California State Polytechnic University, Pomona
Degree Curriculum Sheet

Plan (Major) **CIVIL ENGINEERING**
Subplan/Option **Geospatial Engineering**
Catalog Year **2016 - 2017**
Minimum Units Required **194**
Name _____
Student ID _____

Required Core Courses

CE 127/127L - Civil Engineering CAD I/Laboratory (1/1)
CE 128L - Civil Engineering CAD II Laboratory (1)
CE 134/134L - Elementary Surveying/Laboratory (2/2)
CE 221/221L - Civil Engineering Materials/Laboratory (2/1)
CE 304 - Structural Analysis I (4)
CE 305 - Structural Analysis II (4)
CE 305L - Structural Design Laboratory (1)
CE 306L - Structural Testing Laboratory (1)
CE 325 - Geotechnical Engineering I (2)
CE 326 - Geotechnical Engineering II (3)
CE 327L - Geotechnical Engineering Laboratory (1)
CE 332/332L - Hydraulic Engineering/Laboratory (3/1)
CE 362/362A - Technical Communications and Documentation/Activity (2/1)
CE 421 - Structural Design-Reinforced Concrete (4)
CE 451 - Engineering Hydrology (4)
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 224 - Elementary Linear Algebra and Differential Equations (4)
ME 214 - Vector Statics (3)
ME 215 - Vector Dynamics (4)
ME 218 - Strength of Materials I (3)
ME 311 - Fluid Mechanics I (3)

Total Units 69

Required Subplan/Option Core Courses

CE 220/220L - Advanced Surveying/Laboratory (3/1)
CE 222/222L - Highway Engineering/Laboratory (2/2)
CE 240 - Surveying Computations (3)
CE 311/311L - Geodesy and Satellite Surveying/Laboratory (3/1)
CE 313 - Land Survey Descriptions (4)
CE 331 - Public Land Surveys (3)
CE 420/420L - Digital Mapping/Laboratory (3/1)
CE 427/427L - Photogrammetry and Remote Sensing/Laboratory (3/1)
CE 465 - Geospatial Engineering Seminar (1)
CE 482/482L - Subdivision Design/Laboratory (3/1)
CE 484/484L - Geographical Information Systems/Laboratory (3/1)

CE 491 - Comprehensive Civil Engineering Design I (1) and
CE 492 - Comprehensive Civil Engineering Design II (2) and
CE 493 - Comprehensive Civil Engineering Design III (1)

Total Units 43

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 194 units.

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

EGR 322 - California Land and Boundaries Law (4) (D4)
GSC 321/321L - Engineering Geology I (3/1) (B5)
IME 402 - Ethical Considerations in Technology and Applied Science (4) (C4)

IME 301 - Application of Statistics in Engineering (3) or
STA 309 - Statistical Methods in Engineering and the Physical Sciences (3)

MAT 114 - Analytic Geometry and Calculus I (4) (B4)

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 35

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 Program 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 Program 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.