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

Plan (Major) **AEROSPACE ENGINEERING** Catalog Year **2013-2014** Name _____ TGA _____
Subplan/Option _____ Minimum Units Required **198** Student ID _____ GWT Satisfied _____Yes ____No

## Required Core Courses

| Course | | Units |
|---|---|---|
| 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 |
| or Low Speed Aerodynamics Lab | ARO 435L | (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 |
| Senior Project | ARO 461 | 2 |
| Senior Project | ARO 462 | 2 |
| Space Vehicle Design Lab I | ARO 481L | 2 |
| or Air Vehicle Design I Lab | ARO 491L | (2) |
| Space Vehicle Design Lab II | ARO 482L | 2 |
| or Air Vehicle Design II Lab | ARO 492L | (2) |
| Space Vehicle Design Lab III | ARO 483L | 2 |
| or Air Vehicle Design III Lab | ARO 493L | (2) |
| Aerosciences Lab | ARO 490L | 1 |
| | **Total Units** | **66** |

## Elective Core Courses

| Course | Units |
|---|---|
| Approved Technical Electives | 13 |
| **Total Units** | **13** |

## 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 |
| | **Total Units** | **64** |

## General Education Requirements

| Area | Units | IGE (G.E. Alternative) | |
|---|---|---|---|
| **Area A Communication & Critical Thinking** | **12** | IGE 120 | 4 |
| 1 Oral Communication | | IGE 121 | 4 |
| 2 Written Communication | | IGE 122 | 4 |
| 3 Critical Thinking | | IGE 220 | 4 |
| **Area B Mathematics & Natural Sciences** | **16** | IGE 221 | 4 |
| *Select at least one lab course from sub-area 1 or 2.* | | 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 |
| **Area C Humanities** | **16** | Area C1, C2 or C3 | 4 |
| 1 Visual and Performing Arts | | Area C4 | 4 |
| 2 Philosophy and Civilization | | Area D4 | 4 |
| 3 Literature and Foreign Language | | | |
| 4 Humanities Synthesis | | | |
| **Area D Social Sciences** | **20** | See University Catalog for information on how IGE meets G.E. requirements. | |
| 1 U.S. History, Constitution, American Ideals | | | |
| 2 History, Economics and Political Science | | | |
| 3 Sociology, Anthropology, Ethnic & Gender Studies | | | |
| 4 Social Science Synthesis | | | |
| **Area E Lifelong Understanding & Self Development** | **4** | | |
| **Total Units** | **68** | | |

| | |
|---|---|
| **American Institutions**<br>Courses that satisfy this requirement may also satisfy G.E. Area D1 | 8 |

| | |
|---|---|
| **American Cultural Perspectives Requirement**<br>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.

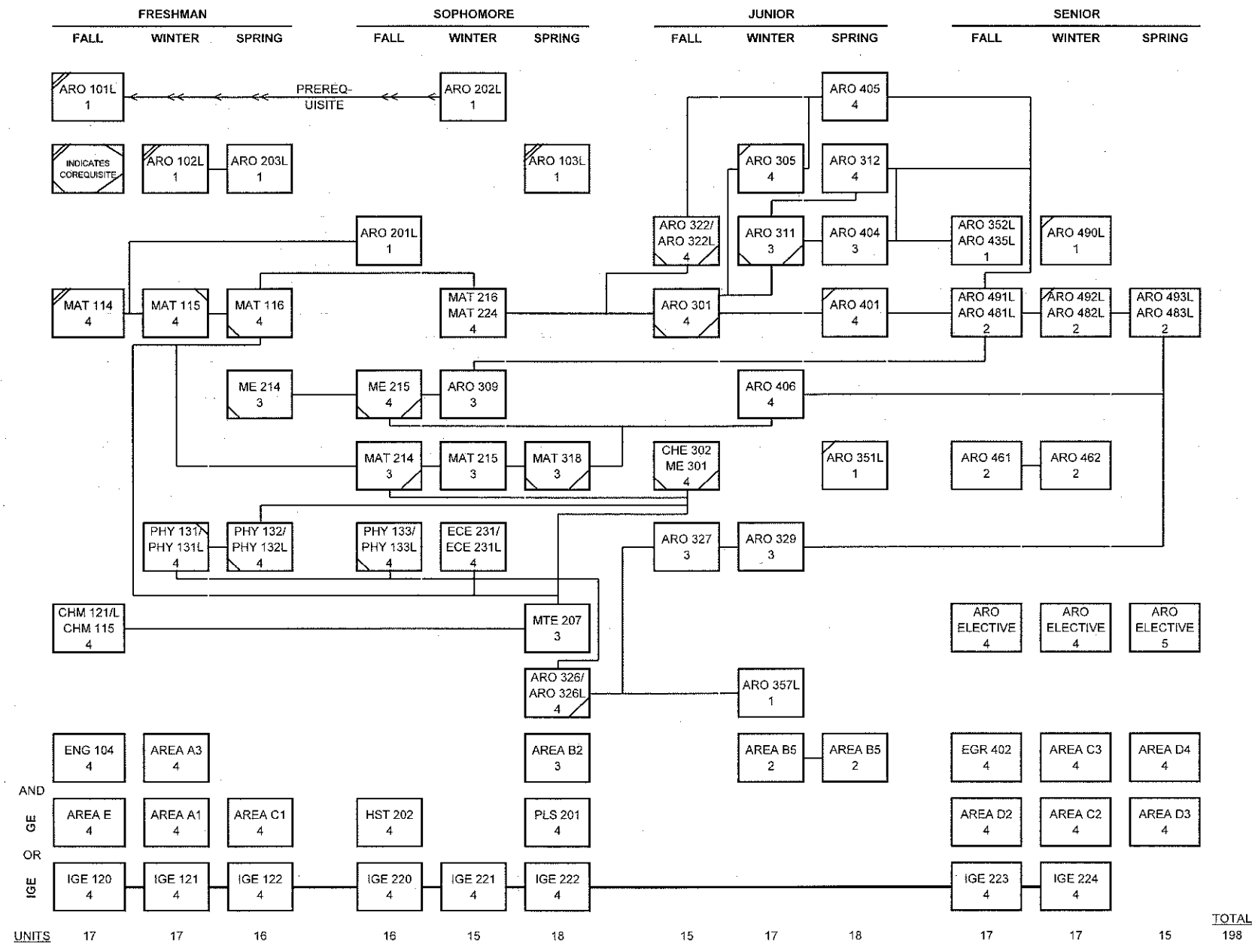
No more than 105 community college quarter units or 36 extension credit quarter units may be applied toward a Bachelor's degree.
A minimum 2.0 cumulative GPA is required in core (including option) courses, Cal Poly Pomona courses, and overall work completed in order to receive a degree in this major.

# CALIFORNIA STATE POLYTECHNIC UNIVERSITY, POMONA
## AEROSPACE ENGINEERING

NAME: _____

CPID: _____

## CURRICULUM FLOWSHEET, 2013-14




Revised: 3/14/13