

Dual Degree Programs in Electrical Engineering and Physics BS in Electrical Engineering (EE) and either BS in Physics or BA in Physics & Astronomy

Dual Degree BSEE/BS in Physics

Uses 3 elective courses in BSEE (the Basic Science elective, 1 ECE elective (3**/4**) and 1 “elective any class”) plus two additional eligible physics courses.

Dual Degree BSEE/BA in Physics and Astrophysics

Uses 3 elective courses in BSEE (the Basic Science elective, 1 ECE elective (3**/4**) and 1 “elective any class”) plus one additional eligible physics or astronomy course.

Students completing dual degree programs will need to transition from pre-major status to admitted major status for both colleges housing these programs (SOE-School of Engineering and A&S-Arts & Sciences) and will then need to fulfill enrollment requirements for each program. Majors can only be admitted into one program at any one time, so students will need to switch majors in order to fulfill each program requirement. It is possible to complete the enrollment requirements in either order but it is recommended that admitted students start in Physics to finish the A&S enrollment requirement first and then switch to EE.

Example rough timeline: 1-2nd year in Pre-major status. 2-3rd year as Phys/A&S major. 3-4th year as EE/SOE major.

A&S transition to major status requirements: A minimum of 26 credit hours and 2.0 cumulative GPA. Completion of Gen Ed Communication, Math, and Second Language.

A&S Major requirement: One year of enrollment subsequent to the transition to major status in the College of Arts and Sciences with a minimum of 12 earned credit hours.

SOE transition to major status requirements: A minimum of 26 credit hours, a 2.3 cumulative GPA, and a 2.5 technical GPA. Completion of ENGL 1110 or higher, MATH 1512 and 1522, and 18 hours of technical courses. Applicable technical courses denoted with * in the table below.

SOE Major requirement: Students must complete a minimum of 30 credit hours after admission to ECE

Course Subject and Title	Cr	Admit Req	Gen Ed	Notes
Semester One:				
ENGL 1120 Composition II	3	SOE/A&S	COMM	
MATH 1512 Calculus I	4	SOE/A&S	MTH	
PHYS 1310 Calc-based Physics I	3	*	CHOICE	
ECE 101 Intro to ECE	1	*		
ECE 131L Programming Fundamentals	4	*		

Semester Three:				
ECE 203 Circuit Analysis I	3	*		
ECE 238L Computer Logic Design	4	*		
MATH 2531 Calculus III	4	*		
PHYS 2310 Calc-based Physics III	3	*		
ENG 220 Engineering, Busi, Soc <i>Fall Only</i>	3			

Semester Five:				
ECE 314L Signals and Systems	4			
ECE 321L Electronics I <i>Fall Only</i>	4			
ECE 340 Probabilistic Methods	3			
ECE 371 Materials and Devices <i>Fall Only</i>	3			
Art and Design	3		AD	

Semester Seven:				
ECE 341 Intro to Comm. Systems	3			
ECE 345/ME 380 Intro to Control Systems	3			
ECE 419 Senior Design I	3			
PHYS 303 Mechanics I	3			BS Physics
PHYS 491 Quantum Mechanics I	3			BS Physics
PHYS 3**/4** or ASTR ***	3			BA Physics/Astr
PHYS 491 Quantum Mechanics I	3			BA Physics/Astr

Course Subject and Title	Cr	Admit Req	Gen Ed	Notes
Semester Two:				
MATH 1522 Calculus II	4	SOE	CHOICE	
PHYS 1320 Calc-based Physics II	3	*	PNS	
PHYS 1320L Calc-based Physics II Lab	1	*	PNSL	
ENGL 2210 Prof. & Tech. Communication	3		COMM	
Second Language #	3	SOE/A&S	SL	
ECON 2110 Macroecon or 2120 Microecon	3		SB	

Semester Four:				
ECE 213 Circuit Analysis II	3	*		
ECE 300: Advanced Eng. Mathematics	4			
ECE 206L: Instrumentation	2	*		
PHYS 330 Modern Physics	3			Required for both BS Physics and BA Phys/Astr
Humanities #	3		HUM	

Semester Six:				
ECE 322L Electronics II <i>Spring Only</i>	4			
ECE 344L Microprocessors	4			
ECE 360 EM Fields & Waves <i>Spring Only</i>	4			
ECE 381 Intro Elec. Power Sys. <i>Spring Only</i>	3			

Semester Eight:				
ECE 420 Senior Design II	3			
ECE 4** Elective	3			
ECE 4** Elective	3			
PHYS 3XX/4XX or ASTR 2110	3			BS Physics
PHYS/ASTR 4**	3			BS Physics
PHYS 3**/4** or ASTR ***	3			BA Physics/Astr