines.

A4  Technical Documents
A7  Use of Precedents
A8  Ordering System Skills
A9  Historical Traditions and Global Cultures
B1  Pre-Design
B2  Accessibility
B4  Site Design
B5  Life Safety
B6  Comprehensive Design
B8  Environmental Systems
B9  Structural Systems
B10  Building Envelope Systems
B11  Building Service Systems
B12  Building Materials and Assemblies

M.Arch 36 Online Study
Highly motivated students located outside of southeast Michigan may apply for acceptance to study online. The degree, admission requirements, curriculum, and graduation requirements are the same as those for on-campus study.

Online design studios are taught in a synchronous, real-time, online environment with all studio members participating. Seminar courses are typically asynchronous, but some may require a limited number of synchronous sessions. The Critical Practice Studio (led by nationally recognized and emerging architects engaged in critical practice) is the only course in the program not available online. This summer semester course is completed on campus over three to five multi-day weekend meetings so that students living at a distance from the LTU campus may make arrangements to participate. One or more weekend meetings may include a field trip. Please contact the Department of Architecture for schedules before each summer session. More information on this course is available at the Critical Practice Studio website.

M.Arch 3+ (90 credit hours)
The M.Arch 3+ track is intended for students who hold a baccalaureate degree in a field other than architecture or in a field related to architecture. A total of 90 credit hours at LTU are required to complete the M.Arch 3+ track, which consists of two phases: (1) foundation coursework that develops the skills and abilities addressed in LTU's lower division courses and (2) advanced (upper division or graduate level) coursework coinciding with the last 36 credit hours of the M.Arch DE and the M.Arch 36 tracks. Accordingly, graduate students on the 3+ track are fully integrated into the 36-credit
M.Arch curriculum. Non-architecture courses previously completed by the student (as part of a previous baccalaureate degree), and required as part of the 168/169-credit accredited M.Arch DE degree, are counted to satisfy the general education requirements of the degree. Please refer to Admission Requirements, below.

TRANSFER STUDENT PROCEDURE: M.Arch PROFESSIONAL DEGREE
Students who are currently enrolled in another accredited graduate program in architecture may be accepted into LTU’s Master of Architecture professional degree program if they meet all admission requirements. Credit for courses completed in an accredited graduate program will be reviewed for their acceptability as substitutes and electives for required courses at LTU. A request for transfer credits must be made at the time of the application for admission. A student must complete a minimum of 30 LTU credit hours even if transfer credits from another institution are granted.

ADMISSION REQUIREMENTS
M.Arch 36 and M.Arch 3+ Professional Degree Programs
The M.Arch degree program is open to qualified graduates of college and university architecture programs who meet all admission requirements. Admission to the program requires the approval of the Graduate Admissions Committee.

Application to the M.Arch degree program requires submittal of the following documents:

1. The Application for Graduate Admission ([www.ltu.edu/apply](http://www.ltu.edu/apply))
2. Official transcripts of all completed college coursework and degrees earned; the transcript must document the award of an undergraduate degree with a minimum undergraduate grade point average of 3.0
3. An academic and professional resume, including school and work experience and extracurricular activities
4. Three letters of recommendation, at least two of which must be from faculty members employed by a college or university school of architecture, design, or interior design program; one letter may be a work reference, preferably from an immediate supervisor
5. M.Arch 36 applicants must submit a comprehensive design and architecture portfolio demonstrating a range of visualization and design abilities and experience. Work should include creative, academic projects and may include professional work accompanied by a clear statement of the applicant’s contribution to each individual project.

M.Arch 3+ applicants must submit a portfolio of creative and academic work that represents their earlier educational experiences and, where relevant, professional experience with a clear statement of the applicant’s contribution to that work. The portfolio may include design and architectural graphics, writing, photography, music, or other materials that establish the student’s aptitude for graduate work in architecture.

All portfolios must be submitted electronically as a single pdf file. Additional requirements can be found at portfolio guidelines.
6. Write and submit a 1,000-word essay that addresses one of these six topics:
   a. What would you do in life if you could not do architecture or urban design?
   b. Cite one book (other than a religious text) that has influenced your understanding of architecture or any of the other design disciplines and explain how it influenced you.
   c. Estimate, without reference materials, the number of piano tuners currently working in Denver, Colorado, and explain in a step-by-step fashion how you developed your estimate.
d. Tell us about a real place that you have never visited. Explain why you would like to visit this place and what you would expect to learn there.
e. Explain how a designed object (other than a religious icon) with which you are familiar has influenced your life.
f. Describe a situation that has required you to collaborate as a team member with others of different backgrounds, interests, or opinions.

7. All application materials should be submitted to admissions@ltu.edu.

APPLICATION DEADLINES
Applications will be reviewed on a continuing basis, but the Department of Architecture can only guarantee application reviews and decisions if all documents are submitted by the following deadlines:

- March 15 for admission in the summer semester
- July 15 for admission in the fall semester
- November 15 for admission in the spring semester

Admission to the M.Arch professional degree program will be determined solely by the faculty of the Department of Architecture. Admission is subject to conditions, which, if applied, will be clearly stated at the time of notification of acceptance into the program. Conditions may include the achievement of minimum course grades for a period of time and coursework in addition to the 36 credit hours of M.Arch coursework, as needed to complete NAAB SPC deficiencies in undergraduate work. Graduate students must maintain a minimum grade point average of 3.0 to remain in the program and to earn the degree.

MASTER OF ARCHITECTURE CURRICULUM
The M.Arch curriculum consists of 36 credit hours of coursework (in addition to the undergraduate coursework previously completed).

Core Courses (15 credits)
ARC 5013  Research Methods
ARC 5423  Ecological Issues
ARC 5643  Design Theory
ARC 5913  Professional Practice
ARC 6833  Practice Portfolio

Design Studio (or Thesis Courses) (12 credits)
ACR 5804  Critical Practice Studio
Note: Critical Practice Studio is a pre-requisite for the Advanced Design Studios and for thesis coursework. Please refer to the Studio description below.
ARC 5814  Advanced Design Studio 1  or  ARC 6514 Thesis 1
ARC 5824  Advanced Design Studio 2  or  ARC 6524 Thesis 2
Note: Students are required to qualify for thesis candidacy. Please refer to the thesis description in the M.Arch degree section, above.

The Critical Practice Studio is the only course in the program not available online. This summer semester course is completed on campus over three to five multi-day weekend meetings so that students living at a distance from LTU’s campus may make arrangements to
participate. One weekend meeting may include a field trip. Please contact the Department of Architecture for schedules before each summer session.

The **Thesis** is a two-semester sequence of courses that offers students an opportunity to formulate and investigate a hypothesis related to architecture, its practice, tectonics, history, ideas, and design. It demands an independent pursuit and generation of knowledge through the creative process with an emphasis on research. The thesis is not a capstone project, nor a "comprehensive design" studio; it is not an opportunity to design a particularly complex building type. It is a self-initiated and self-directed work of greater breadth and depth than work produced in the students’ earlier academic coursework. Thus, it is a more demanding alternative to the graduate-level Advanced Design Studios and is intended as an opportunity for students who are capable of independent work, individual research, independent idea development, and the formulation of sharply focused, articulate conclusions.

Students whose primary interest is in design and in a design studio experience are better served by the graduate-level design courses, the Advanced Design Studios. Students interested in preparing a thesis should contact the Department of Architecture for guidelines that outline the qualification procedure for thesis candidacy.

**Elective Courses (9 credits)**
Students are required to take a minimum of 6 credits of ARC elective courses (typically three courses) and 3 credits of non-architecture elective coursework (typically one course). Elective offerings include the following courses. Additional graduate-level elective courses may be found in the online registration system and in the course catalog.

**MASTERS OF ARCHITECTURE/M.Arch 3+ CURRICULUM (90 CREDITS)**

**M.Arch 3+ Courses**

**Studio Sequence**
ARC 5014  Architecture Foundation Studio 1  
ARC 5024  Architectural Foundation Studio 2  
ARC 5034  Architectural Foundation Studio 3  
ARC 5126  Comprehensive Design Studio  
ARC 5804  Critical Practice Studio  
ARC 5814  Advanced Design Studio 1  
ARC 5824  Advanced Design Studio 2  

**History/Theory Courses**
ARC 5613  History of Designed Environment 1  
ARC 5623  History of Designed Environment 2  
ARC 5063  Twentieth Century Architecture  
ARC 5643  Design Theory  
ARC 5423  Ecological Issues  

**Technical Courses**
ARC 5513  Basic Structures *  
ARC 5523  Intermediate Structures *  
ARC 5543  Advanced Structures *  
ARC 5313  Construction Systems 1 *
DUAL DEGREE GRADUATE PROGRAMS
Students who apply for a dual degree program must apply for and receive acceptance from both programs.

MASTER OF ARCHITECTURE AND MASTER OF BUSINESS ADMINISTRATION
(M.Arch/MBA)
TOTAL SEMESTER CREDIT HOURS: 54
This dual degree program enables students to earn both the accredited Master of Architecture and the Master of Business Administration degrees. The program incorporates courses from both disciplines. Prerequisites to this program include a BS in Architecture or B. Arch degree as well as several prerequisite courses in business. This program can be completed entirely online except for the Critical Practice Studio, as described above. The total number of credit required for the completion of this program include 27 credits of M.Arch coursework and 27 hours of MBA coursework for a total of 54 hours as delineated below.

Applicants to the M.Arch/MBA program are expected to have a significant working knowledge of business functions, such as basic accounting, economics, law, and statistics. This knowledge and understanding can come from prior coursework and/or substantial work experience in a functional business area. Students who do not meet this expectation can satisfy their foundation business requirements by taking coursework online or on campus while taking their core program courses.

M.Arch/MBA CURRICULUM

Required M.Arch Courses
Students are required to take a minimum of eight M.Arch courses for 27 credit hours.

ARC 5804  Critical Practice Studio
ARC 5013  Research Methods
ARC 5643  Design Theory
ARC 5913  Professional Practice
ARC 5423  Ecological Issues
Required MBA Courses
Students are required to take a minimum of nine MBA courses for 27 credit hours.

ACC 6003 Managerial Accounting
MBA 6013 Human Resource Management
MBA 6023 Global Business Economics
MBA 6033 Financial Management
MBA 6043 Global Leadership
MBA 6053 Strategic Marketing Management
MBA 6063 Operations and Supply Chain Management
INT 6043 Enterprise Information Technology
MBA 6073 Global Strategic Management (Capstone class)

MBA Foundation Courses
Students may satisfy their foundation business course requirements by taking coursework online or on campus while taking their core program courses. The program offers a full schedule of foundation courses for 0 to 15 credit hours, as needed.

ACC 5003 Financial Accounting and Financial Statements
MBA 5013 Business Application of Statistical Analysis
MBA 5011T Managerial Economics
MBA 5021T Fundamentals of Macro Economics (1.5 credits)
MBA 5061T Legal Environment of Business (1.5 credits)
MBA 5031T Fundamentals of Marketing (1.5 credits)
MBA 5041T Fundamentals of Management (1.5 credits)
MBA 5051T Fundamentals of Finance (1.5 credits)

MASTER OF ARCHITECTURE AND MASTER OF URBAN DESIGN (M.Arch/MoUD)
TOTAL SEMESTER CREDIT HOURS: 50
This dual degree program enables students to earn the accredited Master of Architecture and the Master of Urban Design degrees. The program incorporates courses from both disciplines. The total number of credit hours required for the completion of this program includes 27 credits of M.Arch coursework, 20 hours of MoUD coursework, and one 3-credit elective course for a total of 50 hours and are listed below.

ADMISSION REQUIREMENTS
This dual degree program is open to applicants who meet the admission requirements for the M.Arch 36 degree program, described above: prerequisites for acceptance to this program include a Bachelor of Science in Architecture or Bachelor of Architecture degree. The courses for the M.Arch 36 degree (except for the Critical Practice Studio) may be completed online; the urban design courses are conducted on campus. Admission to the program requires the approval of the Graduate Admissions Committee.

M.Arch/MoUD CURRICULUM
Required M.Arch Courses
Students are required to take a minimum of eight M.Arch courses for 27 credit hours.
Core Courses (15 credits)
ARC 5013  Research Methods
ARC 5423  Ecological Issues
ARC 5643  Design Theory
ARC 5913  Professional Practice
ARC 6833  Practice Portfolio

Design Studio or Thesis Courses (12 credits)
ACR 5804  Critical Practice Studio
Note: Critical Practice Studio is a prerequisite for the Advanced Design Studios and for thesis coursework. Please refer to the explanation in the M.Arch degree section, above.
ARC 5814  Advanced Design Studio 1 or ARC 5714 Urban Studio or ARC 6514 Thesis 1
ARC 5824  Advanced Design Studio 2 or ARC 5724 Urban Studio or ARC 6524 Thesis 2
Note: Students are required to qualify for thesis candidacy. Please refer to the explanation in the degree section, above.

Required MoUD Courses
Students are required to take a minimum of nine MoUD courses for 20 credit hours.
ARC 5912  Principles and Practices of Urban Design
ARC 5682  History of Urban Form
ARC 5743  Current Issues in Urban Design
ARC 5693  Sustainable Urbanism
ARC 5742  Urban Design Methods
ARC 5782  Urban Theory
ARC 5772  Case Studies in Urban Design
ARC 5762  Urban Design Policy and Implementation
ARC 5752  Quantitative Methods in Urban Design

Elective Course
Non-CoAD 5xx3 or 6xx3 level three-credit elective
Students are required to take a minimum of one elective course outside of the College of Architecture and Design for a total of three credit hours.

OTHER DUAL DEGREE PROGRAMS
More information on the dual degree programs listed below are accessible online at www.ltu.edu/architecture_and_design.

Master of Architecture and Bachelor of Interior Architecture
Master of Architecture and Bachelor of Science in Civil Engineering
Master of Architecture and Bachelor of Science in Construction Management
Master of Architecture and Bachelor of Science in Media Communication

MASTER OF INTERIOR DESIGN (MID)
TOTAL SEMESTER CREDIT HOURS: 36
The Master of Interior Design (MID) degree combines instruction in theory, professional issues, and current technology in a program aimed at students who are interested in expanding or updating their knowledge of the field. The program offers core courses in research, theory, issues, and design application and allows for the independent exploration of topics.
The program presents two tracks leading to the MID degree:

The 36-credit-hour curriculum is for students who hold an undergraduate degree in interior design or interior architecture.
The 3+ track is available to students who hold at least a bachelor’s degree in another discipline and who would like to change careers. This 72-credit-hour curriculum combines the content of the undergraduate professional courses with the graduate courses and leads to a Master of Interior Design.

ADMISSION REQUIREMENTS
Students are eligible to apply for the 36-credit-hour Master of Interior Design program if they are graduates of a recognized baccalaureate degree program in interior design and have a minimum undergraduate grade point average of 3.0. Applications to the program as a regular student must include the following items:

1. An Application for Graduate Admission (ltu.edu/apply)
2. Official transcripts of all completed college work
3. A resume that outlines academic and professional experience and extracurricular activities
4. Three letters of recommendation, including one from a practicing interior designer and two from faculty members employed by a college or university who are familiar with the candidate’s professional promise
5. A comprehensive portfolio demonstrating a range of visualization and design abilities and experience. Work should include creative, academic work and may include professional work with a clear statement of the applicant’s contribution. Portfolios must be submitted electronically in a single pdf format, containing no more than 25 images, and with the total file size not to exceed 15 MB. Send portfolio to: admissions@ltu.edu

Transfer Students
Students who are currently enrolled in a graduate program in interior design may be accepted into the Master of Interior Design program if they meet all admission requirements. Credit for courses taken in a graduate program will be reviewed for their acceptability as substitutes for required courses in Lawrence Tech’s Master of Interior Design program. A request that such courses be considered must be made at the time of application.

Courses taken to meet undergraduate degree requirements may not be used for graduate credit. Normally, a maximum of six credits for non-core, non-design courses will be allowed for transfer credit. A minimum grade point average of 3.0 or better must have been achieved. The courses must have been completed within five (5) years of the application for admission. Exceptions to these guidelines require the approval of the chair of Department of Art and Design.

APPLICATION PROCEDURES
The deadlines for applications are as follows:

March 15 for admission in the summer semester
July 15 for admission in the fall semester
November 15 for admission in the spring semester

Admission to the Master of Interior Design degree program requires the approval of the Graduate Admissions Committee. Regular admission is available only to students who meet all College of Architecture and Design program requirements.
CONDITIONAL ADMISSION  Conditional admission may be granted to students with less than a 3.0 grade point average, whose portfolio and references are not of the highest standard. The conditions of the admission will be clearly stated to the applicant at the time of notification of conditional acceptance into the program. Conditional admission requires the approval of the chair of Department of Art and Design and is established as a result of the formal Graduate Admissions Committee review process. Conditional status requirements must be met with a satisfactory 3.0 grade point average for the student to be able to continue in the graduate program.

Students wishing to enroll in graduate electives during their senior year must consult with the chair of the Department of Art and Design no later than four weeks prior to the scheduled normal registration period. Graduate elective courses taken to meet undergraduate degree requirements may not be used to meet professional degree or graduate program requirements. This option is only available to undergraduate students who have a grade point average of 3.0 or better.

MASTER OF INTERIOR DESIGN (MID 3+)
TOTAL SEMESTER CREDIT HOURS: 72
The Master of Interior Design 3+ track is for students who hold at least a bachelor’s degree in another discipline. The 72 credit hours are in addition to any preliminary courses required.

Master of Interior Design Pre-Core Track for Architects
If required, these courses should be taken prior to beginning the regular program coursework:
ART 1115  Design Elements and Principles  5 credits (2-D and 3-D design)
ART 1225  Visualization Techniques  5 credits (drawing, drafting, rendering)
ARC 2813  Electronic Methodologies I  3 credits (AutoCAD and Revit)

MID 3+ CURRICULUM
FIRST YEAR

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<th>Course Number</th>
<th>Subject</th>
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<td>ARC 2313</td>
<td>Construction Systems 1</td>
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<td>ARI 5113</td>
<td>Interior Architecture Graduate Studio</td>
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<td>ARI 3113</td>
<td>Furniture and Millwork</td>
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<tr>
<td>ART 2523</td>
<td>Graphic Design 1</td>
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<tr>
<td>ARI 5123</td>
<td>Interior Architecture Graduate Studio 2</td>
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</tr>
<tr>
<td>ARC 3413</td>
<td>HVAC and Water Systems 1</td>
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<td>Interior Design Materials, Comp &amp; Textiles</td>
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SECOND YEAR

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<tr>
<td>ARI 5234</td>
<td>Graduate Allied Studio: Interiors</td>
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<td>ARI 4143</td>
<td>Advanced Lighting</td>
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<td>ARI 4223</td>
<td>Interior Design Practice</td>
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<tr>
<td>ARI 4113</td>
<td>History of Interiors and Furniture</td>
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<tr>
<td>ARI 5083</td>
<td>Environmental Psychology</td>
<td>3</td>
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<tr>
<td>ARI 5124</td>
<td>Interior Architecture Graduate Studio 3</td>
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</table>
## Master of Urban Design (MoUD)

**TOTAL SEMESTER CREDIT HOURS: 34**

The Master of Urban Design (MoUD) is a 34-credit-hour master’s degree that welcomes students with diverse undergraduate degrees and backgrounds. The program relies on a pedagogical and research emphasis that builds on the University’s commitment to its urban and suburban context adjacent to Detroit and its neighboring communities. The Master of Urban Design is designed to help students develop a body of knowledge, skills, and experience in urban design with a focus on healthy, smart, and sustainable urbanism – a holistic and systematic approach to design and policy initiatives that addresses the complex environmental, economic, and social, and political forces that influence global city and regional form.

Applicants should be prepared for an intensive academic environment emphasizing both individual and group work in studios, seminars, and lecture classes. Students should expect to discuss themes of sustainability, politics, culture, class, race, and gender as they relate to urban design, and to test assumptions about these issues in light of the history, theory, and practice of urban design.

### Admission Requirements

The MoUD degree program is open to qualified graduates of college and university architecture programs who meet all admission requirements. Admission to the program requires the approval of the Graduate Admissions Committee. Because conversation and debate is central to the MoUD program, candidates whose first language is not English should be prepared to focus on developing their English verbal and writing skills prior to beginning the coursework so as to extract full value from the program.

Applications from mature, talented, intellectually aggressive, and critical individuals holding professional degrees in architecture, urban planning, and/or landscape architecture as well as individuals holding undergraduate and advanced degrees in community development, anthropology, sociology, social work, law, environmental science, political science, economics,
or related fields, with a deep interest in cities and urban and regional development, will be considered.

Credit for transfer courses may be accepted according to established university standards for graduate curricula and in accordance with procedures established by the College of Architecture and Design.

Application to the Master of Urban Design degree program requires submittal of the following documents:

1. The Application for Graduate Admission (ltu.edu/apply)
2. Official transcripts of all completed college coursework and degrees earned. The transcripts must document the award of an undergraduate degree with a minimum undergraduate grade point average of 3.0
3. An academic and professional resume, including school and work experience and extracurricular activities
4. Three letters of recommendation, one from a professional affiliated with urban design and two from faculty members employed by a college or university that you attended
5. All applicants to the MoUD program must submit a portfolio of academic/professional work. The portfolio should show critical and creative aptitude of the applicant’s understanding of cities and experience of working in the context of the urban environment. The intention of the portfolio is to represent the ability to be creative and critical, in any visual and/or written format. Material can include copies of work done in an academic, personal, or professional setting, or any work in the visual arts in two-, three- or four-dimensional execution. Sketching, drawing, painting, photography, illustration, printmaking, sculpture, written reports, articles, opinion-editorials, policy, documentation, and published or unpublished monographs are all acceptable.

The focus of the portfolio is to present a fundamental understanding of cities and their associated regions and a working experience in urban issues. Writing about the social, natural, or built environment of cities, in any format or focus is also acceptable as evidence of creative ability. All work should be organized into a portfolio presentation and include the name of the applicant. Some reference to the date and situation of each element within the portfolio would also be desirable.

Work should include creative, academic work and may include professional work with a clear statement of the applicant’s contribution. Portfolios must be submitted electronically in a single pdf format, containing no more than 25 images, and with the total file size not to exceed 15 MB. Send portfolio to admissions@ltu.edu.
6. In 500 words or less, explain why you are interested in cities, regions, and in the discipline of urban design. What does the term “sustainable urbanism” mean to you? You may be specific or philosophical about your past experiences, interests, or goals.

MASTER OF URBAN DESIGN CURRICULUM

SUMMER

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>ARC 5682</td>
<td>History of Urban Form</td>
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<td>ARC 5743</td>
<td>Current Issues of Urban Design</td>
<td>3</td>
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<tr>
<td>ARC 5013</td>
<td>Research Methods</td>
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FALL

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<tbody>
<tr>
<td>ARC 5742</td>
<td>Urban Design Methods</td>
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<td>ARC 5714 or 6514</td>
<td>Urban Studio 1 or Thesis 1</td>
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<tr>
<td>ARC 5912</td>
<td>Principles and Practices of Urban Design</td>
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<tr>
<td>ARC 5423</td>
<td>Ecological Issues</td>
<td>3</td>
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<td>ARC 5693</td>
<td>Sustainable Urbanism</td>
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SPRING

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<td>Urban Studio 2 or Thesis 2</td>
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<td>ARC 5772</td>
<td>Case Studies in Urban Design</td>
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<td>ARC 5782</td>
<td>Urban Theory</td>
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<td>ARC 5762</td>
<td>Urban Design Policy and Implication</td>
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<tr>
<td>ARC 5752</td>
<td>Quantitative Methods in Urban Design</td>
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**MASTER OF FINE ART IN SOCIAL PRACTICE**

Terminal Degree, 60 credit hours

The Master of Fine Art (MFA) in Social Practice (MFASP) is a terminal degree of 60 credit hours within the College of Architecture and Design (CoAD).

“Social Practice” is an emerging and significant movement in the art and design world, intersecting art, design and community engagement. The MFA will function as a multidisciplinary, intensely collaborative effort between students and the community at large, preparing students to envision, implement, and assess community-based art and design activities. Inviting diverse student artists, designers and activists, MFASP will encompass a broad range of artistic activities and media, including sculpture and large-scale installation art, projection mapping, augmented reality, tactical urbanism, human centered design street art, new media, and performance, among others and elements from interaction design, experiential design, and urban design.

Uniting the relations between digital and analog processes, as well as supporting theories and practices, MFASP students would be encouraged to leverage technology to radical effect and to engage in the study of social entrepreneurship, tactical urbanism, and human-centered design as they collaborate with local community groups and other partners to address pressing cultural and social issues.

Students will address local issues that could solve global problems. They will also have opportunities to travel abroad as well as engage artists and activists both nationally and internationally, helping them gain global perspective.

**ADMISSIONS REQUIREMENTS:**

1. Must have a BA, BS or BFA degree from an accredited program, college or university
2. Transcripts (official)
3. Statement of intent
4. Curriculum vitae (CV)
5. Portfolio of 15-20 images, video, audio, text or urls of past work or proposals of future projects. Files must be numbered sequentially and labeled with last name and first name.

6. List of works with corresponding numbers and title, date, media, dimensions and responsibilities if work is collaborative.

