

The SOs for the BS in ECE Program are:

- 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 effectively in a team.
- e. An ability to identify, formulate and/or 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, life-long learning.
- j. A knowledge of contemporary issues.
- k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practices.

# Relationship Between ECE Department Courses and Student Outcomes a - k

Key: 1 = Minor Contribution to Outcome; 2 = Major Contribution to Outcome; \* =FCAR

Course	Title	a	b	c	d	e	f	g	h	i	j	k
ETCS 105	Career Discovery				2		2*			1		
ICSS 309	Technol. and Global Issues						2*	2*	2*	2*	2*	
<b>Computer Science courses (18 credits)</b>												
CSCI 125	Cptr. Programming I				1	2		2*				
CSCI 155	Cptr. Org. &Architecture					2						1
CSCI 185	Cptr. Programming II				1	2*		2*				
CSCI 235	Elem. Of Discrete Structures	2*										2
CSCI 260	Data Structures	2			1	2		1				
CSCI 330	Operating Systems									2		1
<b>Electrical Engineering courses (42 credits)</b>												
EENG 125	Fund. Of Digital Logic	2		2*		2						2
EENG 212	Electrical Circuits I and Eng. Tools	2				2*						2*
EENG 270	Intro. To Electronic Circuits	1		2*		2*				1		2*
EENG 275	Electronics Lab I		2		2*			2*				
EENG 281	Electrical Circuits II	2*				2						2
EENG 310	Electronic Circuit Applic.	1				2				1		2*
EENG 315	Electronics Lab II		2					2				
EENG 320	Control Systems	2				2*						2
EENG 330	Electromagnetic Theory I	2*				2						2
EENG 341	Signals and Systems	2*				2						2
EENG 360	Electronics Lab III		2*					2				
EENG 370	Microprocessors	1										2
EENG 382	Random Signals and Stat.	2										2
EENG 401	Communication Theory	1				2						1
EENG 403	Electronics Lab IV		2*		2*			2*				
EENG 489	Senior Dsgn Proj. I	2		2*	2*	2*	2*	2*	2*	2*	1	2
EENG 491	Senior Dsgn Proj II	2		2*	2*	2*	2*	2*	2*	2*	1	2*
<b>2 EENG/CSCI Electives (6 credits)</b>												
EENG 301	Energy Conversion					1						1
EENG 390	Electromagnetic Theory II	2				2						2
EENG 410	Control Systems Design	2		2	2	2	2	2	2	2	2	
EENG 415	Digital Control Systems	2		2	2	2	2	2	2	2	2	
EENG 420	Digital Filter Design	2		2	2	2	2	2	2	2	2	
EENG 430	Operational Amp. Design	2		2	2	2	2	2	2	2	2	
EENG 435	Robotics and Flex Automat			2	2	2	2	2	2			2
EENG 440	Microcomp. Based Design	2		2	2	2	2			2	2	
EENG 450	Optical Engineering			2	2	2	2	2	2	2	2	
EENG 460	Fiber Optics Concepts I	1				2	2			2	2	2
EENG 465	Microwave Engineering			1			2	2	2	2	2	
EENG 470	Antennas and Propagation			1			2	2	2	2	2	
EENG 480	Communication Net. Design	2				2						2
EENG 483	Intro. To VLSI Design			2			2	2	2	2	2	2
		a	b	c	d	e	f	g	h	i	j	k

