Name: **Date:**

PeopleSoft ID:

Checklist for BS in Mathematical Biology

MATHEMATICS (27 Hours)

Tr	UH		
		MATH 2413	Calculus I
		MATH 2414	Calculus II
		MATH 2318	Linear Algebra
		MATH 2415	Calculus III
		MATH 3331	Intermediate Differential Equations
		MATH 3338	Probability
		MATH 3339	Statistics for the Sciences
		MATH 43____	4000-level MATH elective

*EXAMPLES OF 4000-LEVEL MATH ELECTIVES

(Check Catalog for Pre-Requisites)

MATH 4320	Introduction to Stochastic Processes
MATH 4322	Introduction to Data Science and Machine Learning
MATH 4323	Data Science and Statistical Learning
MATH 4335	Partial Differential Equations
MATH 4339	Multivariate Statistics
MATH 4350	Differential Geometry
MATH 4351	Calculus on Manifolds
MATH 4355	Mathematics of Signal Representation
MATH 4362	Theory of Differential Equations & Nonlinear Dynamics
MATH 4364	Intro. to Numerical Analysis in Scientific Computing
MATH 4365	Numerical Methods for Differential Equations
MATH 4366	Numerical Linear Algebra
MATH 4380	Mathematical Introduction to Options

BIOLOGY (23 Hours)

		BIOL 1106	Biology for Science Majors I Lab Fall, Sum
		BIOL 1306	Biology for Science Majors I Fall, Sum
		BIOL 1107	Biology for Science Majors II Lab Spring, Sum
		BIOL 1307	Biology for Science Majors II Spring, Sum
		BIOL 3301	Mendelian and Population Genetics
		BIOL 3306	Evolutionary Biology
		BIOL 3311	Adv Mthds/Writing in Gen Lab
		BIOL 3324	Human Physiology
		BIOL 4374	Cell Biology

BIOCHEMISTRY (3 Hours)

		BCHS 3304	General Biochemistry I Fall, Spring

INTERDISCIPLINARY COURSES (6 Hours)

		BIOL/MATH 4309	Mathematical Biology Spring
		BIOL/MATH 4310	Biostatistics Fall

CORE (Check UH Catalog or UH Core Website for Pre-Requisites)

COMMUNICATION (6 Hours):

Tr	UH		
		ENGL 1301	First Year Writing I
		ENGL 1302	First Year Writing II

HIST & GOVT REQUIREMENTS (12 Hours):

			American History (3 Hours)
			American History (3 Hours)
		GOVT 2305	U.S. Government: Congress, President, and Court
		GOVT 2306	U.S. and Texas Constitutions and Politics

ADDITIONAL CORE (12 Hours): Choose from UH Core Website

			Language, Philosophy & Culture (3 Hours)
			Creative Arts (3 Hours)
			Social & Behavioral Sciences (3 Hours)
		Satisified by BIOL 3311	Writing in the Disciplines (3 Hours)

CHEMISTRY (12 Hours)

Tr	UH		
		CHEM 1111	Fundamentals of Chemistry I Lab
		CHEM 1311	Fundamentals of Chemistry I
		CHEM 1112	Fundamentals of Chemistry II Lab
		CHEM 1312	Fundamentals of Chemistry II
		CHEM 2123	Organic Chemistry I Lab
		CHEM 2323	Organic Chemistry I

UNIVERSITY PHYSICS (8 Hours)

		PHYS 2125	University Physics Lab I
		PHYS 2325	University Physics I
		PHYS 2126	University Physics Lab II
		PHYS 2326	University Physics II

FREE ELECTIVES

(Additional hours to complete a total of **120 hours** and **36 advanced hours** as needed)

Tr	UH	

RULES YOU NEED TO KNOW:

1. MINIMUM of a **2.00 GPA** in cumulative, major, and minor GPA to graduate
2. **PRE-REQ RULE:** Must earn C- or better in pre-requisite for MATH and BIOL courses
3. **C- RULE:** MAXIMUM of **6 hours** of grades below C- allowed in UH MATH and BIOL courses
4. See Residency Rule here: https://publications.uh.edu/content.php?catoid=56&navoid=21157
5. MAXIMUM of **6 W's** allowed during entire undergraduate career
6. MINIMUM of **36 advanced hours** and **120 total hours** to graduate
7. MAXIMUM of **66 lower level transfer hours** may be applied towards UH degree

NSM CAPSTONE:

By virtue of the interdisciplinary nature of the program, students who complete the requirements for the B.S. degree in Mathematical Biology have satisfied the NSM Capstone.

NOTE: Students who plan to apply for medical school should include CHEM 2325 and CHEM 2125 in their free elective hours.