

**CYPRESS COLLEGE
CURRICULUM COMMITTEE
Tuesday, November 20, 2018
3:00 p.m.**

**MINUTES
(approved 11-27-18)**

PRESENT: Silvie Grote (chair), Allison Gotoh, Jane Jepson, Danny Lind, Marcus McMillan, Joyce Peacock, Jacquelyn Rangel, Kathleen Reiland, Ann Solis, Carlos Urquidi
Kathleen McAlister (for LA), Marredda Williams (for HS)

ABSENT: Mike Kasler, Joseph Melodia, Jane Walker

GUESTS: Massoud Saleh, Nicole Ledesma, Holly Iris, Eldon Young, Christie Diep, Craig Goralski, Bryan Seiling, Kurt Augsburger

Recorder: Terry Carpenter

Call to Order: by Silvie Grote at 3:05 pm

Establish Quorum and Acknowledge Alternates

Adoption of the Agenda: MSP

Approval of *November 6, 2018 minutes: MSP 9-0-2*

Public Commentary (3 minutes per speaker)

Eldon Young provided information regarding the new Advanced English Skills Lab course ENGL 010LC and the proposed revisions to ENGL 060 C and ENGL 100 C. These were discussed in the Language Arts Division due to the need for AB 705 compliance by Fall 2019. The curriculum was voted approved by the majority of the faculty. ENGL 057 C and ENGL 058 C are being eliminated.

Craig Goralski thanked the committee for all their work on curriculum. He asked for the following items to be considered when making a decision on the curriculum.

- 1) Is the Curriculum AB 705 compliant
- 2) Is it teachable
- 3) Does it serve students

Craig asked that the committee review the items as usual since they are the experts.

Bryan Seiling spoke about the faculty experts in their specific fields and asked the committee to listen to them. He mentioned the Fullerton curriculum has already been Board approved and the need for us to comply with AB 705. Bryan thanked everyone for all their hard work on the committee.

Christie Diep spoke about additional options for compliance to AB 705. She

prelaunched a new course yesterday, ENGL 101 C Enhanced College Writing, 5 units. Fullerton has this course approved along with a tutor in the classroom, for the semester. The cost and funds for this have not been determined.

Massoud Saleh thanked the committee for all their work on the ENGT courses and programs. He explained the new ENGT program and the CTE Strong Workforce funding. He described this new field in California, the market demand and provided a handout with all the statistics. The courses align with Chico and Channel Islands that is in the process of their certification.

Nicole Ledesma addressed the 4 new MATH skills courses. She thanked the committee for fast tracking the curriculum. MATH 010 C, MATH 015 C, MATH 020 C, MATH 024 C courses are being eliminating. MATH 040 C and MATH 041 C will still be taught.

Chair Report

Silvie indicated we do not have speakers scheduled for this meeting.

Jacky provided an update on the programs and certificates that have been approved and the status of the remaining submittals.

Silvie reminded the committee that the last Senate agenda had an item regarding the Curriculum process and the need for it to be re-examined. She asked the Reps if they want to be responsible to bring this to their Divisions and report back or should it be handled in collaboration with the Department Chairs. Silvie would like them to let her know at the Curriculum meeting next Tuesday.

The DE Rubric that was discussed at our last meeting should be reviewed and shared with faculty and then it will be voted on next Tuesday.

Silvie attended the Fall Curriculum meeting that was hosted by Mount SAC last Saturday. AB 705 and Title 5 Regulations were discussed at this meeting and Silvie shared the slides with the committee.

Silvie asked the committee if they would like to suspend the Robert's rule of order regarding discussion and that we could have multiple for or against discussion instead.
ACTION: MSP

ENGL 010LC – discussion:

1. students cannot be required to take pre level courses
2. looking into ENGL 101 as option for fall 2020, embedded tutor expense
3. content for the core exceeds the unit value of the course

MATH 011 C, MATH 012 C, MATH 013 C, MATH 014 C – discussion:

1. great model
2. cut off GPA? Math will provide GPA guidelines that will be entered into the Requisite Analysis screen otherwise the college will use “default” guidelines provided by the state.

