BACHELOR OF SCIENCE IN MATHEMATICS (IMPACTED)
Option in Applied Mathematics (Suboption I: Application in Science and Engineering)
Major Requirements Worksheet
2016-2017 Catalog

Name: _______________________________      Student ID: __________________________

NOTE: This checklist is not intended to replace advising from the major department. Students should consult with the major advisor to
determine the appropriate sequence of courses. This checklist is to inform students of major requirements and course prerequisites only.
CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification. Pre-Mathematics
majors must complete their GE Foundation courses, and the highlighted areas below all with a “C” or better and a cumulative GPA of 2.5,
by 60 units to be considered for the major.

Many prerequisites require a” C” or better, please check the catalog for grade requirements.

**Semester** | **Grade** | **Course #** | **Course Title** | **Prerequisites**
--- | --- | --- | --- | ---
MATH 122 | | Calculus I (4) | Appropriate MDPT placement* or MATH 111 and 113
MATH 123 | | Calculus II (4) | MATH 122
MATH 224 | | Calculus III (4) | MATH 123
MATH 247 | | Introduction to Linear Algebra (3) | MATH 123
ENGL 317 | | Technical Communication (3) | GE Foundation requirements, upper-
division standing, and a previous
composition course*
CECS 174 | | Introduction to Programming and Problem
Solving (3) | MATH 113 (or equivalent)
PHYS 151 | | Mechanics and Heat (4) | MATH 122
PHYS 152 | | Electricity and Magnetism (4) | PHYS 151; Pre/corequisite: MATH 123

*See catalog for more detail

**Choose ONE of the following courses:**

**Semester** | **Grade** | **Course #** | **Course Title** | **Prerequisites**
--- | --- | --- | --- | ---
PHYS 254 | | Applied Modern Physics (3) **OR** | PHYS 152 or EE 210; Pre/corequisite: MATH 224
EE 211 | | Electric and Electronic Circuits (3) **OR** | (EE 210/210L or PHYS 152) and (MATH 123 or equivalent)
CE 205 | | Analytical Mechanics I (Statics) (3) | PHYS 151; Pre/corequisite: MATH 123

**UPPER DIVISION COURSES** (See major faculty advisor)

**Take ALL of the following courses:**

**Semester** | **Grade** | **Course #** | **Course Title** | **Prerequisites**
--- | --- | --- | --- | ---
MATH 323 | | Introduction to Numerical Analysis (4) | MATH 224, and a course in computer
programming
MATH 361A | | Introduction to Mathematical Analysis I (3) | MATH 224, *and* MATH 233 or 247
MATH 361B | | Introduction to Mathematical Analysis II (3) | MATH 361A
MATH 364A | | Ordinary Differential Equations I (3) | MATH 224, and Pre/corequisite: MATH 247
MATH 364B | | Ordinary Differential Equations II (3) | MATH 364A or 370A
MATH 380 | | Probability and Statistics (3) | MATH 224
MATH 470 | | Introduction to Partial Differential Equations (3) | MATH 364A or 370A
Choose a *minimum* of 9 UNITS from the following: MATH 423, 461, 463, 472, 473, 474, 479, 485; STAT 381, 482

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Choose a *minimum* of 9 UNITS from ONE of the following groups**

**GROUP A**

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<td>PHYS 310, 340A, 340B, 350, 410, 422, 450</td>
<td>EE 310, 370, 382, 460, 482</td>
<td>CE 335, 359, 437, 438, 458; MAE 371, 373</td>
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**GROUP B**

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**GROUP C**

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**The following upper-division units are excluded: MATH 303, 309, 370A, 370B, 409**

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