Roadmap B.S. in Mathematics: Pure Mathematics option - AY 2022-2023
For Transfer Students

This guide is an unofficial document intended to be used for advising and course planning. This document cannot be used to waive or supersede requirements listed in the catalog. Fulfillment of all University requirements (including required units) will be determined by the office of the Registrar.

This guide assumes that the student has satisfied and transferred from community college all of the lower division GE requirements, and the following courses: MATH 75, 76, 77, 81; and at least one of PHYS 4A or CSCI 40. Note that both of these courses are required for the mathematics major. Students also need to earn at least 120 units in total.

YEAR 1: FALL			YEAR 1: SPRING		
COURSE	UNITS	PREREQ	COURSE	UNITS	PREREQ
MATH 111	4	MATH 76	**MATH 152**[1]	4	MATH 77
MATH 101 or 107[2]	4/3	MATH 75 or 77	**MATH 193B** (Spring only)	1	MATH 111 and 152 (152 conc. OK)
CSCI 40/PHYS 4A[0] (if not taken at CC) **or MATH 152**	4/3	MATH 75/MATH 76 or MATH 77	**MATH 101 or 114**[2]	4/3	MATH 75 or 111
UD GE IB	3		**MATH Elective**[2] **or 161**[2]	4/3	See table below
			UD GE ID[0]	3	
TOTAL UNITS	13/15		**TOTAL UNITS**	14/16	

YEAR 2: FALL			YEAR 2: SPRING		
COURSE	UNITS	PREREQ	COURSE	UNITS	PREREQ
MATH 171[1] **or 151**[1]	4	MATH 111; and MATH 152 (for MATH 151)	**MATH 151**[1] **or 171**[1]	4	MATH 111; and MATH 152 (for MATH 151)
MATH 128[2] **or 165**[2] **and/or MATH 190**[2]	3	See table below	**MATH 198** (in Pure Mathematics)	3	MATH 151, 152, 171 (or permission)
UD MI[0]	3		**MATH 161**[2] **or 172**[2]	3/4	See table below
UD IC	3		**Writing course** (if writing requirement not satisfied yet)	3	
Elective (if needed)	3		**Elective** (if needed)	4/3	
TOTAL UNITS	16		**TOTAL UNITS**	16/18	

[0] PHYS 4AL is not required for this option in the math major. If students wish to include PHYS 4A as a General Education Breadth course, they must also take PHYS 4AL.

[0] Consider taking ANTH 105W (UD MI) or ANTH 116W (UD GE ID) to satisfy your upper division Writing Skills Requirement.

[1] It is suggested to take MATH 81 before taking MATH 152. It is suggested to take MATH 152 before taking MATH 165.

[1] It is suggested to take MATH 116 before taking MATH 151.

[1] It is suggested to take MATH 161, 128 and/or 165 before taking MATH 171.

[2] The MATH ELECTIVES for the PURE MATH option are as follows: Choose MATH 107 or MATH 114; MATH 128 or MATH 172; MATH 161 or MATH 165; MATH 193B, MATH 198 (in Pure Mathematics); *plus one additional MATH elective (any 3-4 unit mathematics course, upper division or graduate, excluding MATH 100, 102, 133, 134, 137, 138, 139. Special conditions apply for graduate courses.
You should meet with your advisor from the Department of Mathematics, to plan your MATH Electives.

Course Number	Course Title	Prereq	Semester
MATH 107	Mathematical Statistics	MATH 77 (concurrently OK)	Fall only
MATH 114	Discrete Structure	MATH 111	Spring only
MATH 128[1]	Applied Complex Analysis	MATH 77	Fall only
MATH 161[1]	Principles of Geometry	MATH 111	Fall and Spring
MATH 165[1]	Differential Geometry	MATH 77 and MATH 111	Fall only
MATH 172	Intermediate Mathematical Analysis II	MATH 77 and MATH 171	Spring only
MATH 193B	Junior Seminar in Pure Mathematics	MATH 111 and 152 (Math 152 conc. OK)	Spring only
MATH 198	Senior Project	MATH 151, 152, 171 (or permission)	
One Math Elective*			

Advising note: Upper Division GE courses and MATH 101 and MATH 143 are also offered during summer sessions. **Students should meet with their academic advisor at least once per year.**