Roadmap B.S. in Mathematics: Applied 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 PHYS 4A. All 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 101**	4	MATH 75
MATH 152[1]	4	MATH 77	**MATH 193A** (Spring only)	1	MATH 111 and at least two of MATH 109, 121, 122, 123, 152, 181, and 182 or permission.
MATH 181/123/121[2]	3	See table below	**MATH 121/123/182**[2]	3	See table below
CSCI 40 (if not taken at CC)	4	MATH 75	**MATH 120 or CSCI 41** (if not taken at CC)	4	CSCI 40 & MATH 76 (Conc. OK)
UD GE IB (if CSCI 40 was taken at CC)	3		**UD GE ID**[0]	3	
TOTAL UNITS	14/15		**TOTAL UNITS**	15	

YEAR 2: FALL			YEAR 2: SPRING		
COURSE	UNITS	PREREQ	COURSE	UNITS	PREREQ
MATH 151/171[1]	4	MATH 111; and MATH 152 (for MATH 151)	**MATH 171/151**[1]	4	MATH 111; and MATH 152 (for MATH 151)
MATH 128/123/109[2]	3	See table below	**MATH 198** (if not taken yet)	3	MATH 151, 152, 171 (or permission)
MATH 121 or 122 (if MATH 121 was taken)	3	See table below	**UD GE IC**	3	
MATH 190 (if interested in a research project for MATH 198) or **MATH 198**	3	Permission	**UD GE IB** (if not taken yet)	3	
UD MI[0]	3		**Writing course** (if writing requirement not satisfied yet)	3	
TOTAL UNITS	16		**TOTAL UNITS**	16	

[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.

[1] It is suggested to take a math elective with MATH 111 as a prerequisite before taking MATH 151.

[1] It is suggested to take MATH 128 and/or a math elective with MATH 111 as a prerequisite before taking MATH 171.

[2] The following table summarizes the MATH ELECTIVES for the APPLIED MATH option. Choose four courses from the following list. You must also take MATH 193A and MATH 198 (in Applied Mathematics).

You should meet with your advisor from the Department of Mathematics every semester, to choose your MATH Electives.

Course Number	Course Title	Prereq	Semester
MATH 109	Applied Probability	MATH 107	Fall only
MATH 121	Numerical Analysis I	MATH 77 and CSCI 40	Fall and Spring
MATH 122	Numerical Analysis II	MATH 121 and 152	Fall only
MATH 123	Mathematical Modeling	MATH 77	Fall and Spring
MATH 128	Applied Complex Analysis	MATH 77	Fall only
MATH 181	Differential Equations	MATH 81	Fall only
MATH 182	Partial Differential Equations	MATH 81	Spring only

Advising note: Upper Division GE courses and MATH 101 and MATH 143 are also offered during summer sessions.