

NAME: _____

STUDENT ID: _____

IUPUI School of Science – Bachelor of Science in Physics and Electrical Engineering
FIRST-YEAR EXPERIENCE

Windows on Science SCI I120 1 cr. _____

or

 Intro. to Engineering Profession ENGR 195
 (With permission another Learning Community may be substituted. Waived only for students who transfer in more than 18 credit hours.)

AREA I - COMMUNICATION

 A. English Composition - 6 credits total
 (grade of C or better in each course)

English Composition ENG W131 3 cr. _____

Written Comm. in Sci. & Industry TCM 320 3 cr. _____

 B. Speech Communication - 3 credits total
 Speech Communication COMM R110 3 cr. _____

AREA II - FOREIGN LANGUAGE - not required
AREA III - GENERAL REQUIREMENTS

 A. Humanities, Social Sciences, & Cultural Understanding
 12 credits total

Arts & Humanities (H) - _____ 3 cr. _____

Social Science (S) –

 Either Engineering Economics ECE 327 or Microeconomics
 ECON-E 201 _____ 3 cr. _____

Cultural Understanding (C) - _____ 3 cr. _____

Additional H or S - _____ 3 cr. _____

 B. Junior/Senior Integrator –

Replace with general education course (H, S, or C) (3 cr.)

 C. Physical Sciences - 18 credits total

Principles of Chemistry I CHEM C105 (3 cr.) _____

Experimental Chemistry I CHEM C125 (2 cr.) _____

Principles of Chemistry II CHEM C106 (3 cr.) _____

Experimental Chemistry II CHEM C126 (2 cr.) _____

*Linear Circuit Analysis I ECE 201 (3 cr.) _____

*Elec. Measurement Tech. ECE 207 (1 cr.) _____

*Linear Circuit Analysis II ECE 202 (3 cr.) _____

*Elec. Design & Devices Lab ECE 208 (1 cr.) _____

 D. Mathematics & Computer Science - 28 credits total

Analytic Geom. & Calculus I MATH 165 (4 cr.) _____

Analytic Geom. & Calculus II MATH 166 (4 cr.) _____

Multidimensional Math. MATH 171 (3 cr.) _____

Multivariate Calculus MATH 261 (4 cr.) _____

Ordinary Differential Eqns. MATH 266 (3 cr.) _____

Probabilistic Methods in EE ECE 302 (3 cr.) _____

Elementary Linear Algebra MATH 351 (3 cr.) _____

Or Linear Algebra with Apps MATH 511 (3 cr.) _____

Intro. to Computing ECE 263 (Lec) (3 cr.) _____

and Engr Programming Lab ECE 261 (1 cr.) _____

(Must be taken concurrently)

NOTE: Students must have grades of C– or higher in Area IIID. A grade of D or D+ will be allowed for one course only.
AREA IV - MAJOR COURSES

A. Physics Courses – 32 credits total

Mechanics PHYS 152 (4 cr.) _____

Heat, Electricity, & Optics PHYS 251 (5 cr.) _____

Intermediate Mechanics PHYS 310 (4 cr.) _____

Intermediate E & M PHYS 330 (3 cr.) _____

Modern Physics PHYS 342 (3 cr.) _____

Electronics Laboratory PHYS 353 (2 cr.) _____

Physical Optics PHYS 400 (3 cr.) _____

Physical Optics Lab PHYS 401 (2 cr.) _____

Thermal Physics PHYS 416 (3 cr.) _____

Quantum Mechanics PHYS 442 (3 cr.) _____

B. Electrical Engineering – 36 credit hours

Computer Tools for Engr. ENGR 297 (1 cr.) _____

Intro. To Analysis & Design ECE 255 (3 cr.) _____

Digital Logic Design w/ Lab ECE 270 (4 cr.) _____

Signals and Systems ECE 301 (3 cr.) _____

Microprocessor Systems ECE 362 (4 cr.) _____

Feedback System Analysis ECE 382 (3 cr.) _____

Sophomore Seminar ECE 210 (1 cr.) _____

Ethics ECE 401 (1 cr.) _____

Transmission of Info. ECE 440 (4 cr.) _____

EE Electives (9 cr.)

Capstone Experience satisfied by

Senior Design 1 ECE 487 (1 cr.) _____

& Senior Design 2 ECE 488 (2 cr.) _____

A minimum of 139 credits must be completed for graduation. Residence of at least two semesters at the IUPUI campus is also required for graduation.