Bridge to Higher Mathematics, MA 1971

Time / Place : MTThF 2:00 - 2:50 pm / Atwater-Kent 116 (Zoom ID: 982 8625 9912)

Text: Martin Aigner & Günter M. Ziegler, Proofs from THE BOOK, 6th, ed., Springer-Verlag, 2018.

Web Page: http://www.math.wpi.edu/Course_Materials/MA1971D21

Instructor: Joseph D. Fehribach (201C Stratton Hall, 508.831.5069, bach@wpi.edu)

Teaching Assistants: Dane Johnson (djohnson@wpi.edu); Yi Yu (yyu5wpi.edu)

Office Hours: Fehribach: 3:00-3:30 pm, most MTThF, and by appointment (use the lecture zoom ID) Johnson: 2:00-3:00 pm, Wednesdays, and by appointment (use the lecture zoom ID) Yi: 4:00-5:00 pm, Tuesdays, and by appointment (Zoom ID: 946 6471 5442) Please see us after class or e-mail us for an appointment.

- **Content**: This course is a basic introduction to the art of proof. Covered topics come from various areas of mathematics. Most of the theorems will be proven and exercises of a theoretical character will be assigned as homework. Quizzes and the final exam will involve proofs. Students are expected to understand basic techniques for rigorously proving theoretical results in several areas of mathematics.
- Homework: About once per week, several homework exercises will be assigned to be written up and handed in. There will be five hand-in homework sets, and each is worth 20 points. Symbiotic student interactions are encouraged; parasitic interactions are discouraged; copying is outlawed. Homework sets must be completed and handed in by 2:00 pm EDT either on paper in class in AK 116, or as a pdf sent to bach@wpi.edu. If possible, because of size and legibility issues, submissions should be scanned, not photographed, and should not exceed 1Mb per page. Please do not send jpg or jpeg files. An unreadable submissions maybe returned ungraded. Students with iPhones have a built in scanner that can be accessed through Notes: (1) open new note (2) click on the camera icon (3) select "Scan Documents" (4) scan (take photos) of each page (5) click "save" and then "done". There are apps available for other devices.
- Quizzes: On four Fridays (2, 9, 16 April and 7 May) and one Tuesday (27 April), a short quiz will be due. Each quiz will be worth 25 points. Quizzes will be posted on the course website by 5:00 pm the day before the quiz is due. Quizzes must be completed and returned by 2:00 pm EDT either on paper in class in AK 116, or as a **pdf** sent to yyu5@wpi.edu. The guidelines for the electronic submission of quizzes are the same as for homework sets.
- **Exams**: There will be one comprehensive final exam on Tuesday 13 May 2021 (the final class meeting) worth 100 points. In general, the final exam will be graduated—the first question being easiest, the last, hardest.
- **Grading**: Of the five quizzes, the four highest grades will count. All five homework grades will count. So the total value of the quizzes and the homework is 100 points each. Thus a grand total of 300 points is available in the term. Grades are based on a floating scale; the scale is based on the difficulty of the questions/assignments. The maximum number of points required for an A is 270; for a B, 240; for a C, 210. Final letter grades will be assigned based on the total number of points earned, with some consideration given to consistency, progress in the course, etc.
- Missed Homework Assignments, Quizzes or Exam: In general no make-up quizzes or exams will be given, and late homework assignments will not be accepted. A grade of zero will be recorded for all missed work. Rare and unusual circumstances, however, will be considered.
- **Notice**: The management reserves the right to change the above policies. Such changes (if any) will be announced at a regular class meeting or by e-mail.