7. Interview (in-person, Skype, Google Hangout, etc.)

PROGRAM OVERVIEW:

The MFA degree is required by NASAD to have a minimum of 39 credits in studio with at least 30 of those credits in their program focus. 9 credits must cover academic studies concerned with visual media. Curriculum breakdown is as follows:

32 studio credits of Social Practice
7 minimum studio elective credits
9 credits of electives
9 credits of history and theory
3 credits of research methods

SUMMER – Main Campus

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
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<tr>
<td>ARC 5804</td>
<td>Critical Practice Studio</td>
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<td>ARC 5743</td>
<td>Current Issues in Urban Design</td>
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FALL – Detroit Center for Design

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<td>ART 5214</td>
<td>Social Innovation Design 1</td>
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<td>ART 5313</td>
<td>Art in the Public Realm 1</td>
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<td>ART 5413</td>
<td>*Contemporary Art History</td>
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SPRING – Detroit Center for Design & Technology

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SUMMER – Main Campus

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FALL – Detroit Center for Design & Technology

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**Lawrence Technological University**

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**SPRING – Detroit Center for Design & Technology**

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**FALL – Field Study**

*Pre-degree competency in ART 4113 20th Century Art History is a pre-requisite for ART 5413 Contemporary Art History. ART 4113 will count towards elective credits if required.*

**CERTIFICATE PROGRAMS**

The college offers three professional certificate programs that may be of interest to practicing professionals and to students currently enrolled in graduate degree programs.

**GRADUATE CERTIFICATE IN BUILDING INFORMATION MANAGEMENT (BIM)**

The Building Information Modeling (BIM) at LTU is available online, as both an undergraduate and graduate certificate. It covers building information modeling and computer visualization, both of which play an increasingly important role in architecture, specifically building design, construction, and operation with the help of cutting-edge computer software, building information modeling and computer visualization use 3D modeling techniques that integrate a building’s components – properties, location, geometry, spatial relationships, etc. The ability to visualize the project with BIM software increases productivity in the overall building process and improves communication between architects, engineers, contractors, and other key team members, making the project more efficient and economical.

**GRADUATE CERTIFICATE REQUIRED COURSES [12 credits total]**

- ARC 5023 BIM FUNDAMENTALS
- ARC 5033 BIM FOR BUILDING SYSTEMS
- ARC 5043 BIM FOR ENERGY AND ECOLOGY
- ARC 5053 BIM PROGRAMMING & PROTOTYPING
GRADUATE CERTIFICATE IN GEOGRAPHIC INFORMATION SYSTEMS (GIS)
We offer a Graduate Certificate in Geographic Information Systems (GIS) consisting of 4 credit hours of existing Master of Urban Design coursework, 6 credit hours of existing architecture coursework, and two new courses on GIS (5 credits), gathered as a brief but useful step into the understanding and application of urban design-focused GIS, and advancing the urban design profession.

All credits for the certificate are supported through coursework available online. In terms of current students, this program of study will be of particular interest to students enrolled in urban design and planning majors, who will find that they may earn the certificate with as few as 15 additional credits hours. Additionally, this course of study would be valuable for professionals in a range of fields, including urban design, urban planning, architecture, landscape architecture, and community development.

Although traditionally GIS has been used predominately in the fields of urban planning and natural resources, there is a growing demand for the use of GIS in designing the physical environment in design, planning, and real estate development industries. While there are a number of GIS certificate programs across the country, a GIS certificate that focuses on urban design is rare, providing a unique and valuable training for our students. The certificate in GIS offers students the opportunity to gain an understanding of the built environment such that it might add value and focus to a major degree as well as enrich an LTU education in general. The certificate curriculum advances visualization, mapping, spatial education in general. The certificate curriculum advances visualization, mapping, spatial analysis, thematic diagrams and other urban design-supportive GIS based techniques and skills. Coursework covers methods, theories, principles, practices, and application of GIS in urban design. The program consists of three subject area components: Quantitative Methods in Urban Design and Visual Communications 3 (theory focus); advanced GIS, urban design methods, and Visual Communications 4 (practice focus); and GIS Practicum (application).

GRADUATE CERTIFICATE IN PUBLIC INTEREST DESIGN (PID)
We offer a Graduate Certificate in Public Interest Design (PID) consisting of 4 credit hours of existing Master of Urban Design coursework, 6 credit hours of existing Master of Architecture and Master of Interior Design coursework, and one new, 2-credit, introductory course on community development, presented as a focused study in public interest design and a means to advancing socially responsible design and community development professions. Socially responsible development is a common thread that runs through our core curriculum in architecture, interior design, art, and urban design. Detroit, like other postindustrial cities, has seen bourgeoning practices in community development, which is closely relevant to public interest design. Outside the CoAD, PID is a growing point of emphasis in fields of art, architecture and design and a growing point of interest for students entering programs in these fields. In terms of current students, the program of study will likely be of specific interest to students enrolled in design majors, who will find that they may earn the certificate with as few as 12 additional credit hours.

Additionally, this course of study would be valuable for professionals in a range of fields, including urban design, urban planning, architecture, landscape architecture, and community development. The certificate in public interest design offers students the opportunity to gain an understanding of the built environment such that it might add value and focus to a major degree as well as enrich an LTU education in general. The certificate curriculum advances socially responsible design ideas and skills. Coursework covers methods, theories, principles, practices,
policies, and implementation strategies in public interest design. The program consists of three subject area components: introduction to community development (theory focus); public interest design, design ethics, and adaptive reuse and rehab (practice focus); and urban studio (design strategies).
College of Arts and Sciences

Interim Dean
Glen A. Bauer
S101, 248.204.3500

Program Directors
Master of Science in Computer Science – Data Sciences
  Gus Azar, S116B, 248.204.3659
Master of Science in Computer Science – Intelligent Systems
  Corinne B. Stavish, S227, 248.204.3656
Post-Baccalaureate Certificate in Premedical Studies
  Jeffery M. Morrissette, S322, 248.204.3603

Professors
William C. Arlinghaus, emeritus
Chan-Jin "CJ" Chung
Walter K. Dean, emeritus
Marie Therese Jamison
Thomas A. Lackey, emeritus
Richard E. Marburger, emeritus
Richard E. Michel, emeritus
Daniel W. Mioduszewski, emeritus
Hsiao-Ping H. Moore
Virinder K. Moudgil
Gonzalo Munévar, emeritus
James S. Rodgers, emeritus
Maria J. Vaz

Associate Professors
David E. Bindschadler, emeritus
Christopher K. Cartwright
Franco Delogu
Pamela Lowry, emerita
William G. Madden
Jeffery M. Morrissette
Patrick W. Nelson
Marilyn V. Rands, emerita
Scott D. Schneider
Lior Shamir
Betty L. Stover, emerita
Shannon C. Timmons
Valentina Tobos
Philip K. Vogt
Melinda Weinstein
Julie L. Zwiesler-Vollick

Assistant Professors
Bhubanjyoti Bhattacharya
Michael Dabkowski
Mahdi Ebrahimi
Paul Jaussenn
Vivian Kao
Aleksandra Kuzmanov
George Moschelli
Daniel Shargel
Brian Smith
Na Yu
Meng Zhou
Guang-Chong Zhu

College Professors
Ghassan M. Azar
Corinne B. Stavish
Nicole M. Villeneuve

Senior Lecturers
LaVetta Appleby
Holly K. Helterhoff
Kineta Morgan-Paisley
Yelena Vaynberg
Changgong Zhou

Adjunct Faculty
Additional lecturers are assigned to selected courses and sections based on their specialties and expertise and are listed in the faculty roster.

Faculty Council
Christopher Cartwright, Mathematics and Computer Science
Melinda Weinstein, Humanities, Social Sciences, and Communication
Nicole Villeneuve, Natural Sciences

DEGREE PROGRAMS OFFERED
Lawrence Tech’s College of Arts and Sciences offers these graduate programs:

- Master of Science in Computer Science – Data Sciences
- Master of Science in Computer Science – Intelligent Systems
- Master of Science in Technical and Professional Communication
- Graduate Certificate in Instructional Design, Communication, and Presentation
- Graduate Certificate in Sports Communication
- Graduate Certificate in Technical and Professional Communication
- Graduate Certificate in Writing for the Digital Age
- Post-Baccalaureate Certificate in Premedical Studies

ENGLISH AS A SECOND LANGUAGE (ESL)
LTU’s ESL Institute is an accredited language-instruction program conferring certificates in English proficiency. The Institute offers quality academic and cultural programs to the diverse international community on LTU’s campus and the broader Metro Detroit area. For more than a
decade, the Institute’s international staff and instructors have supported students from over 50 countries to achieve their personal, academic, and career goals. Full-time ESL students meet for 24 hours of intensive instruction per week. Courses are taught at four levels of proficiency, across six literacy skills: grammar, reading, listening, conversation, writing, and integrated skills. Voice and articulation, an online English eLab, and TOEFL-preparation courses are also offered. The Institute’s Bridge Program permits advanced students, admitted to an LTU degree program, to take a hybrid schedule of ESL and program courses.

PROGRAM POLICIES
Grades awarded in graduate courses are limited to A, A–, B+, B, B–, C+, C, C– and F. At most, one passing grade below B– may be counted toward a graduate degree. No more than one required course may be repeated. If a course is repeated, the student's GPA will reflect both grades earned and is not subject to recomputation. Courses numbered 5000 and above require a minimum grade of B– in each prerequisite course.

MASTER OF SCIENCE IN COMPUTER SCIENCE (MSCS) – Data Sciences
MASTER OF SCIENCE IN COMPUTER SCIENCE (MSCS) – Intelligent Systems
The Master of Science in Computer Science – Data Sciences differs from traditional master’s programs in that it emphasizes applied concepts in big data, data mining, administration, and social network mining. In a similar way, the Master of Science in Computer Science – Intelligent Systems emphasizes applied concepts in artificial intelligence, machine learning, autonomous mobile robotics, mixed reality, and software engineering in robotics. Both programs are technically demanding in breadth and depth. Concepts are reinforced with customized software development challenges that focus on application and real-world projects. Eight core courses provide rigor in computer science foundations plus specialization in either data sciences or intelligent systems. Each program is designed so that students can select two additional electives to strengthen their understanding and give them a unique competitive advantage with employers. Available electives include Data Warehousing, Distributed Computing, Database Systems, Software Engineering, Web Server Programming, Artificial Intelligence, Social Network Mining, Pattern Recognition, and various Topics in Computer Science, such as deep learning, VR (Virtual Reality) and AR (Augmented Reality).

MSCS PROGRAM OBJECTIVES
The program is designed to develop highly skilled professionals who have a thorough understanding of the theoretical concepts and practical uses of computer science. This applied degree program is intended to draw students from four diverse populations:

- College graduates with undergraduate degrees in computer science who wish to gain advanced knowledge and skill in the area of applied computing;
- Degreed and non-degreed, employed or unemployed, and computer professionals and self-learners seeking to further their technical competencies who demonstrate a passion for computer science and a history of achievement in software development;
- College graduates with bachelor’s degrees in non-computer areas seeking entry into the computer science field.
- Highly motivated freshmen to earn both BSCS (Bachelor of Science in Computer Science) and MSCS (Master of Science in Computer Science) degrees in five years. Program details are described in the “Direct Entry 4+1 MSCS Program” section below.

The market for those with computer science expertise is booming now and most likely will thrive in the future, giving rise to increased demand for technically competent leaders in a field that is essential for economic growth. Hands-on, applied classes reinforce theoretical concepts, and
extensive experience in modern computer science laboratories is emphasized throughout the program.

The exceptional nature of Lawrence Tech’s computer science program is reflected in the fact that computer science students often publish in peer-reviewed journals, an achievement far less common at many other higher education institutions. LTU graduates command some of the highest salaries in Michigan, and LTU has been recognized as being among the nation’s leading institutions for post-graduation professional opportunity.

**MSCS ADMISSION REQUIREMENTS**

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply) with a resume and at least one letter of recommendation;
2. A baccalaureate degree that includes one year of mathematics and one year of science (minimum GPA of 3.0*);
3. Official transcripts of all completed college work;
4. Completion of the following pre-core sequence of undergraduate courses** or their equivalencies with a B- or better. Students may also demonstrate mastery of the topics covered in these pre-core courses through a graduate qualifying exam and will be exempt from any pre-core subject area in which a score of 70 percent or higher is achieved.

<table>
<thead>
<tr>
<th>Subject</th>
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<tbody>
<tr>
<td>Computer Science 2 (with C++ Programming)</td>
<td>4</td>
</tr>
<tr>
<td>Data Structures</td>
<td>4</td>
</tr>
<tr>
<td>Operating Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

5. Accepted applicants who do not pass the qualifying examination will be enrolled in the graduate courses only after completing the pre-core sequence of courses.*

*U.S. students can apply with a GPA of 2.5 or higher

**Pre-core courses may require additional prerequisite courses (e.g., Computer Science 1).**

**MSCS TRANSFER CREDIT POLICY**

No more than six graduate semester credit hours can be transferred into the program from another graduate program.

**MASTER OF SCIENCE IN COMPUTER SCIENCE CURRICULUM**

TOTAL SEMESTER HOURS: 30

Students must have a plan of study, arranged in consultation with an advisor and approved by the program director.

**DATA SCIENCES**

<table>
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<td>MCS 5623</td>
<td>Pattern Recognition</td>
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<td>Social Network Mining</td>
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<td>MCS 5803</td>
<td>Introduction to Algorithm Design</td>
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<td>Concentration Project 1</td>
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<tr>
<td>MCS 7013</td>
<td>Collaborative Research Project 1</td>
<td>3</td>
</tr>
<tr>
<td>MCS 7033</td>
<td>Collaborative Research Project 2</td>
<td>3</td>
</tr>
<tr>
<td>MCS XXX3</td>
<td>Graduate CS Elective</td>
<td>3</td>
</tr>
<tr>
<td>Course Number</td>
<td>Subject</td>
<td>Cr. Hrs.</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>MCS XXX3</td>
<td>Graduate CS Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Server Programming</td>
<td>3</td>
</tr>
<tr>
<td>Software Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>Artificial Intelligence</td>
<td>3</td>
</tr>
<tr>
<td>Robotics Programming</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Distributed Computing</td>
<td>3</td>
</tr>
<tr>
<td>Topics in Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>Distributive Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>Data Warehousing</td>
<td>3</td>
</tr>
</tbody>
</table>

**Intelligent Systems**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCS 5243</td>
<td>Theory of Computation</td>
<td>3</td>
</tr>
<tr>
<td>MCS 5323</td>
<td>Artificial Intelligence</td>
<td>3</td>
</tr>
<tr>
<td>MCS 5403</td>
<td>Robotics Programming</td>
<td>3</td>
</tr>
<tr>
<td>MCS 5803</td>
<td>Introduction to Algorithm Design</td>
<td>3</td>
</tr>
<tr>
<td>MCS 6823</td>
<td>Concentration Project 1</td>
<td>3</td>
</tr>
<tr>
<td>MCS 6833</td>
<td>Concentration Project 2</td>
<td>3</td>
</tr>
<tr>
<td>MCS 7013</td>
<td>Collaborative Research Project 1</td>
<td>3</td>
</tr>
<tr>
<td>MCS 7033</td>
<td>Collaborative Research Project 2</td>
<td>3</td>
</tr>
<tr>
<td>MCS XXX3</td>
<td>Graduate CS Elective</td>
<td>3</td>
</tr>
<tr>
<td>MCS XXX3</td>
<td>Graduate CS Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattern Recognition</td>
<td>3</td>
</tr>
<tr>
<td>Web Server Programming</td>
<td>3</td>
</tr>
<tr>
<td>Social Network Mining</td>
<td>3</td>
</tr>
<tr>
<td>Software Engineering</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>Introduction to Distributed Computing</td>
<td>3</td>
</tr>
<tr>
<td>Topics in Computer Science</td>
<td>3</td>
</tr>
<tr>
<td>Distributive Database Systems</td>
<td>3</td>
</tr>
<tr>
<td>Data Warehousing</td>
<td>3</td>
</tr>
</tbody>
</table>

**DIRECT ENTRY 4+1 MSCS PROGRAM**

4+1 MSCS program is an accelerated program for highly motivated freshmen to earn MSCS as well as BSCS in five years. 9 graduate credits are double counted toward each of the two degrees. Freshman LTU Scholarship will be continued till the fifth year. The total number of
credits for this combined program is 113 (undergraduate) + 9 (graduate double counted) + 21 (graduate) = 143.

Admission requirements of the 4+1 MSCS are the same as the requirements for the first-year freshmen for Bachelor’s degree, which can be found in the Undergraduate Catalog, except the following:

1. Recalculated high school GPA must be 3.6 or higher
2. ACT composite score must be 28 or higher or SAT score must be 1350 or higher
3. Must be ready to take Calculus 1

Program Policies and Procedures of the 4+1 MSCS

1. This program is mainly for domestic first time in any college (FTIAC) or freshmen transfer students seeking admission into LTU's CS program.
2. Current undergraduate CS students with fewer than 30 credit hours completed may apply for this program. The current LTU GPA must be 3.4 or higher and the same higher admission requirements will be checked.
3. By default, the undergraduate concentration for the 4+1 program is Scientific Software Development. If any change is needed, it must be approved by the program director.
4. Up to 9 graduate credits may be double counted toward both BSCS and MSCS degree programs.
5. Freshman LTU Scholarships will be continued through the fifth year.
6. Students are required to pay graduate tuition rates for all graduate-level courses taken.
7. In the senior year, after earning at least 91 credits, 4+1 MSCS students are required to meet with the program director to file a plan of work and petition to officially begin the graduate portion of the program. One of the most important factors for the approval is the GPA, which must be a minimum 3.4. If the petition is approved, they remain in the 4+1 MSCS program. If the petition is not approved, they may exit the 4+1 program and pursue just the BSCS degree with a concentration in Scientific Software Development (122 credits required).
8. To receive the BSCS degree with concentration in Scientific Software Development once all requirements have been fulfilled, the student must submit an undergraduate petition to graduate when 122 credits are expected to be completed.
9. There is no obligation to enter the 5th year MSCS degree program.
10. Students may choose to delay completion of the MSCS degree beyond the 5th year. However, scholarship funds will end after five years.

MASTER OF SCIENCE IN TECHNICAL AND PROFESSIONAL COMMUNICATION (MSTPC)
The Master of Science in Technical and Professional Communication is designed as a professional practice-and-theory-oriented program of graduate study that prepares students for leadership positions in the field of technical communication. The students who graduate from this program will learn to write copy, edit it, design and publish the document, and give a presentation about it.

MSTPC PROGRAM OBJECTIVES
Depending on the emphasis of their course of study and professional interests, students take courses that focus on providing the skills necessary to:

- Design, produce, and evaluate the various types of technical and professional communication required by diverse audiences.
- Use verbal, visual, analytical, and computer skills to create and enhance communication in professional environments.
Lawrence Technological University

- Apply major rhetorical theories of technical and professional discourse to a variety of communication environments.
- Apply emerging digital technologies and other media to the creation of various publications and presentations.
- Gain insight into the current research methodologies applicable to the fields of technical and professional communication.
- Supervise publications, information design, and information management functions in organizations.
- Master presentation techniques that are adaptable to multiple audiences.
- Highly-motivated students may also prepare for doctoral-level work in technical and professional communication to obtain academic, corporate leadership, or research positions.

MSTPC ADMISSION REQUIREMENTS

In addition to the policies and procedures described in the Academic Regulations section of this Catalog, admission to the Master of Science in Technical and Professional Communication requires:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. A baccalaureate degree from an accredited college or university (minimum GPA of 3.0);
3. Official transcripts of all completed college work;
4. A resume, including academic and professional experience;
5. One or more writing samples that demonstrate the applicant’s skill in either technical or professional communication. Professional portfolios may also be submitted;
6. Three letters of recommendation, including one from either a professor or a corporate supervisor. The supervisory letter must be written by someone who has worked with the applicant in either an academic or corporate environment during the past three years and who is familiar with the applicant’s professional promise;
7. An admissions interview with the program director or a designated faculty member.

Applicants with a GPA of less than a 3.0 will be admitted on a conditional basis. Students accepted conditionally are evaluated for official graduate student status upon completion of nine semester hours of graduate coursework at Lawrence Tech.

MSTPC TRANSFER CREDIT POLICY

1. No more than six graduate semester credit hours may be transferred, and these must be from an accredited MS, MA, or PhD program in communication.
2. A request for courses to be considered for transfer must be made in writing at the time of application.
3. A minimum grade of 3.0 must have been achieved in the transfer courses.
4. Courses must have been completed within five years of the application for admission. In exceptional circumstances, and with the approval of the program director, the department chair, and the dean, additional credits may be earned based on professional experience that can be applied to a practicum project for COM 6203.

MSTPC REQUIREMENTS FOR CONTINUING MATRICULATION

In order to continue in the program, students must maintain a cumulative GPA of at least 3.0. A student whose GPA falls below 3.0 must have the approval of the program director to continue in the program.
MASTER OF SCIENCE IN TECHNICAL AND PROFESSIONAL COMMUNICATION CURRICULUM
TOTAL SEMESTER HOURS: 30
Candidates for the Master of Science in Technical and Professional Communication degree must complete the equivalent of 30 semester hours, including 18 semester hours of core courses. Students must have a cumulative GPA of 3.0 in all courses applied toward the degree.

Core Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 5103</td>
<td>Foundations of Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 5443</td>
<td>Rhetoric of Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 5453</td>
<td>Research Methods and Applications</td>
<td>3</td>
</tr>
<tr>
<td>COM 5473</td>
<td>Advanced Publication Design</td>
<td>3</td>
</tr>
<tr>
<td>COM 5553</td>
<td>Advanced Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 6203</td>
<td>Technical Communication Practicum</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives

Four (4) electives (12 credits) to be chosen from the following list:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 5963</td>
<td>Web Site Design</td>
<td>3</td>
</tr>
<tr>
<td>COM 5123 or</td>
<td>Professional Presentation Strategies</td>
<td>3</td>
</tr>
<tr>
<td>COM 5463</td>
<td>Team Problem Solving and Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>COM 5483</td>
<td>Managing Organizational Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 5493</td>
<td>Communicating Across Cultures</td>
<td>3</td>
</tr>
<tr>
<td>COM 5523</td>
<td>Developing the Corporate Story</td>
<td>3</td>
</tr>
<tr>
<td>COM 5533</td>
<td>Writing for Social Media</td>
<td>3</td>
</tr>
<tr>
<td>COM 5543</td>
<td>Technical and Professional Editing</td>
<td>3</td>
</tr>
<tr>
<td>COM 5563</td>
<td>Advanced Nonverbal Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 5573</td>
<td>Instructional Design</td>
<td>3</td>
</tr>
<tr>
<td>COM 5583</td>
<td>Special Topics*</td>
<td>3</td>
</tr>
</tbody>
</table>

*Special Topics examples may include:
- Publication and Graphic Design Software Applications
- Medical Writing
- Proposal Writing
- Legal Writing
- Personal and Professional Storytelling
- Communication Law
- Rhetorical Analysis and Presentation
- Sports Law
- Advanced Business and Professional Communication
- Sports Psychology

GRADUATE CERTIFICATE IN INSTRUCTIONAL DESIGN, COMMUNICATION, AND PRESENTATION
The 15-credit-hour Graduate Certificate in Instructional Design, Communication, and Presentation provides advanced skills in training for mediated and non-mediated situations, with a focus on land-based, audience-centered communication training needs.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 5963</td>
<td>Web Site Design</td>
<td>3</td>
</tr>
<tr>
<td>COM 5123 or</td>
<td>Professional Presentation Strategies</td>
<td>3</td>
</tr>
<tr>
<td>COM 5523</td>
<td>Developing the Corporate Story</td>
<td>3</td>
</tr>
<tr>
<td>COM 5443</td>
<td>Rhetoric of Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 5553</td>
<td>Advanced Interpersonal Communication</td>
<td>3</td>
</tr>
</tbody>
</table>
GRADUATE CERTIFICATE IN SPORTS COMMUNICATION
The 15-credit-hour Graduate Certificate in Sports Communication provides advanced skills in writing, conflict management, cultural and corporate communication, and graphic design with a sports focus.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 5463</td>
<td>Team Building and Problem Solving</td>
<td>3</td>
</tr>
<tr>
<td>COM 5553 or</td>
<td>Advanced Interpersonal Communication or</td>
<td>3</td>
</tr>
<tr>
<td>COM 5493</td>
<td>Communicating Across Cultures</td>
<td>3</td>
</tr>
<tr>
<td>COM 5533 or</td>
<td>Writing for Social Media or</td>
<td>3</td>
</tr>
<tr>
<td>COM 5523</td>
<td>Developing the Corporate Story</td>
<td>3</td>
</tr>
<tr>
<td>COM 5473 or</td>
<td>Advanced Publication Design or</td>
<td>3</td>
</tr>
<tr>
<td>COM 5543 or</td>
<td>Technical and Professional Editing or</td>
<td>3</td>
</tr>
<tr>
<td>COM 5963</td>
<td>Web Site Design</td>
<td>3</td>
</tr>
<tr>
<td>COM 5583</td>
<td>Special Topics: Sports Writing and Analysis, Sports Law, or Sports Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

GRADUATE CERTIFICATE IN TECHNICAL AND PROFESSIONAL COMMUNICATION
The 15-credit-hour Graduate Certificate in Technical and Professional Communication provides advanced skills in literacy across written, oral, and digital communication.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 5103</td>
<td>Foundations of Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 5453</td>
<td>Research Methods and Applications</td>
<td>3</td>
</tr>
<tr>
<td>COM 5553</td>
<td>Advanced Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>2 Electives</td>
<td>COM 5000- level courses</td>
<td>6</td>
</tr>
</tbody>
</table>

GRADUATE CERTIFICATE IN WRITING FOR THE DIGITAL AGE
The 15-credit-hour Graduate Certificate in Writing for the Digital Age provides advanced skills in writing for social media, the web, and non-print journals.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 5963</td>
<td>Web Site Design</td>
<td>3</td>
</tr>
<tr>
<td>COM 5443</td>
<td>Rhetoric of Technical Communication</td>
<td>3</td>
</tr>
<tr>
<td>COM 5523</td>
<td>Developing the Corporate Story</td>
<td>3</td>
</tr>
<tr>
<td>COM 5533</td>
<td>Writing for Social Media</td>
<td>3</td>
</tr>
<tr>
<td>1 Elective</td>
<td>COM 5000- level course</td>
<td>3</td>
</tr>
</tbody>
</table>

The Graduate Certificates in Instructional Design, Communication, and Presentation; Sports Communication; Technical and Professional Communication; and Writing for the Digital Age can be applied to the Master of Science in Technical and Professional Communication, which can be earned with an additional 15 credit hours.

