## MAT Middle Grades Natural Sciences/Biology Education Program Course of Study

Required Education Courses	Clinical hours
EDUC 210 Observing the Schooling Process	15 hours
EDUC 215 Instructional Communication: Theory & Practice	N/A
HIST 239 or PHIL 220 or SOAN 244 History or Philosophy or Anthropology of Education	N/A
PSYC 110 Introduction to Psychology	N/A
PSYC 210 Developmental Psychology	N/A
EDUC 413 Reading in the Content Areas	N/A
EDUC 415 Middle School Fieldwork & Seminar	150 hours
EDUC 414 Inclusive Learning Environments	15 hours
EDUC 519 Secondary Curriculum & Instructional Design	N/A
EDUC 520 Discipline Specific Secondary Instructional Design for Natural Sciences	15 hours
EDUC 521 Secondary Student Teaching and Seminar	560 hours
EDUC 501 Introduction to Teacher Research	N/A
EDUC 502 Action Research Project	N/A
Required Content Courses	
BIO 120 Organismal Biology	N/A
BIO 130 - 139 (choose 1) Core Biological Inquiry	N/A
BIO 220 Ecology and Evolution	N/A
BIO 221 Cellular and Molecular Biology	N/A
Cellular and Molecular Biology (320, 322, 324, 325, 342, 346, 352, 360,362)	N/A
Organismal Biology (320, 330, 340, 342, 344, 346, 360, 362, 384)	N/A
Ecology and Evolution (330, 344, 370, 375, 384, 389)	N/A
BIO 494 Senior Seminar or Senior Thesis	N/A
BIO 150 Reasoning and Statistical Inference in Biology or MATH 110 Calculus I or MATH 150 Probability & Statistics	N/A
CHEM 115 Chemistry I	N/A
CHEM 116 Chemistry II	N/A
PHYS 109 Astronomy and Cosmology	N/A
PHYS 110/120 Introductory Physics	N/A

Note: a grade of "C" or better is required in all content courses. A grade of B- or better is required for all EDUC courses.

## Middle Grades Natural Sciences/Biology Education Major Course Sequence and Program Assessment Checkpoints General Education **And Required Content Courses** EDUC 210: **Observing the Schooling Process CHECKPOINT #1: Program Entry** HIST 239: **PHIL 220 SOAN 244 EDUC 215** History of Philosophy of or Anthropology of Instructional Communication Theory and Practice Education Education Education **PSYC 110:** Introduction to Psychology **PSYC 210: Developmental Psychology** EDUC 413: Reading EDUC 415: Middle School Fieldwork Methods in the Content Areas Practicum EDUC 519: Secondary EDUC 520: Discipline-Specific EDUC 501 Intro to Teacher Secondary Methods of Curriculum and Instructional Research Methods Instruction **CHECKPOINT # 2: Application for Student Teaching** EDUC 414: Inclusive EDUC 521: Secondary Student EDUC 502: Action Research **Learning Environments** Teaching Project **CHECKPOINT 3: Completion of Student Teaching CHECKPOINT 4: Program Exit**