Other:

Jacky is working on a contract for students to sign saying they do not want to take ENGL 100 C level and they want a lower level course.

NEW COURSES					
COURSE ID	ACTION TAKEN	CLASS SIZE	CLASS SIZE JUSTIFICATION	EFF DATE	JUSTIFICATION
ENGL 010LC Advanced English Skills Lab Units: .50 Lecture: 0 Laboratory: 1.50 ACTION: MSP 9-1-1	* New Course * Prerequisite: Appropriate placement using current assessment process. * Corequisite: ENGL 100 C or ENGL 100HC * Hybrid only * Pass/No Pass * Credit – Not Degree Applicable	20	This course requires one-on-one and low instructor/student ratio. Labs in which the instructor provides extensive individualized feedback/evaluation on a regular basis.	2019 Fall	This course is geared toward students who have basic skills needs such that they need additional support in order to succeed in a transfer-level English course.
ENGT 103 C Introduction to Embedded Systems Units: 3 Lecture: 3 Laboratory: 1 ACTION: MSP	* New Course * Prerequisite: None * Distance Education and Hybrid * CSU Transfer	25	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Fall	New course for new AS degree program in Mechatronics, Robotics and Automation.
ENGT 105 C Instrumentation and Process Control Units: 3 Lecture: 3 Laboratory: 1 ACTION: MSP	* New Course * Prerequisite: None * Distance Education and Hybrid * CSU Transfer	25	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Fall	New course for new AS degree program in Mechatronics, Robotics and Automation.
ENGT 107 C Electricity and Electronics Units: 3 Lecture: 3 Laboratory: 2 ACTION: MSP	* New Course * Prerequisite: None * Distance Education and Hybrid * CSU Transfer	25	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Fall	New course for new AS degree program in Mechatronics, Robotics and Automation.

<p>ENGT 109 C Industrial Design and Graphics Units: 4 Lecture: 3 Laboratory: 3</p> <p>ACTION: MSP</p>	<p>* New Course * Prerequisite: None * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 115 C Electric Motors and Controls Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 103 C and ENGT 107 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 120 C Mechanical Systems Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 103 C and ENGT 105 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 125 C Hydraulic and Pneumatic Systems Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 103 C and ENGT 105 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 150 C Digital Fundamentals and PLC Programming Units: 4 Lecture: 4 Laboratory: 2</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 103 C and ENGT 107 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>

<p>ENGT 160 C Industrial Data Network and HMI Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 103 C and ENGT 150 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 210 C Principles of Robotics Systems Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisite: ENGT 103 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 225 C Robot and Automation Programing Units: 4 Lecture: 3 Laboratory: 3</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 150 C and ENGT 160 C and ENGT 210 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 240 C Advanced Robotics Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 109 C and ENGT 225 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 250 C Industrial Maintenance and Safety Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 115 C and ENGT 120 C and ENGT 125 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>

<p>ENGT 255 C Integrated Automation Systems Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisite: ENGT 160 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 265 C Manufacturing Operation Management Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisite: ENGT 109 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>ENGT 290 C Industry 4.0, IIoT, Digitalization Units: 3 Lecture: 3 Laboratory: 1</p> <p>ACTION: MSP</p>	<p>* New Course * Corequisites: ENGT 255 C and ENGT 265 C * Distance Education and Hybrid * CSU Transfer</p>	25	<p>Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.</p>	2019 Fall	<p>New course for new AS degree program in Mechatronics, Robotics and Automation.</p>
<p>MATH 011 C Skills for Finite Math Units: 2 Lecture: 2 Laboratory: 0</p> <p>ACTION: MSP</p>	<p>* New Course * Prerequisite: Appropriate placement * Corequisite: Concurrent enrollment in MATH 115 C * Distance Education and Hybrid * Pass/No Pass</p>	30	<p>Class time focuses on individualized instruction, student presentation time, and/or group learning.</p>	2019 Fall	<p>This course is needed for AB 705 implementation.</p>
<p>MATH 012 C Skills for Probability and Statistics Units: 2 Lecture: 2 Laboratory: 0</p> <p>ACTION: MSP</p>	<p>* New Course * Prerequisite: Appropriate placement * Corequisite: Concurrent enrollment in MATH 120 C * Distance Education and Hybrid * Pass/No Pass</p>	30	<p>Class time focuses on individualized instruction, student presentation time, and/or group learning.</p>	2019 Fall	<p>This course is needed for AB 705 implementation.</p>