POST-BACCALAUREATE CERTIFICATE IN PREMEDICAL STUDIES
The Post-Baccalaureate Certificate in Premedical Studies is designed for college graduates who are interested in pursuing a career in medicine, but have taken few or none of the required courses for admission into medical school.
The rigorous 44-credit-hour program provides the academic foundation in biology, chemistry, physics, mathematics, and English that medical schools require.

Students are pre-approved for Lawrence Tech’s Quest Program. Quest is a project-based experiential learning program that gives premedical students real-world experiences in health-related fields.

Students receive extensive academic and professional advising, and help preparing for the MCAT and medical school application procedures.

POST-BACCALAUREATE CERTIFICATE IN PREMEDICAL STUDIES – ADMISSION REQUIREMENTS

In addition to the policies and procedures described in the Academic Regulations section of this Catalog, admission to the Post-Baccalaureate Certificate in Premedical Studies Program requires:

- Submission of the Application for Graduate Admission (www.ltu.edu/apply);
- A baccalaureate degree from an accredited college or university (minimum GPA of 3.2);
- Official transcripts of all completed college work;
- A resume, including academic and professional experience;
- An admissions interview with the program director or a designated faculty member.

Applicants with a GPA of 2.9 or above may be given provisional acceptance and will be evaluated for official graduate student status upon completion of 10 credits in the program with no course grade below a B+. In order to be given provisional acceptance, there must be strong evidence that the candidate can perform at a significantly higher level than the undergraduate transcript indicates.

POST-BACCALAUREATE CERTIFICATE IN PREMEDICAL STUDIES – TRANSFER CREDIT POLICY

As many as 17 credits will be accepted for transfer from an accredited undergraduate college or university. A minimum grade of 3.0 must have been achieved in the transfer courses.

POST-BACCALAUREATE CERTIFICATE IN PREMEDICAL STUDIES – REQUIREMENTS FOR CONTINUING MATRICULATION

A student who fails to achieve a GPA of 3.0 in any single term will be placed on probation. Any student who fails to achieve a GPA of 3.0 in two successive terms or in any three terms will be expelled from the program.

POST-BACCALAUREATE CERTIFICATE IN PREMEDICAL STUDIES CURRICULUM

TOTAL SEMESTER CREDIT HOURS: 44

Candidates for the Post-Baccalaureate Certificate in Premedical Studies must complete the equivalent of 44 semester hours. Students must have a GPA of 3.0 in all courses applied toward the certificate.

<table>
<thead>
<tr>
<th>English (3 credits)</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 1003 or LLT XXX3</td>
<td>Literature course(s)</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematics (8 credits minimum)</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCS 1214</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
</tbody>
</table>
Lawrence Technological University

MCS 2124  Statistics  4

Biology (8 credits)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1213</td>
<td>Biology 1</td>
<td>3</td>
</tr>
<tr>
<td>BIO 1221</td>
<td>Biology 1 Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>BIO 1223</td>
<td>Biology 2</td>
<td>3</td>
</tr>
<tr>
<td>BIO 1231</td>
<td>Biology 2 Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>

Chemistry (17 credits)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 1213</td>
<td>University Chemistry 1</td>
<td>3</td>
</tr>
<tr>
<td>CHM 1221</td>
<td>University Chemistry 1 Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHM 1223</td>
<td>University Chemistry 2</td>
<td>3</td>
</tr>
<tr>
<td>CHM 1232</td>
<td>University Chemistry 2 Laboratory</td>
<td>2</td>
</tr>
<tr>
<td>CHM 2213</td>
<td>Organic Chemistry 1</td>
<td>3</td>
</tr>
<tr>
<td>CHM 2323</td>
<td>Organic Chemistry 2</td>
<td>3</td>
</tr>
<tr>
<td>CHM 2332</td>
<td>Organic Chemistry Laboratory</td>
<td>2</td>
</tr>
</tbody>
</table>

Physics (8 credits)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 2213</td>
<td>College Physics 1</td>
<td>3</td>
</tr>
<tr>
<td>PHY 2221</td>
<td>College Physics 1 Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>PHY 2223</td>
<td>College Physics 2</td>
<td>3</td>
</tr>
<tr>
<td>PHY 2231</td>
<td>College Physics 2 Laboratory</td>
<td>1</td>
</tr>
</tbody>
</table>
College of Business and Information Technology

Dean
Bahman Mirshab
M331, 248.204.3050

Director of Business Programs
Minakhi (Mina) Jena
M331, 248.204.3071

Professors
Patricia A. Castelli
Vernon R. Hoffner, emeritus
Leland A. Lahr, emeritus
Jacqueline M. Stavros
A. Lerine Steenkamp, emerita

Associate Professors
Matthew Cole
Srikant Raghavan
Anne Kohnke

Assistant Professors
Eralda Caushaj
Shih-Hui Hsiao
Chih-Hao Ku
Pavlo Tsebro
Ling Tuo
Swati Verma
Yu Zhang
Jianjun Zhu

College Professors
Thomas Marx

Adjunct Faculty
Additional lecturers are assigned to selected courses based on their expertise and are listed in the faculty roster.

Faculty Senate
Srikant Raghavan
Anne Kohnke
Pavlo Tsebro

DEGREE PROGRAMS OFFERED
Lawrence Technological University’s College of Business and Information Technology offers these graduate programs:

Master of Business Administration (available online)
Master of Science in Information Technology (available online)
MBA/Master of Science in Information Technology Dual Degree
Employing Lawrence Tech’s model of theory and practice, the College of Business and Information Technology prepares a diverse body of domestic and international students for successful careers in a variety of organizations through interdisciplinary educational programs that emphasize analytical, technological, ethical, team work, global management, and interpersonal skills essential in an interconnected world economy. Faculty engagement in scholarly activity and service to the University, the profession, and the community complements our primary commitment to teaching and service excellence. The foundation of Lawrence Tech’s business education rests on four pillars: student-centered, ethical leadership, suburban setting, and interdisciplinary programs.

Student-Centered: The College of Business and Information Technology’s commitment to student-centered education encompasses all aspects of the educational experience, particularly quality teaching and excellent faculty, student service, and academic support.

Ethical Leadership: Motivated by a commitment to the education of the whole person, intellectually, morally, and socially, the College of Business and Information Technology provides a rigorous and integrated business education for ethical and socially responsible leadership.

Suburban Setting: Lawrence Tech is located in Southfield in the heart of southeastern Michigan, which has more than 9,000 businesses and over 100 Fortune 500 companies. Lawrence Tech’s students learn in a dynamic urban community and gain valuable experience that only a major metropolitan area offers. The quality and diversity of the student body, together with the University’s location, provide students with an educational experience that prepares them for an increasingly diverse workplace.

Interdisciplinary Programs: As stated by Peter Senge, “Good results in a complex system require integrating as many perspectives as possible.” Lawrence Tech’s business programs are organized to cut across subject-matter lines, bringing together various aspects of the curriculum into meaningful association. Students get more than just theories and equations at Lawrence Technological University. They are exposed to the tools and practical experiences they will need to realize their dreams.

Founded in 1952, Lawrence Tech’s College of Business and Information Technology has more than 10,000 alumni. For a school its size, the college has produced a large number of alumni prominent not only in Michigan but throughout the United States and the world.

ACCREDITATION
The College of Business and Information Technology is fully accredited by the AASCB International – the Association to Advance Collegiate Schools of Business. AASCB accreditation represents the highest standard of achievement for business schools worldwide. The College of Business and Information Technology is also accredited by the Association of Collegiate Business Schools and Programs (ACBSP) and the International Assembly of Collegiate Business Education (IACBE).
OFF-CAMPUS PROGRAMS
Consistent with its mission, the College of Business and Information Technology offers programs at the Southfield campus in addition to education centers in metropolitan Detroit. Hybrid and online classes are offered to complement traditional classroom instruction.

GRADUATE ADMISSION REQUIREMENTS
Unless indicated elsewhere, applicants to the College of Business and Information Technology graduate degree programs are expected to be either working or have work experience. Applicants must meet the following criteria:

- Hold a bachelor’s degree from a regionally accredited institution.
- Have earned a GPA of 3.0 or higher for undergraduate coursework.
- The GMAT is not required for applicants holding a master’s degree or who have been previously admitted to a master-level program.
- The GMAT is not required for applicants who hold a bachelor’s degree or equivalent who have obtained a minimum GPA of 3.0 for undergraduate coursework. For applicants with a GPA of less than 3.0, a GMAT or other assessment tool may be required.
- Take the TOEFL or IELTS if English is not the applicant’s native language. The minimum acceptable performance is a 550 paper-based score or a 79 on the Internet-based exam. The minimum acceptable IELTS score is 6.5. The TOEFL/IELTS requirement is waived for those international students who have completed their degrees at a recognized U.S. or North American university.
- Complete an Online Application for Graduate Admission and application fee.
- Provide official transcripts from every college or university attended.
- Submit a professional resume.
- Applicants who have exceptional merit but do not meet all admission criteria may be admitted under special circumstances determined by the Graduate Admissions Committee.

The Graduate Admission Committee and the director of business programs may allow provisional admission to applicants who have exceptional merit but do not meet all admission criteria for regular admission. A provisional student is typically granted regular status after receiving a minimum grade of B or better in each of the first 9 credit hours. Students with provisional admission status may be required to take pre-core courses to meet the admission requirements. Applicants who meet the admission requirements, but whose supporting documentation (e.g., academic transcripts) is still pending may be admitted conditionally. Additional documents, such as WES course-by-course evaluation, letters of recommendation, GMAT, etc., may be required.

Note: Letters of recommendation, transcripts and independent test scores must come directly from the institution to the Office of Graduate Admissions, Lawrence Technological University, 21000 West Ten Mile Road, Southfield, MI 48075-1058. Candidates are notified by mail of the outcome of their applications.

TRANSFER POLICY (NON-SPECIALTY PROGRAMS)
Students should initiate a petition for transfer of credits prior to the completion of their first semester of the graduate program by completing the Graduate Transfer Credit Request form. Up to 12 credit hours are generally accepted by the College of Business and Information Technology for the Master of Business Administration program and up to 9 credit hours are accepted for the Master of Science in Information Technology program. These courses must be graduate-level courses taken at an accredited university. Each course generally must have
been taken within seven years of application for admission. Transfer students should apply for admission through the Office of Admissions. Transferred courses must have a grade of 3.0 or better; grades of “passed/not passed,” “pass/fail,” or “pass/no entry” are not acceptable.

Students may be required to submit additional evidence (e.g., course syllabi, catalog descriptions, and tests/examinations) in order to justify the transfer of credits. The Graduate Admissions Committee may require the applicant to demonstrate proficiency in a subject either through an interview or written examination prepared by faculty members who have expertise in the subject/discipline.

CURRICULUM DELIVERY
Consistent with its mission and values, the College of Business and Information Technology is committed to providing appropriate instructional methods to fit the needs of its students while maximizing student learning. As a result, the college has developed three course-delivery formats:

- **Traditional courses** are courses taught exclusively in the classroom. The semester includes 15 weeks of classroom instruction plus a one-week final exam period. Traditional courses are offered on the Southfield campus and at some of Lawrence Tech’s education centers and are usually held on weekday evenings or Saturdays.
- **Hybrid courses** consist of approximately 50 percent classroom time and 50 percent online learning activities. The goal of hybrid courses is to merge the best features of in-class teaching and web-based educational technologies to promote active independent learning; and allow for both an asynchronous and synchronous communication with the class. Hybrid courses are offered at both the Southfield and education center campuses.
- **Online courses** are courses in which all of the learning activities have been moved online, replacing classroom time entirely. Online courses are designed to take advantage of the best online teaching methods with course content that can be effectively taught in an online environment. These courses provide maximum flexibility for busy working professionals to better manage their work and personal schedule while fulfilling their academic goals. Regardless of the delivery format, curriculum, faculty or course content, learning goals are the same for all courses. All graduate students are required to have a laptop/computer when taking online courses.

Please note that the College of Business and Information Technology reserves the right to update curricula throughout the academic year. Please see an advisor or visit the website for the most current curricula.

**MASTER OF BUSINESS ADMINISTRATION (MBA)**
The Master of Business Administration was first introduced into university curricula at the turn of the 20th century and underwent a major restructuring in the late 1940s and 1950s. Today, enrollment in MBA programs has exponentially increased as the degree has become a necessary credential for those wishing to hone and enhance their managerial and leadership skills to compete in a global economy. The intent of the “traditional” MBA program, often found in business schools, is to provide the business community with a degree-holder who has been exposed to a wide body of knowledge and is prepared to be effective in a rapidly changing business environment.

Lawrence Tech’s MBA is performance driven and links knowledge to organizational activities by melding theory with practice. The intent of Lawrence Tech’s Master of Business Administration program is to develop leadership and management skills by providing the student with a broad
understanding of the roles and responsibilities of business management, thereby enhancing the graduate’s effectiveness as a manager and leader. The learning is active, replacing the “read, look, listen, and take an exam” approach found in traditional MBA programs. The program is further designed to develop the student’s skills in areas such as problem solving, communication, and team building and helps students develop a cross-disciplinary approach to managing the organization.

MBA PROGRAM DESIGN
Lawrence Tech’s 36-credit-hour MBA program consists of nine core classes and three electives. Students can select one of six areas of concentration to help expand their experiences and meet future goals: Business Analytics, Cybersecurity, Finance, Information Technology, Marketing, and Project Management. The MBA can be obtained in as few as two years of evening and/or online study.

Foundation courses may be required of students who have not taken undergraduate coursework in business or who do not have substantial relevant work experience. Waivers from the foundation courses are generally granted at the time of admission to the MBA program. The essential foundations of accounting, finance, statistics, legal environment, economics, marketing and management are covered in these courses. Foundation classes may be taken concurrently with those core classes that require no prerequisites.

Core courses are designed to provide students with meaningful experiences in analyzing and implementing operational concepts and programs as well as lead directly to the selections of appropriate elective courses. Global Strategic Management is the Capstone course and should only be scheduled near the end of the student’s program.

MBA DEGREE REQUIREMENTS
Successful completion of the 36-credit-hour MBA program requires:

- Nine core courses and three electives, with at least 24 graduate credit hours taken at Lawrence Tech;
- Completion (or waiver) of all foundation courses;
- Overall GPA of at least 3.0 in core/elective program areas;
- Completion of the above requirements within seven years of program entry.

MASTER OF BUSINESS ADMINISTRATION CURRICULUM

Foundation Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 5003</td>
<td>Fundamentals of Financial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>MBA 5013</td>
<td>Business Application of Statistical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECN 5011T</td>
<td>Managerial Economics</td>
<td>1.5</td>
</tr>
<tr>
<td>ECN 5021T</td>
<td>Fundamentals of Macro Economics</td>
<td>1.5</td>
</tr>
<tr>
<td>MBA 5031T</td>
<td>Fundamentals of Marketing</td>
<td>1.5</td>
</tr>
<tr>
<td>MBA 5041T</td>
<td>Fundamentals of Management</td>
<td>1.5</td>
</tr>
<tr>
<td>MBA 5051T</td>
<td>Fundamentals of Finance</td>
<td>1.5</td>
</tr>
<tr>
<td>MBA 5061T</td>
<td>Legal Environment of Business</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Core Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 6003</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Course Number</td>
<td>Subject</td>
<td>Cr. Hrs.</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>ECN 6023</td>
<td>Global Business Economics</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6003</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6033</td>
<td>Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6043</td>
<td>Global Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6053</td>
<td>Strategic Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6063</td>
<td>Operations and Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6043</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6073**</td>
<td>Global Strategic Management</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

**Concentration: Business Analytics**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 7253</td>
<td>Visual Analytics</td>
<td>3</td>
</tr>
<tr>
<td>INT 7623</td>
<td>Data Science for Business</td>
<td>3</td>
</tr>
<tr>
<td>INT 7513</td>
<td>Information Retrieval and Data Mining</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentration: Cybersecurity**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 6143</td>
<td>Enterprise Network Infrastructure</td>
<td>3</td>
</tr>
</tbody>
</table>

And two of the following classes:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 7223</td>
<td>Cybersecurity</td>
<td>3</td>
</tr>
<tr>
<td>INT 7233</td>
<td>Advanced Network Security</td>
<td>3</td>
</tr>
<tr>
<td>INT 7243</td>
<td>Disaster Recovery &amp; Business Continuity</td>
<td>3</td>
</tr>
<tr>
<td>INT 7263</td>
<td>Threats, Vulnerability, Security Con. &amp; Countermeasure</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentration: Information Technology**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7063</td>
<td>Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Two other approved IT electives

**Concentration: Finance**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7003</td>
<td>Investment Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7013</td>
<td>Financial Markets and Institutions</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7023</td>
<td>International Finance</td>
<td>3</td>
</tr>
</tbody>
</table>

**Concentration: Marketing**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7073</td>
<td>Digital Marketing</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7083</td>
<td>Marketing Research and Consumer Behavior</td>
<td>3</td>
</tr>
</tbody>
</table>

One other approved graduate-level open elective class

**Concentration: Project Management**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7063</td>
<td>Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

And two of the following classes:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7033</td>
<td>Organization Development and Change Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7053</td>
<td>Managing a Global Workforce</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7103</td>
<td>Entrepreneurship and New Venture Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7173</td>
<td>Project Risk and Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6253</td>
<td>Managing Outsourced Projects</td>
<td>3</td>
</tr>
</tbody>
</table>
INT 7563          Agile Project Management     3

Other Electives

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7123</td>
<td>Directed/Independent Study</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7133</td>
<td>International Experience Abroad</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7143</td>
<td>Master’s Thesis 1</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7153</td>
<td>Master’s Thesis 2</td>
<td>3</td>
</tr>
</tbody>
</table>

**ETS Major Field Test for MBA**

All students in the MBA program are required to take the ETS Major Field Test in the MBA 6073: Global Strategic Management course. This is an MBA Program Requirement to complete in order to graduate. The Major Field Test for MBA consists of 124 multiple-choice questions, half of which are based on short case-study scenarios. The questions require knowledge of MBA content areas in marketing, management, finance, and accounting. The test also includes questions that address international business, information technology, the legal and regulatory environment of business, ethics and social responsibility in business, statistical analysis, managerial economics, and e-commerce. A calculator is not required. For more information, visit [www.ets.org](http://www.ets.org) or ask your faculty advisor.

**MASTER OF SCIENCE IN INFORMATION TECHNOLOGY (MSIT)**

The Master of Science in Information Technology aims to provide students with skills and knowledge in the management of enterprise information systems. The program explores the “context” in which information systems operate while examining how information systems are designed and how they can successfully be implemented and operated to deliver business value. It is unique in its three-part focus on the development of managerial skills, technical expertise, and an understanding of standards and practices.

**MSIT PROGRAM DESIGN**

The MSIT program gives students the chance to customize their degree to meet their individual professional and academic goals. The MSIT consists of 30 credit hours of coursework, including seven (7) core courses (21 credit hours) and three elective courses (9 credit hours). Each course is delivered by way of workshops, seminars, exercises, case analyses, and other forms of interactive learning. Students can select one of three areas of concentration to help expand their experiences and meet future goals: Business Analytics, Cybersecurity, and Project Management.

The MSIT can be completed in two years by taking two classes each semester. The flexible schedule offers courses in the evenings, hybrid courses, and some courses are available fully online.

**MSIT DEGREE REQUIREMENTS**

Successful completion of the MSIT program requires:

- 21 credit hours of core courses and nine credit hours of electives;
- Completion or waiver of all necessary foundation courses;
- An overall GPA of at least 3.0 in core and elective program areas; and
- Completion of the above requirements within seven years of program entry.
MASTER OF SCIENCE IN INFORMATION TECHNOLOGY CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 30
Students without an IT background must take foundation coursework in statistical methods, programming, and management information systems.

Foundation Courses (up to 10 credit hours, may be waived by advisor)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 5013</td>
<td>Business Applications of Statistical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>INT 5024</td>
<td>Business Application Programming</td>
<td>4</td>
</tr>
<tr>
<td>INT 6043</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

Core Courses (21 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7063</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6113</td>
<td>Database Modeling and Administration</td>
<td>3</td>
</tr>
<tr>
<td>INT 6123</td>
<td>Systems Analysis and Design</td>
<td>3</td>
</tr>
<tr>
<td>INT 6143</td>
<td>Enterprise Network Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>INT 7213</td>
<td>Business Analytics and Intelligence</td>
<td>3</td>
</tr>
<tr>
<td>INT 7223</td>
<td>Cybersecurity</td>
<td>3</td>
</tr>
<tr>
<td>INT 7593</td>
<td>IT Capstone</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives
Concentration: Business Analytics

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 7513</td>
<td>Information Retrieval and Data Mining</td>
<td>3</td>
</tr>
<tr>
<td>INT 7623</td>
<td>Data Science for Business</td>
<td>3</td>
</tr>
<tr>
<td>INT 7253</td>
<td>Visual Analytics</td>
<td>3</td>
</tr>
</tbody>
</table>

Concentration: Cybersecurity

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 7233</td>
<td>Advanced Network Security</td>
<td>3</td>
</tr>
<tr>
<td>INT 7243</td>
<td>Disaster Recovery and Business Continuity</td>
<td>3</td>
</tr>
<tr>
<td>INT 7263</td>
<td>Threats, Vulnerability, Security Con. and Countermeasure</td>
<td>3</td>
</tr>
</tbody>
</table>

Concentration: Project Management

Three of the following classes:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 6043</td>
<td>Global Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7033</td>
<td>Organization Development and Change Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7053</td>
<td>Managing a Global Workforce</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7103</td>
<td>Entrepreneurship and New Venture Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7173</td>
<td>Project Risk and Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6253</td>
<td>Managing Outsourced Projects</td>
<td>3</td>
</tr>
<tr>
<td>INT 7563</td>
<td>Agile Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Open Electives
Students may create a personalized concentration with an advisor’s permission.

Specialization Courses (9 credit hours)
These courses can be tailored to meet the student’s field of interest, subject to advisor approval.
DUAL DEGREE PROGRAM
Today, more than ever before, employers continue to look for creative, innovative individuals who demonstrate an ability to combine superb technical skills with the interpersonal skills needed to lead, manage, and inspire a 21st-century workforce. To address this growing need, Lawrence Tech has developed a unique dual degree program that combines the technical skill development of a specialty master’s degree with the leadership competence gained through the MBA degree. Students enrolled in this program will receive two master’s degrees, one in their field of expertise or specialty and the other in management (MBA), with one set of curricular requirements.

DUAL DEGREE PROGRAM DESIGN
Lawrence Tech’s dual degree program is distinctively designed to enhance opportunities for the personal and professional growth of tomorrow’s leaders and provides qualified students with tailored coursework most suited to their career paths. Students in the dual degree program will take coursework in the University’s MBA program and in information systems, engineering management, or architecture. Upon completion of the coursework in both programs, a student will be awarded an MBA degree from the College of Business and Information Technology and a second master’s degree from the College of Business and Information Technology, the College of Engineering, or the College of Architecture and Design. Most importantly, the fully accredited dual degree program remains true to Lawrence Tech’s mission of blending theory and practice to provide its students with real-world experience.

The dual degree program consists of a minimum of 51 credits (excluding foundation courses), 27 of which are MBA credits. Many students are able to complete the program, exclusive of any required foundation coursework, in three years or less.

MASTER OF BUSINESS ADMINISTRATION/MASTER OF SCIENCE IN INFORMATION TECHNOLOGY (MBA/MSIT) CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 51

Foundation Coursework
Students should consult with an academic advisor to discuss required foundation courses as they may vary depending on the program declared as the primary master’s degree.

MBA Courses (27 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 6003</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECN 6023</td>
<td>Global Business Economics</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6003</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6033</td>
<td>Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6043</td>
<td>Global Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6053</td>
<td>Strategic Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6063</td>
<td>Operations and Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6043</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6073</td>
<td>Global Strategic Management</td>
<td>3</td>
</tr>
</tbody>
</table>

MSIT Courses (21 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7063</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6113</td>
<td>Database Modeling and Administration</td>
<td>3</td>
</tr>
<tr>
<td>INT 6123</td>
<td>Systems Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>
INT 6143  Enterprise Network Infrastructure  3
INT 7213  Business Intelligence and Analytics  3
INT 7223  Cybersecurity  3
INT 7593  IT Capstone  3

Additional Requirements
- Electives – 3 credit hours
- Foundation courses are required for students without undergraduate coursework in business or information technology
- If INT 6043 Management Information Systems (foundation course for MSIT degree and core course for MBA degree) is excused, the student needs eight MBA core courses (24 credit hours), seven MSIT core courses (21 credit hours), and two graduate-level electives (6 credit hours)

MASTER OF BUSINESS ADMINISTRATION/MASTER OF ENGINEERING MANAGEMENT (MBA/MEM) CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 51

MBA Courses (27 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
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<th>Cr. Hrs.</th>
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</thead>
<tbody>
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<td>3</td>
</tr>
<tr>
<td>MBA 6003</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6033</td>
<td>Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6043</td>
<td>Global Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6053</td>
<td>Strategic Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6063</td>
<td>Operations and Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6043</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6073</td>
<td>Global Strategic Management</td>
<td>3</td>
</tr>
</tbody>
</table>

MEM Core Courses (21 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 6583</td>
<td>Enterprise Productivity</td>
<td>3</td>
</tr>
<tr>
<td>EIE 6673</td>
<td>Six Sigma Process</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6713</td>
<td>Production Planning &amp; Control</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6753</td>
<td>Engineering Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6763</td>
<td>Quality Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6803</td>
<td>Engineering Management</td>
<td>3</td>
</tr>
<tr>
<td>EEM 7613</td>
<td>Technology Management</td>
<td>3</td>
</tr>
</tbody>
</table>

MEM Elective Courses (3 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 5513</td>
<td>Lean Manufacturing Systems</td>
<td>3</td>
</tr>
<tr>
<td>EEM 5623</td>
<td>Product Development and Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6143</td>
<td>Hazardous Materials Management</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6203*</td>
<td>Manufacturing Process</td>
<td>3</td>
</tr>
<tr>
<td>EME 6343</td>
<td>Automotive Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6403*</td>
<td>Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>EIE 6663*</td>
<td>Applied Stochastic Processes</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6703</td>
<td>Manufacturing Systems</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6723</td>
<td>Special Topics in Engineering Management</td>
<td>3</td>
</tr>
</tbody>
</table>
EEM 6743 Value Engineering Management 3
EMS 6823 Product Innovation and Design 3
EME 6993 Graduate Directed Study 3
MBA 7063 Project Management 3

Courses marked with an asterisk (*) are open only to engineering majors.

