

**Articulated Plan of Study**  
**Macomb Community College & Lawrence Technological University**  
**A.A.S. in Manufacturing Technology to a B.S. in Engineering Technology**

<u>MACOMB COMMUNITY COLLEGE</u>	<u>LAWRENCE TECHNOLOGICAL UNIVERSITY</u>
<b>AAS + Certificates + MACRAO General Education: 70 Credit Hours</b>	<b>Application of Macomb courses to the B.S.E.T.</b>
<p style="text-align: center;"><b>Dual Certificate Credits: (44 credit hours)</b></p> <ul style="list-style-type: none"> <li>➤ <b>Computer Numerically Controlled Machinist</b></li> <li>➤ <b>Computer Aided Manufacturing Technologist</b></li> </ul> <p>ATDD 1950 Drafting - Essentials            ATAP 1030 Feeds, Speeds &amp; Advanced Tools            ATAP 2010 Drafting-2D CAD/ Master CAM            ATAP 2310 CNC Mill G&amp;M Program            ATAP 2320 CNC Lathe G&amp;M Programming            ATAP 2330 EDM RAM G&amp;M Programming &amp; Machining            ATAP 2340 EDM WIRE G&amp;M Programming &amp; Machining            ATMT 1150 Machine Theory- Machine Tool Lab 1            ATMT 1160 Machine Theory- Machine Tool Lab 2            ATMT 2250 Machine Theory / Modern Metal Removal Processes            ATMT 2270 Computer Numerical Control Concepts 1            ATMT 2280 Computer Numerical Control Concepts 2            ATAP 2020 Art to Part-Digital Art to 3D CNC Machining            ATAP 2030 2D Master CAM Mill Programming            ATAP 2310 CNC Mill G&amp;M Programming &amp; CNC Machining            ATAP 2350 3D Master CAM Die/ Mold CNC Machining            ATAP 2360 3D CIMATRON CAD/CAM Die Mold Machining            ATAP 2370 3D Computer Aided Molding / Electrode Design            ATAP 2380 Rapid Prototyping &amp; Reverse Engineering            ATMT 1750 Plastic Product Design &amp; Tooling            ATAP 2911 Advanced CNC Mill</p>	<p style="text-align: center;"><b>Dual Certificate Credits: (44 credit hours)</b></p> <ul style="list-style-type: none"> <li>➤ <b>Computer Numerically Controlled Machinist</b></li> <li>➤ <b>Computer Aided Manufacturing Technologist</b></li> </ul> <p style="text-align: center;">30 Technology Specialty Credits</p> <p style="text-align: center;">6 Technical Elective Credits</p> <p style="text-align: center;">8 General Elective Credits</p> <p style="text-align: center;">6 Non Transferable Credits</p> <p>NOTE: Six credits required by Macomb for the Associate Degree are not covered by this agreement. They are as follows: ATAM 1150, ATAM 2150 and a PHED course.</p>
<b>MACRAO General Education</b>	<b>Eliminates Course for Course Requirements</b>
<p><b>English: (6 credits required)</b>            ENGL 1180 or 1210            ENGL 1190 or 1220</p> <p><b>Science &amp; Math Requirement (8 credits required)</b></p> <ul style="list-style-type: none"> <li>➤ At least one course must have a lab.</li> <li>➤ Courses must be taken in more than one area.</li> <li>➤ <b>LTU requires that you use either:</b>  <b>MATH 1420+1430 or MATH 1450</b></li> <li>➤ <b>LTU highly recommends that you use</b>  <b>PHY 1180 for the Science course.</b></li> </ul> <p><b>Social Science (8 credits required)</b>            Select courses from the following subject areas:            ANTH, ECON, GEOG, PSYC, POLS, SOCY, SOSC, HIST</p> <p><b>Humanities (8 credits required)</b>            Select courses from the following subject matter:            ARTT, GERM, FREN, SPAN, ENGL, MUSC, PHIL, THEA, ARAB, ITAL</p>	<p style="text-align: center;"><b>30 Semester Credit Hours</b></p> <p style="text-align: center;">The MACRAO Agreement Between State of Michigan 2 &amp; 4 Year Colleges Covers the completion of General Education</p> <p>NOTE: At the time of transfer to LTU, you will need to request that the transcript you are sending to LTU be stamped "<b>MACRAO Agreement Satisfied</b>" Work with a counselor to assure proper completion.</p>

## BSET DEGREE COMPLETION AT LAWRENCE TECHNOLOGICAL UNIVERSITY

	Cr Hrs		Cr Hrs
<b>Technology Core at LTU: (29 credits)</b> HRM 4013 Employee Management Relations MGT 2203 Management & Supervision TOM 3113 Operations Management TEE 3103 DC/ AC Circuits TIE 2063 MFG Process TME 2163 Engineering Economics TME 4103 Engineering Materials 2 TME 2053 Dynamics <b>OR</b> TME 3133 Engineering Mechanics TIE 4115 Senior Project		<b>Remaining A&amp;S Courses at LTU: (26 Cr Hrs)</b> LT/SSC/ PSY Junior/ Senior Elective CHM 3144 Fundamentals of Chemistry PHY 1083 + 1101 Technical Physics 2 + Lab MCS 1023 Technical Computer Applications MCS 1123 Technical Mathematics 2 MCS 2313 Tech. Calculus MCS 2323 Applied Differential Equations MCS 2023 Statistical Methods	
	3 Cr		3 Cr
	3 Cr		4 Cr
	3 Cr		4 Cr
	3 Cr		3 Cr
	3 Cr		3 Cr
	3 Cr		3 Cr
	3 Cr		3 Cr
	3 Cr		3 Cr
	3 Cr		3 Cr
	5 Cr		3 Cr
		COM 1001 University Seminar: Articulation Students are Excused for this requirement.	
<b>Credit Summary for this Plan:</b>		<b>Maximum Transferable MCC Credits:</b>	<b>70</b>
		<b>Minimum Credits at LTU:</b>	<b>55</b>
		<b>Minimum Credits to Graduate with the BSET</b>	<b>125</b>
<b>This program plan is for students completing:</b>		<ul style="list-style-type: none"> <li>➤ <b>Associate of Applied Science</b></li> <li>➤ <b>Includes Dual Certificates: CAM &amp; CNC</b></li> <li>➤ <b>MACRAO General Education</b></li> </ul>	
<b>Other Available Options Include:</b>		<ul style="list-style-type: none"> <li>➤ <b>Associate Degree + 1 Certificate</b></li> <li>➤ <b>Associate Degree + 1 Certificate +MACRAO</b></li> </ul>	<b>Varies</b>

- **This comprehensive guide is based on the MCC 2006-07 Catalog and the LTU 2005-07 Catalog.**