

Physics and Engineering Engineering Physics Curriculum Map

Core Courses		Learning Outcome*					
		1	2	3	4	5	6
EGR110	Computational Methods I		I			I	
EGR120	Computational Methods II		I			I	
PHY241	University Physics I	I	D	I			I
PHY242	University Physics II	I	D	I			I
PHY304	Modern Physics	D	D	D		D	
PHY341	Analytical Mechanics	M	M				
PHY361	Electricity, Magnetism, and Waves	M	M			D	
PHY401	Thermodynamics	M	M				
PHY431	Quantum Mechanics	M	M				
PHY475	Senior Laboratory and Student Project			M		M	M
PHY495	Seminar in Physics				I	D	M
Choice between:							
PHY311	Nuclear Physics		M	D	M	D	
PHY443	Solid State Physics		M		M	D	

Mechanical Emphasis		Learning Outcome					
		1	2	3	4	5	6
EGR215	Engineering Mechanics	D	D				
EGR225	Electronics Circuit Analysis	D	D		D		D
EGR265	Mechanics of Materials	D	D		D		D

Electrodynamic Emphasis		Learning Outcome					
		1	2	3	4	5	6
EGR225	Electronics Circuit Analysis	D	D		D		D
EGR352	Analog Electronics	D		D			D
EGR422	Digital Electronics	D		D			D
EGR432	Computer Interfacing		D	D			D
EGR442	Mobile Robotics			M			M
PHY362	Electricity, Magnetism, and Waves II		M				

*Learning Outcomes:

1. develop an understanding of the fundamental principles of physics and of engineering
2. apply physical principles, mathematical reasoning, and computational techniques to solve real-world problems
3. design and conduct experiments or complete an engineering design project as well as analyze and interpret data.
4. demonstrate good ethics in science and engineering
5. effectively communicate complicated technical information
6. effectively collaborate in teams