Indiana State University
More. From day one.

Automation And Control Engineering Technology

Courses and Activities Mapped to BS in Electronics Engineering Technology Outcome Set

Courses and Learning Activities	Program Objective A: Mastery of knowledge and tools								Program Objective B: Apply technical knowledge			Program Objective C: Experiment and apply results				Program Objective D: Be creative in design and application			Program Objective E: Function effectively in environment			Program Objective F: Effective problem solving			Program Objective G: Effective communication			Program Objective H: Embrace lifelong learning	Program Objective I: Professional responsibilities			Program Objective J: Diversity and responsibilities			Program Objective K: Embrace quality			OBJ. 5: Mastery of skills and competencies										
	SLO 1.1: Application of circuit analysis and design	SLO 1.2: Application of circuits, design, and application	SLO 1.3: Application of digital electronics	SLO 1.4: Application of computer programming and software	SLO 1.5: Apply science, math, and engineering tools Students will apply science, math, and engineering tools.	SLO 1.6: Apply PLCs, Robotics, and control system equipment Students will apply PLC's, Robotics, and control system equipment.	SLO 1.7: Engineering materials and manufacturing processes Students will understand engineering materials and manufacturing processes.	SLO 1.8: Management techniques and processes	SLO 2.1: Use mathematics in design Students will use mathematics in design.	SLO 2.2: Modeling for analysis	SLO 2.3: System design	SLO 3.1: Conduct experiments Students will conduct experiments.	SLO 3.2: Analysis and interpretation of laboratory exercise	SLO 3.3: Test plans	SLO 4.1: Circuit design	SLO 4.2: Software and program development	SLO 4.3: System design and control	SLO 5.1: Effective team member	SLO 5.2: Understands the purpose of teams Students will understand the purpose of teams.	SLO 5.3: Works and communicates well in the team setting Students will work and communicate well in the team setting.	SLO 6.1: Effectively use problem solving methods Students will effectively use problem solving methods.	SLO 6.2: Use electrical troubleshooting tools properly Students will use electrical troubleshooting tools properly.	SLO 6.3: Debugs logic and software applications Students will debug logic and software applications successfully.	SLO 7.1: Exhibits good verbal communications Students will exhibit good verbal communications.	SLO 7.2: Possesses good written communication skills Students will possess good written communication skills.	SLO 7.3: Formality and respect in communication Students will understand the need for formality and respect in communication.	SLO 8.1: Demonstrates a desire to learn	SLO 9.1: Demonstrates professionalism Students will demonstrate professionalism.	SLO 9.2: Understands and exhibits ethics Students will understand and exhibit ethics.	SLO 9.3: Understands the role of professional societies Students will understand the role of professional societies.	SLO 10.1: Automated control system marketplace Students will understand the automated control system marketplace.	SLO 10.2: Understands social responsibility Students will understand social responsibility.	SLO 10.3: Safe design practices and operations Students will understand the responsibility of safe design practices and operations.	SLO 11.1: Understands the breadth of quality concerns Students will understand the breadth of quality concerns.	SLO 11.2: Understands the importance of quality Students will understand the importance of quality.	SLO 11.3: Understands timeliness and continuous improvement Students will understand timeliness and continuous improvement.	Outcome 5.1: Mastery of knowledge Students will learn mastery of knowledge and tools.	Outcome 5.2: apply technical knowledge Student will learn to apply technical knowledge.	Outcome 5.3: Experiment and apply results Students will learn experiment and apply results.	Outcome 5.4: Creative in design Students will learn to be creative in design and application.	Outcome 5.5: Team environment Student will learn to function effectively in the team environment.	Outcome 5.6: Problem solving Students will learn problem solving.	Outcome 5.7: Effective communication Student will learn effective communication.	Outcome 5.8: Life-long learning Student will learn to embrace life-long learning.	Outcome 5.9: Professional and ethical responsibilities Student will learn and understand professional and ethical responsibilities.	Outcome 5.10: Respect diversity Student will learn diversity and professional responsibilities.	Outcome 5.11: Embrace quality Students will embrace quality.
