



**California State Polytechnic University, Pomona  
Degree Curriculum Sheet**

Plan (Major) **AEROSPACE ENGINEERING**  
Subplan/Option \_\_\_\_\_

Catalog Year **2011-2012**  
Minimum Units Required **198**

Name \_\_\_\_\_  
Student ID \_\_\_\_\_

Evaluator \_\_\_\_\_  
GWT Satisfied \_\_\_\_\_ Yes \_\_\_\_\_ No

| Required Core Courses   |              |           |
|---|--------------|-----------|
| Course  |              | Units     |
| <i>Students in this major are expected to maintain a GPA of 2.00 in all core courses.</i> |              |           |
| Introduction to Aeronautics Lab   | ARO 101L     | 1         |
| Introduction to Astronautics Lab  | ARO 102L     | 1         |
| Introduction to Aerospace Propulsion Lab  | ARO 103L     | 1         |
| Fundamentals of Aeronautics Lab   | ARO 202L     | 1         |
| Fundamentals of Astronautics Lab  | ARO 203L     | 1         |
| Fluid Dynamics  | ARO 301      | 4         |
| Low-Speed Aerodynamics and Performance  | ARO 305      | 4         |
| Astronautics  | ARO 309      | 3         |
| Gas Dynamics  | ARO 311      | 3         |
| Aircraft Jet Propulsion   | ARO 312      | 4         |
| Aerospace Feedback Control Systems  | ARO 322/322L | 3/1       |
| Aerospace Structural Mechanics I  | ARO 326/326L | 3/1       |
| Aerospace Structural Mechanics II   | ARO 327      | 3         |
| Aerospace Structures  | ARO 329      | 3         |
| Fluid Dynamics & Heat Transfer Lab  | ARO 351L     | 1         |
| High Speed Aerodynamics Lab   | ARO 352L     | 1         |
| Aerospace Structures Lab  | ARO 357L     | 1         |
| Heat, Mass & Momentum Transfer  | ARO 401      | 4         |
| High-Speed Aerodynamics   | ARO 404      | 3         |
| Aircraft Stability & Control  | ARO 405      | 4         |
| Advanced Dynamics & Vibrations of Aerospace Systems                                       | ARO 406      | 4         |
| Low Speed Aerodynamics Lab  | ARO 435L     | 1         |
| Senior Project  | ARO 461      | 2         |
| Senior Project  | ARO 462      | 2         |
| Aerosciences Lab  | ARO 490L     | 1         |
| Aerospace Vehicle Design I Lab  | ARO 491L     | 2         |
| Aerospace Vehicle Design II Lab   | ARO 492L     | 2         |
| Aerospace Vehicle Design III Lab  | ARO 493L     | 2         |
| <b>Total Units</b>  |              | <b>67</b> |

| Elective Core Courses        |  |           |
|------------------------------|--|-----------|
| Course                       |  | Units     |
| Approved Technical Electives |  | 12        |
| <b>Total Units</b>           |  | <b>12</b> |

| Required Support Courses                     |              |           |
|--|--------------|-----------|
| Course                                       |              | Units     |
| Fundamentals of Systems Engineering Lab      | ARO 201L     | 1         |
| CHE Thermodynamics I                         | CHE 302      | 4         |
| or Thermodynamics I                          | ME 301       | (4)       |
| General Chemistry                            | CHM 121      | 3         |
| General Chemistry Lab (B3)                   | CHM 121L     | 1         |
| Elements of Electrical Engineering           | ECE 231/231L | 3/1       |
| Ethical Consideration in Tech & App Sci (C4) | EGR 402      | 4         |
| Analytical Geometry/Calculus 1 (B4)          | MAT 114      | 4         |
| Analytical Geometry/Calculus II              | MAT 115      | 4         |
| Analytical Geometry/Calculus III             | MAT 116      | 4         |
| Calculus of Several Variables I              | MAT 214      | 3         |
| Calculus of Several Variables II             | MAT 215      | 3         |
| Differential Equations                       | MAT 216      | 4         |
| or Elem Linear Algebra Diff Equations        | MAT 224      | (4)       |
| Math Analysis of Engineering Problems        | MAT 318      | 3         |
| Vector Statics                               | ME 214       | 3         |
| Vector Dynamics                              | ME 215       | 4         |
| Materials Science and Engineering            | MTE 207      | 3         |
| General Physics (B1, B3)                     | PHY 131/131L | 3/1       |
| General Physics                              | PHY 132/132L | 3/1       |
| General Physics                              | PHY 133/133L | 3/1       |
| <b>Total Units</b>                           |              | <b>64</b> |