MATH 013 C Skills for Survey of Calculus Units: 2 Lecture: 2 Laboratory: 0 ACTION: MSP	* New Course * Prerequisite: Appropriate placement * Corequisite: Concurrent enrollment in MATH 130 C * Distance Education and Hybrid * Pass/No Pass	30	Class time focuses on individualized instruction, student presentation time, and/or group learning.	2019 Fall	This course is needed as a corequisite to Math 130 C to support underprepared students who will enroll directly in Math 130 C as a result of AB 705.
MATH 014 C Skills for College Algebra Units: 2 Lecture: 2 Laboratory: 0 ACTION: MSP	* New Course * Prerequisite: Appropriate placement * Corequisite: Concurrent enrollment in MATH 141 C * Distance Education and Hybrid * Pass/No Pass	30	Class time focuses on individualized instruction, student presentation time, and/or group learning.	2019 Fall	This course is needed for AB 705 implementation.

REACTIVATED COURSES					
COURSE ID	ACTION TAKEN	CLASS SIZE	CLASS SIZE JUSTIFICATION	EFF DATE	JUSTIFICATION
MATH 045 C Intermediate Algebra Review Units: 2 Lecture: 2 Laboratory: 0 ACTION: MSP	* Catalog Description Update * Prerequisites revalidated * Distance Education and Hybrid * Pass/No Pass * Credit – Not Degree Applicable * TOPS & CIP Codes changed * Textbook Update * Student Learning Outcomes	35	While the instructor does lecture, much of the class time focuses on discussion, group learning, and/or formal/informal student presentations. Evaluation primarily through objective exams. Writing assignments are assessed mostly for concepts and structure.	2019 Fall	This course is needed for AB 705 Implementation

REVISED COURSES					
COURSE ID	ACTION TAKEN	CLASS SIZE	CLASS SIZE JUSTIFICATION	EFF DATE	JUSTIFICATION
ENGL 060 C College Writing Preparation Units: 4 Lecture: 4 Laboratory: 0 ACTION: MSP	* Outline Update * Catalog Description Update * Schedule Description Update * Prerequisite removed * Advisory language added * Grading Option changed to Pass/No Pass/Letter Grade Option * FSA C60 Reading added * Student Learning Outcomes * Textbook Update	25	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Fall	Outline, catalog, schedule, and textbook updated to better reflect course content.
ENGL 100 C College Writing Units: 4 Lecture: 4 Laboratory: 0 ACTION: MSP	* Outline Update * Catalog Description Update * Prerequisite changed * Advisory: ENGL 010LC added * Student Learning Outcomes * Textbook Update	27	Evaluation mostly through writing assignments with a minimum of 6000-8000 words. Writing assignments are assessed for critical thinking, conceptual understanding, structure, style and mechanics.	2019 Fall	Outline, catalog, and textbook updated to better reflect course content.
ENGL 100HC Honors College Writing Units: 4 Lecture: 4 Laboratory: 0 ACTION: MSP	* Outline Update * Catalog Description Update * Prerequisite changed * Advisory: ENGL 010LC added * SAM code changed * Student Learning Outcomes * Textbook Update	20	The Cypress College Honors Advisory Group recommends a maximum of 20 students for a seminar-style honors course to allow for in-depth class discussion and student presentations.	2019 Fall	Outline, catalog, and textbook updated to better reflect course content.