ECT 130 Intro to Elec. & Comp. Techngy																																I														
ECT 165 D.C. Circuits and Design		I		I					I		I	I	I	I	I	I		I		I	I	I	I				I	I		I	I													
ECT 167 A.C. Circuits and Design		I		I					I		I	I	I	I	I	I		I		I	I	I	I				I	I		I	I													
ECT 221 Circuit Analysis I	I								I	I																		I																	
ECT 231 Digital Computer Logic			I						I																			I																	
ECT 232 Digital Computer Circuits			P						P					I	P				I									I																	
ECT 280 Intro to Auto. Manufacturing Systems						I																		I				I																
ECT 281 Robotics Controls				A	P	I					P	P				P		I	I		I	I	P				P				T													
ECT 321 Circuit Analysis II	P																											P																	
ECT 324 Discrete Transistor Theory & Circuit Design		P							P	P	P	P	P	P	P		I	P	P	P	P	P	P				P	P																	
ECT 325 Analog Integrated Precision Circuits		P											P		R		P	P	P	P	P	P	P				P	P									I	I	I						
ECT 343 Industrial Electronic Pulse Circuits		R											R		R				P				P				P	P									I	I	I						
ECT 421 Circuit Analysis by Calculus	R																											R																	
ECT 437 Industrial Computer System Management					P			I										R	R	R	R					R	R	R	R			P		P	P	P	P	P	P	P				
ECT 444 PLCs & Control Systems				A		R										R	P							R			R							R		R	R	R						
ECT 448 Industrial Electronic Current Control Systems		R			R	P			R		P	R	R	P	R		R						R				R	R								R	R	R	R					
ECT 430 Senior Seminar																										P		A	R	A	P	R	P		P								
ECT 406 Senior Project					R	R	R	R	R	R	R	R	R	R		R	R	R	R	R	R	R	R			R	R	R	R	R	R	R	R	R	R	R	R	R	R				
MET 103 Intro to Tech Graphics/CAD					P				I	I	I							P										I															
MET 329 Fluid Power Technology							I					P				P		P			P	P						P							P	P	P	P						
TMGT 471 Prod. Plan & Control I								P										P	P	P	R					A			P	P	P			P	P	P	P	P					
TMGT 478 Indust. Organz. & Functions								P										R	R	R	P					P	P	P	P	P	P			P	P	I	I	I	I				
TMGT 492 Industrial Supervision								R										R	R	R	R					A		A	P	P	P			P	P		R	R	R				
MFG 370 Fundamentals of Machine Tool Proc.							P																						I								I	I	I				
MFG 371 Manuf. Process & Materials							P																						I								I	I	I				
MATH 115 College Algebra					P	I																							I														
MATH 301 Fund. & Appl. of Calc					A	P																							R														
CS 151 Intro. Comp. Sci.				I												I													I														
CS 256 C++				P												P													P														
Laboratory Sci. Laboratory Science					A	P			P			P						I	I	I									P														
ENG 3057 Technical Writing																						R	A						R														
COMM 101 Introduction to Speech																										I			I														
For Lang Study Foreign Language Study																										I		I	I			I											
Freshman Comp Freshman Composition																						I		I					I														
Soc/Behav Study Social or Behavioral Studies																													I			I										
Literary Studie Literary Studies																													I			I										
Fine/Perf. Arts Fine & Performing Arts																													I			I										
Hist. Studies Historical Studies																													I			I										
GPCD Global persp & Cultural Diversity																													I			I										
ESR Ethics & Social Responsibility																													I			I										
UDIE Upper Division Integrative Electives																													R			R										