Additional Requirements
Foundation courses required for students without undergraduate coursework in business.

MASTER OF BUSINESS ADMINISTRATION/MASTER OF ARCHITECTURE (MBA/M.Arch)
CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 54

MBA Core Courses (27 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC 6003</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>ECN 6023</td>
<td>Global Business Economics</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6003</td>
<td>Financial Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6033</td>
<td>Corporate Finance</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6043</td>
<td>Global Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6053</td>
<td>Strategic Marketing Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6063</td>
<td>Operations and Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6043</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6073</td>
<td>Global Strategic Management</td>
<td>3</td>
</tr>
</tbody>
</table>

M.Arch Courses (27 credit hours)

Core Courses (15 credits)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARC 5013</td>
<td>Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>ARC 5423</td>
<td>Ecological Issues</td>
<td>3</td>
</tr>
<tr>
<td>ARC 5643</td>
<td>Design Theory</td>
<td>3</td>
</tr>
<tr>
<td>ARC 5913</td>
<td>Professional Practice</td>
<td>3</td>
</tr>
<tr>
<td>ARC 6833</td>
<td>Practice Portfolio</td>
<td>3</td>
</tr>
</tbody>
</table>

Design Studio (or Thesis Courses) (12 credits)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR 5804</td>
<td>Critical Practice Studio</td>
<td>4</td>
</tr>
<tr>
<td>ARC 5814</td>
<td>Advanced Design Studio 1 OR ARC 6514 Thesis 1</td>
<td>4</td>
</tr>
<tr>
<td>ARC 5824</td>
<td>Advanced Design Studio 2 OR ARC 6524 Thesis 2</td>
<td>4</td>
</tr>
</tbody>
</table>

Additional Requirements
Foundation courses required for students without undergraduate coursework in business.

DUAL DEGREE PROGRAM FOR CURRENT STUDENTS AND ALUMNI
Current students and Lawrence Tech alumni desirous of obtaining a second degree from the College of Business and Information Technology can have their required coursework individually tailored and aligned with their existing degree.

GRADUATE CERTIFICATE IN CYBERSECURITY
This 15-credit-hour certificate is designed to provide students comprehensive knowledge of cybersecurity.

Students may work toward the Graduate Certificate in Cybersecurity independently or pursue it as part of any of the college’s master’s degree programs (Master of Business Administration or Master of Science in Information Technology) by applying to both programs simultaneously. To successfully complete this program, students must take 15 credit hours of the courses listed below (excluding foundation course INT 6043) and achieve a GPA of 3.0 or better.

**Concentration: Cybersecurity**

**Foundation Course**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 6043</td>
<td>Management Information Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

**Core Courses**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INT 6143</td>
<td>Enterprise Network Infrastructure</td>
<td>3</td>
</tr>
<tr>
<td>INT 7223</td>
<td>Cybersecurity</td>
<td>3</td>
</tr>
<tr>
<td>INT 7233</td>
<td>Advanced Network Security</td>
<td>3</td>
</tr>
<tr>
<td>INT 7243</td>
<td>Disaster Recovery &amp; Business Continuity</td>
<td>3</td>
</tr>
<tr>
<td>INT 7263</td>
<td>Threats, Vulnerability, Security Con and Countermeasure</td>
<td>3</td>
</tr>
</tbody>
</table>

Please note: Eligibility of any Financial Aid depends on which degree/certificates you are applying for. Not all certificate programs are eligible for financial aid. For more information, please contact enrollmentservices@ltu.edu.

**GRADUATE CERTIFICATE IN PROJECT MANAGEMENT**

This 12-credit-hour certificate is designed to provide students comprehensive knowledge of project management skills in either a managerial or technical environment.

Students may work toward the Graduate Certificate in Project Management independently or pursue it as part of any of the college’s master’s degree programs (Master of Business Administration or Master of Science in Information Technology) by applying to both programs simultaneously. To successfully complete this program, students must take 12 credit hours of the courses listed below and achieve a GPA of 3.0 or better.

**Course Number**  | **Subject**                                      | **Cr. Hrs.** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 7063</td>
<td>Project Management</td>
<td>3</td>
</tr>
</tbody>
</table>

And only three of the following classes:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBA 6043</td>
<td>Global Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7053</td>
<td>Managing a Global Workforce</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7103</td>
<td>Entrepreneurship and New Venture Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7173</td>
<td>Project Risk and Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>INT 6253</td>
<td>Managing Outsourced Projects</td>
<td>3</td>
</tr>
<tr>
<td>INT 7563</td>
<td>Agile Project Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7033</td>
<td>Organization Development and Change Management</td>
<td>3</td>
</tr>
</tbody>
</table>

If you are pursuing an MBA or MSIT degree along with the Graduate Certificate in Project Management, please consult with an academic advisor on your curriculum.
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E98, 248.204.2500

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Elin Jensen
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Certificate in Fire Engineering
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Certificate in Integrated Project Delivery
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George Pappas (Senior lecturer)
Gary Lowe (Senior lecturer)

Adjunct Faculty
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Joachim Wagenblast, PhD
Senior Director, Research and Development, NAFTA, Mahle Industries Inc.

GRADUATE PROGRAMS OFFERED
Lawrence Tech’s College of Engineering offers these graduate programs:

Doctor of Engineering in Mechanical Engineering
Doctor of Philosophy in Civil Engineering
Doctor of Philosophy in Mechanical Engineering

Master of Construction Engineering Management
Master of Engineering Management (also online)
Master of Science in Architectural Engineering
Master of Science in Automotive Engineering
Master of Science in Biomedical Engineering
Master of Science in Civil Engineering (thesis, course-based, or project option)
Master of Science in Electrical and Computer Engineering
Master of Science in Engineering Technology
Master of Science in Fire Engineering
Master of Science in Industrial Engineering
Master of Science in Mechanical Engineering
Master of Science in Mechatronic Systems Engineering

Graduate Certificate in Aeronautical Engineering
Graduate Certificate in Energy Engineering
Graduate Certificate in Fire Engineering
Graduate Certificate in Integrated Project Delivery
Graduate Certificate in Telecommunications Engineering

DOCTOR OF ENGINEERING IN MECHANICAL ENGINEERING (DEME)
TOTAL SEMESTER CREDIT HOURS: 57

DEME ADMISSION REQUIREMENTS
Students applying for admission to the program are required to meet the following criteria:

- Hold a Master of Science in Mechanical Engineering or an equivalent degree in a related field from an accredited college or university. Exceptional students with an earned
Bachelor of Science in Mechanical Engineering may be considered for direct admission into the doctoral program. Please contact the program director.

- Have earned an overall GPA of at least 3.3 (B+) on a 4.0 scale in the Master of Science degree. Students with lower GPAs may be accepted on a provisional basis as described below.
- Provide official transcripts of all completed college work.
- Submit an application for doctoral admission (www.ltu.edu/apply) a minimum of two months before the beginning of the term in which the applicant expects to enroll.
- Submit three letters of recommendation.
- Submit a research statement describing subject(s) of interest.
- Non-native speakers of English must document English proficiency upon entry to the program (TOEFL minimum 450 or IELTS minimum 5.5). Students with TOEFL scores below 450 or IELTS below 5.5 will be directed to ESL coursework in addition to regular academic classes.

Students with a graduate GPA lower than 3.3 may be admitted on a provisional basis. They will be evaluated for continuation upon completion of nine credits of graduate coursework. This evaluation is conducted by the director of the Doctor of Engineering in Mechanical Engineering program, the chair of A. Leon Linton Department of Mechanical Engineering, and the associate dean of graduate studies and research. The department chair will notify the student in writing of the outcome. If a student is not permitted to continue work toward the DEME, then he or she is expected to terminate his or her studies within the department. The student may petition the decision to the Doctoral Governance Committee of the College of Engineering within one week of receiving written notification. The decision of the Doctoral Governance Committee is final.

Students with an engineering master’s degree in a field other than mechanical engineering and who have a GPA of at least 3.3 on a 4.0 scale may be admitted on a provisional basis. The program director and program advisor(s) will define the prerequisite requirements.

DEME REQUIREMENTS
Students admitted to the program have to complete a minimum of 27 course credits (beyond the MS degree) and a minimum of 30 dissertation credit hours to satisfy the doctoral degree requirements. This is in addition to passing (a) Preliminary Qualifying Examination, (b) Final Qualifying Examination, and (c) Dissertation Defense.

It should be noted that those who are admitted to the program are defined as “DE Applicant” until they pass the Final Qualifying Exam. After passing the Final Qualifying Exam they become “DE Candidates.”

Course credits are subjected to following requirements:
- 24 credits from 6000 level or higher mechanical engineering courses
- 3 credits of mathematics (EME 6283 Engineering Analysis II)
- English language course credits are not counted toward the degree

Descriptions of all graduate courses offered by the A. Leon Linton Department of Mechanical Engineering are provided on BannerWeb. Students are required to consult the director of the Doctor of Engineering in Mechanical Engineering program in selecting courses not offered by the A. Leon Linton Department of Mechanical Engineering. Students are allowed to register for a maximum of 12 dissertation credits before becoming DE Candidates.
DEME RESEARCH SPECIALIZATION
Students admitted to the DEME program can specialize in one of the following areas:

- Thermal-Fluids
- Solid Mechanics, Dynamics, Vibrations
- Manufacturing
- Automotive
- Mechatronics

This decision will be impacted by the courses students took during their Master of Science in Mechanical Engineering program. Those who have not been adequately exposed to the selected specialization will be asked to take more courses to bridge the gap. Depending on the specialization they select, students will be assigned to an advisor who will guide them throughout the process.

DEME REQUIREMENTS FOR DEGREE COMPLETION

Preliminary Qualifying Examination
All students are required to pass a written Preliminary Qualifying Examination within one year (12 months) after being formally admitted to the program as a DE Applicant. The exam is designed to test and evaluate the students’ knowledge of the advanced application of the fundamental theories, principles, and concepts from their upper-level undergraduate and master’s studies in engineering. Each student has only two chances to pass this examination, which will be administered twice a year (once in the fall and once in the spring semester).

It is the DE Applicant’s responsibility to initiate the process by making a written request for the Preliminary Qualifying Examination. Eligibility to take the exam is determined by the director of the Doctor of Engineering in Mechanical Engineering program. The director forms a Qualifying Examination Committee, which creates and grades the exam. The director also administers the exam.

The three possible outcomes of the examination are: 1) pass; 2) fail (first try) and deferment for re-examination; or 3) fail (second try) and dismissal from the program. The student who is dismissed from the program will not be permitted to continue work toward the DE and will be expected to terminate studies within the A. Leon Linton Department of Mechanical Engineering by the end of the academic semester. The student may petition the decision to the College of Engineering’s Doctoral Governance Committee within one week of receiving written notice. The decision of the Doctoral Governance Committee is final.

The Qualifying Examination Committee reports examination results to the director of the Doctor of Engineering in Mechanical Engineering program and the department chair.

Selection of Academic Advisor and Dissertation Topic
All DE Applicants are required to select an academic advisor within one semester after passing the Preliminary Qualifying Examination. Typically, the academic advisor becomes the chair of the dissertation committee. If necessary, any full-time engineering faculty member can serve as co-chair.

The student’s dissertation research must make a significant and important contribution to the knowledge in the chosen area of specialization. However, the scope and complexity of the
research should not make completion impossible within a reasonable period of time. Students must refer to the *Handbook for Doctoral Students* for further details.

**Dissertation Committee**  
The Doctoral Dissertation Committee, which serves as both the Final Qualifying Examination Committee and the Dissertation Committee for each DE Applicant/Candidate, will be formed at least two semesters prior to the student taking the Final Qualifying Examination. The Dissertation Committee must include at least five members: a qualified academic advisor, an industrial advisor (if the research project is sponsored by a company), at least two members from the A. Leon Linton Department of Mechanical Engineering, and at least one member from a cognate field outside the A. Leon Linton Department of Mechanical Engineering. Other qualified individuals not affiliated with Lawrence Technological University may also be appointed. To have any person who is not a faculty member approved to serve as a committee member, it is necessary to obtain permission from the director of the program by providing a Curriculum vitae (or resume) describing that person’s qualifications.

When the Dissertation Committee has been selected and each prospective member has consented to serve, the designated Dissertation Committee chair requests that the department formally recommend the appointment of the Dissertation Committee to the Dean of the Graduate Programs.

**Final Qualifying Examination**  
Before registering for more than 12 credits of DE Dissertation Research, each student is required to successfully pass the Final Qualifying Examination. The examination is administered by the student’s Doctoral Dissertation Committee and consists of an oral presentation of the student’s proposed dissertation research and an optional written examination in the field of study pertaining to the proposed research. The written examination is given at the discretion of the student’s Doctoral Committee and program director and is usually waived for students who are in good standing. To become eligible to take the Final Qualifying Examination, the DE Applicant must have maintained a minimum of 3.3/4.0 GPA. In consultation with his or her academic advisor, the DE Applicant should assume the responsibility for arranging the date, time, and venue of the Final Qualifying Examination.

The Final Qualifying Examination will consist of a presentation followed by an oral examination during which the DE Applicant defends his or her Dissertation Proposal in front of the Doctoral Dissertation Committee. Only the presentation portion of the examination is open to the public.

The student passes the oral and optional written examination upon the recommendation of the Doctoral Dissertation Committee. The student is allowed only one re-examination for each of the oral and written parts. After the student successfully completes the Final Qualifying Examination, the Final Qualifying Examination Committee recommends to the director of the Doctor of Engineering in Mechanical Engineering program and the department chair that the student can advance to DE Candidate status. Advancement to DE Candidate status is granted by the dean of the graduate programs upon recommendation of the department chair.

**Preparation of the Dissertation**  
The steps in the process of completion, submission, and approval of the dissertation are specified in the *Handbook for Doctoral Students*. The dissertation must be prepared according to the handbook. A final draft of the dissertation must be submitted to each member of the Dissertation Committee for review and evaluation two weeks prior to the scheduled dissertation defense.
Dissertation Defense
The student must complete a minimum of 30 dissertation research credits to fulfill the degree requirements. The student may be enrolled in any remaining credits (typically 6 credits) during the semester of the dissertation defense. DE Candidates are responsible for maintaining constant contact with their committee members and updating them on their progress.

The Dissertation Defense is conducted by the Dissertation Committee. During the Dissertation Defense, the DE Candidate gives an oral presentation of the research and defends the dissertation. The Dissertation Defense is advertised by the department, but only the presentation portion of the Dissertation Defense is open to the public.

At the end of the Dissertation Defense, the Dissertation Committee informs the student of the outcome. The three possible outcomes of the Dissertation Defense are: 1) acceptance of the dissertation as it is; 2) acceptance of the dissertation with corrections; or 3) deferment for re-examination at a later date after steps have been taken to remedy deficiencies. Following successful completion of the Dissertation Defense, the Dissertation Committee recommends that the associate dean of graduate studies and research award the Doctor of Engineering in Mechanical Engineering degree to the DE Candidate.

An unbound final copy of the dissertation, incorporating all corrections specified by the Dissertation Committee, is required. This final copy is sent to a publisher for printing and binding the required number of copies as well as providing an electronic version as outlined in the Handbook for Doctoral Students.

DOCTOR OF PHILOSOPHY IN MECHANICAL ENGINEERING (PhD)
Students in the DEME program may be considered for a PhD degree instead of a DEME. This option is available upon a request submitted by the student with the recommendation of his academic advisor and the consent of the student’s Doctoral Committee members. All requirements of the PhD are the same as those of the DEME, with emphasis on the research project being more of fundamental research. The student must also satisfy the PhD residency requirement. The PhD residency requirements is as follows:

Residency Requirement for PhD
Completing a PhD dissertation requires the complete commitment of the candidate to research that must be accomplished by working in a research laboratory that contains the necessary equipment. A PhD candidate must be a full-time student for at least two consecutive semesters (including a spring-fall semester combination) while working on the dissertation research project. The residency requirement shall be fulfilled by registering for six hours of dissertation research credits for two consecutive semesters.

DOCTOR OF PHILOSOPHY IN CIVIL ENGINEERING
TOTAL SEMESTER CREDIT HOURS: 60
From the roads and bridges that connect us, to the buildings that shape our horizons, the future of civil engineering will require not only finding new and innovative solutions to age-old problems but also a commitment to creating a more sustainable world. Earning a Doctor of Philosophy in Civil Engineering at Lawrence Tech can make a difference by opening up new leadership opportunities in academia and research and helping students prepare to make their mark in the field.

Throughout the program, students have the opportunity to participate in and lead pioneering applied-research projects that offer them exceptional hands-on experience. Most projects are
funded by research grants from private foundations and public entities, such as the National Science Foundation and numerous state transportation departments.

Innovation, creativity, research, and action are the guiding principles of Lawrence Tech’s College of Engineering. The Department of Civil Engineering has lived up to those principles and experienced tremendous growth over the past decade, including the 2006 launch of the Center for Innovative Materials Research (CIMR), a national resource for the research, development, and testing of carbon fiber composite materials for defense and infrastructure applications.

DOCTOR OF PHILOSOPHY IN CIVIL ENGINEERING ADMISSION REQUIREMENTS

Students applying for admission to the PhD in Civil Engineering program are required to meet the following criteria:

- Have a civil engineering background at the undergraduate level. Students with non-civil engineering backgrounds may only be considered on a case-by-case basis under very exceptional circumstances.
- Hold a Master of Science in Civil Engineering or an equivalent degree from an accredited college or university. Exceptional students with an earned Bachelor of Science in Civil Engineering may be considered for direct admission into the doctoral program.
- Have earned an overall GPA of at least 3.3 on a 4.0 scale in the master’s degree. Students with lower GPAs may be accepted on a provisional basis as described below.
- Provide official transcripts of all completed college work.
- Submit an Application for Doctoral Admission (www.ltu.edu/apply) a minimum of two months before the beginning of the term in which the applicant expects to enroll.
- Submit three letters of recommendation from academic professors who have directly evaluated the student’s academic performance during previous degrees.
- Submit a research statement describing subject(s) of interest. This statement MUST INCLUDE the intended area of specialization within civil engineering.
- Submit an up-to-date professional resume.
- Non-native speakers of English must document English proficiency upon entry to the program (TOEFL minimum 570 for the PBT and an 84 for the IBT or IELTS minimum 6.5).

Students with a graduate GPA lower than 3.3 may be admitted on a provisional basis. They are evaluated for continuation upon completion of nine credits of graduate coursework at Lawrence Tech. This evaluation is conducted by the director of civil engineering graduate programs, the chair of the Department of Civil Engineering, and the Associate Dean of Graduate Studies and Research. The department chair will notify the student in writing of the outcome. If a student is not permitted to continue work toward the PhD, then he or she is expected to terminate his or her studies within the department. The student may petition the decision to the Doctoral Governance Committee of the College of Engineering within one week of receiving written notification. The decision of the Doctoral Governance Committee is final.

Students with an engineering master’s degree in a field other than civil engineering who have a GPA of at least 3.3 on a 4.0 scale may be admitted on a provisional basis. The graduate program director and program adviser(s) will define the prerequisite requirements.
DOCTOR OF PHILOSOPHY IN CIVIL ENGINEERING REQUIREMENTS FOR DEGREE COMPLETION

Students admitted to PhD in Civil Engineering program must earn a minimum of 24 course credits (beyond the master’s degree) and 36 dissertation credits to satisfy degree requirements. Additionally, students must pass: (a) a PhD Qualifying Examination, (b) a Proposal Examination, and (c) a Dissertation Defense.

Students admitted to the program are defined as PhD applicants until they pass the Proposal Examination, at which time they are considered PhD Candidates. PhD Candidates must complete a one-year residency as part of the degree requirements, i.e., as a PhD Candidate, the student must complete a minimum of one year (or equivalent) of research in the Lawrence Tech campus environment.

Course credits are subjected to the following limitations:
- A maximum of 9 credits from the 5000-level civil engineering courses
- A minimum of 15 credits from 6000-and higher-level courses
- A maximum of 9 credits from 6000-and higher-level courses from other departments
- A maximum of 9 credits from three Civil Engineering Independent Research courses (i.e., ECE 7993)
- 6 credits of 4000- and higher-level courses in mathematics, probability, statistics or programming
- English as a Second Language (ESL) course credits and any required prerequisite course credits are not counted toward the degree

Descriptions of all graduate courses offered by the Department of Civil and Architectural Engineering are provided on BannerWeb. Students are required to consult the director of civil engineering graduate programs in selecting courses not offered by the Department of Civil and Architectural Engineering. Students are not allowed to register for any dissertation credits until they have passed the PhD Qualifying Examination.

Credit Transfer Policy

Lawrence Tech allows the transfer of a maximum of six credits of qualified graduate level coursework from other institutions. Transfer courses must have been taken within the past five (5) years and passed with a B grade or better. An applicant transferring from another institution with special circumstances will be evaluated on a case-by-case basis.

Research Specialization

Students admitted to the PhD in Civil Engineering program may select from one of the following civil engineering specializations:
- Construction Engineering and Management
- Environmental and Water Resources Engineering
- Geotechnical and Geoenvironmental Engineering
- Structural Engineering and Materials
- Transportation Engineering

The selection decision will also depend on the student’s coursework during his or her MS in Civil Engineering program. Those who have not been adequately exposed to the selected specialization are required to enroll in additional courses to bridge the gap. Depending on the specialization selected, students are assigned to an advisor who will guide them throughout the process.
**PhD Qualifying Examination**
To become eligible to take the PhD Qualifying Examination, PhD applicants must have completed a minimum of 12 credit hours beyond the master’s degree and have a GPA of 3.3 or better in graduate coursework at Lawrence Tech. With special permission from the director of civil engineering graduate programs, students may include up to 3 credits of Civil Engineering Independent Research.

It is the PhD applicant's responsibility to initiate the process by making a written request to appear for the PhD Qualifying Exam. Eligibility for the Qualifying Exam is determined by the director of civil engineering graduate programs and the Doctoral Governance Committee after reviewing the student’s academic performance.

The examination will ordinarily be given as soon as the student is eligible and should be taken no later than 12 months after admission as a PhD applicant. If the student does not meet this requirement, the student must petition the director of the civil engineering graduate program for permission to continue in the program. The petition must include an updated plan of work supported by the student’s advisor.

The PhD Qualifying Examination is administered by a Qualifying Examination Committee selected by the student's advisor and appointed by the director of civil engineering graduate programs. The committee, comprised of at least three graduate faculty members, two of whom must be from the civil engineering faculty, will prepare the qualifying exam.

PhD Qualifying Examinations are given separately to each student. The student is allowed a specified amount of time to respond to a set of written examination questions selected to test the student’s knowledge in his or her chosen and closely related fields. The student then makes an oral presentation to the Qualifying Examination Committee that expands on the theories and solutions covered in the examination questions. The student is expected to defend the solutions and answer questions from the Qualifying Examination Committee on related topics in the field of study. In some cases, a more extensive and comprehensive Qualifying Examination may be required.

After reviewing the written answers and oral presentation, the Qualifying Examination Committee submits its recommendation to the College of Engineering’s Doctoral Governance Committee and the chair of the Department of Civil and Architectural Engineering, who officially informs the student in writing of the outcome. The three possible outcomes are: 1) pass, 2) deferment for re-examination at a later date after remedial steps are taken to address deficiencies, or 3) denial. The student is only permitted to appear for the Qualifying Examination twice. The student denied acceptance is not permitted to continue work toward the PhD and is to terminate studies within the Department of Civil and Architectural Engineering by the end of the academic semester. The student may petition the decision to the College of Engineering’s Doctoral Governance Committee within one week of the issuance of the decision letter. The decision of the Doctoral Governance Committee is final.

**Selection of a Dissertation Topic**
As soon as possible after passing the Qualifying Examination, the student should choose a dissertation topic in consultation with his or her advisor. Typically, the advisor becomes the chair of the student’s Dissertation Committee. If necessary, any full-time engineering faculty member can serve as co-chair.
The student's dissertation research must make a significant contribution to the knowledge in his or her chosen area of specialization. However, the scope and complexity of the research should not make completion impossible within a reasonable period of time. Students must refer to the Handbook for Doctoral Students for further details.

**Dissertation Committee**

The Dissertation Committee must include at least four members of qualified faculty, including at least two from the Department of Civil and Architectural Engineering and at least one from a cognate field outside the Department of Civil and Architectural Engineering. Other qualified individuals not affiliated with Lawrence Technological University may also be appointed. To have any person who is not a faculty member approved to serve as a committee member, it is necessary to obtain permission from the director of the program by providing a Curriculum vitae (or resume) describing that person’s qualifications.

