

Name: _____ ID: _____ Date: _____ Advisor: _____

Discrete Mathematics Option – Bachelor of Science in Mathematics

This option allows students and advisors to create a program that differs from the pre-approved option. Such a program must be approved by the advisor at least one year before graduation.

| COURSE | TAKEN ? | NOTES |
|--|---------|-------|
| MATH 1401 – Calculus I | | |
| MATH 2411 – Calculus II | | |
| MATH 2421 – Calculus III | | |
| MATH 3000 – Introduction to Abstract Math | | |
| MATH 3140 – Introduction to Modern Algebra | | |
| MATH 3191 – Applied Linear Algebra | | |
| MATH 3250 – Problem Solving Tools | | |
| MATH 3800 or 4810 Probability and Statistics for Engineers or Probability | | |
| MATH 4201 or 4310 – Topology or Introduction to Real Analysis I | | |
| MATH 4408 – Applied Graph Theory | | |
| MATH 4409 – Applied Combinatorics | | |
| MATH 4779 – Math Clinic | | |
| MATH 4793 or 4794 – Discrete Math Modeling (highly recommended) or Optimization Modeling | | |
| One course from the following listing: MATH 3210 – Higher Geometry I OR 4110 – Theory of Numbers OR 4220 – Higher Geometry II | | |
| One Math elective above MATH 3000, excluding 3040. | | |

If a cancellation, non-offering, or scheduling conflict prevents the timely completion of the Mathematics major, contact an advisor. No class may be used for more than one category. You must also meet the following requirements.

1. In order for this option to appear on your transcript, you must complete a form with your CLAS advisor before the last semester of your senior year.
2. An advisor must approve the classes in your major. This should be done before completing MATH 3000.
3. A C- or better is needed in each class counted towards your major. Your grade point average must be at least 2.0 in all MATH classes. You must take at least 15 upper division (3000 or above) MATH credits (5 classes) at UC-Denver.
4. The semester you graduate, you must:
 - Create a portfolio containing two papers demonstrating your mathematical and writing abilities. These papers can be projects done while taking a class.
 - Participate in an exit interview with one Math faculty. This can be scheduled through Angela Beale.
 - Complete a senior survey.

5. You must satisfy the requirements of the College of Liberal Arts and Sciences (CLAS). Contact CLAS advising office (303-556-2555) for details.
6. The following is a list of sample courses that will satisfy the depth requirement:
 - a. Math 4650 & 4660 (Numerical Analysis I & II)
 - b. Math 3301 & 3302 (Operations Research I & II)
 - c. Math 3200 & 4733 (Elementary Diff. Eq. & Partial Diff. Eq.)
 - d. Math 4810 & 4820 (Probability and Statistics)
 - e. Math 4408 & 4409 (Graph Theory and Combinatorics)
 - f. Math 3210 & 4220 (Higher Geometry I & II)
 - g. Math 4310 & 4320 (Intro to Real Analysis I & II)
 - h. Math 3140 & 4110 (Modern Algebra and Number Theory)
 - i. Math 3191 & 5718 (Applied Linear Algebra)
7. To graduate as a Mathematics major, must have a minimum of 30 hours of resident credit (letter grades received at UCD). Furthermore, 21 out of the last 30 hours must be taken in UCD CLAS courses. Finally, at least 15 upper-division mathematics credits must be taken at UC Denver. For the most current CLAS residency requirements, please visit:
<http://thunder1.cudenver.edu/clas/advising/coreGeneral.html>

Those considering graduate study in mathematics should take Introduction to Real Analysis I and II (MATH 4310 and 4320). Students with at least a 3.5 major grade point average, at least 3.2 overall grade point average, and who have done an honors project are eligible to graduate with honors. See an advisor (or the honors advising sheet) for details.