BACHELOR OF SCIENCE – MATHEMATICAL SCIENCE
High School Teacher Certification, Mathematics 7-12 (126 Hours)
2019-2020 Degree Plans

University Core Requirements (42 Hours)  |  UHCL Course Title  |  TCCNS*  |  CODE
---|---|---|---
Communications (6 hours):  |  WRIT 1301—Composition I (Grade must be “C-” or better)  |  ENGL 1301  |  010
  |  WRIT 1302—Composition II (Grade must be “C-” or better)  |  ENGL 1302  |  010
Mathematics (3 hours*):  |  MATH 2413—Calculus I (1 hour counts toward the Major)  |  MATH 2413  |  020
Life and Physical Sciences (6 hours):  |  Choose TWO courses from the core approved list  |  030
  |  030
Language, Philosophy, and Culture (3 hours):  |  Choose ONE course from the core approved list  |  040
Creative Arts (3 hours):  |  Choose ONE course from the core approved list  |  050
U.S. History (6 hours):  |  HIST 1301—U.S. History I  |  HIST 1301  |  060
  |  HIST 1302—U.S. History II  |  HIST 1302  |  060
Government/Political Science (6 hours):  |  GOVT 2305—Federal Government  |  GOVT 2305  |  070
  |  GOVT 2306—Texas Government  |  GOVT 2306  |  070
Social/Behavioral Science (3 hours):  |  Choose ONE course from the core approved list  |  080
Component Area Option (6 hours):  |  COMM 1315—Public Speaking  |  SPCH 1315  |  090
  |  PSYC 1100—Learning Frameworks  |  PSYC 1100  |  090
  |  Two 1-hr Life/Physical Science Labs

COE Core Requirements (30 hours):  |  UHCL Course Title  |  TCCNS*  |  CODE
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TCED 1101 — Inquiry Approaches to Teaching Mathematics and Science Step 1
TCED 1102 — Inquiry Based Lesson Design in Mathematics and Science Step 2
TCED 2301 — Knowing & Learning
TCED 2303 — Classroom Interactions
TCED 3300 — Perspectives on Mathematics and Science
TCED 3301 — Research Methods in Science
TCED 4300 — Project Based Instruction
TCED 4102 — Secondary (4-8 & 7-12) Content Teacher Seminar
MATH 3307 — Functions and Modeling
TCED 4363 — Methods in Secondary Mathematics
SILC 4315 — Theories of American Pluralism
SPED 4300 — Survey of Exceptionalities
Major Requirements (47 hours):

TCCNS

(All grades must be C- or better except Technical Writing (C+))

LLLS 4351—Reading in Content Subjects
WRIT 3315—Advanced Technical Writing (Grade C+ or better)
MATH 2414—Calculus II
MATH 2315—Calculus III
MATH 2318—Linear Algebra
MATH 2320—Differential Equations
MATH 3304—Algebra Through Technology
MATH 3305—Euclidian/Non-Euclidian Geometry
MATH 3331—Advanced Calculus
MATH 4344—Introduction to Probability
MATH/STAT 4345—Introduction to Statistics
MATH 3301—History of Math Sciences

Choose ONE course from the following two choices:

- MATH 4322—Introduction to Abstract Algebra
- MATH 4341—Introduction to Analysis

Choose TWO courses from the following list of 8 choices:

- MATH 4313—Introduction to Topology
- MATH 4315—Numerical Analysis its Applications
- MATH 4316—Mathematic Software Applications
- MATH 4321—Predicate Logic
- MATH 4322—Introduction to Abstract Algebra
- MATH 4325—Theory of Models and Applications
- MATH 4363—Functions of a Complex Variable
- MATH 3312—Number Theory

Pedagogy Requirements (7 hours):

TCED 4700 — Apprentice Teaching and Seminar

- Enrollment in the courses listed above requires admission to TEP.
- 3.000 GPA required in pedagogy coursework.
- TCED 4378 must be taken in the fall or spring semester immediately preceding the final semester.
- TCED 4978 must be taken in the final semester.

Teacher Certification Requirements

- Passing scores on the appropriate state assessments (Texas Examinations of Educator Standards [TExES]) are required for recommendation for teacher certification.
  - Mathematics 7-12 TExES #235
  - Pedagogy and Professional Responsibilities EC-12 TExES #160
- All courses outside the University Core must be C- or better.

General Degree Requirements

- Students must complete at least 126 semester credit hours. A minimum of 45 hours of the 126 semester hours must be advanced (3000-4000 level) course work according to the requirements of the respective major.
- Students must complete the University Core Curriculum requirements (refer to Core Curriculum Requirements section of this catalog).
- Students must fulfill the statutory requirements of the Texas State Education Code, including the following:
  - Six hours of U.S. History (three hours may be Texas History).
  - Six hours of Constitutions of the United States and Texas.
- Students must demonstrate writing proficiency by completing nine hours of lower-level (1000-2000 level) and upper-level (3000-4000 level) English composition course credit with a minimum grade of "C-" or better. Some majors may require higher grades in English composition.
- Students must complete at least 25% of the credit hours required for the degree (i.e., 30 semester credit hours for a 120 credit hour program) through instruction offered by UHCL to fulfill the Southern Association of Colleges and Schools (SACS) residency requirements.
- Students must complete the final 30 semester hours of 3000 and 4000 level course work in residence at UHCL.
- Students must complete a minimum of 12 semester credit hours of upper-level (3000-4000 level) coursework in the major in residence at UHCL.
- Students must have a cumulative GPA of 2.000 on course work completed at UHCL with grades of "C" or better on at least 30 hours of resident upper-level work. Grades of "C-" or below cannot be applied toward the 30 hours of resident upper-level work.