After the prospective Dissertation Committee members agree to serve, the designated Dissertation Committee chair requests the Doctoral Governance Committee and the Department of Civil and Architectural Engineering to formally recommend the appointment of the Dissertation Committee to the associate dean of graduate studies and research.

**Proposal Examination**

The student must submit a written proposal describing the scope and approach to the dissertation research for approval by the Dissertation Committee during a Proposal Examination. The Proposal Examination must be conducted when the PhD applicant has earned a minimum of 30 credits toward the degree, including a maximum of 12 dissertation credits. In addition, this must occur within three years of passing the PhD Qualifying Exam. The Department of Civil and Architectural Engineering requires the student to have completed or enrolled in a minimum of six PhD dissertation credits at the time of the Proposal Examination. To become eligible to take the Proposal Examination, the PhD applicant must have maintained a minimum 3.3 GPA on a 4.0 scale. In consultation with the advisor, the PhD applicant has the responsibility for arranging the date, time, and venue of the Proposal Examination.

The Proposal Examination consists of a presentation followed by an oral examination during which the PhD applicant defends his or her Dissertation Proposal to the Dissertation Committee. Only the presentation portion of the examination is open to the public.

The Dissertation Committee submits its recommendation to the chair of the Department of Civil and Architectural Engineering, who officially informs the student in writing of the outcome. The three possible outcomes are: 1) acceptance of the proposal and advancement to the status of PhD Candidate, 2) deferment for re-examination at a later date after remedial steps are taken to address deficiencies, or 3) denial. The student is only permitted to appear for the Proposal Examination twice. The student denied acceptance is not permitted to continue work toward the PhD and is to terminate studies within the Department of Civil and Architectural Engineering by the end of the academic semester. The student may petition the decision to the Doctoral Governance Committee of the College of Engineering within one week of the issuance of the decision letter. The decision of the Doctoral Governance Committee is final.

**Preparation of the Dissertation**

The steps in the process of completion, submission, and approval of the dissertation are specified in the *Handbook for Doctoral Students*. The dissertation must be prepared according to the handbook. A final draft of the dissertation must be submitted to each member of the Dissertation Committee for review and evaluation 14 days before the Dissertation Examination.
Dissertation Examination
The student must complete a minimum of 36 dissertation research credits to fulfill the degree requirements. The student may be enrolled in any remaining credits during the semester of the Dissertation Examination. PhD Candidates are responsible for remaining in contact with the committee members and updating them on their progress.

The Dissertation Examination is conducted by the Dissertation Committee. During the examination, the PhD Candidate first gives an oral presentation of his or her research and then defends the dissertation. The Dissertation Examination is advertised by the department and only the oral presentation portion is open to public. In consultation with the advisor, the PhD Candidate should assume the responsibility for arranging the date, time, and venue of the Dissertation Examination.

At the end of the Dissertation Examination, the Dissertation Committee informs the student of the outcome. The three possible outcomes of the Dissertation Examination are: 1) acceptance of the dissertation as submitted, 2) acceptance of the dissertation with corrections, or 3) deferment for re-examination at a later date after steps have been taken to remedy deficiencies. The Dissertation Committee then informs the chair of the Department of Civil and Architectural Engineering and the College of Engineering’s Doctoral Governance Committee of its decision. The PhD in Civil Engineering is awarded to the PhD Candidate by the associate dean of graduate studies and research upon the recommendation of the Doctoral Governance Committee.

An unbound final copy of the dissertation, incorporating all corrections required by the Dissertation Committee, is required by the associate dean of graduate studies and research. The final version of the dissertation is submitted in electronic and hard copy as set forth in the Handbook for Doctoral Students.

Time Limit
Students must complete all doctoral work within seven consecutive years of their initial enrollment in the doctoral program. Students exceeding this time limit must petition the associate dean of graduate studies and research through the department for an extension of time and may be required to take additional examinations and/or coursework.

MASTER OF CONSTRUCTION ENGINEERING MANAGEMENT (MCEM)
The Master of Construction Engineering Management (MCEM), offered by Lawrence Tech’s Department Civil and Architectural Engineering, provides a specialized education addressing the needs of students interested in the concepts of construction engineering and the principles of management. The synthesis of these two fields represents a highly marketable combination of skills valuable in today’s environment of integrated project delivery.

The MCEM degree comprises 15 core credits (five courses) and 15 elective credits (five courses).

MCEM ADMISSION REQUIREMENTS
Admission to the MCEM program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. A Bachelor of Science degree in civil engineering (or technical field) from an ABET-accredited undergraduate program (minimum GPA of 3.0);
3. Three letters of recommendation (employers and professors are preferred);
4. Official transcripts of all college work;
5. Professional resume;
6. Statement of purpose (a one-page essay discussing what the applicant plans to do with his or her degree).

The director of civil engineering graduate programs may allow provisional admission to applicants who do not meet all conditions for regular admission. A provisional student is typically granted regular status after completing the assigned provisional requirements. The program director may require admitted students with non-engineering degrees or in some cases engineering degrees to take additional undergraduate courses which are not counted toward the MCEM degree.

**MCEM CURRICULUM**

**TOTAL SEMESTER CREDIT HOURS: 30**

**Core Courses (15 credit hours)**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5113</td>
<td>Sustainable Construction Practices</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5213</td>
<td>Principles of Design-Build Project Delivery</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5223</td>
<td>Techniques of Project Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5243</td>
<td>Fund. of Const. Accounting &amp; Finance</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5273</td>
<td>Construction Law</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses (15 credit hours)**

Students may select any five courses from the following list:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5103</td>
<td>Applied Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5203</td>
<td>Construction Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5233</td>
<td>Adv. Construction Techniques and Methods</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5253</td>
<td>Infrastructure Asset Management</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5263</td>
<td>Construction Safety Management</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5283</td>
<td>Conceptual Estimating</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5293</td>
<td>Special Topics in Construction Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5353</td>
<td>Environmental Management</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5823</td>
<td>Pavement Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5913</td>
<td>Graduate Directed Study</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5923</td>
<td>Special Topics in Civil Engineering (Topic Dependent)</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6113</td>
<td>Concrete Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6213</td>
<td>Issues in Integrated Engineering Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6043</td>
<td>Global Leadership</td>
<td>3</td>
</tr>
</tbody>
</table>

*In addition to the above electives, a maximum of two electives may be chosen from other graduate programs in civil engineering or related fields within the College of Engineering, with prior approval from the program director.*

**MCEM COURSE TRANSFER POLICY**

Students may transfer a maximum of six semester hours for graduate engineering courses taken at other accredited engineering colleges, provided they are deemed relevant. Students must have taken the courses within the past five years and achieved a grade of B (3.0) or better. To transfer courses, the student must submit a petition in writing prior to completion of the first semester of graduate work toward the MCEM degree. The student must submit transcripts and evidence consisting of syllabi and examinations. The program director may
require the applicant to demonstrate proficiency in the subject through interviews with faculty members who have expertise in the subject.

Students may apply up to six credits of 4000-level civil engineering courses (senior-level electives) with the approval of the program director. In addition, students may apply up to 12 credits of the MCEM degree toward the MBA program at Lawrence Tech.

**MASTER OF ENGINEERING MANAGEMENT (MEM)**

Lawrence Tech’s Master of Engineering Management program provides opportunities for students with diverse technical backgrounds to pursue a higher education. The program, which totals 36 credit hours, is designed for full-time students and working professionals who have degrees in technical fields, such as engineering, engineering technology, physics, chemistry, mathematics, and computer science. The MEM’s educational objectives are to provide students:

- The technical knowledge and skills required to manage technical and engineering functions.
- Greater exposure and opportunities to interact with other professionals from different disciplines in the industry.
- Skills to enhance their professional careers.

All coursework can be taken in the evening, allowing working students to complete their studies in approximately two years. All courses meet once a week for two hours and forty minutes.

**MEM ADMISSION REQUIREMENTS**

Admission to the MEM program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission ([www.ltu.edu/apply](http://www.ltu.edu/apply));
2. A Bachelor of Science degree in engineering, engineering technology, science, mathematics, or computer science from an accredited college or university (minimum GPA of 3.0);
3. Official transcripts of all completed college work;
4. Three letters of recommendation.

Applicants who do not meet all conditions for regular admissions may be admitted on a provisional basis as determined by the Graduate Admissions Committee of the College of Engineering. The applicant will be evaluated for official graduate student status upon completion of six semester hours of graduate course work, achieving a minimum grade of 3.0 in each course, at the University. Students with provisional admission status may be required to take additional pre-courses to meet the program admission requirements.

**MEM COURSE TRANSFER POLICY**

For applicants transferring from other graduate programs to the Master of Engineering Management, no more than nine graduate semester credit hours may be transferred from an accredited MEM program. Any exceptions to this policy must be approved by the Graduate Admissions Committee. A minimum grade of 3.0 must have been achieved in all transfer courses. Credit for courses taken in a graduate program will be reviewed to determine whether they may be substituted within the Master of Engineering Management program at Lawrence Tech. A request for transfer courses to be considered must be made in writing at the time of
application and must be accompanied by transcripts, course descriptions, and syllabi for each proposed transfer course.

MEM CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 36

Core Courses (7 courses, 21 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEM 6583</td>
<td>Enterprise Productivity</td>
<td>3</td>
</tr>
<tr>
<td>EIE 6673</td>
<td>Six Sigma Processes</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6713</td>
<td>Production Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6753</td>
<td>Engineering Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6763</td>
<td>Quality Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6803</td>
<td>Engineering Management</td>
<td>3</td>
</tr>
<tr>
<td>EMS 7613</td>
<td>Technology Management</td>
<td>3</td>
</tr>
</tbody>
</table>

Elective Courses (5 courses, 15 credit hours)

Students may select any five courses from the following list:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5513</td>
<td>Lean Manufacturing Systems</td>
<td>3</td>
</tr>
<tr>
<td>EME 5623</td>
<td>Product Development and Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6143</td>
<td>Hazardous Materials Management</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6203*</td>
<td>Advanced Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6343</td>
<td>Automotive Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6403*</td>
<td>Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6603</td>
<td>Engineering Economics</td>
<td>3</td>
</tr>
<tr>
<td>EIE 6653</td>
<td>Advanced Optimization Techniques</td>
<td>3</td>
</tr>
<tr>
<td>EIE 6663*</td>
<td>Applied Stochastic Processes</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6703</td>
<td>Manufacturing Systems</td>
<td>3</td>
</tr>
<tr>
<td>EME 6723</td>
<td>Special Topics in Engineering Management</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6743</td>
<td>Value Engineering Management</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6823</td>
<td>Product Innovation and Design</td>
<td>3</td>
</tr>
<tr>
<td>EME 6993</td>
<td>Graduate Directed Study</td>
<td>3</td>
</tr>
<tr>
<td>MBA 7056</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>MBA 6043</td>
<td>Global Leadership</td>
<td>3</td>
</tr>
<tr>
<td>MGT 6043</td>
<td>Enterprise Information Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

*Open only to engineering majors.

Other electives: Students may take ONE elective course (6XXX) in management, electrical engineering, computer engineering, civil engineering, applied science, or other disciplines ONLY with the approval of the MEM director.

MASTER OF SCIENCE IN ARCHITECTURAL ENGINEERING (MSArE) (INTEGRATED BACHELOR’S AND MASTER’S PROGRAM)

Lawrence Technological University’s architectural engineering program is a five-year, direct-entry, integrated bachelor’s-master’s degree with breadth and depth coursework in math, science, engineering and building design. Students progress through a rigorous undergraduate engineering core, culminating in advanced engineering and design analysis courses in the graduate fifth year. Students develop excellent integrated building design and engineering
skills, complemented with communication, leadership, and ethics education, to become highly sought-after graduates for the thriving built environment.

The Master of Science in Architectural Engineering requires a total of 164 credit hours, which includes courses in the four primary discipline areas, including building mechanical systems, building electrical systems, building structural systems, and construction.

Students are required to maintain a 3.0 GPA in order to obtain the terminal master’s degree. Graduates have consistently enjoyed 100 percent placement well before graduation and engage in meaningful internship experiences in line with the University’s motto of Theory and Practice. The architectural engineering program’s educational objectives and outcomes are formulated by the faculty in consultation with the Architectural Engineering Industrial Advisory Board as the primary constituents.

**MSArE EDUCATIONAL OBJECTIVES**

The MSArE is designed to help students develop advanced knowledge, skills, and experience in the growing fields of sustainable building design and systems engineering and integration. According to ABET, “program educational objectives are broad statements which describe the career and professional accomplishments that the program is preparing graduates to achieve.” LTU’s Department of Civil and Architectural Engineering offers the architectural engineering program in which students acquire the education and skill set so that, upon graduation, they are prepared to achieve the following educational objectives:

1. Acquire the written, visual, and oral communication skills to integrate building design and aesthetics with the mechanical, electrical, and structural systems of the built environment.
2. Employ problem-solving skills and awareness of emerging green technologies to create a collaborative culture in which the design process, building systems integration and constructability, and leadership in energy efficiency can flourish and support the worldwide need for skilled building designers and detailers.
3. Lead design and construction teams in the process and development of conceptual designs, design drawings, construction drawings and specifications, and construction contract administration for building sustainability in a global market.

**MSArE STUDENT OUTCOMES**

All architectural engineering graduates must acquire:

(a) an ability to apply knowledge of mathematics, science, and engineering;
(b) an ability to design and conduct experiments, as well as to analyze and interpret data;
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints, such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
(d) an ability to function on multidisciplinary teams;
(e) an ability to identify, formulate, and solve engineering problems;
(f) an understanding of professional and ethical responsibility;
(g) an ability to communicate effectively;
(h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;
(i) a recognition of the need for, and an ability to engage in, lifelong learning;
(j) a knowledge of contemporary issues;
(k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice; and
(l) an ability to integrate building engineering and architectural systems through collaboration and tools to create high-performing solutions.
All students should have an advisor/director-approved Plan of Work. Contact Filza Walters, director of architectural engineering, at 248.204.2610 or fwalters@ltu.edu, to set up an appointment. Students are required to maintain an overall and program GPA of 3.0. Students meeting this GPA requirement will be automatically admitted into the graduate portion of the program upon completion of 131 credit hours. Students falling below the required 3.0 GPA threshold, at any time during their studies, must retake courses in order to raise their GPA and must have a proven record of academic progress before being eligible to continue taking coursework specific to the MSArE degree.

MASTER OF SCIENCE IN ARCHITECTURAL ENGINEERING CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 164

Freshman Year
FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 1103</td>
<td>College Composition</td>
<td>3</td>
</tr>
<tr>
<td>CHM 1213</td>
<td>University Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>CHM 1221</td>
<td>University Chemistry 1 Lab</td>
<td>1</td>
</tr>
<tr>
<td>MCS 1414</td>
<td>Calculus 1</td>
<td>4</td>
</tr>
<tr>
<td>EGE 1001</td>
<td>Fundamentals of Engineering Design Projects</td>
<td>1</td>
</tr>
<tr>
<td>EAE 1081</td>
<td>Intro to Architectural Engineering</td>
<td>1</td>
</tr>
<tr>
<td>ARC 1213</td>
<td>Visual Communication 1</td>
<td>3</td>
</tr>
</tbody>
</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 2413</td>
<td>Foundations of American Experience</td>
<td>3</td>
</tr>
<tr>
<td>PHY 2413</td>
<td>University Physics 1</td>
<td>3</td>
</tr>
<tr>
<td>PHY 2421</td>
<td>University Physics 1 Lab</td>
<td>1</td>
</tr>
<tr>
<td>MCS 1424</td>
<td>Calculus 2</td>
<td>4</td>
</tr>
<tr>
<td>EAE 1093</td>
<td>Architectural Engineering History</td>
<td>3</td>
</tr>
<tr>
<td>ARC 1223</td>
<td>Visual Communication 2</td>
<td>3</td>
</tr>
</tbody>
</table>

Sophomore Year
FIRST SEMESTER

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSC 2423</td>
<td>Development of American Experience</td>
<td>3</td>
</tr>
<tr>
<td>COM 2103</td>
<td>Tech and Prof Communication</td>
<td>3</td>
</tr>
<tr>
<td>PHY 2423</td>
<td>University Physics 2</td>
<td>3</td>
</tr>
<tr>
<td>PHY 2431</td>
<td>University Physics 2 Lab</td>
<td>1</td>
</tr>
<tr>
<td>MCS 2414</td>
<td>Calculus 3</td>
<td>4</td>
</tr>
<tr>
<td>ARC 2843</td>
<td>BIM Fundamentals</td>
<td>3</td>
</tr>
</tbody>
</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGE 2013</td>
<td>Statics</td>
<td>3</td>
</tr>
<tr>
<td>LLT 1213</td>
<td>World Masterpieces 1</td>
<td>3</td>
</tr>
<tr>
<td>EEE 2123</td>
<td>Circuits and Electronics</td>
<td>3</td>
</tr>
<tr>
<td>MCS 2423</td>
<td>Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>EAE 1091</td>
<td>Directed Study</td>
<td>1</td>
</tr>
</tbody>
</table>
### Junior Year

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLT 1223</td>
<td>World Masterpieces 2</td>
<td>3</td>
</tr>
<tr>
<td>ECE 3013</td>
<td>Mechanics of Materials for CE</td>
<td>3</td>
</tr>
<tr>
<td>EAE 3113</td>
<td>Electrical Systems I</td>
<td>3</td>
</tr>
<tr>
<td>EGE 3003</td>
<td>Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>MCS 3403</td>
<td>Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>EGE 3022</td>
<td>Leadership and Prof. Development for Engineers</td>
<td>2</td>
</tr>
</tbody>
</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 3000</td>
<td>Written Proficiency Exam</td>
<td>0</td>
</tr>
<tr>
<td>ECE 3723</td>
<td>Theory of Structures</td>
<td>3</td>
</tr>
<tr>
<td>EAE 3613</td>
<td>Mechanical Systems I</td>
<td>3</td>
</tr>
<tr>
<td>EME 3123</td>
<td>Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>EAE 3016</td>
<td>Arch. Eng. Integrated Des. Studio 1</td>
<td>6</td>
</tr>
</tbody>
</table>

### Senior Year

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLT/SSC/PSY</td>
<td>Jr./Sr. Elective</td>
<td>3</td>
</tr>
<tr>
<td>ECE 4743</td>
<td>Concrete Design</td>
<td>3</td>
</tr>
<tr>
<td>EAE 4113</td>
<td>Electrical Systems II</td>
<td>3</td>
</tr>
<tr>
<td>ECE 4243</td>
<td>Construction Project Management</td>
<td>3</td>
</tr>
<tr>
<td>EAE 4016</td>
<td>Arch. Eng. Integrated Des. Studio 2</td>
<td>6</td>
</tr>
</tbody>
</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 4753</td>
<td>Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>EAE 4613</td>
<td>Mechanical Systems II</td>
<td>3</td>
</tr>
<tr>
<td>EAE 4623</td>
<td>Architectural Acoustics</td>
<td>3</td>
</tr>
<tr>
<td>EAE 4026</td>
<td>Arch. Eng. Integrated Des. Studio 3</td>
<td>6</td>
</tr>
</tbody>
</table>

### Fifth Year (Graduate Coursework)

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5283</td>
<td>Conceptual Estimating</td>
<td>3</td>
</tr>
<tr>
<td>EME 5373</td>
<td>Building Integrated Renewable Energy Sys</td>
<td>3</td>
</tr>
<tr>
<td>EME 5983</td>
<td>Advanced Mechanical Systems</td>
<td>3</td>
</tr>
<tr>
<td>EAE 5113</td>
<td>Advanced Day/Lighting Systems</td>
<td>3</td>
</tr>
<tr>
<td>EAE 5016</td>
<td>Arch. Eng. Integrated Des. Studio 4</td>
<td>6</td>
</tr>
</tbody>
</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5703</td>
<td>Design of Timber Structures</td>
<td>3</td>
</tr>
<tr>
<td>EAE 5623</td>
<td>Building Controls and Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>EAE 5123</td>
<td>Advanced Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>EAE 5026</td>
<td>Arch. Eng. Integrated Des. Studio 5</td>
<td>6</td>
</tr>
</tbody>
</table>
FE EXAM
Candidates for degrees in civil, electrical, mechanical, and architectural engineering are strongly encouraged to complete the Fundamentals of Engineering (FE) Examination administered by the National Council of Examiners for Engineering and Surveying (NCEES).

MASTER OF SCIENCE IN AUTOMOTIVE ENGINEERING (MSAE)
Lawrence Tech’s Master of Science in Automotive Engineering program is designed for working professionals who are graduates of accredited undergraduate mechanical or electrical engineering programs. All coursework is offered in the evening, allowing working students to complete their studies in approximately two years. Most courses meet once per week for two and one-half hours, usually starting at 5:45 p.m.

Geared to help students use and improve their automotive engineering leadership skills, the MSAE encompasses automotive systems, design, product engineering, and manufacturing. A key element of the coursework is the concept that the complete automobile is a single system. All other components and component packages are subsystems, which cannot be changed independently. Woven throughout each course is the recognition that in such a complex system all areas must behave as a single entity to achieve goals. The program also emphasizes use of both full-time faculty from Lawrence Tech and an adjunct faculty of highly qualified experts currently working in the industry, who bring to the classroom their experience with the latest advancements in the field.

This MSAE program derives unique value from Lawrence Tech’s historic relationship with the automotive and manufacturing industries, the University’s philosophical emphasis on the practical application of knowledge, and the extensive utilization of industry experts as teachers and mentors.

The student body of practicing engineers, representing a broad variety of automotive related companies and a wide variety of job assignments, provides an important additional learning resource. The students work in teams on assigned projects in many of the courses, learning and enhancing teamwork as well as sharing expertise with one another.

The MSAE is an interdisciplinary program consisting of 10 three-credit courses: four core courses and six technical electives. A total of 30 credit hours are required for graduation.

Students are also allowed to select a thesis option by enrolling in three three-credit-hour thesis courses in lieu of three technical electives. This option provides students with an in-depth experience in one subject area. Students who elect to enroll in the thesis option are required to select a faculty advisor from either the A. Leon Linton Department of Mechanical Engineering or the Department of Electrical and Computer Engineering. Students may also select an industrial advisor in addition to the faculty advisor. Students must submit their thesis to a professional society for publication (e.g., SAE Technical Papers, ASME Journal, etc.). Further, all students must make a verbal presentation of their findings.

Thesis students are required to meet regularly with their advisor. All thesis projects will be approved by the program director in addition to the faculty advisor. A copy of the proposal and the project commitment form, signed by the student and the advisor, must be presented to the program director before a student may register in the course. Upon thesis completion, two copies of the thesis, signed by both student and advisor must be presented to the program director.
director. One copy will be maintained by the director and the second shall be held in the Lawrence Tech library.

**MSAE LEARNING OBJECTIVES**
The learning objectives indicate what the graduates are capable of doing upon graduation:

1. Demonstrate the ability to understand and analyze a problem by applying science, math and engineering principles to interpret data; to develop advanced knowledge to design mechanical components and systems and to recommend design changes; to verify calculations and support assumptions and recommendations.

2. Demonstrate the ability to take the collected data, understand them and plot them correctly, producing effective written communication (graphical format); to conduct under-steer analysis; to summarize the under-steer behavior of various vehicles and compare them insightfully.

3. Demonstrate the ability to review and evaluate the literature, to utilize ethical judgment and strong communication skills to contribute to the literature.

4. Demonstrate the ability to produce effective oral communications.

5. Understand professional and ethical responsibilities of engineers, the impact of engineering solutions in a global and societal context, be aware of contemporary issues, and recognize the need for life-long learning.

**MSAE ADMISSION REQUIREMENTS**
Admission to the MSAE program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission ([www.ltu.edu/apply](http://www.ltu.edu/apply));
2. A Bachelor of Science degree in mechanical or electrical engineering (or equivalent) from an accredited university (minimum GPA of 3.0);
3. Official transcripts of all completed college work;
4. Three letters of recommendation from an employer, business contact, and/or faculty member;
5. A resume, including professional experiences and extracurricular activities.

Applicants who do not meet all of the conditions for regular graduate admission may be considered for provisional admission by the Graduate Admissions Committee, provided they demonstrate an exceptionally high aptitude and promise for doing graduate work in this area and hold a Bachelor of Science degree in mechanical or electrical engineering. Applicants may be required to take the GRE examination and pass the TOEFL examination.

Additionally, the academic background of candidates will be evaluated by the Graduate Admissions Committee as part of the admissions process. Students found deficient in a particular subject area are required to enroll in pre-core crossover courses before being allowed to enroll in some of the core program courses. No graduate credit will be granted for these pre-core courses.

**Pre-core Courses (as needed)**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
</table>

165 GRADUATE CATALOG 2018–19
EME 4603 Introduction to Mechanical Systems 3
EME 4613 Introduction to Thermal Systems 3
EEE 2123 Circuits and Electronics 3
EME 3214 Mechatronics 4

MSAE TRANSFER POLICY
A maximum of six semester hours of graduate engineering courses taken at other accredited engineering colleges may be transferred, provided they are deemed relevant by the Graduate Admissions Committee. Courses to be transferred must have been taken in the last five (5) years and a grade of B (3.0) or higher must have been achieved. Students should petition the Graduate Admissions Committee by letter prior to completion of the first semester of graduate work. Students must submit evidence, in addition to transcripts, in the form of syllabi and examinations for each transfer course proposed. The committee may require the applicant to demonstrate proficiency in the subject through interviews with faculty members who have expertise in the subject.