Legend: I Introduced | P Practiced | R Reinforced

Last Modified: 12/15/2011 12:15:08 PM CST

Indiana State University
More. From day one.

Electronics Engineering Technology

Courses and Activities Mapped to BS in Electronics Engineering Technology Outcome Set

	Program Objective #1: Mastery of knowledge and tools								Program Objective #2: Apply technical knowledge Students will apply technical knowledge.			Program Objective #3: Experiment and apply results Students will experiment and apply results.			Program Objective #4: Be creative in design and application Students will be creative in design and application.			Program Objective #5: Function effectively in environment Students will function effectively in the team environment.			Program Objective #6: Effective problem solving			Program Objective #7: Effective communication			Program Objective #8: Embrace lifelong learning Students will embrace lifelong learning.	Program Objective #9: Professional responsibilities Students will understand professional and ethical responsibilities.			Program Objective #10: Diversity and responsibilities Students will respect diversity and professional responsibilities.			Program Objective #11: Embrace quality Students will embrace quality.		
	SLO 1.1: Application of circuit analysis and design	SLO 1.2: Application of circuits, design, and application	SLO 1.3: Application of digital electronics	SLO 1.4: Application of computer programming and software	SLO 1.5: Apply science, math, and engineering tools Students will apply science, math, and engineering tools.	SLO 1.6: Apply PLCs, Robotics, and control system equipment Students will apply PLC's, Robotics, and control system equipment.	SLO 1.7: Engineering materials and manufacturing processes Students will use fluid power, engineering materials and manufacturing processes.	SLO 1.8: Management techniques and processes	SLO 2.1: Use mathematics in design Students will use mathematics in design.	SLO 2.2: Modeling for analysis	SLO 2.3: System design	SLO 3.1: Conduct experiments Students will conduct experiments.	SLO 3.2: Analysis and interpretation of laboratory exercise	SLO 3.3: Test plans	SLO 4.1: Circuit design	SLO 4.2: Software and program development	SLO 4.3: System design and control	SLO 5.1: Effective team member	SLO 5.2: Understands the purpose of teams Students will understand the purpose of teams.	SLO 5.3: Works and communicates well in the team setting Students will work and communicate well in the team setting.	SLO 6.1: Effectively use problem solving methods Students will effectively use problem solving methods.	SLO 6.2: Use electrical troubleshooting tools properly Students will use electrical troubleshooting tools properly.	SLO 6.3: Debugs logic and software applications successfully. Students will debug logic and software applications successfully.	SLO 7.1: Exhibits good verbal communications Students will exhibit good verbal communications.	SLO 7.2: Possesses good written communication skills Students will possess good written communication skills.	SLO 7.3: Formality and respect in communication Students will understand the need for formality and respect in communication.	SLO 8.1: Demonstrates a desire to learn	SLO 9.1: Demonstrates professionalism Students will demonstrate professionalism.	SLO 9.2: Understands and exhibits ethics Students will understand and exhibit ethics.	SLO 9.3: Understands the role of professional societies Students will understand the role of professional societies.	SLO 10.1: Automated control system marketplace Students will understand the automated control system marketplace.	SLO 10.2: Understands social responsibility Students will understand social responsibility.	SLO 10.3: Safe design practices and operations Students will understand the responsibility of safe design practices and operations.	SLO 11.1: Understands the breadth of quality concerns Students will understand the breadth of quality concerns.	SLO 11.2: Understands the importance of quality Students will understand the importance of quality.	SLO 11.3: Understands timeliness and continuous improvement Students will understand timeliness and continuous improvement.
Courses and Learning Activities																																							
ECT 130 Intro to Elec. & Comp. Techngy																														I									
ECT 165 D.C. Circuits and Design		I		I					I		I	I	I	I	I	I		I	I	I	I	I			I	I	I	I		I								
ECT 167 A.C. Circuits and Design		I		I					I		I	I	I	I	I	I		I	I	I	I	I			I	I	I	I		I								
ECT 221 Circuit Analysis I	I								I	I																			I										
ECT 231 Digital Computer Logic			I						I																				I									
ECT 232 Digital Computer Circuits			P						P						P														I									
ECT 280 Intro to Auto. Manufacturing Systems						I																I							I									
ECT 281 Robotics Controls				R	P	I					P	P				P						P							P									
ECT 321 Circuit Analysis II	P																												P									
ECT 324 Discrete Transistor Theory & Circuit Design		P							P	P	P		P	I	P		I	P	P	P	P	P							P	P								
ECT 325 Analog Integrated Precision Circuits		P											P		R		P	P	P	P	P	P							P	P					I	I	I	
ECT 343 Industrial Electronic Pulse Circuits		R											R		R			P			P							P	P					I	I	I	
ECT 421 Circuit Analysis by Calculus	R																												R									
ECT 437 Industrial Computer System Management					P			I										R	R	R	R	R			R	R	R	R	R			P	I	P	P	P	P	P
ECT 444 PLCs & Control Systems				R		R										R	P					R							R				R			R	R	R	R
ECT 448 Industrial Electronic Current Control Systems		R			R	P			R		P	R	R	P	R		R				R								R	R						R	R	R	R
ECT 430 Senior Seminar																									P		R		R	R	P	R	P		P				
ECT 406 Senior Project					R	R	R	R	R	R	R	R	R	R		R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		R	R	R	R	R	R	R	R
MET 103 Intro to Tech Graphics/CAD					P				I	I	I																		I									
MET 329 Fluid Power Technology							I					P				P		P		P	P								P					P	P	P	P	
TMGT 471 Prod. Plan & Control I								P										P	P	P	R				R			P	P	P	P			P	P	P	P	
TMGT 478 Indust. Organz. & Functions								P										R	R	R	P				P	P	P	P	P	P	P			P	I	I	I	
TMGT 492 Industrial Supervision								R										R	R	R	R				R			R	P	P	R			P	P	R	R	R	
MFG 370 Fundamentals of Machine Tool Proc.							P																						I							I	I	I	
MFG 371 Manuf. Process & Materials							P																						I							I	I	I	
MATH 115 College Algebra					P	I																							I									
MATH 301 Fund. & Appl. of Calc					R	P																							R									
CS 151 Intro. Comp. Sci.				I												I													I									
CS 256 C++				P												P						I							P									
Laboratory Sci. Laboratory Science					R	P			P			P						I	I	I									I									
ENG 305T Technical Writing																									R	R		R	R									
COMM 101 Introduction to Speech																									I				I									
For Lang Study Foreign Language Study																									I			I	I		I							
Freshman Comp Freshman Composition																										I	I		I									
Soc/Behav Study Social or Behavioral Studies																													I		I			I				
Literary Studie Literary Studies																													I		I			I				
Fine/Perf. Arts Fine & Performing Arts																													I		I			I				

