Information for Midterm 2

1-The test will be held during the class time on Monday, 11/18 in Center 101.

2- You must bring a Blue Book to the exam.

2- Please bring your UCSD student ID to the exam and expect it will be checked.

4- You may bring one 8.5”*11” sheet of handwritten notes (written on both sides) to the exam.

5-No calculators (or other electronic devices)!!

6- You must know your discussion section ID:

Ali Behzadan

- B01, Th 8:00p - 8:50p, APM B402A
- B02, Th 5:00p - 5:50p, APM B402A
- B03, Th 6:00p - 6:50p, APM B402A
- B04, Th 7:00p - 7:50p, APM B402A

Ruibo Ma

- B05, Th 5:00p - 5:50p, SEQUO 147
- B06, Th 6:00p - 6:50p, SEQUO 147
- B07, Th 7:00p - 7:50p, SEQUO 147
- B08, Th 8:00p - 8:50p, SEQUO 147

If you attend a different section from the one in which you are enrolled, specify which is which on your blue book. For example you may write “I am enrolled in B01 but I attend B07”.

Topics

The exam covers the parts of chapters 7, 11 and the supplement discussed in the course. This means the test covers the material on homework’s 3-6. In particular, make sure you are familiar with the following topics:

1- Polar coordinates: (Sections 11.3 and 11.4)

1-1) Converting between polar and rectangular coordinates.

1-2) Polar equation of a line.

1-3) Area in polar coordinates.

2-Complex numbers: (Supplement)

2-1) Arithmetic, complex conjugation, polar form of a complex number.

2-2) de Moivre's Theorem (page 9) .

2-3) Finding nth roots of complex numbers.

2-4) Complex exponentials.

2-5) Integration using complex exponentials.

3- Integration by parts. (Section 7.1)

4-Trigonometric integrals. (Section 7.2)

You do not need to memorize the reduction formulas on page 410. If needed, those formulas will be given to you on the test.

5-Computing integrals using Trigonometric Substitution. (Section 7.3)

6- Computing integrals using the Method of Partial Fractions. (Section 7.5)

7-Improper integrals: (Section 7.6)

7-1) Type I and Type II improper integrals.

7-2) Computing improper integrals using the limit definition.

7-3) The Comparison Test for convergence / divergence of improper integrals.

8- Numerical integration: Trapezoidal Rule, Midpoint Rule. (Section 7.8)

Note that the newer material builds on the concepts we learned earlier in the quarter. You will be expected to understand the material we covered earlier in the class (e.g. substitution method) in addition to the above topics.

Every effort is made to make the exam questions clear, correct, and straightforward. However, minor errors are sometimes detected during the exam. Should this occur, the appropriate correction will be written on the board.