

B.S. in Engineering Physics

Electrical Engineering Concentration

(Effective Fall 2021)

Freshman Fall Semester			Freshman Spring Semester		
Course	Course Name	CR	Course	Course Name	CR
PHYS 201	General Physics I	4	PHYS 202	General Physics II	4
MTSC 251	Calculus I	4	MTSC 252	Calculus II	4
PHYS 200	Ana. and Quant. Analysis	3	ENGL-124	Intro to Speech and Composition IV (8-weeks)	2
ENGL 121	Introduction to Composition I (8-weeks)	2	PHYS 192	University Seminar II	1
ENGL-122	Introduction to Composition II (8-weeks)	2	PHYS 220	Scientific Programming	3
PHYS-191	University Seminar I	1	KINE-100	Lifetime Fit. And Wellness	2
	Total Credits	15		Total Credits	16
Sophomore Fall Semester			Sophomore Spring Semester		
Course	Course Name	CR	Course	Course Name	CR
PHYS 313	Mechanics I: Statics	3	PHYS 314	Mechanics II: Dynamics	3
CHEM 101	Gen. & Elem. Chemistry I	4	ENGR 205	Electrical Circuit Analysis	4
ENGR 210	Digital Logic Design	4			
MTSC 313	Linear Algebra	3	MTSC-253	Calculus III	4
ENGL-xxx	World Literature Elective	3	ENGL-123	Intro to Composition and Speech III (8-weeks)	3
	Total Credits	17		Total Credits	14
Junior Fall Semester			Junior Spring Semester		
Course	Course Name	CR	Course	Course Name	CR
PHYS 341	Electricity and Magnetism I	3	PHYS 342	Electricity & Magnetism II	3
ENGR 309	Electronic Circuit Analysis	4	xxxx-xxx	Technical Elective I	3
ENGR 302	Signals and Systems	4	ENGR 340	Solid State Electronics	3
PHYS 361	Modern Physics	4	xxxx-xxx	Social Science Elective	3
MTSC 351	Differential Equation	3			
	Total Credits	18		Total Credits	12
Senior Fall Semester			Senior Spring Semester		
Course	Course Name	CR	Course	Course Name	CR
PHYS 305	Thermal Physics	3	ENGR 342	Material Science for Engr.	4
PHYS 451	Introduction to Research*	3	PHYS 418	Senior Research Project **	3
xxxx xxx	Technical Elective II	3	xxxx xxx	Technical Elective III	3
GLOB 395	Global Societies	3	xxxx xxx	World History Elective	3
xxxx xxx	Arts and Humanities Elective	3	xxxx xxx	Arts and Humanities Elective	3
	Total Credits	15		Total Credits	16

Total Credits: 123

** Senior Capstone

* Writing Intensive Course(s)

Students will complete a course that addresses the African-American experience. This course may also satisfy the arts & humanities elective, the social science elective or can be taken to fulfill a free elective. Please see your advisor.

Technical Elective Selection

For Physics concentration, the student and Advisor will choose a minimum of 12 credits from technical electives under the Physics concentration. For engineering concentrations, the student and Advisor will choose a minimum of 9 credits from technical electives under the chosen concentration.

ELECTIVES

<u>Course</u>	<u>Course Name</u>	<u>CR</u>
PHYS-316	Introduction to Physical Optics	4
PHYS-411	Fiber Optics Communication	4
ENGR-412	Digital Signal Processing	3
ENGR-446	Optical Electronics	3
ENGR-403	Introduction to MEMS	3
ENGR-415	Infrared Detection and Radiation	3
ENGR-444	Introduction to VLSI Design	4
ENGR-460	Power System Analysis	3