PURDUE UNIVERSITY

Chemical Engineering Selectives

Select course for each requirement

Biology Selective (3 credits)

_____ (3) BIOL 23000 Biology of the Living Cell *(CHM 11600 & MA 16200)*
_____ (3) BIOL 23100 Biology III: Cell Structure and Function *(BIOL 11100 & CHM 11600)*
_____ (3) *CHM 33900: Biochemistry: A Molecular Approach *(CHM 26200)*
_____ (3) *CHM 53300 Introductory Biochemistry *(Junior Classification, CHM 26200, CHM 32100)*
_____ (3) BCHM 30700 Biochemistry *(CHM 26200)*
_____ (3) *BCHM 56100 General Biochemistry I *(Sophomore 45-59 Classification, CHM 26200)*

***Students minoring in Chemistry can take CHM 33900/ CHM 53300/ BCHM 56100 to fulfill both minor requirements and the ChE Bio Selective.**

Chemical Engineering Selective (3 credits)

_____ (3) ABE 58000 Process Engineering of Renewable Resources
_____ (3) CHE 33000 Principles of Molecular Engineering *(CHE 21100)*
_____ (1-3) CHE 41100 ChE Research *(Junior Classification, Instructor Permission)*
_____ (1-3) CHE 41200 ChE Design Research Problems *(Junior Classification, Instructor Permission)*
_____ (3) CHE 44200 Chemistry and Engineering of High Polymers *(CHM 26200 & CHM 37000)*
_____ (1) CHE 46100 Biomedical Engineering
_____ (3) CHE 46300 Applications of ChE Principles *(CHE 37800)*
_____ (3) CHE 49700 Course Titles Vary
_____ (3) CHE 49800 Undergrad Thesis Research I *(Instructor Permission & Admission to CHE Honors Program)*
_____ (3) CHE 49900 Undergrad Thesis Research II *(Instructor Permission & Admission to CHE Honors Program)*
_____ (3) Any CHE 500 level course

***Students cannot earn credit in both CHE 52500 and ABE 58000**
***CHE offers multiple CHE 49700 & 59700 courses which can be identified by course title – refer to the Schedule of Classes for current offerings**
***CHE 49700 Chemical Engr Study Abroad does not count for CHE Elective – rather a Technical Selective or General Education Elective**

Engineering Selective (6 credits)

_____ (3) CHE 40100 Co-Op Seminar II *(Co-Op Students only)*
_____ (3) Any Chemical Engineering Selective
_____ (3) Any AAE, ABE, BME, CE, CEM, ECE, IE, MSE, ME AND NUCL course *(Must meet pre-req listed in MyPurdue to enroll)*

***The following courses DO NOT count in CHE: ABE 20100, 21000, 30800, 37000, IE 23000, 33000 and ME 30900, 35100**
***CHE 49700 Chemical Engr Study Abroad does not count for an ENGR Elective – rather a Technical Selective or General Education Elective**

Math Selective (6-7 credits)

_____ (3) Math Selective I: MA 26500 Linear Algebra *(MA 26100 Minimum Grade of C-)*
_____ (4) Math Selective II: MA 36600 Ordinary Differential Equations*(MA 26100 & 26500 Minimum Grade of C-)*
(3) MA 26600 Ordinary Differential Equations *(MA 26100 Minimum Grade of C-)*

OR

_____ (3) Math Selective I: * MA 35100 Elementary Linear Algebra *(MA 26100 Minimum Grade of C-)*
_____ (4) Math Selective II: *MA 36600 Ordinary Differential Equations*(MA 26100 & 26500 Minimum Grade of C-)*

OR

_____ (4) Math Selective I: MA 26200 Linear Algebra and Diff Equations *(MA 26100 Minimum Grade of C-)*
_____ (3) Math Selective II: MA 30300 Differential Equations and Partial Differential Equations *(MA 26200)*
(3) MA 30400 Differential Equations and Analysis of Nonlinear Systems *(MA 26500 & 26600/36600)*
(3) MA 51400 Numerical Analysis *(Junior Classification)*
(3) ME 58100 Numerical Methods in Mechanical Engineering *(Junior Classification, ME 31500 & 35200)*

***Suggested courses for students pursuing a minor or dual major in math**

Technical Selective (3 credits)

_____ (3) BCHM – Any biochemistry course excluding BCHM 307 & 56100 if used for Biology Selective
_____ (3) BIOL – Any biology course excluding 11000, 13500, 14600 and 14700
_____ (3) CHE 49700 Chemical Engr Study Abroad
_____ (3) CHM 22400 Intro to Quantitative Analysis *(CHM 11600)*
_____ (3) CHM 24100 Intro to Inorganic Chemistry
_____ (4) CHM 32100 Analytical Chemistry I *(CHM 11600)*
_____ (4) CHM 32300 Analytical Chemistry I *(CHM 11600)*
_____ (3) CHM 33300 Principles of Biochemistry *(CHM 26200)*
_____ (3) CHM 34200 Inorganic Chemistry
_____ (4) CHM 42400 Analytical Chemistry *(CHE 21100 & CHM 37000)*
_____ (3) CHM – Any chemistry course above 42400
_____ (3) CS – Any computer science course
_____ (3) EAPS – Any Earth and Atmospheric Science course
_____ (3) EPCS – Any 3 credit hours of Epics
_____ (3) Engineering Selective – Any Engineering Selective
_____ (3) GEP – Any 3 credit hours of Global Engineering Programs 20000 and above
_____ (3) MGMT 20000 Introductory Accounting or MGMT 20010 Business Accounting
_____ (3) MGMT 24300 Minorities in Management
_____ (3) MATH – MA 30100, 30800, 34100, 35300, 36200, 37000 and any course above 37300
_____ (3) IPPH 36200 Basic Pharmaceuticals
_____ (3) IPPH 56200 Intro to Pharma Manufacturing Processes
_____ (3) PHAD Food and Drug Law I
_____ (3) PHYS – Any physics course 30000 or above
_____ (3) STAT – Any statistic course 51100 or above

Prerequisites are listed in *italics*.