CNSM Academic Advising Center
College of Natural Sciences and Mathematics California State University Long Beach www.csulb.edu/cnsm/advising

# Bachelor of Science in Mathematics Option in Mathematics Education Four Year Degree Worksheet <br> <br> 2017-2018 Catalog 

 <br> <br> 2017-2018 Catalog}

This degree worksheet is intended to help you develop a balanced course schedule while completing your degree within 4 years. The same sequence of courses (with fewer courses each semester) is also recommended for students completing their degree in 5 or 6 years. This worksheet is not intended to replace academic advising with your assigned advisor. Students should consult with their assigned advisor to determine the appropriate sequence of required courses and electives based on their academic goals.

CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.

## Year 1

| Semester | Course \# | Course Title (Units) | Prerequisites | Notes |
| :---: | :--- | :--- | :--- | :--- |
|  | MATH 122 | Calculus I (4) | MATH 111 and 113 |  |
|  | GE (area A1) | Written Communication (3) |  |  |
|  | GE (area C,D,E) | Other Explorations (3) |  | Fall only |
|  | GE (area C,D,E) | Other Explorations (3) |  |  |
|  | NSCI 190A | Experience Success Program 1 (1) |  |  |
|  | MATH 123 | Calculus II (4) | MATH 122 |  |
|  | GE (area A2) | Oral Communication (3) |  |  |
|  | GE (area A3) | Critical Thinking (3) | Corequisite: GE (area B1a) Life Science | B1a or <br> B1b with <br> lab |
|  | GE (area C,D,E) | Other Explorations (3) | Lab |  |
|  | GE (area B1a) | Life Science (3-4) |  |  |

Year 2

| Semester | Course \# | Course Title (Units) | Prerequisites | Notes |
| :---: | :---: | :---: | :---: | :---: |
| 3 | MATH 224 | Calculus III (4) | MATH 123 |  |
|  | MATH 233 | Fundamental Concepts for Advanced Mathematics (3) | MATH 123 |  |
|  | PHYS 151; OR <br> PHIL 170; <br> OR <br> GE (Area C2) | Mechanics and Heat (4); <br> OR <br> Critical Reasoning (3); <br> OR <br> Foreign Language I (4) | MATH 122; <br> OR <br> GE Written Communication (A1); <br> OR <br> varies |  |
|  | GE (area C,D,E) | Other Explorations (3) |  |  |
|  | GE (area C,D,E) | Other Explorations (3) |  |  |
| 4 | MATH 247 | Introduction to Linear Algebra (3) | MATH 123 |  |
|  | MATH 310 | History of Early Mathematics (3) |  |  |
|  | PHYS 152; <br> OR <br> PHIL 270; <br> OR <br> GE (area C2) | Electricity and Magnetism (4); OR <br> Symbolic Logic I (3); <br> OR <br> Foreign Language II (4) | PHYS 151, Pre/Corequisite: MATH 123; <br> OR <br> PHIL 170; <br> OR <br> varies |  |
|  | MTED 301; <br> OR <br> CECS 174 | Computer Applications in Mathematics for Teachers (3) OR Intro Program. and Prob. Solving (3) | MATH 122; <br> OR <br> CECS 100 and MATH 113 |  |
|  | Elective | Elective (3) |  |  |

## Year 3

| Semester | Course \# | Course Title (Units) | Prerequisites | Notes |
| :---: | :---: | :---: | :---: | :---: |
| 5 | MATH 380 | Probability and Statistics (3) | MATH 224 |  |
|  | MATH 355 | College Geometry (3) | MATH 247 |  |
|  | ENGL 101; OR <br> ENGL 300; OR <br> ENGL 317 | Composition (3); <br> OR <br> Advanced Composition (3); <br> OR <br> Technical Communication (3) | GE Written Communication (A1) and GE Oral Communication (A2) and GE Critical Thinking (A3) and MATH 122 (B2) | 101 not offered |
|  | GE (area C,D,E) | Other Explorations (3) |  |  |
|  | Elective | Elective (3) |  |  |


| Semester | Course \# | Course Title (Units) | Prerequisites | Notes |
| :---: | :--- | :--- | :--- | :--- |
| 6 | MATH 341 | Number Theory (3) | MATH 233 |  |
|  | STAT 381 | Mathematical Statistics (3) | MATH 247 and 380 |  |
|  | EDSS 300M | Introduction to Teaching- <br> Mathematics (3) |  |  |
|  | GR (area B1b); <br> Elective | GE (area B1b) Physical Science (3-4); <br> OR <br> Elective (if took PHYS 151) (3) |  |  |
|  | GE (area C,D,E) | Other Explorations (3) |  |  |

## Year 4

| Semester | Course \# | Course Title (Units) | Prerequisites | Notes |
| :---: | :---: | :---: | :---: | :---: |
| 7 | MATH 444 | Introduction to Abstract Algebra (3) | MATH 233, 247, and 341 |  |
|  | MATH 410 | History of Modern Mathematics (3) | MATH 247 and 310 | Spring only |
|  | GE (area F) | Capstone (3) | GE Written Communication (A1) and GE Oral Communication (A2) and GE Critical Thinking (A3) and MATH 122 (B2) |  |
|  | GE (area F) | Capstone (3) | GE Written Communication (A1) and GE Oral Communication (A2) and GE Critical Thinking (A3) and MATH 122 (B2) |  |
|  | Elective | Elective (3) |  |  |
| 8 | MATH 361A | Intro. to Mathematical Analysis I (3) | MATH 224 and 247 |  |
|  | MTED 411 | Topics and Issues in Secondary School Mathematics (3) | MATH 310, 341, 355, 380, 444, AND EDSS 300M |  |
|  | Upper Division Elective | MATH (3) |  |  |
|  | GE (area F) | Capstone (3) | GE Written Communication (A1) and GE Oral Communication (A2) and GE Critical Thinking (A3) and MATH 122 (B2) |  |
|  | Elective | Elective (1) |  |  |

