California State Polytechnic University, Pomona
Degree Curriculum Sheet

Plan (Major) CHEMICAL ENGINEERING
Subplan/Option
Catalog Year 2017 - 2018
Minimum Units Required 194
Name
Student ID

Required Core Courses

Required of all students. A 2.0 cumulative GPA is required in core courses in order to receive a degree in the major.
CHE 131/141L - Introduction to Chemical Engineering/Laboratory (2/1)
CHE 132/142L - Chemical Engineering Analysis/Laboratory (2/1)
CHE 143L - Chemical Engineering Data Analysis and Design of Experiments Laboratory (1)
CHE 201/211L - Stoichiometry I/Laboratory (3/1)
CHE 202/212L - Stoichiometry II/Laboratory (3/1)
CHE 302 - Chemical Engineering Thermodynamics I (4)
CHE 303 - Chemical Engineering Thermodynamics II (4)
CHE 304 - Kinetics and Reactor Design (4)
CHE 311 - Momentum Transport (4)
CHE 312 - Energy Transport (3)
CHE 313 - Mass Transport (3)
CHE 322L - Transport Laboratory I (1)
CHE 333L - Transport Laboratory II (1)

CHE 425 - Unit Operations I (3) and
CHE 435L - Unit Operations I Laboratory (1)

CHE 426 - Process Controls (3)
CHE 436L - Process Controls Laboratory (1)
CHE 441/451L - Chemical Process Synthesis and Design I/Laboratory (4/1)
CHE 442/452L - Chemical Processes Synthesis and Design II/Laboratory (3/1)
CHE 443/453L - Chemical Process Synthesis and Design III/Laboratory (3/1)
CHE 463 - Undergraduate Project (2)

Total Units 62

Required Support Courses

The following major support courses should be used to satisfy the indicated GE requirements. If these courses are not used to satisfy GE, the total units to degree may be more than 198 units.

CHM 121 - General Chemistry (3) and
CHM 121L - General Chemistry Laboratory (1) (B3)

CHM 122 - General Chemistry (3) and
CHM 122L - General Chemistry Laboratory (1)

CHM 123 - General Chemistry (3)

CHM 314 - Organic Chemistry (3) and
CHM 317L - Organic Chemistry Laboratory (1)

CHM 315 - Organic Chemistry (3)
CHM 316 - Organic Chemistry (3)
ECE 231/231L - Elements of Electrical Engineering (3/1)

EGR 481 - Project Design Principles and Applications (2) (B5) and
EGR 482 - Project Design Principles and Applications (2) (B5)

Continue next column

Required Support Courses Con't.

IME 402 - Ethical Considerations in Technology and Applied Science (4) (C4)
MAT 114 - Analytic Geometry and Calculus I (4) (B4)
MAT 115 - Analytic Geometry and Calculus II (4)
MAT 116 - Analytic Geometry and Calculus III (4)
MAT 214 - Calculus of Several Variables I (3)
MAT 215 - Calculus of Several Variables II (3)

MAT 216 - Differential Equations (4) or
MAT 224 - Elementary Linear Algebra and Differential Equations (4)

ME 214 - Vector Statics (3)
MTE 207 - Materials Science and Engineering (3)
MTE 317L - Materials Science and Engineering Laboratory (1)
MTE 401/401L - Corrosion and Materials Degradation (3/1)

PHY 131 - General Physics (3) (B1) and
PHY 131L - General Physics Laboratory (1) (B3)

PHY 132 - General Physics (3) and
PHY 132L - General Physics Laboratory (1)

PHY 133 - General Physics (3) and
PHY 133L - General Physics Laboratory (1)

Total Units 78

Elective Support Courses

Upper Division MTE/CHE Elective (3)

Total Units 3

Interdisciplinary General Education

An alternate pattern for partial fulfillment of GE Areas A, C, D, and E available for students is the Interdisciplinary General Education (IGE) program. Students should see an advisor for specific GE coursework required by their major. Students must be exempt from or score at least 147 on the EPT to qualify for IGE. Please refer to the University Catalog General Education Programs section for additional information.

How IGE fulfills General Education Requirements:

Year	Completion of IGE Courses	Satisfies GE Requirements
Freshman	IGE 120, IGE 121, IGE 122	A2 as well as any 2 courses from C1-C3
Sophomore	IGE 220, IGE 221, IGE 222	D1 (8 units) and D3
Junior	IGE 223, IGE 224	D2 and Area E

Total Units 32

General Education Requirments

Area A Communication & Critical Thinking (12 units)
- 1. Oral Communication
- 2. Written Communication
- 3. Critical Thinking

Area B Mathematics & Natural Sciences (16 units)
- 1. Physical Science
- 2. Biological Science
- 3. Laboratory Activity
- 4. Math/Quantitative Reasoning
- 5. Science & Technology Synthesis

Area C Humanities (16 units)
- 1. Visual and Performing Arts
- 2. Philosophy and Civilization
- 3. Literature and Foreign Language
- 4. Humanities Synthesis

Area D Social Sciences (20 units)
- 1. U.S. History, Constitution, American Ideals
  - a. United States History
  - b. Introduction to American Government
- 2. History, Economics and Political Science
- 3. Sociology, Anthropology, Ethnic & Gender Studies
- 4. Social Science Synthesis

Area E Lifelong Understanding & Self Development (4 units)

Total Units 68

American Institutions Courses that satisfy this requirement may also satisfy GE Area D1	8

American Cultural Perspectives Requirement Refer to the University Catalog General Education Programs section for a list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements.	4

All persons who receive undergraduate degrees from Cal Poly Pomona must pass the Graduation Writing Test (GWT). The test must be taken by the quarter following completion of 120 units for undergraduates.