

# **MATHEMATICS**

Bachelor of Science (B.S.) - Catalog Year Fall 2020

#### FOR TRANSFER STUDENTS

### **PROGRAM OVERVIEW**

Apart from the specialized mathematical skills that students acquire, the degree also reflects general skills that are valued by many employers. These skills include problem solving, critical thinking, analysis, facility with data, the ability to process quantitative information, and perhaps most important of all, the ability to learn new skills and concepts quickly.

A bachelor's degree in mathematics prepares students for jobs in statistics, actuarial sciences, mathematical modeling, mathematics education, as well as for graduate school leading to a research career in engineering, mathematics or statistics. A strong background in mathematics is also necessary for research in many areas of computer science and social science.

#### **ACADEMIC ADVISING**

The College of Liberal Arts and Sciences (CLAS) supports students to graduation using a shared advising system. CLAS students have two academic advisors with whom they should meet regularly to discuss academic and degree progress: a CLAS Academic Advisor and a major/faculty advisor.

For questions related to CU Denver Core Curriculum, CLAS, general graduation requirements, university/college academic policies, or campus resources contact:

**CLAS Academic Advising** 

clas advising@ucdenver.edu
Visit the CLAS Advising website here
North Classroom (NC) Building 1030
303-315-7100

For questions related to major requirements, major course prerequisites, or evaluation of transfer coursework in your major contact:

Adam Spiegler

math.advising@ucdenver.edu
Visit the department website here
Student Commons Building (SCB) 4000
303-315-1700

For questions about admission requirements, transfer policies, applying, and the transfer process contact:

Office of Admissions

admissions@ucdenver.edu
Visit the Admissions website here
Student Commons 1007
303-315-2601

#### **GENERAL GRADUATION REQUIREMENTS & POLICIES**

All CU Denver CLAS students are required to complete the following minimum general graduation requirements to be eligible to apply for graduation:

- 1. Complete a minimum of 120 semester hours
- 2. Achieve a minimum 2.0 CU cumulative grade point average (GPA)
- Complete a minimum of 45 upper-division (3000- to 4000-level) semester hours
- 4. Complete all CU Denver Core, CLAS, and major requirements
- 5. Complete a minimum of 30 CLAS hours at CU Denver

The following are **maximum** semester hours that can apply toward the minimum 120 hours required for graduation:

- 56 semester hours in major department/prefix courses
- 16 semester hours Pass/Fail
- 12 semester hours of Independent Study/Directed Research
- 12 semester hours of internship credit
- 8 semester hours of physical education credit

### **PROGRAM REQUIREMENTS & POLICIES**

The following program requirements are based on degree requirements for the current Catalog year at CU Denver and are subject to change. Students are responsible for completing degree requirements based on the Catalog year for which they are admitted.

Students are responsible for meeting with the major/faculty advisor in the department to confirm major requirements. In addition to completing all CU Denver Core and CLAS requirements, students completing the Mathematics B.S. Degree are required to complete the following minimum program requirements:

- 1. Students must complete a total of 45 credit hours, including a minimum of 42 MATH credit hours.
- 2. Students must complete at least 30 upper division (3000-level and above) credit hours in the major.
- 3. Students must earn a minimum grade of C- (1.7) in all major courses taken at CU Denver and must achieve a minimum cumulative major GPA of 2.25. All graded attempts in required and elective courses are calculated in the major GPA. Students cannot complete major or ancillary course requirements as pass/fail.
- 4. Students must complete a minimum of 15 upper division level MATH credit hours with CU Denver faculty.
- 5. Students may not use any of the following MATH courses to count toward major requirements: MATH 3195, MATH 3511, MATH 3800, MATH 3999, and MATH 4830.



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## COURESWORK THAT CAN BE COMPLETED AT PREVIOUS INSTITUTION

The following is a "bucket" of requirements students can complete prior to transferring to CU Denver, including equivalent Colorado Community College System (CCCS) courses. To determine the equivalencies of courses to be completed at non-CU Denver institutions, students can visit www.transferology.com. It is critical students connect with a CU Denver academic advisor to ensure planned courses will transfer and apply to CU Denver degree requirements. All non-CU Denver coursework must be completed with a C- or better to be eligible for transfer.

Students interested in completing an Associate (A.A. or A.S.) Degree or a Colorado Statewide Transfer Articulation Agreement or Degree with Designation (DWD) must work with their community/junior college academic advisor to create an academic plan that accounts for all degree or transfer articulation agreement requirements. Colorado Community College Students may also explore the option to complete Reverse Transfer at CU Denver.

