

## B.S. in Physics and Electrical Engineering Sample Program (Minimum 139 cr. required)

### FRESHMAN YEAR

#### First Semester

SCI I120 Windows on Science	
<i>or</i> ENGR 195 Introduction to the Engineering Profession	1
CHEM C105 Principles of Chemistry I	3
CHEM C125 Experimental Chemistry I	2
MATH 165 Analytic Geometry and Calculus I	4
MATH 171 Multidimensional Mathematics	3
ENG W131 Elementary Composition I	3
<b>Total</b>	<b>16</b>

#### Second Semester

PHYS 152 Mechanics	4
CHEM C106 Principles of Chemistry II	3
CHEM C126 Experimental Chemistry II	2
MATH 166 Analytic Geometry and Calculus II	4
One course from List H, S, or C	3
<b>Total</b>	<b>16</b>

#### Summer 1 Term

HIST H114 History of Western Civilization II	3
<b>Total</b>	<b>3</b>

#### Summer 2 Term

One course from remaining two Lists H, S, or C	3
<b>Total</b>	<b>3</b>

### SOPHOMORE YEAR

#### Third Semester

PHYS 251 Heat, Electricity, and Optics	5
MATH 261 Multivariate Calculus	4
CSCI 230 Computing I	4
ECE 201 Linear Circuit Analysis I	3
ECE 207 Electronic Measurement Techniques	1
ENGR 297 Computer Tools for Engineering	1
<b>Total</b>	<b>18</b>

#### Fourth Semester

PHYS 342 Modern Physics	3
MATH 266 Ordinary Differential Equations	3
ECE 202 Circuit Analysis II	3
ECE 208 Electronic Design and Devices Lab	1
ECE 270 Digital Logic with lab	4
ECE 255 Introduction to Electronic Analysis and Design	3
<b>Total</b>	<b>17</b>

### JUNIOR YEAR

#### Fifth Semester

PHYS 310 Intermediate Mechanics	4
MATH 351 Elementary Linear Algebra	
<i>or</i> MATH 511 Linear Algebra with Applications	3
ECE 301 Signals and Systems	3
ECE 362 Microprocessor Systems and Interfacing	4
One course from remaining List H, S, or C	3
<b>Total</b>	<b>17</b>

#### Sixth Semester

PHYS 330 Intermediate Electricity and Magnetism	3
PHYS 353 Electronics Laboratory	2
ECE 302 Probabilistic Methods in Electrical Engineering	3
ECE 382 Feedback System Analysis	3
TCM 320 Written Communication in Science and Industry	3
General Education Elective	3
<b>Total</b>	<b>17</b>

## SENIOR YEAR

### Seventh Semester

PHYS 400 Physical Optics	3
PHYS 401 Physical Optics Laboratory	2
PHYS 442 Quantum Mechanics	3
ECE 400 Senior Seminar	1
ECE 440 Introduction to Comm. Systems Analysis	4
ECE Elective	3
<b>Total</b>	<b>16</b>

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### Eighth Semester

PHYS 416 Thermal Physics	3
ECE 401 Ethics	1
ECE 492 Senior Design	3
ECE Elective	3
ECE Elective	3
COMM R110 Fundamentals of Speech Communication	3
CAND 991 Candidate for Graduation	0
<b>Total</b>	<b>16</b>

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