| General Education Requirements                              |           | IGE (G.E. Alternative) |    |
|---|-----------|------------------------|----|
| Area  | Units     |                        |    |
| <b>Area A Communication &amp; Critical Thinking</b>         | <b>12</b> | IGE 120                | 4  |
| 1 Oral Communication  |           | IGE 121                | 4  |
| 2 Written Communication                                     |           | IGE 122                | 4  |
| 3 Critical Thinking   |           | IGE 220                | 4  |
| <b>Area B Mathematics &amp; Natural Sciences</b>            | <b>16</b> | IGE 221                | 4  |
| <i>Select at least one lab course from sub-area 1 or 2.</i> |           | IGE 222                | 4  |
| 1 Physical Science  |           | IGE 223                | 4  |
| 2 Biological Science  |           | IGE 224                | 4  |
| 3 Laboratory Activity                                       |           | Area A1                | 4  |
| 4 Math/Quantitative Reasoning                               |           | Area A3                | 4  |
| 5 Science & Technology Synthesis                            |           | Area B                 | 16 |
| <b>Area C Humanities</b>                                    | <b>16</b> | Area C1, C2            |    |
| 1 Visual and Performing Arts                                |           | or C3                  | 4  |
| 2 Philosophy and Civilization                               |           | Area C4                | 4  |
| 3 Literature and Foreign Language                           |           | Area D4                | 4  |
| 4 Humanities Synthesis                                      |           |                        |    |
| <b>Area D Social Sciences</b>                               | <b>20</b> | See University         |    |
| 1 U.S. History, Constitution, American Ideals               |           | Catalog for            |    |
| 2 History, Economics and Political Science                  |           | information on         |    |
| 3 Sociology, Anthropology, Ethnic & Gender Studies          |           | how IGE meets          |    |
| 4 Social Science Synthesis                                  |           | G.E. require-          |    |
| <b>Area E Lifelong Understanding &amp; Self Development</b> | <b>4</b>  | ments.                 |    |
| <b>Total Units</b>  | <b>68</b> |                        |    |

| American Institutions   | Units |
|---|-------|
| Courses that satisfy this requirement may also satisfy G.E. Area D1 | 8     |

| American Cultural Perspectives Requirement   | Units |
|--|-------|
| Refer to catalog for list of courses that satisfy this requirement. Course may also satisfy major, minor, GE, or unrestricted elective requirements. | 4     |

| The following required support courses should be taken to satisfy the indicated GE Requirements to achieve the minimum units to degree listed at the top of this sheet. |              |         |
|---|--------------|---------|
| Course  |              | GE Area |
| General Physics   | PHY 131/131L | B1, B3  |
| and General Chemistry Lab   | CHM 121L     | B3      |
| Analytical Geometry/Calculus 1  | MAT 114      | B4      |
| Ethical Consideration in Tech & App Sci   | EGR 402      | C4      |
| The remaining GE requirements may be satisfied by any course approved for that area.  |              |         |

No more than 105 community college quarter units or 36 extension credit quarter units may be applied toward a Bachelor's degree. A minimum 2.0 cumulative GPA is required in core (including option) courses, Cal Poly Pomona courses, and overall work completed in order to receive a degree in this major.

**CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA  
AEROSPACE ENGINEERING**

NAME: \_\_\_\_\_

CPID: \_\_\_\_\_

**CURRICULUM FLOWSHEET, 2011-12**

