

CURRICULUM GUIDE

Mathematics, B.S.

2017-2018

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The schedule below is an **EXAMPLE** of how you can arrange your class schedule. You are strongly advised to meet with the Chair of the Department Mathematics & Statistics or with your academic advisor prior to registration for appropriate placement in MAT courses.

	Fall Semester	Spring Semester
Freshman Year	SCO 100T 1	MAT 244 <u>or</u> 244H 4
	° STA 270 (fulfills Gen. Ed. 2) 4	MAT 239 3
	Gen. Ed. 1A (ENG 101) 3	Gen. Ed. 1B (ENG 102) 3
	MAT 234 <u>or</u> 234H 4	Gen Ed. 3A (Arts) 3
	CSC 160, 177 <u>or</u> 190 3	Gen Ed. 4 (Nat. Sci.) 3
	TOTAL 15	TOTAL 16
Sophomore Year	MAT 254 <u>or</u> 254H 4	MAT 315 (spring only) 3
	MAT 301 3	Free Elective (upper division) 3
	Gen. Ed. 1C (Oral Comm) 3	(MAT 353 recommended) 3
	Gen. Ed. 4 (Nat. Sci.) 3	Gen. Ed. 3B (Humanities) 3
	Gen Ed. 5A (History) 3	Gen. Ed. 5B (Soc. & Behav. Sci.) 3
	TOTAL 16	TOTAL 15
Junior Year	MAT 308 (fall only) 3	♦ ♦ MAT 408 (spring only) <u>or</u> (415 (fall only)) (or MAT 505 or higher elective)(restricted elective) 3
	Gen. Ed. 6 (Diversity) 3	‡ Core Elective (upper division) 3
	Free Elective (upper division) 3	Free Elective (upper division) 3
	Free Elective 3	Free Elective (upper division) 3
	Free Elective 3	Free Elective 3
	TOTAL 15	TOTAL 15
Senior Year	♦ MAT 415 (fall only) (or 408 (spring only)) 3	MAT 498 1
	‡ Core Elective (upper division) 3	‡ Core Elective (upper division) 3
	Free Elective (ACCT) (upper division) 3	Free Elective (upper division) 3
	Free Elective 3	Free Elective 3
	Free Elective 3	Free Elective 3
	TOTAL 15	TOTAL 13
TOTAL HOURS TO DEGREE COMPLETION 120		

* **PREREQUISITES:** Consult with your advisor and/or the University catalog regarding prerequisites for upper division MAT or STA courses.

Upper division courses: All students are required to have a minimum of 42 hrs. upper division (300 level or above) courses distributed throughout Major/Supporting/Gen Ed/Free Electives categories. If 300 level classes are taken for Gen. Ed., they can be used to fulfill the 42 hours instead of upper division free electives.

Refer to the University Catalog at <http://www.catalogs.eku.edu/> regarding University and General Education Requirements. All baccalaureate degree seeking students who enter the University are required to successfully complete one writing intensive course following completion of the ENG 102, ENG 105, or HON 102/103. Writing intensive courses are designated with the suffix "W" following the course prefix and number (e.g. HUM 300W).

Applied Critical & Creative Thinking (ACCT) Requirement: Mathematics majors can fulfill ACCT with any of the following: a 349 Co-op experience in any subject area, a program-approved service-learning course, a program-approved undergraduate scholarly or creative activity, HON 420 with a program-approved thesis topic, a program-approved leadership experience, or a program-approved study abroad experience. (Credit hours may be incorporated into program requirements.)

Course Number	Course Name
GENERAL EDUCATION & UNIVERSITY REQUIREMENTS (37)	
SCO 100T	Student Success Seminar in Mathematics and Statistics (1)
CORE COURSE REQUIREMENTS (40)	
MAT 234 <u>or</u> MAT 234H	Calculus I (4)
MAT 239	Honors Calculus I (4)
MAT 244 <u>or</u> MAT 244H	Linear Algebra and Matrices (3)
MAT 254 <u>or</u> MAT 254H	Calculus II (4)
MAT 301	Honors Calculus II (4)
MAT 308	Calculus III (4)
MAT 315	Honors Calculus III (4)
♦ MAT 408 <u>or</u> MAT 415	Logic and Set Theory (3)
MAT 498	Modern Algebra I (3)
♦ PLUS ONE (1) COURSE selected from (restricted elective):	Introduction to Analysis (3) (Spring only)
♦ MAT 408	Modern Algebra II (3)
♦ MAT 415	Analysis (3)
OR any course numbered 505 or above (507 only with Departmental approval).	
‡ PLUS NINE (9) HOURS selected from (core elective):	Mathematics Capstone (1)
CSC 300	Introduction to Numerical Methods (3)
CSC 320	Introduction to Algorithms (3)
Any MAT course numbered 300 or above (except for 303, 349, 501, 502) or any STA course numbered 300 or above (except for 349, 500, 503). (No more than SIX (6) HOURS of STA courses may be used to fulfill this requirement.)	
SUPPORTING COURSE REQUIREMENTS (4)	
CSC 160 <u>or</u> CSC 177 <u>or</u> CSC 190	Introduction to Programming (3)
° STA 270	Introduction to Visual Basic (3)
	Object-Oriented Programming I (3)
	Applied Statistics (4)
FREE ELECTIVES (39)	

♦ If either MAT 408 or 415 is counted under the core course requirements, it cannot also be counted as a core or restricted elective.

° Denotes that 3 credit hours from this course are/can be applied to fulfill a Gen. Ed. requirement.