

FOR THE NEW MATH MAJORS

2017-2018

Welcome to the club! On this sheet you'll find our department's rules, regulations, and other important items as you plan your journey through the major. Your first source of information is the Colgate catalogue, and we won't repeat what is in there. We will, however, provide information that is not in the catalogue. As always, if you have any questions, ask a professor.

RESEARCH SEMINARS. The main seminars, Math 482 (for the applied major) and Math 483 (for the standard major) are offered **ONLY IN THE FALL**. Math 481 (which can be used for the applied major) is offered **ONLY IN THE SPRING**.

REQUIRED COURSES. MATH 250 / 260 should be completed before Junior year. Math 375 / 376 and Math 377 should be complete before Senior year.

THESIS. To complete the major, each student must produce a thesis. This is normally done through Math 482 (or 481) or Math 483.

HONORS. For a student to be considered for honors in Mathematics or in Applied Mathematics the student must achieve a 3.3 GPA in the respective major; in order for the student to be considered for high honors, a 3.7 GPA in the major is required. For both honors and high honors, completion of a course numbered 440 or above that is not a research seminar is required. Honors / High Honors are attained by a student's production and defense of a thesis of distinction. A grade of A- or better is required to be considered for honors. In this situation, the student's thesis advisor puts forward the thesis for honors consideration. Subsequently, a committee of three faculty members, one being the student's thesis advisor, the others chosen by the department, is formed.

The student must give a defense of the thesis, typically on the Wednesday during Finals week. The committee of three, with other math faculty acting in an advisory capacity with a recommendation, then grades the project, consisting of the thesis and defense.

In order for honors to be granted, the committee of three must unanimously grade the project as A- or better. In the event that all three grade the project as A or better, high honors will be granted. These are both contingent on satisfying the GPA and 440-level course requirements.

STUDY GROUPS. You can satisfy the major's requirements and participate in a study group easily with a little bit of planning. To help guide you, visit the departmental webpage for sample 4-year schedules.

COURSE ROTATION. On the back you will find a guiding schedule for our 2-year course rotation. This is not set in stone, but should give you a good idea of when certain courses are offered.

Once again, welcome to the club.

GUIDING TWO-YEAR ROTATION

Green: Service courses; **Red:** Required courses; **Black:** Elective offered each semester; **Purple:** Electives offered annually; **Blue:** Electives offered biennially (these are rotated; not all will be offered as shown). Numbers are number of sections offered.

FALL 1

FSEM/Core/Dist: 3
Stats: 2
Calc 1: 5
Calc 2: 4
Calc 3: 3
214: Linear Algebra: 2
250: Number Theory: 2
260: Computational Math: 1.5
375: Abstract Algebra: 1
376: Numerical Analysis: 1
377: Real Analysis: 1
308: Diff. Equations: 1
316: Probability: 1
310: Combinatorics: 1
315: Math Bio: 1
313: Complex
499: Logic: 1
482: Applied Seminar: 2
483: Math Seminar: 2

SPRING 1

Core/Dist: 3
Stats: 2
Calc 1: 2
Calc 2: 2
Calc 3: 3
214: Linear Algebra: 2
250: Number Theory: 2
260: Computational Math: 1.5
375: Abstract Algebra: 1
376: Numerical Analysis: 1
377: Real Analysis: 1
308: Diff. Equations: 1
312: Math Modeling: 1
360: Graph Theory: 1
410: Ramsey Theory: 1
448: Nonlinear Dynamics: .5
487: Real Analysis II: 1
481: Bio Seminar: .5

FALL 2

FSEM/Core/Dist: 3
Stats: 2
Calc 1: 5
Calc 2: 4
Calc 3: 3
214: Linear Algebra: 2
250: Number Theory: 2
260: Computational Math: 1.5
375: Abstract Algebra: 1
376: Numerical Analysis: 1
377: Real Analysis: 1
308: Diff. Equations: 1
316: Probability: 1
302: Systems Biology: 1
382: Topology: 1
450: Number Theory II: 1
482: Applied Seminar: 2
483: Math Seminar: 2

SPRING 2

Core/Dist: 3
Stats: 2
Calc 1: 2
Calc 2: 2
Calc 3: 3
214: Linear Algebra: 2
250: Number Theory: 2
260: Computational Math: 1.5
375: Abstract Algebra: 1
376: Numerical Analysis: 1
377: Real Analysis: 1
308: Diff. Equations: 1
312: Math Modeling: 1
389: Axiomatic Set Theory: 1
408: PDEs: 1
416: Math Stats: 1
485: Abstract Algebra II: 1
481: Bio Seminar: .5