

MA 234 - Complex Variables with Applications

Instructor: Andrei-Paul Grecianu

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Office Hours: Mondays, 12:00-14:00 or by appointment

Textbook:

John H. Matthews & Russell W. Howell, Complex Analysis for Mathematics and Engineering, 6th edition

Topics covered in class and corresponding sections in textbook:

- (i) Introduction to Complex Numbers: Chapter 1
- (ii) Functions over Complex Numbers: Chapters 2 and 3
- (iii) Complex Series and Generalization of Real Functions: Chapters 4 and 5, excluding 4.2
- (iv) Complex Integration: Chapter 6
- (v) Taylor and Laurent Series: Chapter 7, excluding 7.1
- (vi) Residue Theory: 8.1, 8.2 and 8.7

Evaluation:

Homework - 40%

Mid-Term - 20%

Final Exam - 40%

There will be weekly written assignments beginning on January 22nd. The assignments will be posted on Canvas on Monday afternoons and are due the next Monday in class. Collaboration is fine but each student must write his own paper. Solutions will also be posted on Monday afternoons and late submissions will not be accepted except in extraordinary cases. Only the eight highest assignments results will count.

The mid-term is scheduled for Monday, March 19th in class and should be on topics (i)-(iii), though this will be amended if chapter 5 has not been fully covered at that point. The final will contain mid-term material, though it will naturally focus on material not previously evaluated.