MASTER OF SCIENCE IN AUTOMOTIVE ENGINEERING CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 30

Core Courses (12 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5153</td>
<td>Applied Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EME 5213</td>
<td>Mechanical Vibrations</td>
<td>3</td>
</tr>
<tr>
<td>EME 5223</td>
<td>Advanced Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EME 5253</td>
<td>Engineering Analysis 1</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives (18 credit hours)
Students may select six courses from the following list:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5103</td>
<td>Fasteners and Bolted Joints</td>
<td>3</td>
</tr>
<tr>
<td>EME 5203</td>
<td>Design of Mechanical Joints</td>
<td>3</td>
</tr>
<tr>
<td>EME 5433</td>
<td>Vehicle Dynamics 1</td>
<td>3</td>
</tr>
<tr>
<td>EME 5453</td>
<td>Vehicle Crashworthiness</td>
<td>3</td>
</tr>
<tr>
<td>EME 5573</td>
<td>Automotive HVAC 1</td>
<td>3</td>
</tr>
<tr>
<td>EME 6103</td>
<td>Engineering Materials</td>
<td>3</td>
</tr>
<tr>
<td>EME 6333</td>
<td>Body and Chassis Systems</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6343</td>
<td>Automotive Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EME 6353</td>
<td>Automotive Mechanical Systems</td>
<td>3</td>
</tr>
<tr>
<td>EME 6363</td>
<td>Automotive Electrical Systems</td>
<td>3</td>
</tr>
<tr>
<td>EME 6373</td>
<td>Powertrain Systems 1-Engines</td>
<td>3</td>
</tr>
<tr>
<td>EME 6383</td>
<td>Powertrain Systems 2-Transmissions</td>
<td>3</td>
</tr>
<tr>
<td>EME 6473</td>
<td>Hybrid Electric Vehicles</td>
<td>3</td>
</tr>
<tr>
<td>EME 6523</td>
<td>Combustion and Emissions</td>
<td>3</td>
</tr>
<tr>
<td>EME 6623</td>
<td>Automotive Control Systems 1</td>
<td>3</td>
</tr>
<tr>
<td>EME 6913</td>
<td>Thesis</td>
<td>3</td>
</tr>
<tr>
<td>EME 7433</td>
<td>Vehicle Dynamics 2</td>
<td>3</td>
</tr>
</tbody>
</table>

AUTOMOTIVE RESEARCH
The Johnson Controls Vehicle Engineering Systems Laboratory’s unique 4x4 vehicle chassis dynamometer with individual wheel control is an invaluable research tool for studying vehicle
performance, safety, stability, and fuel economy and responding to emerging needs in vehicle engineering. Focused on creating new knowledge in the field of automotive engineering, the lab extends Lawrence Tech’s strong research and development capabilities to corporations and governmental organizations. Students may have opportunities to participate in applied research projects with these partners to research such subjects as vehicle dynamics, driveline technology, NVH, emerging energy technologies, and emissions.

**MASTER OF SCIENCE IN BIOMEDICAL ENGINEERING (MSBME)**

The comprehensive Master of Science in Biomedical Engineering enhances the knowledge of professionals for advanced and emerging topics in the field. This program covers a wide area of advanced biomedical engineering, life sciences, medical, and engineering applications topics. The MSBME curriculum is structured to prepare graduate students in fields such as biomechanics, tissue engineering, bioMEMS, bioinstrumentation, and medical imaging.

The MSBME, which totals 30 credit hours, is designed to provide Lawrence Tech’s signature combination of theory and practice. Eligibility for the program is not limited to graduates with a bachelor’s degree in biomedical engineering; interested students from other engineering and science backgrounds are also eligible to enroll in this program. Applicants may choose between two options to complete a Master’s Design Project or a Master’s Research Thesis. Early in the program, students can select a BME faculty member to serve as their adviser and to work with to determine the scope of their Project or Thesis work. Pending the approval of the MSBME Graduate Admissions Committee, working professionals pursuing the Project option can choose a topic in conjunction with their job or company.

**MSBME ADMISSION REQUIREMENTS**

Admission to the MSBME program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission ([www.ltu.edu/apply](http://www.ltu.edu/apply));
2. A Bachelor of Science degree in engineering (probationary admission with a mathematics, science, or technical degree and plan to complete certain engineering undergraduate courses) from an ABET-accredited (or equivalent) college or university (minimum GPA of 3.0);
3. Official transcripts of all completed college work;
4. Two letters of recommendation, including one from academic faculty, and one from corporate supervisors or peers.

Students with a GPA lower than 3.0 or with baccalaureate degree in a field other than engineering may be admitted on a provisional basis. These students must satisfy prerequisite requirements as determined by the MSBME Graduate Admissions Committee before they can be granted official graduate status. They will be evaluated for official graduate student status upon completion of six semester hours of graduate coursework, achieving a minimum grade of 3.0 in each course. All coursework must be completed within five years after the program is started.

**MSBME TRANSFER POLICY**

For applicants transferring from other graduate programs into the MSBME program, no more than six graduate semester credit hours may be transferred, and these must be from an accredited institution. Any exceptions to this policy must be approved by the MSBME Graduate Admissions Committee. A minimum grade of 3.0 must have been achieved in all transfer courses. Credit for courses taken in a graduate program other than biomedical engineering will
be reviewed to determine whether they may be substituted within the MSBME program at Lawrence Tech. A request for transfer courses to be considered must be made in writing at the time of application and must be accompanied by transcripts, course descriptions, and syllabi for each proposed transfer course.

**MSBME DEGREE REQUIREMENTS**
The MSBME program offers students two degree options:

**Option I: Research Thesis**
- Core Courses (6 courses) 18 credits
- Electives (1–2 courses) 3–6 credits
- Research Thesis 6–9 credits
- Total Credit Hours 30 credits

**Option II: Design Project**
- Core Courses (6 courses) 18 credits
- Electives (2–3 courses) 6–9 credits
- Design Project 3–6 credits
- Total Credit Hours 30 credits

**Core Courses (18 Credits)**
Choose one of the following advanced mathematics courses:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5253</td>
<td>Engineering Analysis 1</td>
</tr>
<tr>
<td>EEE 5114</td>
<td>Engineering Analysis</td>
</tr>
<tr>
<td>EME 6283</td>
<td>Engineering Analysis 2</td>
</tr>
<tr>
<td>MCS 6603</td>
<td>Statistical Methods</td>
</tr>
</tbody>
</table>

Choose one of the following advanced biology/physiology courses:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 5703</td>
<td>Quantitative Physiology</td>
</tr>
<tr>
<td>BME 5713</td>
<td>Cell and Molecular Biology</td>
</tr>
</tbody>
</table>

Choose three of the following biomedical engineering courses:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 6103</td>
<td>Bioelectrical Physics</td>
</tr>
<tr>
<td>BME 6213</td>
<td>Advanced Biomaterials</td>
</tr>
<tr>
<td>BME 6303</td>
<td>Cell Mechanobiology</td>
</tr>
</tbody>
</table>

Select a section based in the laboratory of your advisor of the course:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 6503</td>
<td>Advanced Experimental Methods</td>
</tr>
</tbody>
</table>

**Elective Courses (3–9 Credits)**
Choose from the following biomedical engineering courses or courses from another department with MSBME Graduate Admissions Committee approval:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>BME 5103</td>
<td>Computer Applications in BME</td>
</tr>
<tr>
<td>BME 5123</td>
<td>Biomedical Simulations</td>
</tr>
<tr>
<td>BME 5203</td>
<td>Surface Chemistry</td>
</tr>
<tr>
<td>BME 5303</td>
<td>Applications of Engineering in Orthopedics</td>
</tr>
<tr>
<td>BME 5313</td>
<td>Safety in Design</td>
</tr>
</tbody>
</table>
Additional Requirements
- Selection of Project Advisor or Thesis Committee
- Attend a minimum of four Professional Educational Experiences related to the topics of Ethics, Statistics, Regulatory Issues or Industry/Academic Meetings
- BME 6803 Master’s Design Project (3–6 credits) or
- BME 6903 Master’s Research Thesis (6–9 credits)
- Oral Defense of Project or Thesis
- Written Final Report of Project or Thesis

MASTER OF SCIENCE IN CIVIL ENGINEERING (MSCE)
Lawrence Technological University offers comprehensive master’s programs in civil engineering that provide technical and practical expertise in a wide range of civil engineering subjects: structural, geotechnical, hydraulics/water resources, environmental, and transportation/highway engineering. Students must specialize in a minimum of one concentration but are able to select courses over various concentrations.

The Master of Science in Civil Engineering requires 30 or 33 credit hours, depending on the option chosen. In line with Lawrence Tech’s “theory and practice” approach to education, the program emphasizes practical training and the development of theoretical concepts through classroom experiences and applied research projects. Students have access to industry-standard software packages and advanced experimental testing facilities.

Most courses are offered in the evening, and the standard completion timeline for a degree is two years. Some courses are available online.

MSCE ADMISSION REQUIREMENTS
Admission to the MSCE program as a regular graduate student requires:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. A Bachelor of Science degree in civil engineering (or equivalent) from an ABET-accredited undergraduate program (minimum GPA of 3.0);
3. Three letters of recommendation (employers and professors are preferred);
4. Official transcripts of all college work;
5. Professional resume;
6. Statement of purpose (a one-page essay discussing what you plan to do with your degree).

The director of the civil engineering graduate programs (or program director) may allow provisional admission to applicants who do not meet all conditions for regular admission. Non-civil engineering graduates or other civil engineering students who do not meet regular admission to the program may be required to pass additional courses as determined by the program director. A provisional student may also be granted regular status after receiving a minimum grade of “B” in a number of consecutive graduate-level courses.

SUMMARY OF MSCE DEGREE REQUIREMENTS

<table>
<thead>
<tr>
<th>Thesis Option</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Electives</td>
<td>24 credits</td>
</tr>
<tr>
<td>Thesis</td>
<td>6 credits</td>
</tr>
</tbody>
</table>

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Total Credit Hours 30 credits

**Project Option**
- Technical Electives 27 credits
- Project 3 credits
- Total Credit Hours 30 credits

**Coursework Option**
- Technical Electives 33 credits
- Total Credit Hours 33 credits

**MSCE COURSES**

### Environmental Engineering

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5323</td>
<td>Environmental Cleanup</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5333</td>
<td>Air Pollution Control</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5343</td>
<td>Advanced Environmental Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5353</td>
<td>Environmental Management</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5363</td>
<td>Surface Water Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5393</td>
<td>Special Topics in Environmental Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6313</td>
<td>Industrial Water and Wastewater Treatment</td>
<td>3</td>
</tr>
</tbody>
</table>

### Geotechnical Engineering

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5413</td>
<td>Shallow and Deep Foundation Design</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5423</td>
<td>Geoenvironmental Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5433</td>
<td>Ground Improvement Methods</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5443</td>
<td>Designing with Geosynthetics</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5473</td>
<td>Earth Retaining Structures</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5493</td>
<td>Special Topics in Geotechnical Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6413</td>
<td>Engineering Properties of Soils</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6423</td>
<td>Geotechnical Earthquake Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

### Structural Engineering

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5703</td>
<td>Design of Timber Structures</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5713</td>
<td>Analysis and Design of Prestressed Concrete</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5723</td>
<td>Advanced Analysis and Design of Structures</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5733</td>
<td>Structural Masonry Design</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5753</td>
<td>Advanced Concrete Design</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5763</td>
<td>Advanced Composite Materials and Their Uses in Structures</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5773</td>
<td>Advanced Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5783</td>
<td>Bridge Design I</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5793</td>
<td>Special Topics in Structural Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6723</td>
<td>Structural Analysis and Design for Fire Safety</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6733</td>
<td>Finite Element Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6743</td>
<td>Structural Dynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

### Transportation Engineering

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
</table>
Lawrence Technological University

ECE 5813 Pavement Analysis and Performance 3
ECE 5823 Pavement Management Systems 3
ECE 5833 Traffic Engineering 3
ECE 5843 Highway Safety Engineering 3
ECE 5893 Special Topics in Transportation Engineering 3

Water Resources Engineering

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5523</td>
<td>River Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5533</td>
<td>Coastal Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5543</td>
<td>Design of Stormwater Management Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5553</td>
<td>Ports and Harbors Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5593</td>
<td>Special Topics in Hydraulic Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6513</td>
<td>Groundwater Modeling</td>
<td>3</td>
</tr>
</tbody>
</table>

General Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5103</td>
<td>Applied Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5113</td>
<td>Sustainable Construction Practices</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5911-3</td>
<td>Graduate Directed Study</td>
<td>1-3</td>
</tr>
<tr>
<td>ECE 5923</td>
<td>Special Topics in Civil Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6053</td>
<td>Graduate Project</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6073</td>
<td>Thesis I</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6083</td>
<td>Thesis II</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6113</td>
<td>Concrete Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

ADDITIONAL MSCE CURRICULUM REQUIREMENTS

Selection of Concentration

Students within the MSCE program are required to select a concentration and complete a minimum of four graduate level courses (12 credits) in one specific subdiscipline (water resources, structural, geotechnical, environmental, and transportation) as listed in the MSCE courses. Exceptions will be made when deemed necessary, often dependent on course availability and graduation timeline.

Selection of Analytical Credits

MSCE students must complete a breadth of courses that requires the use of analytical skills to solve complex problems. They must take a minimum of 14 analytical credits (ACs). The number of ACs offered by each course is different. A list of courses and the number of ACs each course offers can be obtained from the graduate programs director. The number of ACs offered by specific courses may change over time. An unexpected reduction in a course’s ACs will be accommodated when a student is near graduation. The number of ACs contained in special topics courses and directed studies will be determined from the courses’ content.

MSCE TRANSFER PROCEDURE

Students may transfer a maximum of six semester hours for graduate engineering courses taken at other accredited engineering colleges, provided they are deemed relevant. Students must have taken the courses within the past five years and achieved a grade of B (3.0) or better. To transfer courses, the student must submit a petition in writing prior to completion of the first semester of graduate work toward an MSCE degree. The student must submit transcripts and evidence consisting of syllabi and examinations. The program director may
require the applicant to demonstrate proficiency in the subject through interviews with faculty members who have expertise in the subject.

With the approval of the program director, students may apply up to six credits of construction engineering courses or courses from other Lawrence Tech programs (architecture, engineering, mathematics, and science) toward an MSCE degree. In addition, graduate students may apply up to six credits of 4000-level civil engineering courses (senior-level electives) with the approval of the program director.

**MASTER OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING (MSECE)**
Lawrence Tech’s Master of Science in Electrical and Computer Engineering program is designed for the working professional with a bachelor’s degree in electrical or computer engineering or their equivalent. Taking coursework entirely in the evening, the student can complete the degree in two years or less. The Master of Science in Electrical and Computer Engineering affords students an exciting opportunity to learn about advanced engineering methods used for high technology products and services. It is designed to provide advanced professional skills, expand knowledge of specific technical disciplines, and improve a student’s ability to apply scientific principles and mathematical techniques in solving engineering problems.

This degree is designed to provide graduates with the tools needed to maintain their knowledge of leading technology and enhance their ability to communicate with audiences having a variety of technical backgrounds. It is also designed to offer the background required for the pursuit of a senior engineering position or acceptance into a PhD program.

**MSECE ADMISSION REQUIREMENTS**
Admission to the MSECE program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. A Bachelor of Science degree in electrical engineering or computer engineering (or equivalent) from an accredited (or equivalent) college or university (minimum GPA of 3.0);
3. Official transcripts of all completed college work;
4. Three letters of recommendation (employers and professors are preferred);
5. A professional resume.

Students with a GPA between 2.8 and 3.0 may be admitted on a provisional basis. They will be evaluated for official graduate student status upon completion of pre-core courses, if necessary, and 12 semester hours of required electrical and computer engineering graduate coursework at Lawrence Tech. This evaluation will be conducted by the program director and the Graduate Admissions Committee. Students are notified of their status within two weeks of completion of the minimum required hours.

Students with a Bachelor of Science degree in a field other than electrical or computer engineering who have a GPA of at least 3.0 may be admitted on a provisional basis. These students must satisfy all prerequisite requirements before they can be granted official graduate status. The program director and the Graduate Admissions Committee decide what the prerequisite requirements are on a case-by-case basis.
MSECE TRANSFER POLICY
A maximum of eight graduate semester credit hours may be transferred, and these must be from an accredited Master of Science program in electrical, electrical and computer, or computer engineering. Credit for courses taken in a graduate program other than those listed above will be reviewed by the program director and the Graduate Admissions Committee for acceptability as a substitute within Lawrence Tech’s program.

Courses transferred must have been taken in the last five (5) years and a grade of B (3.0) or higher must have been achieved. All petitions for course transfer consideration must be made in writing at the time of application. Credit may be earned at another university after matriculation by guest credit. Guest credit forms must be completed at both Lawrence Tech and the university where the courses are to be taken. No guest credit will be granted for courses that are being offered at Lawrence Tech during the same semester during which the student is applying for guest credit. Since fewer MSECE graduate courses are offered during the summer semester, some students apply for guest credit during the summer. All requests for transfer or guest credit must be accompanied by an official transcript.

MSECE DEGREE REQUIREMENTS
The MSECE program offers students two degree options:

Option I: Coursework Only
This option requires 16 credit hours of core courses plus 16 credit hours of technical electives for a total of 32 credit hours. The core courses must be taken prior to the elective courses. At least one of the technical electives must be at the 6000 level. Advanced-level electives (6XX4) require completion of core courses or specific approval by both the instructor and the chair.

Option II: Coursework and Thesis
If a student elects to write a thesis, the core courses requirement may be waived at the thesis advisor’s discretion. This option requires 20 credit hours of a combination of any of the core and technical electives courses plus a ten-credit-hour thesis for a total of 30 credit hours. The student, in consultation with his or her thesis advisor, proposes a thesis topic by submitting the “Petition for a Master’s Thesis” form that describes the research topic in detail and presents the research plan. The thesis proposal must be successfully presented to the student’s thesis committee before the master’s thesis credits are elected. Once the thesis is accepted, the student can take any combination of EEE 6911, EEE 6912, and EEE 6913, to add up to the ten thesis credits. Once the thesis is completed, the student must successfully defend it before his or her thesis committee.

MASTER OF SCIENCE IN ELECTRICAL AND COMPUTER ENGINEERING CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 32 (option I) or 30 (option II)

Core Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEE 5114</td>
<td>Engineering Analysis</td>
<td>4</td>
</tr>
<tr>
<td>EEE 5654</td>
<td>Digital Signal Processing</td>
<td>4</td>
</tr>
<tr>
<td>EEE 5444</td>
<td>Digital Communications</td>
<td>4</td>
</tr>
<tr>
<td>EEE 5534</td>
<td>Digital Control Systems</td>
<td>4</td>
</tr>
</tbody>
</table>

Technical Electives

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEE 5144</td>
<td>Power Distribution Systems</td>
<td>4</td>
</tr>
</tbody>
</table>
EEE 5134  Electrical Machines and Transformers  4
EEE 5204  Advanced Computer Architecture  4
EEE 5264  Advanced Microprocessors  4
EEE 5274  Digital Image Processing  4
EEE 5284  Parallel Architectures  4
EEE 5314  Power Electronics  4
EEE 5324  Network Synthesis  4
EEE 5364  Computer Networking  4
EEE 5524  Modern Control Systems  4
EEE 5554  Applications of Artificial Intelligence  4
EEE 5564  Interfacing and Control of Robots  4
EEE 5624  VLSI Systems Design  4
EEE 5634  Optical Systems Engineering  4
EEE 5784  Communication Circuits  4
EEE 5911–4  Directed Study  1–4
EEE 5993–4  Special Topics/Elect. & Comp. Eng.  3–4
EEE 6144  Smart Grid Communications  4
EEE 6444  Software Defined Radio  4
EEE 6524  Nonlinear and Optimal Control  4
EEE 6534  Adaptive Control  4
EEE 6704  Engineering Optimization  4
EEE 6784  Advanced Communication Theory  4
EEE 6901–4  Master's Project  1–4
EEE 6911–3  Master's Thesis Research  1–3

The following Master of Science in Computer Science (MSCS) degree electives may be used as technical electives with the advisor’s approval. (The prerequisites for these courses are listed in their course descriptions.)

\[
\begin{array}{lll}
\text{Course Number} & \text{Subject} & \text{Cr. Hrs.} \\
MCS 5023 & \text{Java Programming} & 3 \\
MCS 5103 & \text{Software Engineering} & 3 \\
MCS 5303 & \text{Database Systems} & 3 \\
MCS 5503 & \text{Intelligent Systems} & 3 \\
MCS 5703 & \text{Intro. to Distributed Computing} & 3 \\
MCS 6123 & \text{Adv. Topics Software Eng. Techniques} & 3 \\
MCS 6323 & \text{Distributive Database Systems} & 3 \\
MCS 6513 & \text{Adv. Topics in Intelligent Systems} & 3 \\
MCS 6723 & \text{Adv. Topics in Distributed Computing} & 3 \\
\end{array}
\]

**MSECE ACADEMIC STANDING**

Students are expected to maintain a 3.0 GPA or higher. If a student’s GPA drops below 3.0, the student is placed on academic probation. Failure to raise the GPA to at least 3.0 by the end of one semester of academic probation will necessitate the student’s appearance before the ECE Graduate Committee to explain why he or she should not be terminated from the program. A student whose GPA has been below 3.0 for one semester and who fails to appear before the committee, or who has not attained a GPA of 3.0 after two semesters of academic probation will be terminated from the program. A student terminated from the program may reapply after one calendar year. No grade below a B- can be counted toward a master’s degree and the student’s GPA should remain at or above 3.0.
MSECE WAIVER OF A REQUIRED COURSE
Students who have completed coursework that duplicates a required course may petition for waiver of that course. The petition must include the following:

1. The name of the institution where the equivalent coursework was taken.
2. The name and number of the course that duplicates material in a required course.
3. A copy of the course syllabus, which must include the name and author of the textbook used, as well as detailed descriptions of the topics covered.

If the course was offered at the graduate level at the other institution, the student may petition to have the course transferred into the MSECE program. A maximum of eight (8) hours of credit may be transferred in this manner.

If the course was offered at the undergraduate level, no graduate credit may be given, but a required course may be waived. The waiver of a required course does not reduce the total number of credit hours that must be earned in the MSECE program. If, for example, a student obtains a waiver of the Network Synthesis course because the material was covered in an undergraduate course, another course must be substituted for Network Synthesis so that the total number of credit hours earned is still 32, or 30, if the thesis option is elected.

MASTER OF SCIENCE IN ENGINEERING TECHNOLOGY (MSET)
The Master of Science in Engineering Technology aims to prepare students with the acquisition of upper-level knowledge to enable them to become leaders in engineering technology practice and management. The 30-credit-hour program is designed for full-time students and working professionals who have degrees in technical fields, such as engineering, engineering technology, physics, chemistry, mathematics, and computer science.

The MSET is a cross-disciplinary program incorporating engineering, technology, and management. It is designed to provide students and professionals with mastery-level knowledge in:

- Quality analysis and improvement of technology and engineering products
- Evolving technologies, including wireless, nano, and alternative energy
- The management of engineering and technology projects

All coursework can be taken in the evening, allowing working students to complete their studies in approximately two years. All courses meet once a week for two hours and 40 minutes, usually starting around 5:45 p.m.

MSET ADMISSION REQUIREMENTS
Admission to the MSET program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. A Bachelor of Science in engineering or engineering technology from an accredited college or university; students with science or similar degrees and three years of experience in an engineering environment will be considered. Applicants may be required to take some undergraduate courses if they do not have the required foundational courses.
2. Official transcripts of all completed college work.
3. A minimum undergraduate GPA of 3.0 on a 4.0 scale. (Students with lower GPAs may be accepted on a provisional basis, as described below.)
Lawrence Technological University

4. Submission of the Application for Graduate Admission ([www.ltu.edu/apply](http://www.ltu.edu/apply)).
5. Three letters of recommendation, including one from a faculty member in the students' undergraduate program, and, if applicable, two from corporate supervisors.

Applicants should have math and science coursework that is equivalent to Lawrence Tech's Bachelor of Science in Engineering Technology curriculum.

Students with a GPA lower than 3.0 may be admitted on a provisional basis. They will be evaluated for official graduate student status upon completion of six semester hours of graduate coursework at LTU. This evaluation will be conducted by the program director and a graduate committee made up of at least three full-time departmental faculty members. Students will be notified of their status within two weeks of completing the minimum required hours.

Students may apply to the MSET program at any time of the year, for matriculation during any future semester.

**MSET COURSE TRANSFER POLICY**
For students transferring from other graduate programs into LTU's Master of Science in Engineering Technology program, the following guidelines will be implemented:

1. No more than six graduate semester credit hours may be transferred, and these must be from an accredited institution. The director and the graduate committee will evaluate exceptions to this policy on a case-by-case basis.
2. Credit for courses taken in a graduate program other than those listed above will be reviewed by the program director and the graduate committee for their acceptability as substitutes within LTU's program.
3. A request for courses to be considered for transfer credit must be made in writing at the time of application.
4. A minimum grade of 3.0 must have been achieved in the transfer courses.
5. Courses must be completed within five years after the program is started.

In order to continue in the MSET program, students must have a cumulative GPA of at least 3.0. A student whose cumulative GPA falls below 3.0 after their formal admission to the MSET program may be placed on academic probation and must consult with the program director regarding continuation in the program.

**REQUIREMENTS FOR DEGREE COMPLETION**
After formal admission to the MSET program, students must complete a written plan of study, which will be approved by the program director and kept on file for updating purposes in the Department of Engineering Technology. The plan of study must be submitted no later than the second semester after the student has enrolled in the MSET program. In the semester prior to their anticipated graduation, candidates for the MSET degree will meet with the program director to ensure that they have met all program requirements and to complete the petition for graduation. The program director will then review the petition and give final approval for graduation.

