

# Department of Mathematics, University of California, San Diego

## PRELIMINARY DEGREE CHECK

### MAJOR in MATHEMATICS-SCIENTIFIC COMPUTATION (MA34)

Name: \_\_\_\_\_ PID: \_\_\_\_\_

Admit quarter: \_\_\_\_\_ Graduating Quarter: \_\_\_\_\_ Major GPA: \_\_\_\_\_

#### Lower-Division Requirements

**Mathematics (24 units total):**

1. Math 20A Calc for Sci & Eng .....
2. Math 20B Calc for Sci & Eng .....
3. Math 20C/31BH Calc & Analyt. Geom .....
4. Math 20D Intro to Diff. Eqns .....
5. Math 20E/31CH Vector Calculus .....
6. Math 20F/31AH Linear Algebra .....

**Basic Computation:**

1. Math 15A (or CSE 20) .....
2. Math 15B (or CSE 21) .....
3. CSE 12 .....

**Programming:**

1. MAE 9 .....
2. CSE 8A-AL-B or CSE 11 .....

#### Upper-Division Requirements - 15 courses

1. Math 109 Mathematical Reasoning (should be taken in sophomore year)
2. Math 102 Applied Linear Algebra
3. Probability & Statistics:  
Math 183 OR Math 180A AND 181A
4. One of the following sequences:  
Math 140A-B Foundations of Real Analysis OR  
Math 142A-B Introduction to Analysis
5. Introduction to Numerical Analysis:  
Math 170A-B-C OR  
Math 170A-B and Math 175 (was 172)
6. Numerical Optimization Math 171A-B
7. Computational & Applied Math 179 (was 173)
8. Upper-division electives - to complete 15 upper-div 4-unit courses chosen from:  
Math 107A, 107B, 110A, 110B, 120A, 120B, 130A, 130B, 152, 154, 155A, 155B, 170C, 175.

1. Math \_\_\_\_\_ 109 (4 units) .....
2. Math \_\_\_\_\_ 102 (4 units) .....
3. Math \_\_\_\_\_ (4 units) .....
4. Math \_\_\_\_\_ (4 units) .....
5. Math \_\_\_\_\_ 170A (4 units) .....
- Math \_\_\_\_\_ 170B (4 units) .....
- Math \_\_\_\_\_ 170C/175 (4 units) .....
6. Math \_\_\_\_\_ 171A (4 units) .....
- Math \_\_\_\_\_ 171B (4 units) .....
7. Math \_\_\_\_\_ 179 (4 units) .....
8. Math \_\_\_\_\_ (4 units) .....
- Math \_\_\_\_\_ (4 units) .....
- Math \_\_\_\_\_ (4 units) .....
- Math \_\_\_\_\_ (4 units) .....

#### Mathematics Department Evaluation

Comments:

Advisor: \_\_\_\_\_

Date: \_\_\_\_\_