	Program Objective #1: Mastery of knowledge and tools								Program Objective #2: Apply technical knowledge Students will apply technical knowledge.			Program Objective #3: Experiment and apply results Students will experiment and apply results.			Program Objective #4: Be creative in design and application Students will be creative in design and application.			Program Objective #5: Function effectively in environment Students will function effectively in the team environment.			Program Objective #6: Effective problem solving			Program Objective #7: Effective communication			Program Objective #8: Embrace lifelong learning Students will embrace lifelong learning.	Program Objective #9: Professional responsibilities Students will understand professional and ethical responsibilities.			Program Objective #10: Diversity and responsibilities Students will respect diversity and professional responsibilities.			Program Objective #11: Embrace quality Students will embrace quality.		
	SLO 1.1: Application of circuit analysis and design	SLO 1.2: Application of circuits, design, and application	SLO 1.3: Application of digital electronics	SLO 1.4: Application of computer programming and software	SLO 1.5: Apply science, math, and engineering tools Students will apply science, math, and engineering tools.	SLO 1.6: Apply PLCs, Robotics, and control system equipment Students will apply PLC's, Robotics, and control system equipment.	SLO 1.7: Engineering materials and manufacturing processes Students will use fluid power, engineering materials and manufacturing processes.	SLO 1.8: Management techniques and processes	SLO 2.1: Use mathematics in design Students will use mathematics in design.	SLO 2.2: Modeling for analysis	SLO 2.3: System design	SLO 3.1: Conduct experiments Students will conduct experiments.	SLO 3.2: Analysis and interpretation of laboratory exercise	SLO 3.3: Test plans	SLO 4.1: Circuit design	SLO 4.2: Software and program development	SLO 4.3: System design and control	SLO 5.1: Effective team member	SLO 5.2: Understands the purpose of teams Students will understand the purpose of teams.	SLO 5.3: Works and communicates well in the team setting Students will work and communicate well in the team setting.	SLO 6.1: Effectively use problem solving methods Students will effectively use problem solving methods.	SLO 6.2: Use electrical troubleshooting tools properly Students will use electrical troubleshooting tools properly.	SLO 6.3: Debugs logic and software applications Students will debug logic and software applications successfully.	SLO 7.1: Exhibits good verbal communications Students will exhibit good verbal communications.	SLO 7.2: Possesses good written communication skills Students will possess good written communication skills.	SLO 7.3: Formality and respect in communication Students will understand the need for formality and respect in communication.	SLO 8.1: Demonstrates a desire to learn	SLO 9.1: Demonstrates professionalism Students will demonstrate professionalism.	SLO 9.2: Understands and exhibits ethics Students will understand and exhibit ethics.	SLO 9.3: Understands the role of professional societies Students will understand the role of professional societies.	SLO 10.1: Automated control system marketplace Students will understand the automated control system marketplace.	SLO 10.2: Understands social responsibility Students will understand social responsibility.	SLO 10.3: Safe design practices and operations Students will understand the responsibility of safe design practices and operations.	SLO 11.1: Understands the breadth of quality concerns Students will understand the breadth of quality concerns.	SLO 11.2: Understands the importance of quality Students will understand the importance of quality.	SLO 11.3: Understands timeliness and continuous improvement Students will understand timeliness and continuous improvement.
Hist. Studies Historical Studies																												I		I			I				
GPCD Global persp & Cultural Diversity																												I		I			I				
ESR Ethics & Social Responsbility																												I		I			I				
UDIE Upper Division Integrative Electives																												R		R			R				

Legend: I Introduced P Practiced R Reinforced

Last Modified: 12/16/2011 09:02:09 AM CST