

Mathematics – Pure Mathematics Concentration (B.S.)

The specific mission of the major in Mathematics is to produce a well-trained mathematician capable of both research and teaching in general. In particular, a Howard University-trained mathematician must be comfortable when employed as an actuarial scientist, a computer scientist and/or a mathematician/researcher in schools, government, or industry.

Freshman Year First Semester

Item #	Title	Credits
MATH 156	Calculus I	4
	Physical Education (Active)	1
	ENGW 101/102/104	3
	Humanities Elective	3
CSCI 100	Intro to Computer Science	3
FRSM 001	Freshman Seminar	1
Sub-Total Credits		15

Freshman Year Second Semester

Item #	Title	Credits
MATH 157	Calculus II	4
MATH 101	Proof and Problem Seminar I	1
	ENGW 103/105	3
	Humanities Elective	3
CSCI 135	Computer Science I	4
Sub-Total Credits		15

Sophomore Year First Semester

Item #	Title	Credits
MATH 158	Calculus III	4
MATH 102	Proof & Prob Seminar II	1
	World Language and Culture Requirement (Options: See Elective 3 Group Descriptions)	3
	General Elective (Options: To be determined in consultation with 3 advisor) (3)	3
	General Elective (Options: To be determined in consultation with 3 advisor) (3)	3
Sub-Total Credits		14

Sophomore Year Second Semester

Item #	Title	Credits
MATH 180	Intro to Linear Algebra	3
	Philosophy Elective * (Options: Courses under Code PHIL 051, 053, 055, 057 and 059)	3
	World Language and Culture Requirement (Options: See Elective Group Descriptions)	3
SLMC 101	Principles of Speech	3
	General Elective (Options: To be determined in consultation with advisor) (3)	3
Sub-Total Credits		15

Junior Year First Semester

Item #	Title	Credits
MATH 197	Intro to Modern Algebra I	3
MATH 795	Intro Anal I-Wrtg	3
	World Language and Culture Requirement (Options: See Elective Group Descriptions)	3
	General Elective (Options: To be determined in consultation with advisor) (3)	3
	General Elective (Options: To be determined in consultation with advisor) (3)	3
	Physical Education (Active)	1
Sub-Total Credits		16

Junior Year Second Semester

Item #	Title	Credits
MATH 159	Differential Equations	4
	Social Science Elective	3
MATH 196	Introduction to Analysis II	3
	General Elective (Options: To be determined in consultation with advisor) (3)	3
	World Language and Culture Requirement (Options: See Elective Group Descriptions)	3
Sub-Total Credits		16

Senior Year First Semester

Item #	Title	Credits
MATH 199	Intro to General Topology	3
	Mathematics Elective (Options: Courses under code MATH)	3
	Social Science Elective	3
	Social Science Elective	3
	Health Education Requirement (Options: Courses under subject code HHPL)	1
Sub-Total Credits		13

Senior Year Second Semester

Item #	Title	Credits
MATH 185	Intro to Complex Variables	3
	Social Science Elective	3
	General Electives (Options: To be determined in consultation with advisor) (4)	4
	General Elective (Options: To be determined in consultation with advisor) (3)	3
	General Elective (Options: To be determined in consultation with advisor) (3)	3
Sub-Total Credits		16
Total credits:		120

Category Descriptions

Physical Education (Active)

ENGW 101/102/104

Choose between ENGW 101, ENGW 102, OR ENGW 104

Humanities Elective

ENGW 103/105

World Language and Culture Requirement (Options: See Elective Group Descriptions)

Foreign Language - Amharic*	3
Foreign Language - Arabic*	3
Foreign Language - Chinese*	3
Foreign Language - French*	3
Foreign Language - German	3

Foreign Language - Haitian Creole* (Options: Courses under code HACR)	3
Foreign Language - Spanish*	3
Foreign Language - Swahili*	3
Foreign Language - Wolof*	3

General Elective (Options: To be determined in consultation with advisor) (3)

Philosophy Elective * (Options: Courses under Code PHIL 051, 053, 055, 057 and 059)

PHIL 051	Principles of Reasoning	3
PHIL 055/057	Intro to Philosophy	3
PHIL 057	Intro to Ethics (Honors)	3

Social Science Elective

Mathematics Elective (Options: Courses under code MATH)

	MATH 006/007	3
MATH 009	Intro to Statistics	4
MATH 010	College Algebra II	4
MATH 012	Patterns in Math	3
MATH 020	Fundamental Concepts of Mathematics for Education I	3
MATH 026	Applied Calculus	4
MATH 160	Adv Calculus for Sci & Eng	3
MATH 164	Numerical Analysis	3
MATH 168	Actuarial Science Lab I	1
MATH 190	Probability & Statistics II	3
MATH 192	Topics in Applied Mathematics	3
MATH 193	Actuarial Science Seminar	3
MATH 196	Introduction to Analysis II	3
MATH 197	Intro to Modern Algebra I	3
MATH 198	Intro to Modern Algebra II	3

Health Education Requirement (Options: Courses under subject code HHPL)

General Electives (Options: To be determined in consultation with advisor) (4)