**MSET CURRICULUM**
TOTAL SEMESTER CREDIT HOURS: 30

### Core Courses (21 credit hours)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
</table>

176 GRADUATE CATALOG 2018–19
TIE 5013  Technometrics  3
EEE 5923  Electric Machines and Transformers  3
TEE 6333  Wireless Communication Technologies  3
TME 5123  Rapid Prototyping Technologies  3
TME 6343  Current Issues in Technology  3
TIE 5343  Engineering Project Management  3
EEM 6583  Enterprise Productivity  3

Elective Courses (9 credit hours)
Students may fulfill the requirements by one of the two following options:

1. Selecting 3 out of the following courses:
   
<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEM 6763</td>
<td>Quality Engineering Systems</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6753</td>
<td>Eng. Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6713</td>
<td>Production Planning and Control</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6703</td>
<td>Manufacturing Systems</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6143</td>
<td>Hazardous Materials Management</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6303</td>
<td>Computer Integrated Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6503</td>
<td>Manufacturing Productivity</td>
<td>3</td>
</tr>
</tbody>
</table>

2. Master’s Dissertation to substitute the elective courses.

MASTER OF SCIENCE IN FIRE ENGINEERING (MSFE)
Fire engineering or fire protection engineering is a growing profession with new employment opportunities in structural engineering firms, fire protection engineering consulting firms, fire departments, fire equipment and systems manufacturers, government, hospitals and health care facilities, the insurance industry, research and testing laboratories, universities and colleges, the entertainment industry, and forensics, among others.

LTU’s fire engineering program is rooted in structural engineering and several of the courses available analyze structural performance under fire. Fire-related material properties are measured using large- and small-scale test methods. Such properties include flammability (e.g., heat release rate and flame spread), smoke density, and toxicity hazards. In addition, courses are offered in fire dynamics and fire modeling. To understand mechanisms that suppress or mitigate fire, an introductory course on fire protection systems is available.

Several courses utilize Lawrence Tech’s fire testing equipment, which includes a cone calorimeter, smoke density chamber, radiant panel flame spread apparatus, and gas analyzer. These items are used to measure various smoke and flammability properties as well as gases that develop due to the burning of materials. In addition, LTU maintains a large-scale fire-testing furnace for testing large items.

The standard completion timeline for the MSFE degree is two years.

MSFE ADMISSION REQUIREMENTS
Admission to the MSFE program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. A Bachelor of Science degree in civil engineering, architectural engineering, or mechanical engineering (or equivalent) from an ABET-accredited undergraduate program;
3. A minimum undergraduate GPA of 3.0;
4. Official transcripts of all completed college work;
5. Three letters of recommendation, preferably from employers and former professors;
6. Professional resume;
7. Statement of purpose (a one-page essay discussing what you plan to do with your degree).

The program director may allow provisional admission to applicants who do not meet all conditions for regular admission. A provisional student is typically granted regular status after receiving a minimum grade of "B" in three consecutive graduate-level courses. The program director may require non-engineering graduates admitted to the program to pass additional courses at the undergraduate level.

**MSFE TRANSFER PROCEDURE**
The program director may allow as many as six transfer credits from other universities. At least three of these credits should be directly related to one of the fire engineering courses listed in the curriculum. Special considerations for these three credits will be made for other topics related to fire engineering. A maximum of three credits may be applied as elective credits if they are in a closely related field. Transfer credits must be approved in writing prior to students joining the MSFE program.

Students within the MSFE program may be dual enrolled in any other academic program on campus. A maximum of three credits included as part of another degree program may be applied toward the Master of Science in Fire Engineering if approved by the program director.

**MSFE COURSE REQUIREMENTS**
Students must successfully complete 30 credit hours. Three credit hours are obtained from 4000 and higher level courses in mathematics, probability, statistics or programming. The selection of the three credits must be approved by the program director. The mathematics requirement may be waived if a student has already taken an applicable course. However, if the mathematics requirement is waived, the student must obtain an additional three elective credits from any approved graduate-level courses either within or outside of the program.

Of the remaining 27 credit hours, 18 credit hours are obtained from core courses, including four 5000-level courses and two 6000-level courses. These courses are listed below. A minimum of six credit hours are obtained by selecting two of the five technical elective courses listed below. A maximum of three credits may be applied as electives to the program either from the list below or from applicable graduate-level courses within the civil, architectural, or mechanical engineering programs. The courses must be approved by the program director prior to considering them for the MSFE and must be related to core content.

If the math credit has been previously fulfilled, as many as four courses may be selected from the list of elective courses below.

**MSFE CURRICULUM**
TOTAL SEMESTER CREDIT HOURS: 30

**Core Courses (18 credits)**
**Course Number** | **Subject** | **Cr. Hrs.**
--- | --- | ---
EFE 5013 | Fundamentals of Fire Engineering | 3
EFE 5223 | Fire Dynamics | 3
EFE 5233 | Fire Modeling | 3
EFE 5323 | Fire Testing Methods for Materials | 3
EFE 6013 | FE Graduate Project | 3
ECE 6723 | Structural Analysis and Design for Fire Safety | 3

**Elective Courses (6 credits minimum)**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFE 5333</td>
<td>Large Scale Fire Testing Methods</td>
<td>3</td>
</tr>
<tr>
<td>EFE 5523</td>
<td>Fire Protection Systems</td>
<td>3</td>
</tr>
<tr>
<td>EFE 5533</td>
<td>Failure Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6753</td>
<td>Fire Analysis and Design in Steel Structures</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6763</td>
<td>Adv. Fire Eng. for Structural Applications</td>
<td>3</td>
</tr>
</tbody>
</table>

**MASTER OF SCIENCE IN INDUSTRIAL ENGINEERING (MSIE)**

Industrial engineers are charged with developing more efficient processes, reducing costs, and increasing productivity within the manufacturing industry – essential functions that employers depend on to remain successful. In order to improve efficiency, industrial engineers use their knowledge of mathematics to study product requirements and then design the manufacturing and information systems needed to meet those requirements. They also design production planning and control systems, improve systems for the distribution of goods and services, develop wage and salary administration systems and job evaluation programs, and create management control systems to help with cost analysis and financial planning.

Just as industrial engineering itself is growing, so are certain disciplines within the field. In response to this growth, Lawrence Tech’s Master of Science in Industrial Engineering features focus areas in healthcare systems, quality, and supply chain. Lawrence Tech’s Master of Science in Industrial Engineering can prepare you to compete in today’s ever-changing workforce by not only helping you stay abreast of current trends and technologies within the field, but also by developing your leadership skills. The MSIE focuses on providing advanced knowledge in operations optimization, process control, reliability, design of experiments, and more. This rigorous 30-credit hour program allows you to choose either a course-work-only option or a thesis option. Both feature the flexibility demanded by busy professionals, with most courses available in the evenings and some offered online.

**MSIE ADMISSION REQUIREMENTS**

Admission to the MSIE program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission ([www.ltu.edu/apply](http://www.ltu.edu/apply));
2. An undergraduate degree in engineering, science, math, computer science, or physical science (or other technical field) from an accredited college or university. Individuals with a degree in a non-engineering field may be required to take prerequisite coursework (minimum GPA of 3.0);
3. Official transcripts of all completed college work;
4. Three letters of recommendation, preferably from employers and former professors;
5. A resume, including experience and relevant extracurricular activities.
Applicants who do not meet all requirements may be admitted on a conditional basis and will be granted regular status upon the completion of three consecutive graduate-level courses with a minimum 3.0 GPA.

**MSIE TRANSFER POLICY**

A maximum of six semester hours of graduate engineering courses taken at other accredited engineering colleges may be transferred, provided they are deemed relevant by the Graduate Admissions Committee. Transferred courses must have been taken in the last five years and a grade of B (3.0) or higher must have been achieved. Students should petition the Graduate Admissions Committee by letter prior to completion of the first semester of graduate work. Students must submit evidence, in addition to transcripts, in the form of syllabi and examinations for each transfer course proposed. The committee may require the applicant to demonstrate proficiency in the subject matter through interviews with faculty members who have expertise in the subject.

**MSIE DEGREE REQUIREMENTS**

**Coursework and Thesis Option**
- Core Courses (6 courses) 18 credits
- Electives (1 course) 3 credits
- Thesis 9 credits
- Total Credit Hours 30 credits

**Coursework Only Option**
- Core Courses (6 courses) 18 credits
- Electives (4 courses) 12 credits
- Total Credit Hours 30 credits

**Core Courses**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMS 5603</td>
<td>Engineering Systems Simulation</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6403</td>
<td>Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>EIE 6653</td>
<td>Advanced Optimization Techniques</td>
<td>3</td>
</tr>
<tr>
<td>EIE 6663</td>
<td>Applied Stochastic Processes</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6713</td>
<td>Production, Planning, and Control</td>
<td>3</td>
</tr>
<tr>
<td>EIE 6673</td>
<td>Six Sigma Processes</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5513</td>
<td>Lean Manufacturing Systems</td>
<td>3</td>
</tr>
<tr>
<td>EME 5623</td>
<td>Product Development and Sustainability</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6743</td>
<td>Value Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6753</td>
<td>Engineering Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>EEM 6583</td>
<td>Enterprise Productivity</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6703</td>
<td>Manufacturing Systems</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6343</td>
<td>Automotive Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EMS 7103</td>
<td>Design of Experiments</td>
<td>3</td>
</tr>
<tr>
<td>EMS 7203</td>
<td>Manufacturing Systems Simulation</td>
<td>3</td>
</tr>
<tr>
<td>EMS 7303</td>
<td>Design for Reliability</td>
<td>3</td>
</tr>
<tr>
<td>EMS 7403</td>
<td>Design of Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EMS 7613</td>
<td>Technology Management</td>
<td>3</td>
</tr>
</tbody>
</table>
**Focus Areas**

Three focus areas are available:

**Healthcare Systems Focus**
The Healthcare Systems focus provides the student with sufficient knowledge and skills for modeling, analyzing, and designing healthcare systems. Students will have an option to graduate with a Healthcare Systems focus by taking electives related on healthcare systems instead of general electives.

Healthcare Focus – Any four courses related on healthcare systems (12 credits)
- EIE 6843 Healthcare Systems Engineering
- EIE 6853 Healthcare Operations Analysis
- EIE 6863 Healthcare Information Systems
- EIE 6873 Healthcare Human Factors
- EIE 6883 Healthcare Economics
- EIE 6893 Logistics in Healthcare Systems

**Quality Focus**
Recent experience in the world has shown that quality becomes an important factor in manufacturing and service industries for their business success and growth. Effective quality improvement programs provide a significant competitive advantage. This quality focus provides the student with sufficient knowledge and skills for improving quality and productivity in manufacturing and service organizations using modern quality concepts, tools, and techniques to develop, implement and maintain systems.

Quality Focus – Any four courses related on quality (12 credits)
- EMS 6403 Quality Control
- EIE 6673 Six Sigma Processes
- EEM 6763 Quality Engineering Systems
- EMS 7103 Design of Experiments
- EMS 7303 Design for Reliability

**Supply Chain Focus**
Due to globalization, companies are looking to supply chain and logistics for their strategic and competitive advantages. The supply chain focus provides a foundation in supply chain and logistics systems with national and global perspectives. It provides proficiency in problem solving, analytical methods, and decision making processes in a wide variety of industries, including manufacturing, retail, logistics, distribution, healthcare, defense, service, and software.

Supply Chain Focus – Any four courses related on supply chain (12 credits)
- EMS 6713 Production, Planning and Control
- EEM 6753 Engineering Supply Chain Management
- MIS 6113 Database and Enterprise Models
- MIS 7643 Enterprise Integration
- Special Topic on Customer Relationship Management (CRM)
- Special Topic on Enterprise Resource Planning (ERP) and MRP II
- Special Topic on Logistics
- Special Topic on Warehousing
Online Only
The Master of Science in Industrial Engineering is also offered online. Students can earn the same rigorous LTU education and enjoy the same prestigious, industry expert faculty while having the flexibility to manage full-time work and busy schedules.

MASTER OF SCIENCE IN MECHANICAL ENGINEERING (MSME)
Lawrence Tech's Master of Science in Mechanical Engineering provides opportunities for students to enhance their undergraduate engineering education. In the diverse field of mechanical engineering many students find it both necessary and rewarding to pursue more advanced study in their particular areas of interest to enhance their professional careers. The MSME curriculum is structured to prepare graduate students in fields such as combustion engines, emissions, energy systems, manufacturing processes and systems, structural analysis, vehicle dynamics, powertrain systems, dynamics, vibrations, fluid mechanics, and heat transfer.

The 30-credit-hour MSME is designed for full-time students and working professionals who are graduates of ABET-accredited undergraduate engineering programs. All coursework can be taken in the evening, allowing working students to complete their studies in approximately two years. Most courses meet once or twice a week for two and a half hours. Applicants may choose between two options, one focused strictly on coursework and the other incorporating a thesis. Pending the approval of the MSME Graduate Admissions Committee, working professionals pursuing the thesis option can choose a topic in conjunction with their job or company.

MSME ADMISSION REQUIREMENTS
Admission to the MSME program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. A Bachelor of Science degree in mechanical engineering (or equivalent) from an ABET-accredited (or equivalent) college or university (minimum GPA of 3.0);
3. Official transcripts of all completed college work;
4. Two letters of recommendation, including one from a professor in the student’s undergraduate program and one from a corporate supervisor (if the student is working).

Applicants who do not meet all conditions for regular admission may be admitted on a provisional basis as determined by the Graduate Admissions Committee. The applicant will be evaluated for official graduate student status upon completion of nine hours of graduate coursework, achieving a minimum grade of 3.0 in each course, at the University. Applicants with an engineering baccalaureate degree in a field other than mechanical engineering who have a GPA of at least 3.0 may be admitted on a provisionary basis. These students must satisfy all prerequisite requirements before they can be granted official graduate status. All coursework must be completed within five years after the program is started.

MSME TRANSFER POLICY
For applicants transferring from other graduate programs into the MSME program, no more than six graduate semester credit hours may be transferred, and these must be from an accredited MSME program. Any exceptions to this policy must be approved by the Graduate Admissions Committee. A minimum grade of 3.0 must have been achieved in all transfer courses. Credit for courses taken in a graduate program other than mechanical engineering will be reviewed to determine whether they may be substituted within the MSME program at Lawrence Tech. A request for transfer courses to be considered must be made in writing at the time of application.
and must be accompanied by transcripts, course descriptions, and syllabi for each proposed transfer course. For some transfer courses, the Graduate Admissions Committee may require the applicant to demonstrate proficiency in the subject through interviews with faculty members who have expertise in the subject.

MSME DEGREE REQUIREMENTS
The MSME program offers students two degree options:

Option I: Coursework and Thesis
Core Courses (4 courses) 12 credits
Electives (3 courses) 9 credits
Thesis 9 credits
Total Credit Hours 30 credits

Option II: Coursework Only
Core Courses (4 courses) 12 credits
Electives (6 courses) 18 credits
Total Credit Hours 30 credits

MASTER OF SCIENCE IN MECHANICAL ENGINEERING CURRICULUM
TOTAL SEMESTER CREDIT HOURS: 30

Core Courses – Thermal-Fluid Systems Track

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5153</td>
<td>Applied Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EME 5353</td>
<td>Transport Phenomena I</td>
<td>3</td>
</tr>
<tr>
<td>EME 5363</td>
<td>Transport Phenomena II</td>
<td>3</td>
</tr>
<tr>
<td>EME 5253</td>
<td>Engineering Analysis I</td>
<td>3</td>
</tr>
</tbody>
</table>

Core Courses – Solid Mechanics, Dynamics, and Vibration Track

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5333</td>
<td>Advanced Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>EME 5213</td>
<td>Mechanical Vibrations</td>
<td>3</td>
</tr>
<tr>
<td>EME 5223</td>
<td>Advanced Mechanics of Materials</td>
<td>3</td>
</tr>
<tr>
<td>EME 5253</td>
<td>Engineering Analysis I</td>
<td>3</td>
</tr>
</tbody>
</table>

Students can choose elective courses and receive a concentration in one of six fields: Automotive; Energy Systems; Manufacturing; Mechatronics; Solid Mechanics, Dynamics, and Vibration Systems; and Thermal-Fluid Systems. Students who choose the thesis option can obtain a concentration if they take two courses from one of the above areas and write their thesis in that same field. Students not writing the thesis can obtain a concentration if they take four courses in one of the concentration areas. Students will be credited for only one concentration.

Electives

Mathematics

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 6283</td>
<td>Engineering Analysis II</td>
<td>3</td>
</tr>
</tbody>
</table>

CONCENTRATIONS
### Automotive

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5433</td>
<td>Vehicle Dynamics 1</td>
<td>3</td>
</tr>
<tr>
<td>EME 5453</td>
<td>Vehicle Crashworthiness</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6343</td>
<td>Automotive Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6353</td>
<td>Automotive Mechanical Systems</td>
<td>3</td>
</tr>
<tr>
<td>EME 6373</td>
<td>Powertrain Systems 1</td>
<td>3</td>
</tr>
<tr>
<td>EME 6383</td>
<td>Powertrain Systems 2</td>
<td>3</td>
</tr>
</tbody>
</table>

### Energy Systems

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5263</td>
<td>Energy Resources and Technology</td>
<td>3</td>
</tr>
<tr>
<td>EME 5273</td>
<td>Heat Pipes</td>
<td>3</td>
</tr>
<tr>
<td>EME 5283</td>
<td>Elements of Nuclear Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EME 5293</td>
<td>Fusion Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EME 5313</td>
<td>Biofuels and Biomass Energy Eng.</td>
<td>3</td>
</tr>
<tr>
<td>EME 5373</td>
<td>Alternative Energy Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EME 5983</td>
<td>Special Topics – Solar Energy Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EME 6163</td>
<td>Fuel Cells and Hydrogen</td>
<td>3</td>
</tr>
</tbody>
</table>

### Manufacturing

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 6103</td>
<td>Engineering Materials</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6203</td>
<td>Manufacturing Processes</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6303</td>
<td>Computer Integrated Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6323</td>
<td>Expert Systems in Manufacturing</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6403</td>
<td>Quality Control</td>
<td>3</td>
</tr>
<tr>
<td>EMS 6703</td>
<td>Manufacturing Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

### Mechatronics

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRE 5183</td>
<td>Mechatronic Systems I</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6183</td>
<td>Mechatronic Systems II</td>
<td>3</td>
</tr>
<tr>
<td>EME 5323</td>
<td>Modern Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>EEE 5534</td>
<td>Digital Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>MRE 6143</td>
<td>Adaptive Control in Mechatronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRE 5143</td>
<td>Aerospace Systems Engineering</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6283</td>
<td>Autonomous Wheel Power Mgt. Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6293</td>
<td>Intelligent Tire and Vehicle Structure Mechatronics</td>
<td>3</td>
</tr>
</tbody>
</table>

### Solid Mechanics, Dynamics, and Vibrations Systems

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 6113</td>
<td>Fatigue Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EME 6123</td>
<td>Automotive Structural Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EME 6213</td>
<td>Fundamentals of Acoustics</td>
<td>3</td>
</tr>
<tr>
<td>EME 6493</td>
<td>Theory of Plates and Shells</td>
<td>3</td>
</tr>
<tr>
<td>EME 6533</td>
<td>Mechanical Vibrations II</td>
<td>3</td>
</tr>
<tr>
<td>EME 6553</td>
<td>Structural Stability</td>
<td>3</td>
</tr>
<tr>
<td>EME 6593</td>
<td>Random Vibrations and Spectral Analysis</td>
<td>3</td>
</tr>
<tr>
<td>EME 6613</td>
<td>Elasticity I</td>
<td>3</td>
</tr>
<tr>
<td>EME 7113</td>
<td>Fracture Mechanics</td>
<td>3</td>
</tr>
</tbody>
</table>
## Thermal-Fluid Systems

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 6133</td>
<td>Viscous Flow</td>
<td>3</td>
</tr>
<tr>
<td>EME 6153</td>
<td>Incompressible Flow I</td>
<td>3</td>
</tr>
<tr>
<td>EME 6223</td>
<td>Conduction Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>EME 6233</td>
<td>Convection Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>EME 6243</td>
<td>Radiation Heat Transfer</td>
<td>3</td>
</tr>
<tr>
<td>EME 6253</td>
<td>Turbulence</td>
<td>3</td>
</tr>
<tr>
<td>EME 6393</td>
<td>Compressible Flow I</td>
<td>3</td>
</tr>
<tr>
<td>EME 6413</td>
<td>Advanced Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EME 6523</td>
<td>Combustion and Emissions</td>
<td>3</td>
</tr>
<tr>
<td>EME 6543</td>
<td>Computational Fluid Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>EME 6563</td>
<td>Aerodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EME 7213</td>
<td>Advanced Combustion and Emissions</td>
<td>3</td>
</tr>
<tr>
<td>EME 7543</td>
<td>Advanced Computational Fluid Dynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

## MASTER OF SCIENCE IN MECHATRONIC SYSTEMS ENGINEERING (MSMSE)

The Master of Science in Mechatronics Systems Engineering (MSMSE) program at Lawrence Technological University is a response to a rapidly growing need for system engineers who, in the course of product development, may be responsible for the design of a mechanical system, the development of algorithms to operate specific mechanisms, and the integration of requisite sensors and actuators.

Our goal is to provide students with a combination of classroom theory and hands-on experience. Theory classes include dynamics, vibrations, control theory, and the integration of common and advanced sensors and actuators. Two practical classes provide students with the experience of developing an integrated electro-mechanical system and the required communication and engineering skills.

Mechatronics experience and skill sets are especially important in a fast-paced and cost-conscious business environment, whose shortened product cycle times and profit margins require concurrent development of the mechanical, electrical, and software system. The ability to communicate and resolve system integration issues early in the product development cycle would serve to reduce engineering resource requirements and potential product defects and hence to maximize profitability and product quality.

Lawrence Tech’s MSMSE program is designed for working professionals who are graduates of accredited undergraduate mechanical or electrical engineering programs. All coursework is offered in the evening, allowing working students to complete their studies in approximately two years. Full time students can complete the degree in one year or more, depending on the study load they carry.

Lawrence Tech’s Master of Science in Mechatronics Systems Engineering is one of just a few graduate programs in the United States and the only such program in Michigan. Mid-career professionals can get the education they need in classes that are conveniently scheduled in the evenings.

Full-time faculty members conduct the teaching process together with a team of highly accomplished and recognized adjunct professors and guest lecturers from industry and governmental research agencies. Mechatronics students gain deep analytical knowledge,
research skills, and extensive hands-on experience through product-oriented courses, laboratory and computer workshops, and open-ended engineering projects.

**MSMSE PROGRAM OBJECTIVES**
The 31-credit-hour MSMSE program is designed to provide students with advanced knowledge in mechatronics. Students will be expected to:

1. Learn and apply mechatronic engineering principles and theories.
2. Develop analytical and problem-solving skills for mechatronic systems.
3. Evaluate technical mechatronics engineering publications.
4. Effectively communicate technical information.
5. Understand the importance of lifelong learning and the professional and ethical responsibilities of the engineering profession.

**MSMSE ADMISSION REQUIREMENTS**
Admission to the MSMSE program as a regular graduate student requires the demonstration of high potential for success based on the following:

1. A Bachelor of Science in mechanical engineering, electrical and computer engineering, or an equivalent degree from an ABET-accredited college or university; or a Bachelor of Science in mathematics and computer science, or an equivalent degree from an accredited college or university, and 3-5 years of experience in the mechatronics field;
2. A minimum undergraduate GPA of 3.0 (B average);
3. Submission of the Application for Graduate Admission ([www.ltu.edu/apply](http://www.ltu.edu/apply));
4. Three letters of recommendation, preferably from employers and former professors;
5. Official transcripts of all college work completed;
6. A resume that includes work experiences and extracurricular activities;
7. A statement of purpose that includes personal and professional achievements or goals.

The MSMSE program director and, if necessary, the Program Committee, may evaluate and consider applicants who do not meet all conditions for regular admission, for conditional admission.

Applicants must satisfy all prerequisite requirements before they can be granted official graduate status. The MSMSE program director will decide prerequisite requirements. Applications to the MSMSE program may be submitted at any time of the year, for matriculation during any future semester.

**MSMSE TRANSFER POLICY**
No more than six graduate semester credit hours may be transferred, and these must be from accredited programs. A form with a request for courses for the current/coming semester must be submitted at the time of application. A minimum grade of 3.0 must have been achieved in the transfer courses. Courses must be completed within five (5) years after the program was started.

**MSMSE CURRICULUM**
The MSMSE curriculum requires:

- **Core Courses (7 courses)**: 22 credits
- **Thesis Option or Electives (3 courses)**: 9 credits
- **Total Credit Hours**: 31 credits
All courses with the MSE prefix were uniquely designed and developed for the MSMSE program.

**Core Courses**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5253</td>
<td>Engineering Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>EME 5213</td>
<td>Mechanical Vibrations</td>
<td>3</td>
</tr>
<tr>
<td>EME 5333</td>
<td>Advanced Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>MRE 5323</td>
<td>Modern Control Systems</td>
<td>3</td>
</tr>
<tr>
<td>EEE 5534</td>
<td>Digital Control Systems</td>
<td>4</td>
</tr>
<tr>
<td>MRE 5183</td>
<td>Mechatronic Systems I</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6183</td>
<td>Mechatronic Systems II</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives**

Students may select courses from the following:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 6913</td>
<td>Master Thesis</td>
<td>3</td>
</tr>
<tr>
<td>MSE 5143</td>
<td>Aerospace Systems Engineering</td>
<td>3</td>
</tr>
<tr>
<td>MRE 5813</td>
<td>Unmanned Aerial Vehicles</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6113</td>
<td>Analytical &amp; Adaptive Dynamics in Mechatronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6123</td>
<td>Mechanical Design of Mechatronic Sys/Robots</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6143</td>
<td>Adaptive Control in Mechatronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6153</td>
<td>Optimization in Mechatronic Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6283</td>
<td>Autonomous Wheel Power Mgt. Systems</td>
<td>3</td>
</tr>
<tr>
<td>MRE 6293</td>
<td>Intelligent Tire &amp; Vehicle Structure Mechatronics</td>
<td>3</td>
</tr>
<tr>
<td>MCS 5563</td>
<td>Intelligent Control</td>
<td>3</td>
</tr>
<tr>
<td>MCS 6513</td>
<td>Advanced Topics in Intelligent Systems</td>
<td>3</td>
</tr>
<tr>
<td>EME 6623</td>
<td>Automotive Controls Systems I</td>
<td>3</td>
</tr>
<tr>
<td>EME 7623</td>
<td>Automotive Control Systems II</td>
<td>3</td>
</tr>
<tr>
<td>EEE 5274</td>
<td>Digital Image Processing</td>
<td>4</td>
</tr>
<tr>
<td>EEE 5653</td>
<td>Digital Signal Processing</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Courses may have prerequisites, which are listed in their course descriptions.

