

## MT216: Introduction to Abstract Mathematics Fall 2014

**Instructor:** Dawei Chen, Carney 266, [dawei.chen@bc.edu](mailto:dawei.chen@bc.edu)

**Class time and location:** MWF 1-1:50pm, Campion 302.

**Office hours (tentative):** M 3-4:30pm, Th 1:30-3pm, or by appointment.

**Textbook:** There is no textbook to buy. We will be using notes prepared by Professors Gross and Howard, which you can download from the course website. These are concise and often omit proofs which I will ask you to provide, either in class or as part of homework assignments.

**Prerequisites:** Students must have completed Calculus II (Mt103 or Mt105). At least one of the other 200-level courses (Mt202 or Mt210) should either have been completed or be taken simultaneously.

**Course description:** This course will cover a number of fundamental topics essential for future mathematics courses such as algebra and analysis. Among these are the integers, including the principle of induction, congruences, and prime factorization; the complex numbers; and polynomials. Other major objectives are to learn to read mathematics carefully, to appreciate its elegance, to construct correct and complete proofs, and to communicate mathematics clearly and accurately.

**Homework:** Homework will be assigned and collected regularly, roughly on a weekly basis. Submissions must be typeset in LATEX. This is a free typesetting language; Mac users may download it at <http://www.tug.org/mactex/> and Windows users at <http://tug.org/protext>

The Wikipedia entry for LATEX has links to many introductory articles: <http://en.wikipedia.org/wiki/LaTeX> including an excellent Wikibook: <http://en.wikibooks.org/wiki/LaTeX>

**Exam:** There will be two midterm exams and a final exam. They will be

in-class exams. The final exam will be comprehensive. Tentative dates of the exams:

*Midterms:* Wednesdays, Oct 8 and Nov 12

*Final:* Thursday, Dec 18 at 9am.

**Grade:** Your final grade will be based on 20% homework, 20% each midterm, and 40% final.

**Academic integrity:** Many people find discussing problems with others to be the best, easiest, most efficient and most pleasant way to learn mathematics. You are permitted and encouraged to do this! Nevertheless, you must write up all the homework solutions by yourself only. Copying solutions from someone or somewhere else is not only intellectually dishonest but it also undermines the educational process. If you are caught cheating on a problem set, you will receive **zero** for that set. BC's policy on academic integrity can be found at [www.bc.edu/integrity](http://www.bc.edu/integrity).

**Special need:** If you are a student with a documented disability seeking reasonable accommodations in this course, please contact Kathy Duggan, (617) 552-8093 at the Connors Family Learning Center regarding learning disabilities and ADHD, or Paulette Durrett, (617) 552-3470 in the Disability Services Office regarding all other types of disabilities, including temporary disabilities. Advance notice and appropriate documentation are required for accommodations.