

## Industry and Technology Institutional (ILO), Program (PLO), and Course (SLO) Alignment

Use the checklists provided to evaluate your SLO statements. Please add or revise PLO and SLO statements directly on this form.

Or, if you prefer to make changes on the electronic version contact your Facilitators (Pati Fairchild or SueEllen Warren) or your Division Administrative Assistant (Denise Spurlock) to have the grid emailed to you.

When SLO, PLO and ILO alignment changes are made, please make changes in red.

Return the completed grid to your Facilitator by Friday, Nov 8<sup>th</sup>

<b>Program: Automation, Robotics, and Manufacturing Engineering Technology (ETEC), Manufacturing Technology (MTEC), and Machine Tool Technology (MTT)</b>		<b>Number of Courses:</b> 36	<b>Semester Updated:</b> Fall 2012	<b>Submitted by:</b> E. Carlson					
<b>ILO Rating Rubric</b>									
<p><b>4</b> - A major focus of the course. Direct instruction is provided. Students are evaluated multiple times (and possibly in various ways) throughout the course.</p> <p><b>3</b> - An important part of the course. Some direct instruction is provided and students are evaluated on the concepts once or twice within the course.</p> <p><b>2</b> - Only a minor focus of the course. Some instruction is given in the area but students are not formally evaluated on the concepts.</p> <p><b>1</b> - May be tangentially part of the class, but is not directly taught or evaluated or is not part of the course at all.</p>									
<b>Institutional Learning Outcomes (ILOs)</b>	I. Content Knowledge	II. Critical, Creative, and Analytical Thinking	III. Communication and Comprehension	IV. Professional and Personal Growth	V. Community and Collaboration	VI. Information and Technology Literacy			
<b>Overall Rating</b> <small>Rate each from 1-4 based on above rubric.</small>	4	3	1	3	1	2			
<b>ETEC Technology Program Level SLOS</b> A minimum of 3 and maximum of 6 PLOS. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive PLO statements that reflect the program mission and covers the major components and the overarching goals of the program, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the PLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations. <i>Include PLO #, Short Title, and PLO statement. Example: PLO #2 Ethics and Professionalism</i>				<b>ILOs to PLOs Alignment</b> (Rate 1-4)					
				I	II	III	IV	V	VI
<b>ETEC PLO #1 Phases of Product Lifecycles</b> Upon completion of the courses in this discipline, the student will be able to identify the phases of a product lifecycle.				4	4	2	1	1	2
<b>ETEC PLO #2 New Product Tests</b> Upon completion of the courses in this discipline, the student will be able create a list of tests that a new product should be subjected to.				3	4	2	1	1	1
<b>ETEC PLO #3 Solving Engineering Problems</b> Students will apply principles from mathematics, physics, and chemistry to solve applied problems in engineering.				3	4	2	1	1	1

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<b>MTEC Technology Program Level SLOs</b> A minimum of 3 and maximum of 6 PLOS. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive PLO statements that reflect the program mission and covers the major components and the overarching goals of the program, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the PLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations. <i>Include PLO #, Short Title, and PLO statement. Example: PLO #2 Ethics and Professionalism</i>				<b>ILOs to Course SLOs Alignment</b> (Rate 1-4)							
				I	II	III	IV	V	VI		
				4	2	1	2	2	2		
<b>MTEC PLO #1 Digital and Analog Sensor Technologies</b> Upon completion of the courses in this discipline, the student will be able to identify different digital and analog sensor technologies.											
<b>MTEC PLO #2</b>											
<b>MTEC PLO #3</b>											
<b>MTEC Technology Course Level SLOS</b> A minimum of 3 and maximum of 6 SLOs. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive SLO statements that cover the major components and the overarching goals of the course, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the SLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations. <i>Include SLO #, Short Title, and SLO Statement Example: Math 170 SLO #3 Vectors and Complex Numbers.</i>			<b>Course to PLO Alignment</b> <i>Mark with an X if you will use the course when assessing your PLO.</i>			<b>Core Competencies to Courses Alignment</b>					
						I	II	III	IV	V	VI
			P1	P2	P3						
<b>MTEC 70 Basic Robotics: SLO #1 Four-Block Flow Chart</b> Students correctly draw a 4 block flowchart of a computer/robot including: input, processor, memory, and output.			X			4	2	1	2	2	2
<b>MTEC 70 Basic Robotics: SLO #2</b>											
<b>MTEC 70 Basic Robotics: SLO #3</b>											
<b>MTEC 75 Integrated Robotic and Automated Technologies: SLO #1 Programming a Robot</b> Students will correctly program a robot to travel 5 feet turn 180 degrees and return to the start point.			X			4	2	1	2	2	2
<b>MTEC 75 Integrated Robotic and Automated Technologies: SLO #2</b>											
<b>MTEC 75 Integrated Robotic and Automated Technologies: SLO #3</b>											

