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

Plan (Major) MATHEMATICS
Subplan/Option Applied Mathematics

Catalog Year 2009-2010
Minimum Units Required 180

Name
Student ID

Evaluator
GWT Satisfied _____Yes ____No

### Required Core Courses

| Course | | Units |
|---|---|---|
| FORTRAN | CS 125 | 4 |
| or Intro to C++ | CS 128 | (4) |
| Analytic Geometry & Calculus III | MAT 116 | 4 |
| Intro to Numerical Methods | MAT 201 | 4 |
| Intro Linear Algebra | MAT 208 | 4 |
| Calculus of Sev Variables I | MAT 214 | 3 |
| Calculus of Sev Variables II | MAT 215 | 3 |
| Differential Equations | MAT 216 | 4 |
| Basic Set Theory & Logic | MAT 310 | 4 |
| Intermediate Analysis I | MAT 314 | 4 |
| Intermediate Analysis II | MAT 315 | 4 |
| Modern Algebra I | MAT 417 | 4 |
| Modern Algebra II | MAT 418 | 4 |
| Complex Variables | MAT 428 | 4 |
| Applied Prob Theory | STA 241 | 4 |
| Applied Statistics | STA 341 | 4 |
| | **Total Units** | **58** |

### Required Subplan/Option Courses

| Course | | Units |
|---|---|---|
| *Complete two, two-quarter sequences from the list below:* | | |
| Math of Operations Research | MAT 380 | (4) |
| Math of Operations Research | MAT 381 | (4) |
| Numerical Analysis | MAT 401 | (4) |
| Numerical Analysis | MAT 402 | (4) |
| Differential Equations | MAT 431 | (4) |
| Differential Equations | MAT 432 | (4) |
| Math Modeling | MAT 485 | (4) |
| Math Modeling | MAT 486 | (4) |
| *Complete two additional courses from the list above or the list below:* | | |
| Graph Theory | MAT 370 | (4) |
| Combinatorics | MAT 470 | (4) |
| Mathematical Programming | MAT 480 | (4) |
| | **Total Units** | **24** |

### Required Support Courses

| Course | | Units |
|---|---|---|
| Freshman Composition (A2) | ENG 104 | 4 |
| Analytic Geometry & Calculus I (B4) | MAT 114 | 4 |
| Analytic Geometry & Calculus II (B4) | MAT 115 | 4 |
| General Physics/Lab (B1, B3) | PHY 131/131L | 3/1 |
| General Physics/Lab | PHY 132/132L | 3/1 |
| General Physics/Lab | PHY 133/133L | 3/1 |
| | **Total Units** | **24** |

### Unrestricted Electives

| Course | Units |
|---|---|
| Unrestricted Electives<br><br>Select a sufficient number of courses so that the total from "Required Support," "GE," and "Unrestricted Electives" is at least 98 units. | 6-18 |
| **Total Units** | **6–18** |

### General Education Requirements

| Area | Units |
|---|---|
| **Area A Communication & Critical Thinking** | **12** |
| 1 Oral Communication | |
| 2 Written Communication | |
| 3 Critical Thinking | |
| **Area B Mathematics & Natural Sciences** | **16** |
| *Select at least one lab course from sub-area 1 or 2.* | |
| 1 Physical Science | |
| 2 Biological Science | |
| 3 Laboratory Activity | |
| 4 Math/Quantitative Reasoning | |
| 5 Science & Technology Synthesis | |
| **Area C Humanities** | **16** |
| 1 Visual and Performing Arts | |
| 2 Philosophy and Civilization | |
| 3 Literature and Foreign Language | |
| 4 Humanities Synthesis | |
| **Area D Social Sciences** | **20** |
| 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 requirements. 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 |
|---|---|---|
| Freshman Composition | ENG 104 | A2 |
| General Physics/Lab | PHY 131/131L | B1, B3 |
| Analytic Geometry and Calculus I | MAT 114 | B4 |
| or Analytic Geometry and Calculus II | MAT 115 | (B4) |

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.