**Sample Program--- B.S. in Mathematics with**

**Concentration in Mathematics for Education/ Secondary Teaching Certification**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **FRESHMAN** | Units |  | Units |  | Units |
| **Fall** |  | **Winter** |  | **Spring** |  |
| Math 2A | 4 | Math 2B | 4 | Math 2D | 4 |
| Physics 7C, 7LC | 5 | Physics 7D, 7LD | 5 | Physics 7E | 4 |
| Gen. Ed. | 4 | Gen. Ed. | 4 | Math 8: Functions and Modeling | 4 |
| P.S. 5: Intro to Sci/Math Teaching | 3 | Math 13 | 4 | Math 9 | 4 |
|  | ***16*** |  | ***17*** |  | ***16*** |
| **SOPHOMORE** |  |  |  |  |  |
| **Fall** |  | **Winter** |  | **Spring** |  |
| Math 3A | 4 | Math 3D | 4 | Math 161 | 4 |
| P.S. 105: Middle School Sci/Math Teaching | 3 | Math 180A | 4 | Math 121A | 4 |
| Gen. Ed. | 4 | Chem 193- Research Methods | 4 | Gen. Ed. | 4 |
|  |  |  |  |  |  |
|  | ***11*** |  | ***12*** |  | ***12*** |
| **JUNIOR** |  |  |  |  |  |
| **Fall** |  | **Winter** |  | **Spring** |  |
| Math 140A | 4 | Math 140B | 4 | Math 184, 184L | 5 |
| Math 130A | 4 | Math 130B | 4 | Math 120B | 4 |
| Educ 55: Know & Learn Sci/Math (III) | 5 | Math 120A | 4 | Math Elective | 4 |
|  |  | Educ 143AW: Classroom Interactions I | 4 | Educ 148: Complex Pedagogical Design | 6 |
|  | ***13*** |  | ***16*** |  | ***19*** |
| **SENIOR** |  |  |  |  |  |
| **Fall** |  | **Winter** |  | **Spring** |  |
| Math 105A/LA | 5 | Gen. Ed. | 4 | Gen. Ed. | 4 |
| Math 150 | 4 | Educ 109: Read & Writing in Sec. Classroom | 4 | Gen. Ed. | 4 |
| Educ 143BW: Classroom Interactions II (I-UDW/VII) | 4 | Educ 158: Student Teaching in Math & Science | 6 | Education 158: Student Teaching in Math & Science | 6 |
|  | **13** |  | **14** |  | **14** |

**Departmental Requirements**

*Lower Division Requirements for concentration in secondary teaching credential:*

1. Math 2A-B, 2D, 3A, 3D, 8, 13

*Upper Division Requirements:*

1. Math 105A-105LA, 120B, 130B, 150, 161, 180A, 184, 184L, plus one additional four-unit math course numbered 100-189.

\*\* Physics 2 does not count for three quarters of Physics sequence

**Cal Teach Courses**

* **PS 5/BS 14** Intro to Science & Math Teaching (F,W,S)- Fieldwork
* **PS 105/BS 101** Middle School Teaching (F,W,S)- Fieldwork
* **Chem 193/Physics 193/BS 108** Research Methods (W)
* **LPS 60/Hist 60** Making of Modern Science (science majors only W, S, Summer)
* **Math 8** (math majors only, S, summer)
* **ED 55** Knowing and Learning (F)
* **ED 143AW** Classroom Interactions I (W, ED 55 prereq)-Fieldwork
* **ED 148** Complex Pedagogical Design (S, ED 143AW prereq)-Fieldwork
* **ED 143BW** Classroom Interactions II (F, ED 148 prereq)- Fieldwork
* **ED 109** Reading & Writing in Sec. Classroom (W, ED 148 prereq)
* **ED 158** Student Teaching I (W, ED 109 coreq, ED 143BW prereq)- Fieldwork
* **ED 158** Student Teaching II (S, ED 158 I prereq)- Fieldwork