**RESEARCH IN THE MSMSE PROGRAM**

Mechatronics students participate in research and publish papers in professional and academic journals and in the proceedings of prestigious international conferences. The Laboratory of Mechatronic Systems provides high-tech equipment for coursework and research projects. This includes projects on piezoelectric materials, advanced manufacturing techniques, and autonomous vehicles.

The Johnson Controls Vehicle Engineering Systems Laboratory’s unique 4x4 vehicle chassis dynamometer with individual roll control is a valuable component of the mechatronics course curriculum and provides the necessary support for research projects on vehicle driveline systems and control of vehicle performance, including fuel efficiency, mobility, traction and acceleration, and stability of motion.

**GRADUATE CERTIFICATE IN AERONAUTICAL ENGINEERING**

Aeronautical engineers are in growing demand as air travel becomes faster, safer, and more environmentally friendly. Increased competition in the commercial aircraft industry, new
initiatives in space exploration, the evolution of smaller aircraft and airports as alternatives to traditional airline travel, including the expanding market for personal jet aircraft known as very light jets (VLJs), are also fueling this trend. With our world becoming smaller by the day, the aeronautics industry relies on highly skilled aeronautical engineers to help meet the demands of business and pleasure travelers alike.

Lawrence Technological University’s Graduate Certificate in Aeronautical Engineering offers a strong foundation with which to enter the industry, featuring a comprehensive curriculum focused on the fundamentals of aeronautical engineering for aircraft design, analysis, and testing. Designed for mechanical engineering graduates, the aeronautical engineering program at Lawrence Tech provides students with a deeper understanding of this broad field—beyond what is covered in the mechanical engineering program. Aeronautical engineering not only focuses on the design and fluid dynamic aspects of aerospace vehicles but also on aerodynamics, structural mechanics, control systems, noise and vibrations, and engineering materials.

**GRADUATE CERTIFICATE IN AERONAUTICAL ENGINEERING ADMISSION REQUIREMENTS**
Admission to the program as a graduate student requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. A Bachelor of Science degree in mechanical engineering (or equivalent) from an ABET-accredited (or equivalent) college or university;
3. Official transcripts of all completed college work;
4. Two letters of recommendation, one from a professor in the student’s undergraduate program and/or from a corporate supervisor.

**GRADUATE CERTIFICATE IN AERONAUTICAL ENGINEERING TRANSFER POLICY**
No more than six graduate semester credit hours may be transferred, and these must be from an accredited program. Any exceptions to this policy must be approved by the certificate coordinator. A request for transfer courses to be considered must be made in writing at the time of application and must be accompanied by transcripts, course descriptions, and syllabi for each proposed transfer course. For some transfer courses, the certificate coordinator may require the applicant to demonstrate proficiency in the subject through interviews with faculty members who have expertise in the subject.

**GRADUATE CERTIFICATE IN AERONAUTICAL ENGINEERING CURRICULUM**
The 18-credit-hour Graduate Certificate in Aeronautical Engineering will be awarded upon the successful completion of the courses listed below.

**Core Courses**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 4163</td>
<td>Aeronautical Engineering Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>EME 4323</td>
<td>Applied Fluid Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>EME 5223</td>
<td>Advanced Mechanics of Materials</td>
<td>3</td>
</tr>
</tbody>
</table>

**Elective Courses (choose three)**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 4243</td>
<td>Finite Element Analysis I</td>
<td>3</td>
</tr>
<tr>
<td>EME 5103</td>
<td>Fasteners and Bolted Joints</td>
<td>3</td>
</tr>
</tbody>
</table>
GRADUATE CERTIFICATE IN ENERGY ENGINEERING

Professionals who hold a Bachelor of Science degree in engineering or the natural sciences (primarily chemistry or physics) are eligible to enroll in the Graduate Certificate in Energy Engineering program. The certificate requires the completion of 18 credit hours. The goal of the Graduate Certificate in Energy Engineering is to:

- Educate students in energy engineering, including alternative (renewable) energy sources, traditional (fossil fuel) energy sources, nuclear energy, energy management, and conservation.
- Help meet global needs with energy-educated engineers who can address the issues related to energy and the supply and demand balance of global fossil fuel resources and to transition the economy to more environmentally friendly energy systems.

GRADUATE CERTIFICATE IN ENERGY ENGINEERING ADMISSION REQUIREMENTS

To be admitted to the Graduate Certificate in Energy Engineering program requires the applicant to have already earned a Bachelor of Science degree in engineering or to have earned a Bachelor of Science in chemistry or physics with an overall GPA of 3.0 or better for their undergraduate degree. Students with related degrees may be admitted to the Graduate Certificate in Energy Engineering program as long as they meet all course prerequisites. A grade of B or better is required in all make-up and prerequisite courses for this program. All students enrolled in the Certificate in Energy Engineering core or elective courses must earn a grade of B or better in all courses in this program. Any student not complying with minimum grade requirements will prompt a review of that student’s academic standing and may result in his or her dismissal from the program.

The courses offered in this program are all College of Engineering technical electives and can typically be used as technical electives in the pursuit of an undergraduate Bachelor of Science in Mechanical Engineering or in Electrical and Computer Engineering, and most of the 5000-level courses may be used towards a Master of Science in Mechanical Engineering degree.
GRADUATE CERTIFICATE IN ENERGY ENGINEERING CURRICULUM
The Graduate Certificate in Energy Engineering requires the completion of 6 courses (18 credit hours) from the approved list of related courses. Three courses (nine credits) are required core courses, and three are elective courses (9 credits).

Core Courses

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 5373</td>
<td>Alternative Energy Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EME 5153</td>
<td>Applied Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>EME 5263</td>
<td>Energy Resources and Technologies</td>
<td>3</td>
</tr>
</tbody>
</table>

Electives (choose three)

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EME 4363</td>
<td>Thermal Fluid System Design</td>
<td>3</td>
</tr>
<tr>
<td>EME 5193</td>
<td>Solar and Wind Energy Generation Systems</td>
<td>3</td>
</tr>
<tr>
<td>EME 5163/6163</td>
<td>Fuel Cells and Hydrogen</td>
<td>3</td>
</tr>
<tr>
<td>EME 5283</td>
<td>Elements of Nuclear Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EGE 5303</td>
<td>Energy and Environmental Management 1</td>
<td>3</td>
</tr>
<tr>
<td>EGE 5323</td>
<td>Energy and Environmental Management 2</td>
<td>3</td>
</tr>
<tr>
<td>EME 5273</td>
<td>Heat Pipes</td>
<td>3</td>
</tr>
<tr>
<td>EME 5293</td>
<td>Fusion Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EME 5313</td>
<td>Biofuels and Biomass Energy Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

GRADUATE CERTIFICATE IN FIRE ENGINEERING (GCFE)
Fire engineering is a growing profession with employment opportunities in structural engineering, consulting firms, fire departments, fire equipment manufacturers, hospitals and health care centers, research facilities, and entertainment, among others.

The Graduate Certificate in Fire Engineering (GCFE) is a 15-credit hour program that is intended for individuals working as engineers in structural engineering or in fire protection. The certificate focuses on the behavior of structures and materials when exposed to fire conditions. This program is open to students holding an engineering degree in civil, mechanical, and architectural engineering or a related discipline. The topics introduced within the courses are similar to those offered by various fire protection engineering programs around the United States and Canada. These programs have been developed to teach the engineering principles of protecting people and property from fire and smoke related events. This program, however, has its roots in structural engineering, and structural applications are emphasized.

GRADUATE CERTIFICATE IN FIRE ENGINEERING ADMISSION REQUIREMENTS
Admission to the GCFE program requires the demonstration of high potential for success based on the following:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. An earned bachelor degree in one of the following or closely related disciplines: civil engineering, mechanical engineering, and architectural engineering;
3. Minimum undergraduate GPA of 3.0;
4. Three letters of recommendation (employers and professors are preferred);
5. Official transcripts of all college work;
6. Professional resume;
7. Statement of purpose.
GRADUATE CERTIFICATE IN FIRE ENGINEERING CURRICULUM
To obtain a GCFE, students are required to earn 15 credits by completing the following graduate courses:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFE 5013</td>
<td>Fundamentals of Fire Engineering</td>
<td>3</td>
</tr>
<tr>
<td>EFE 5223</td>
<td>Fire Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>EFE 5323</td>
<td>Fire Testing Methods for Materials</td>
<td>3</td>
</tr>
<tr>
<td>EFE 5233</td>
<td>Fire Modeling</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6723</td>
<td>Structural Analysis and Design for Fire Safety</td>
<td>3</td>
</tr>
</tbody>
</table>

GRADUATE CERTIFICATE IN INTEGRATED PROJECT DELIVERY (GCI PD)
Many stakeholders in the construction industry recognize the inefficiency of design-bid-build project delivery. Numerous and costly changes, contract disputes, and schedule delays render traditional general contracting a less attractive option than in the past. Integrated project delivery (IPD) methods, especially design-build, are growing in popularity precisely because they successfully address these problems.

The construction industry values professionals with some educational background in IPD methods. Additionally, there are professionals who would like to learn IPD concepts without completing a lengthy graduate degree program. This new graduate certificate caters to the needs of these two groups.

GRADUATE CERTIFICATE IN INTEGRATED PROJECT DELIVERY ADMISSION REQUIREMENTS
Admission to the GCI PD program requires:
1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. An earned bachelor’s degree in one of the following or a closely related discipline: engineering, architecture, construction management, business management, accounting;
3. Minimum undergraduate GPA of 3.0;
4. Official transcripts of all completed college work;
5. Professional resume.

GRADUATE CERTIFICATE IN INTEGRATED PROJECT DELIVERY CURRICULUM
To obtain a GCI PD, students are required to earn 12 credits by completing the following graduate courses:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5213</td>
<td>Principles of Design-Build Project Delivery</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5273</td>
<td>Construction Law</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5283</td>
<td>Conceptual Estimating</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6213*</td>
<td>Issues in Integrated Eng. Management</td>
<td>3</td>
</tr>
</tbody>
</table>

*Students must have a minimum grade of C- in ECE 5213 and ECE 5273 before taking this class.

GRADUATE CERTIFICATE IN STRUCTURAL ENGINEERING ADMISSION REQUIREMENTS
Admission to the GCSE program requires:
1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. An earned bachelor’s degree in one of the following or closely related disciplines; Civil Engineering or Architectural Engineering;
3. Minimum undergraduate GPA of 3.0 at the time of application and after completing undergraduate degree requirements;
4. Demonstration that prerequisite courses prior to the courses in the chosen degree program have been completed;
5. Official transcripts of all completed college work

The Director of Civil Engineering Graduate Programs in consultation with the Dean of Graduate Studies may allow provisional admission to applicants who do not meet all of the above criteria. Special considerations may be made available for students from IMT.

GRADUATE CERTIFICATE IN STRUCTURAL ENGINEERING CURRICULUM
To obtain a GCSE, students are required to earn 12 credits by completing four of the five following graduate courses:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5703</td>
<td>Design of Timber Structures</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5733</td>
<td>Structural Masonry Design</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5763</td>
<td>Advanced Composite Materials and their use in Structures</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5773</td>
<td>Advanced Steel Design</td>
<td>3</td>
</tr>
<tr>
<td>ECE 6733</td>
<td>Finite Element Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>

Note:
If students do not have the required prerequisites from Undergraduate coursework, they will be evaluated on a case by case basis.

GRADUATE CERTIFICATE IN TELECOMMUNICATIONS ENGINEERING (GCTE)
This certificate program is intended for those who wish to pursue a career or advance their career in the telecommunications industry. The certificate program is open to students who have a bachelor degree in electrical engineering, computer engineering, computer science, or a closely related field.

GRADUATE CERTIFICATE IN TELECOMMUNICATIONS ENGINEERING ADMISSION REQUIREMENTS
Admission to the Graduate Certificate in Telecommunications Engineering requires:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. A Bachelor of Science degree in electrical engineering, computer engineering, computer science, or a closely related field from an accredited university (minimum 3.0 GPA);
3. Official transcripts of all completed college work;
4. Two letters of recommendation from supervisors;
5. A resume, including professional experiences and extracurricular activities.

GRADUATE CERTIFICATE IN TELECOMMUNICATIONS ENGINEERING CURRICULUM
Students must choose four courses (16 credit hours) from the following list to earn the certificate.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEE 5444</td>
<td>Digital Communications</td>
<td>4</td>
</tr>
<tr>
<td>EEE 5654</td>
<td>Digital Signal Processing</td>
<td>4</td>
</tr>
</tbody>
</table>
GRADUATE CATALOG 2018–19

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EEE 6444  Software Defined Radio  4
EEE 6784  Advanced Communication Theory  4

GRADUATE CERTIFICATE IN TRANSPORTATION ENGINEERING ADMISSION REQUIREMENTS

Admission to the GCTE program requires:

1. Submission of the Application for Graduate Admission (www.ltu.edu/apply);
2. An earned bachelor’s degree in one of the following or closely related discipline: Civil Engineering;
3. Minimum undergraduate GPA of 3.0 at the time of application and after completing undergraduate degree requirements;
4. Demonstration that prerequisite courses prior to the courses in the chosen degree program have been completed;
5. Official transcripts of all completed college work

The Director of Civil Engineering Graduate Programs in consultation with the Dean of Graduate Studies may allow provisional admission to applicants who do not meet all of the above criteria. Special considerations may be made available for students from IMT.

GRADUATE CERTIFICATE IN TRANSPORTATION ENGINEERING CURRICULUM

To obtain a GCTE, students are required to earn 12 credits by completing four of the five following graduate courses:

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Subject</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 5103</td>
<td>Applied Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5813</td>
<td>Pavement Analysis and Performance</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5823</td>
<td>Pavement Management</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5833</td>
<td>Traffic Engineering</td>
<td>3</td>
</tr>
<tr>
<td>ECE 5843</td>
<td>Highway Safety Engineering</td>
<td>3</td>
</tr>
</tbody>
</table>

Note:
If students do not have the required prerequisites from Undergraduate coursework, they will be evaluated on a case by case basis.
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Mitchell Clauw, BSME’86
Vice President and Head of Global Pre-Programs and Program Management, Fiat Chrysler Automobiles

Douglas E. Ebert
Chairman of the Board, Lawrence Technological University; Former Chief Operating Officer, Cranbrook Educational Community

Elizabeth Howell, BSEE’92
Independent Consultant, PYRACAP, Inc.; Former Vice President of Operations, ITC Holdings Corp.

Raymond R. Khan, BSEE’70
Former Sr. Vice President, Chief Information Officer, Blue Cross Blue Shield of Michigan

Marcy Klevorn
Executive Vice President and President of Mobility, Ford Motor Co.

Larry D. Lyons
Former Vice President, Car and Minivan Product Team, Chrysler Corp.

Jean Meyer
Chief Operating Officer, Ascension Michigan

Howard B. Padgham
Former Vice President, Advance Manufacturing Engineering Power Train, Chrysler Corp.

Lloyd E. Reuss
Former President, General Motors Corp.

Barbara Samardzich
Former Chief Operating Officer, Ford of Europe

Victor A. Saroki, BSAr’79, BA’s’80
President, Saroki Architecture

John G. Smith
Chairman, Board of Directors, Ross Controls
Lawrence Technological University

Daniel W. Winey, BSAr’74, BAr’75, MAr’15
Chief Operating Officer, Gensler

David B. Wohleen
Former President, Electrical, Electronics Safety and Interior Sector, Delphi Corp.

Cary B. Wood, MSIO’96
President and Chief Executive Officer, Angelica Corp.

Ex Officio
Virinder K. Moudgil
President and Chief Executive Officer, Lawrence Technological University

Advisory Member of the Corporation

Richard H. Cummings
Former Sr. Vice Chairman, NBD Bank & NBD Bancorp, Inc.
Administration

President and Chief Executive Officer
Executive Assistant to the President
Director, Information Technology Service Delivery

Virinder K. Moudgil
Karen McCardle
Tim Chavis

University Advancement
Vice President, University Advancement
Executive Director, Corporate and Foundation Relations
Executive Director, Outreach and Special Events
   Director, Alumni Relations
Director, Annual Giving
Director, Major Gifts

Kristen R. DeVries
Nadia Fadel-Bazzi
Robin G. Leclerc
Krysta Coleman
Lauren Seebold
Julie Vulaj

Vice President, Marketing and Public Affairs
Director, University Communications and Academic Editor
   Art Director
   Manager, Advertising and Video
Director, Media Services
   Assistant Director, Media Services
   Manager, Instructional and Graphics Support
Director, Web Services
Managing Editor, University News Bureau, Media Relations
Digital Media Specialist

Bruce J. Annett, Jr.
Renée Tambeau
Sofia Lulgjuraj
Sharon MacDonell
Walter G. Bizon
T. Sam Vukonic
Norman J. Plant
Christian Forrest
Matthew Roush
Brian Breen

Academic Services
Provost and Chief Academic Officer
Assistant Provost
Executive Director, Corporate and Community Partnerships
Director, eLearning Services
Director, University Library
Director, Professional Development Center
Director, Help Desk Services
Coordinator, Entrepreneurship

Maria J. Vaz
Jim Jolly
Mark Brucki
Lynn Miller-Wietecha
Gary R. Cocozzoli
Benjamin Benson
Charlene Ramos
Gina Zasadny

Enrollment Services
Assistant Provost, Enrollment Management
Director, Academic Advising
University Registrar and Director, Institutional Research and Academic Planning
   Associate Registrar
   Interim Assistant Director, Institutional Research
Director, Admissions
   Associate Director, Admissions
   Assistant Director of Admissions
Director, Financial Aid
Director, Leadership Programs

Lisa R. Kujawa
Leslie Michalik
Noreen Ferguson
Jennifer Wrobel
Megan Hollowell
Jane T. Rohrback
Kristi Webster
Aubriex Cason
Susie Poli-Smith
Brian Craig

Finance and Administration
Vice President, Finance and Administration
   Controller
Executive Director, Human Resources
   Senior Manager, Benefits and HRIS
Director, Campus Facilities
   Assistant Director, Campus Facilities
Executive Director, Campus Safety
   Assistant Director
University Architect
Manager, University Bookstore

Deshawn Johnson
Starlett Sinclair
Carey G. Valentine
Matt Maracle
Steve Bogdalek
Timothy McGillivary
Joseph C. Veryser
Adria Rahn

Administration of the Colleges

Architecture and Design
Dean of Architecture and Design
   Associate Dean
   Chair, Architecture
   Associate Chair, Architecture
   Chair, Art and Design

Karl Daubmann
Scott Shall
James Stevens
Martin Schwartz
Steven Rost

Arts and Sciences
Interim Dean of Arts and Sciences
   Chair, Humanities, Social Sciences, and Communication
   Chair, Mathematics and Computer Science
   Chair, Natural Sciences
   Associate Chair, Natural Sciences
   Director, English as a Second Language
   Director, Writing Proficiency Exam
   Assistant Dean for Research
   Director, Media Communication Program
   Director, Psychology Program
   Director, Computer Science Programs
   Director, Technical and Professional Communication Program
   Director, Nursing Program
   Director, Honors Program and Quest Program
   Director, Pathways Program

Glen A. Bauer
Jason Barrett
Patrick Nelson
Jeffery Morrissette
Julie Zwiesler-Vollick
Nawal Abbas
Jamie Hobart
Lior Shamir
Jody Gaber
Franco Delogu
Ghassan Azar
Corinne Stavish
Marie Therese Jamison
Shannon Timmons
Ty Faulkner

Business and Information Technology
Dean of Business and Information Technology
   Director, Business Programs
   Director, Doctor of Business Administration
   Director, Center for Leadership and SSCF Program

Bahman Mirshab
Minakhi (Mina) Jena
Jacqueline Stavros
Thomas Marx

Engineering
Dean of Engineering
   Associate Dean for Undergraduate Programs
   Associate Dean, Graduate Studies and Research
   Chair, Civil and Architectural Engineering
   Interim Chair, Electrical and Computer Engineering
   Chair, Engineering Technology
   Chair, Mechanical Engineering
   Chair, Biomedical Engineering
   Director, Architectural Engineering

Nabil Grace
Selin Arslan
Elin Jensen
Edmund Yuen
Elin Jensen
Ken Cook
Badih Jawad
Gerald LeCarpentier
Filza Walters
Student Affairs

Dean of Students
Assistant Dean of Students
  Disability Services
    Disability Services Advisor
First-Year Programs
Director, International Programs
  Assistant Director
Director, Academic Achievement Center
  Assistant Director
Director, Campus Dining
Director, Career Services
  Assistant Director
  Career Services Advisor
University Psychologist, Clinical Counseling Services
  Clinical Counselor
Program Coordinator, KCP Grant
  Director, Recreation, Athletics, and Wellness
    Assistant Director
    Sports Information Director
Director, Student Engagement
  Student Engagement Coordinator
  Student Engagement Coordinator
Director of Residence Life, University Housing
  Assistant Director and Residence Hall Coordinator, Reuss Hall
Residence Hall Coordinator, South Hall
Residence Hall Coordinator, Donley Hall
Residence Hall Coordinator, East Hall

Kevin Finn
Cyndi Spotts
Cyndi Spotts
Samantha Rohrback
Cyndi Spotts
Kalie Davio
Laura Affer
Gladys Aviles
VaNessa Thompson
Nancy Thomas
Margaret (Peg) Pierce
Kerri Seach
Kayla Bottrell Harteg
Jeff Betman
Lusine Hambardzumyan
Eula Muckleroy
Scott Trudeau
Don Gillette
Jay Nichols
Brian Craigo
Eula Muckleroy
Jamie Vassel
Kim Jerdine
Laura Wiedenfeld
Shannen Stiffler
Marissa Gonzalez
TBD
Faculty Committees

**Academic Standing**
The Academic Standing Committee consists of the dean of students, the director of admissions, and representatives from the four colleges. Members are appointed by the provost upon recommendation of the deans, and the group is chaired by the dean of students. The committee acts on petitions of students who have been suspended from the University for academic reasons.

**Additional Credit Review**
The Additional Credit Review Committee is chaired by the registrar and has a faculty representative from each of the four colleges. It reviews all applications from students for additional transfer credit and for guest credit.

**Benefits**
The Benefits Committee is made up of an appointee from the Faculty Senate, an academic administrator, an administrative manager, and a staff member and is chaired by the director of human resources. It reviews and recommends changes to the University benefit package to the vice president of finance and administration.

**Conflict Resolution**
The Conflict Resolution Committee is comprised of 15 members from faculty, staff, and administration who support the Conflict Resolution Policy by addressing work-related concerns brought before the committee that have not been resolved at the department/college level.

**Council of Academic Deans**
The Council of Academic Deans consists of the four college deans, the dean of students, and the dean of graduate programs. The council provides the principal advice to the provost on academic and administrative affairs.

**Faculty Academic Misconduct**
The Faculty Academic Misconduct Committee is a standing committee to advise the provost on issues and situations involving faculty academic misconduct. The committee is comprised of four members. All four colleges are represented by one tenured faculty member.

**Faculty Councils**
Organized to meet its own structural requirements, each college has a Faculty Council that advises the dean on academic and other matters. The councils are independent of administrative channels and may consider any issues they believe appropriate but are particularly involved with faculty personnel and curricular concerns within their colleges. Membership of the Faculty Councils consists of full-time college faculty. Advice of Faculty Councils is not binding on academic deans, but it is considered significant to administrative decision making.

**Faculty Senate**
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 long-term success of the University. Membership of the Faculty Senate consists of regular full-time faculty on annual contracts.
Financial Aid and Scholarships Committee
The Financial Aid and Scholarships Committee reviews all applications for financial aid and scholarship. This committee evaluates all necessary criteria that specific scholarships require including financial need, course of study, credits completed and cumulative grade point average.

Graduate Council
The Graduate Council consists of faculty with program experience or interests at the graduate level, and of observers from academic-service functions. All members are appointed by the provost upon the recommendation of the college deans. This group reviews and recommends graduate policies and programs. The dean of graduate programs is an ex-officio member.

Library
The Library Committee acts as an advisory board for the director of the library on service and policy issues. It consists of six faculty members, one each from architecture, engineering, humanities, management, natural sciences, and technology, one of whom serves as chairperson. Members are appointed by the deans. The director of the library is an ex-officio member.

Research Support Services
The Research Support Services Committee is made up of the assistant provost, a representative of the vice president for finance and administration, a representative of the office of corporate and community partnerships, and four full-time faculty members appointed by the dean of each college. This committee functions to identify and recommend improvements and support for Lawrence Tech faculty and students initiating and conducting research.

Standing Committee on Tenure Removal
A panel of the Standing Committee on Tenure Removal, selected in accordance with Section 2 of the Faculty Handbook, hears all cases brought under section 2.10.7 for removal of tenure from a tenured faculty member.

University Assessment
The Committee on University Assessment coordinates policy and procedures related to both college and University assessment programs. The committee’s principal responsibility is to promote improvements in learning through implementation of the University’s plan for academic assessment. The committee is advisory to the Council of Academic Deans, and its members are appointed by the dean of each college. The chairperson is appointed by the provost.