MATHEMATICS (BS)

General Undergraduate Admission Requirements

All applicants must meet the general admission requirements for Concordia University Chicago undergraduate programs as published in the Concordia University Chicago academic catalog (http://catalog.cuchicago.edu/graduate/graduate-admission-student-services/).

New students are accepted into undergraduate degree-seeking programs for online (ADP) and on-campus (Traditional) study in the fall and spring semesters. If you have any questions please work with your admissions advisors.

BS Mathematics Major Requirements

All students in the Bachelor of Science degree in mathematics program must complete the 27-hour Mathematics Core, the 4-hour Core Support and one Specialization. All courses must be at or above the 2000 level.

Code	Title	Hours
Mathematics Core		
MAT-2500	Calculus I	4
MAT-2600	Calculus II	4
MAT-3100	Calculus III	4
MAT-3500	Mathematical Proof	3
MAT-3600	Linear Algebra	3
MAT-4610	Group Theory	3
MAT-4730	Probability Theory	3
MAT-4810	Real Analysis	3
Core Support		
CSC-2410	Computer Science I	3
CSC-2411	Applied Programming Techniques in Computer Science I	1
Specialization		
Select one of the following specializations:		24-25
Actuarial Science (p. 1)		
Data Science (p. 1)		
Natural Science (p. 1)		
Pure Mathematics (p. 1)		
Total Hours		**55-56**

Specializations

Actuarial Science

Code	Title	Hours
Required Courses		
MAT-3200	Differential Equations	3
MAT-4740	Mathematical Statistics	3
Support Courses		
ACC-2001	Introduction to Financial Accounting	3
ACC-2101	Business Accounting for Leaders	3
ECO-2400	Foundations of Economics	3
FIN-4200	Finance	3
FIN-4280	Corporate Finance and Capital Budgeting	3
Electives		
Select three hours from MAT, ACC, CSC, ECO, FIN		3
Total Hours		**24**

Data Science

Code	Title	Hours
Required Courses		
MAT-2100	Discrete Mathematics	3
MAT-4740	Mathematical Statistics	3
Support Courses		
CSC-2510	Computer Science II	3
CSC-2620	Database Systems & Design	3
CSC-3420	Data Structures and Algorithms	3
CSC-3421	Applied Programming Techniques in Data Structures and Algorithms	1
Electives		
Select nine hours from MAT, CSC		9
Total Hours		**25**

Natural Science

Code	Title	Hours
Required Courses		
MAT-3200	Differential Equations	3
MAT-4740	Mathematical Statistics	3
Support Courses		
Select two of the following sequences:		16
BIO-2011 & BIO-2012	General Biology I and General Biology II	
CHE-2211 & CHE-2212	General Chemistry I and General Chemistry II	
PHY-2121 & PHY-2122	Elementary Physics I and Elementary Physics II	
Electives		
Select three hours from MAT, BIO, CHEM, CSC, PHY		3
Total Hours		**25**

Pure Mathematics

Code	Title	Hours
Required Courses		
MAT-3200	Differential Equations	3
MAT-4300	Number Theory	3
MAT-4820	Complex Analysis	3
Support Courses		
CHE-2211	General Chemistry I	4
or PHY-2121	Elementary Physics I	
Electives		
Select 12 hours from MAT, CSC (at least six hours must be MAT)		12
Total Hours		**25**

Graduation Requirements

Students in the College of Health, Science and Technology or The College of Theology, Arts and Humanities must meet all University requirements found in the Academic Information section of this catalog. Specific requirements for these Colleges include the following:

- A minimum cumulative GPA of 2.00 for all coursework completed at CUC
- A minimum GPA of 2.00 for all courses taken in the major at CUC
- A minimum grade of C for all courses taken in a major at CUC
- The Department of Natural Sciences requires a minimum grade of C for courses within the major that are not pre-requisites for other courses. For courses that are pre-requisites, the C minimum remains unless superseded by admission grade requirements for specific programs, e.g., nursing at Oak Point (formerly Resurrection) University, microscopy at Hooke College, medicine/dentistry/pharmacy at LECOM, etc.).
- The following courses may not be taken on the Pass/Fail grade option:

Code	Title	Hours
ENG-0100	College Writing	3
ENG-1100	English Composition	3
ENG-2000	Writing About Literature	3
MAT-0100	Fundamentals of Math	3
MAT-0110	Advanced Intermediate Algebra	3
Any course in a major at CUC		