DEGREE WORKSHEET FOR:

BS Mathematics, Pure & Applied Mathematical Sciences

2022-2023 Catalog

Degree Requirements – 120 credits

YEAR 1- FALL (14 credits)		YEAR 1- SPRING (16 credits)	
ENG 122 College Composition (LAW1*)	3 credits	**MATH 132 Calculus II (LAX1*)**	4 credits
MATH 131 Calculus (LAX1*)	4 credits	**MATH 228 Discrete Mathematics**	3 credits
CS 120 Computer Programming	3 credits	**CS 160 Structured Programming**	3 credits
Liberal Arts Curriculum[b] (choose one LAA1, LAA2, LAA3, or LAA4 that is also a LAMS and/or LAIS*)	3 credits	Liberal Arts Curriculum[b] (choose one LAB1, LAB2 or LAB3 that is also a LAMS and/or LAIS*)	3 credits
MATH 102 Success in Math Sciences (suggested elective)	1 credit	Liberal Arts Curriculum[b] (LAW2*)	3 credits
YEAR 2- FALL (15 credits)		**YEAR 2-SPRING (15 credits)**	
MATH 233 Calculus III	4 credits	**MATH 221 Elementary Linear Algebra**	3 credits
MATH 350 Elementary Probability Theory	4 credits	*Major Elective*[d]	3 credits
Liberal Arts Curriculum[b] (LAS1; LAS1L*)	4 credits	Liberal Arts Curriculum[b] (LAA1, LAA2, LAA3, LAA4*)	3 credits
University-wide Electives[c]	3 credits	Liberal Arts Curriculum[b] (LAH1*)	3 credits
		University-wide Electives[c]	3 credits
YEAR 3- FALL (15 credits)		**YEAR 3- SPRING (15 credits)**	
MATH 335 Differential Equations	3 credits	**MATH 460 Introduction to Complex Analysis**[a]	3 credits
MATH 431 Basic Analysis I[a]	4 credits	*Major Electives*[d]	3 credits
Liberal Arts Curriculum[b] (choose one additional LAA, LAH or LAB*)	3 credits	Liberal Arts Curriculum[b] (LAS1*)	3 credits
University-wide Electives[c]	5 credits	University-wide Electives[c]	6 credits
YEAR 4- FALL (15 credits)		**YEAR 4- SPRING (15 credits)**	
MATH 321 Introduction to Abstract Algebra I	3 credits	*Major Elective*[d]	6 credits
MATH 495 Topics in Mathematics[a]	3 credits	University-wide Electives[c]	9 credits
University-wide Electives[c]	9 credits		

***See the Liberal Arts Curriculum webpage for more information**

This four-year plan is a recommended schedule to complete your bachelor's degree in 4 years. Every UNC student must meet the following requirements in order to graduate with a bachelor's degree: earn a minimum of 120 semester credit hours; possess a minimum of a 2.00 cumulative grade point average; have at least 31 credit hours in courses designated as Liberal Arts Curriculum; meet all degree requirements in the student's major field of study. Each major and/or concentration may have additional requirements necessary for graduation. **Students must consult with their major advisor to receive information on any additional graduation requirements.**

Admission Requirement – No separate admission requirement.
Minor Required – No Minor required.
Contact Information – School of Mathematical Sciences Ross Hall Room 2239, 970-351-2820
School Web Page: http://www.unco.edu/nhs/mathematical-sciences/
Notes – see page 2

BS Mathematics, Pure & Applied Concentration (cont.)

Notes

1 [a] MATH 495 is only offered every odd-numbered fall; MATH 431 is only offered every odd-numbered fall; and MATH 460 is only offered every even-numbered spring.

2 [b] Liberal Arts Curriculum courses can be taken any semester. It is strongly suggested that they be evenly distributed over the entire 4 years of study rather than concentrated in the first 2 years. NOTE: You need to complete 31 Liberal Arts Curriculum credits total. Math 131 and Math 132 are required in the program and also satisfy the 3 credit Liberal Arts Curriculum Mathematics requirement. Most students will take ENG 122 for their first composition class unless they have placed out of the introductory composition requirement. Students need to take 6 credits total of composition courses, 7 credits of natural and physical sciences credits, and 15 credits from Arts & Humanities, History, Social & Behavioral Sciences, U.S. Multicultural, and International Studies. Of these 15 credits, one must be designated as a Multicultural Studies [MS] class, and one must be designated as an International Studies [IS] class.

3 [c] You need to complete 36-37 credits of University-wide Electives.

4 [d] You need to complete 12 additional credits from the concentration electives. Choose from: MATH 322, 336, 341, 342, 351, 375, 391, 432, 437, 495 (under second title); CS 301, 302, 350, 454, 456, 460; STAT 411, or 451.

5 Courses in **bold** are Mathematical Sciences Core courses.

6 Courses in *italics* are Concentration requirements

The Pure & Applied Concentration permits students to acquire the standard concepts of undergraduate mathematics including calculus, real and complex analysis, differential equations, linear and abstract algebra, discrete mathematics, probability, and statistics. The concentration also focuses on applications of mathematics to real-life problems and includes some supporting computer science and statistics. Graduates will be prepared to enter a graduate program in mathematics or some other related discipline. They may also begin a career in a wide variety of quantitative settings, including branches of engineering, physical and social science, environmental, governmental, industrial, military, finance and management, law, and medicine.

***Liberal Arts Curriculum Course Indicators**			
LAA1	Arts & Humanities: Arts & Expression	LAIS	International Studies
LAA2	Arts & Humanities: Literature & Humanities	LAMS	U.S. Multicultural Studies
LAA3	Arts & Humanities: Ways of Thinking	LAS1	Natural & Physical Sciences
LAA4	Arts & Humanities: World Languages	LASL	Natural & Physical Sciences LAB
LAB1	Social & Behavior Sciences: Economic or Political Systems	LAW1	Introductory Written Communication
LAB2	Social & Behavior Sciences: Geography	LAW2	Intermediate Written Communication
LAB3	Social & Behavior Sciences: Human Behavior, Culture or Social Frameworks	LAW3	Advanced Written Communication
LAH1	History	LAX1	Mathematics