CU Denver Requirements	CU Denver Credits	CCCS Equivalent Courses & Notes	CCCS Credits
CU Denver Core Curriculum Requirements	34 - 40		
ENGL 1020 – Core Composition I	3	ENG 121	
ENGL 2030 – Core Composition II	3	ENG 122	
Mathematics	3 - 4	MAT 201 recommended or GT-MA1	
Arts	3	GT-AH	
Humanities	3	GT-AH or GT-HI	
Behavioral Sciences	3 - 4	GT-SS	
Social Sciences	3 - 4	GT-SS or GT-HI*	
Natural/Physical Science with lab	4 - 5	GT-SC1	
Natural/Physical Science without lab or Math	3 - 5	MAT 202 or GT-SC2 or GT-MA1 (except the course used for Core Math) or GT-SC1	
International Perspectives	3	Additional GT-AH, HI, SS* (see note below)	
Cultural Diversity	3	To be completed at CU Denver. This requirement must be completed with an upper-division course and CCCS courses will not apply.	
CLAS Graduation Requirements	15 - 29		
CLAS Communicative Skills	3	COM 115 or PHI 113	
CLAS Foreign Language	0 - 10	(e.g.) SPA 112 or ASL 122  Students have several options to fulfill this requirement. Please consult a CU  Denver CLAS Academic Advisor.	
CLAS Humanities	3	Any transferrable LIT, HIS, HUM, or PHI course	
CLAS Behavioral Sciences	3 - 4	Any transferrable ANT, COM, or PSY course (except GT-SC courses)	
CLAS Social Sciences	3 - 4	Any transferrable ECO, ETH, GEO, POS, or SOC course (except GT-SC courses)	
CLAS Biological/Physical Science with lab	3 - 5	GT-SC1 If you completed only one science course with a lab for the CU Denver Core Curriculum, this course must have an associated lab.	
MATH Major Courses	12		
MATH 1401 Calculus I	4	MAT 201 Course can fulfill CU Denver Core Mathematics	
MATH 2411 Calculus II	4	MAT 202 Course can fulfill CU Denver Core Mathematics	
MATH 2421 Calculus III	4	MAT 203 Course can fulfill CU Denver Core Mathematics	
Minimum Applicable Transfer Credits Recommended:	60	Students completing less than 60 applicable transfer credits will have additional credits to complete at CU Denver. Students needing general elective credits should consult a CU Denver CLAS Academic Advisor.	

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\*The applicability of Guaranteed Transfer (GT Pathways) courses to specific CU Denver Core Curriculum requirements requires completion of a block of five courses: two GT-AH courses; one GT-HI course; one GT-SS course; and one additional GT-AH, GT-HI, or GT-SS course.

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## SAMPLE PLAN – COURESWORK TO BE COMPLETED AT CU DENVER

Based on successful completion of 60 applicable transfer credits and the complete "bucket" of requirements outlined above, students would have the following remaining to complete at CU Denver. At CU Denver, students must tailor this plan based on the evaluation of previously completed college coursework (e.g., AP, IB, CLEP, dual/concurrent enrollment, and transfer credit), course availability, individual preferences related to course load, summer term courses, part-time or full-time student status, or add-on programs such as minors or double-majors.

Note: this plan assumes students have completed the CLAS Foreign Language proficiency requirement. Students must demonstrate foreign language proficiency through a 2<sup>nd</sup> semester college-level course equivalent (e.g., SPA 112 or ASL 122), proficiency testing through CU Denver's Department of Modern Languages, or submitting their high school transcript demonstrating completion of a 2<sup>nd</sup> year (Level II) high school course with a minimum grade of "C-" (1.7) in the 2<sup>nd</sup> semester of the 2<sup>nd</sup> year. Students who have not fulfilled this requirement must work with a CU Denver CLAS Academic Advisor to modify this plan.

## Students must not exceed 56 hours in their major.

Year Three	Fall	CRS
	MATH 1376 or CSCI 1410 & CSCI 1411	3-4
	MATH 3000 PE	3
	MATH 3191 PE	3
	General Upper-Division Elective	3
	General Elective	3
	Total Credit Hours	15-16

Spring	
MATH 3382 PR	
MATH 4310 PE	
Upper-Division MATH Elective	
CU Denver Core Cultural Diversity	
General Elective	
Total Credit Hours	

Year Four	Fall	CRS
	MATH 4779	3
	Upper-Division MATH Elective	3
	Upper-Division MATH Elective	3
	General Upper-Division Elective	3
	General Elective	3
	Total Credit Hours	15

Spring	
Upper-Division MATH Elective	
Upper-Division MATH Elective	
General Upper-Division Elective	
General Upper-Division Elective	
General Elective	
Total Credit Hours	

<sup>&</sup>lt;sup>M</sup> Major Course Available <sup>C</sup> CU Denver Core Course <sup>PE</sup> Prerequisite Enforced <sup>PR</sup> Prerequisite Recommended