KIN 128 C Yoga-Intermediate Units: .50-1 Lecture: 0 Laboratory: 1.50-3 ACTION: MSP	* FSA M35 Coaching added	30	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Spring	FSA was omitted during the last review
KIN 129 C Vinyasa Yoga Units: .50-1 Lecture: 0 Laboratory: 1.50-3 ACTION: MSP	* FSA M35 Coaching added	30	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Spring	FSA was omitted during the last review
KIN 130 C Yoga Units: .50-1 Lecture: 0 Laboratory: 1.50-3	* FSA M35 Coaching added	30	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Spring	FSA was omitted during the last review
KIN 131 C Restorative Yoga Units: .50-1 Lecture: 0 Laboratory: 1.50-3 ACTION: MSP	* FSA M35 Coaching added	30	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Spring	FSA was omitted during the last review
KIN 132 C Hatha Yoga Units: .50-1 Lecture: 0 Laboratory: 1.50-3 ACTION: MSP	* FSA M35 Coaching added	30	Most of the time the students are engaged in practicing the skill(s) they are learning and the instructor gives each student individual instruction as the class proceeds.	2019 Spring	FSA was omitted during the last review

NEW DEGREES/CERTIFICATES																																				
DEGREE		EFF DATE	JUSTIFICATION																																	
Engineering Technology	<p>Computer Aided Design Certificate</p> <p>Required courses are listed in suggested sequence:</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>ENGR102 C</td> <td>Engineering Design Graphics</td> <td>3</td> </tr> <tr> <td>ENGR110 C</td> <td>Introduction to Engineering</td> <td>3</td> </tr> <tr> <td>ENGR205 C</td> <td>Advanced 3D Solid Modeling and Simulation</td> <td>3</td> </tr> <tr> <td>MATH142 C</td> <td>Trigonometry</td> <td>4</td> </tr> <tr> <td>ENGR220 C</td> <td>Programming and Problem-Solving in MATLAB</td> <td>3</td> </tr> <tr> <td colspan="2">Total Units</td> <td>16</td> </tr> </tbody> </table>			Units	ENGR102 C	Engineering Design Graphics	3	ENGR110 C	Introduction to Engineering	3	ENGR205 C	Advanced 3D Solid Modeling and Simulation	3	MATH142 C	Trigonometry	4	ENGR220 C	Programming and Problem-Solving in MATLAB	3	Total Units		16	2019 Fall	This is a new program aligned with need for skilled workforce in the field of advanced manufacturing and automation												
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ENGR102 C	Engineering Design Graphics	3																																		
ENGR110 C	Introduction to Engineering	3																																		
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ENGR220 C	Programming and Problem-Solving in MATLAB	3																																		
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Engineering Technology	<p>Mechatronics and Industrial Automation Certificate</p> <p>Required courses are listed in suggested sequence:</p> <table border="1"> <thead> <tr> <th></th> <th></th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>ENGT103 C</td> <td>Introduction to Embedded Systems</td> <td>3</td> </tr> <tr> <td>ENGT105 C</td> <td>Instrumentation and Process Control</td> <td>3</td> </tr> <tr> <td>ENGT107 C</td> <td>Electricity and Electronics</td> <td>3</td> </tr> <tr> <td>ENGT109 C</td> <td>Industrial Design and Graphics</td> <td>4</td> </tr> <tr> <td>ENGT115 C</td> <td>Electric Motors and Controls</td> <td>3</td> </tr> <tr> <td>ENGT120 C</td> <td>Mechanical Systems</td> <td>3</td> </tr> <tr> <td>ENGT125 C</td> <td>Hydraulic and Pneumatic Systems</td> <td>3</td> </tr> <tr> <td>ENGT150 C</td> <td>Digital Fundamentals and PLC Programming</td> <td>4</td> </tr> <tr> <td>ENGT160 C</td> <td>Industrial Data Network and HMI</td> <td>3</td> </tr> <tr> <td colspan="2">Total Units</td> <td>29</td> </tr> </tbody> </table>			Units	ENGT103 C	Introduction to Embedded Systems	3	ENGT105 C	Instrumentation and Process Control	3	ENGT107 C	Electricity and Electronics	3	ENGT109 C	Industrial Design and Graphics	4	ENGT115 C	Electric Motors and Controls	3	ENGT120 C	Mechanical Systems	3	ENGT125 C	Hydraulic and Pneumatic Systems	3	ENGT150 C	Digital Fundamentals and PLC Programming	4	ENGT160 C	Industrial Data Network and HMI	3	Total Units		29	2019 Fall	Mechatronics/Industrial Automation is designed to prepare students for employment as entry-level industrial automation technicians. The program prepares students for careers in the design, operation, and maintenance of industrial automation systems focusing on the local industries that utilize these technologies, such as food production, petroleum production, fabrication, and logistics. This program focuses on the application of electronics and computer technology to industrial automation systems, including instrumentation and control, industrial robotics, and process control systems. Significant emphasis is placed on project-based learning facilitated by significant laboratory work.
		Units																																		
ENGT103 C	Introduction to Embedded Systems	3																																		
ENGT105 C	Instrumentation and Process Control	3																																		
ENGT107 C	Electricity and Electronics	3																																		
ENGT109 C	Industrial Design and Graphics	4																																		
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ENGT160 C	Industrial Data Network and HMI	3																																		
Total Units		29																																		