A minimum of 3 and maximum of 6 SLOs. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive SLO statements that cover the major components and the overarching goals of the course, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the SLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations.

*Include SLO #, Short Title, and SLO Statement      Example: Math 170 SLO #3 Vectors and Complex Numbers.*

MTEC 75A Integrated Robotic and Automated Technologies I: SLO #2

**MTEC 75B Integrated Robotic and Automated Technologies II: SLO #1 Programming a Robot** Students will correctly program a robot to travel a total of 10 feet. Within the travel the robot will reach maximum velocity by smoothly accelerating and deaccelerating.

**MTEC 75B Integrated Robotic and Automated Technologies II: SLO #2**

MTEC 75B Integrated Robotic and Automated Technologies II: SLO #3

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<b>MTT Technology Program Level SLOs</b> A minimum of 3 and maximum of 6 PLOs. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive PLO statements that reflect the program mission and covers the major components and the overarching goals of the program, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the PLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations. <i>Include PLO #, Short Title, and PLO statement. Example: PLO #2 Ethics and Professionalism</i>					<b>ILOs to Course SLOs Alignment</b> (Rate 1-4)								
					I	II	III	IV	V	VI			
<b>MTT PLOI #1 Prints and Shop Calculations</b> Upon completion of a course of study in Machine Tool Technology, a student will demonstrate an ability to read prints and be proficient at shop calculations.					4	3	1	2	2	2			
<b>MTT PLO #2 Trouble Shooting</b> Upon completion of a course of study, a Machine Tool Technology student will be able to trouble shoot machine tool problems using proper set up technique, RPMs and feed calculations.					4	3	1	2	2	2			
<b>MTT PLO #3 Basic Safety</b> Upon a completion of a course of study in Machine Tool Technology, a student will practice safety in basic machine tool operations including lathe, milling, grinding machines and hand tools.					4	3	1	2	2	2			
<b>MTT PLO #4 Preparing for the Job Market</b> Upon a completion of a course of study, Machine Tool Technology will successfully compete for jobs in the machine tool technology job market					4	2	1	2	2	2			
<b>MTT Course Level SLOs</b> A minimum of 3 and maximum of 6 SLOs. There are, however, exceptions. For example, if department faculty have developed one or two comprehensive SLO statements that cover the major components and the overarching goals of the course, they may present them to their Dean and Facilitator for approval as is. In cases where the facilitator or dean or faculty disagree with the rigor of the statements, the SLO statement will be forwarded to the Assessment of Learning Committee (ALC) for review and recommendations. <i>Include SLO #, Short Title, and SLO Statement Example: Math 170 SLO #3 Vectors and Complex Numbers</i>				<b>Course to PLO Alignment</b> <i>Mark with an X if you will use the course when assessing your PLO.</i>				<b>ILOs to Course SLOs Alignment</b> (Rate 1-4)					
				P1	P2	P3	P4	I	II	III	IV	V	VI
<b>MTT 2 Manufacturing Print Reading SLO #1: Orthographic Orientation.</b> Student will correctly sketch a part in orthographic orientation.				X				4	3	1	2	2	2
<b>MTT 2 Manufacturing Print Reading SLO #2 :</b> Demonstrate basic understanding or Multi-View Orthographic drawings, including part visualization and interpretation and the mechanics of: dimensioning, tolerancing and drawing.				X				4	3	1	2	2	2
<b>MTT 2 Manufacturing Print Reading SLO #3 Total Position Tolerance</b> Gain a basic understanding of GD&T (Geometric Dimensioning and Tolerancing) practices. Presented with a Feature Control Frame, students will calculate total positional tolerance of a hole utilizing Maximum Material Condition, Least Material Condition and Regardless of Feature Size Modifiers.				X				4	2	1	2	2	4

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