Senior Capstone Project in Mathematics

Getting Started

1. Resources for project ideas:

   - Books

     – "Proofs from THE BOOK" by Martin Aigner and Günter M. Ziegler

     – "Math Talks for Undergraduates" by Serge Lang

     – "The Mathematical Tourist" by Ivars Peterson

       (associated blog: `http://mathtourist.blogspot.com/`)

   - YouTube videos highlighting interesting math problems

     – Numberphile `https://www.youtube.com/user/numberphile`

     – TED-Ed `https://www.youtube.com/user/TEDEducation`

     – Vi Hart `https://www.youtube.com/user/Vihart`

   - Advanced problems from course textbooks

2. Resources for mathematical writing

   - "A Primer of Mathematical Writing" by Steven Krantz: `https://arxiv.org/abs/1612.04888`

   - Student Writing Support @ UMN: `http://writing.umn.edu/sws/index.html`

   - Assignment Planner for Research Papers frum UMN Library: `https://www.lib.umn.edu/ac/research-paper`

Student-Adviser Mathematics Capstone Project Contract

Student: _____   Adviser: _____

Semester: _____ Year: _____

Project Topic/Title: _____

    This is an optional contract to be agreed upon between the student and their adviser. If applicable, this contract should be filled out before the add/drop date of the semester. Set a date for any or all of the following project milestones, to be checked by the adviser when complete. A recommended timeline can be generated at `https://www.lib.umn.edu/ac`

☐ Project topic/research question decided   _____ / _____ / _____

☐ Provide list of resources/bibliography   _____ / _____ / _____

☐ Submit first draft (recommended before halfway point of semester)   _____ / _____ / _____

    At this time, the adviser will check one of the following boxes:

    ☐ Writing quality meets expectations

    ☐ Writing quality does not meet expectations, and the student will schedule an appointment with Student Writing Support: `http://writing.umn.edu/sws/index.html`

☐ Submit second draft/rewrite (scheduled after SWS meeting if applicable)   _____ / _____ / _____

☐ Submit final draft   _____ / _____ / _____

Additional milestones, if desired:

☐ _____   _____ / _____ / _____

☐ _____   _____ / _____ / _____

☐ _____   _____ / _____ / _____

Student signature and date: _____   _____ / _____ / _____

Adviser signature and date: _____   _____ / _____ / _____