Engineering Technology ACTION: MSP	Robotics Technician Certificate		2019 Fall	The Robotics Certificate program provides a basic foundation of industrial robotics and how they can be used in a plant or manufacturing system. The simulation software, integrated within the program emulates real-world robotics applications and employs the basic principles common to the vast majority of robots currently in use in the automation industry including Cartesian and SCARA designs.	
	Required courses are listed in suggested sequence:				
		Units			
	ENGT103 C	Introduction to Embedded Systems			3
	ENGT115 C	Electric Motors and Controls			3
	ENGT120 C	Mechanical Systems			3
	ENGT125 C	Hydraulic and Pneumatic Systems			3
	ENGT210 C	Principles of Robotics Systems			3
	ENGT225 C	Robot and Automation Programming			4
	ENGT240 C	Advanced Robotics			3
Total Units		22			

REVISED DEGREES/CERTIFICATES					
DEGREE		EFF DATE	JUSTIFICATION		
Engineering Technology ACTION: MSP	Associate in Science Degree in Mechatronics, Robotics & Automation		2019 Fall	Due to recent changes within the industry and to sustain the quest for leadership through the creation of an "innovation economy" changes made to the program in order to train future workforces in a cooperative, active-learning environment.	
	Must take the required nine courses listed below in the suggested sequence (total of 29 units) plus choose one area of emphasis, (additional 10-12 units depending on emphasis selected).				
		Units			
	ENGT103 C	Introduction to Embedded Systems			3
	ENGT105 C	Instrumentation and Process Control			3
	ENGT107 C	Electricity and Electronics			3
	ENGT109 C	Industrial Design and Graphics			4
	ENGT115 C	Electric Motors and Controls			3
	ENGT120 C	Mechanical Systems			3
	ENGT125 C	Hydraulic and Pneumatic Systems			3
	ENGT150 C	Digital Fundamentals and PLC Programming			4
	ENGT160 C	Industrial Data Network and HMI			3
	Mechatronics and Robotics Operator Emphasis:				
		Units			
	ENGT210 C	Principles of Robotics Systems			3
	ENGT225 C	Robot and Automation Programming			4
	ENGT240 C	Advanced Robotics			3
	Mechatronics System Technician Emphasis:				Units
	ENGT250 C	Industrial Maintenance and Safety			3
	ENGT255 C	Integrated Automation Systems			3
ENGT265 C	Manufacturing Operation Management	3			
ENGT290 C	Industry 4.0, IIoT, Digitization	3			
Total Units		39 - 42			