

Integrative Learning

BA in Mathematics Teacher Certification Option

1 Common Orientation/Freshman Experiences

- Common experience in EIU Reads
- Majority of freshman majors start at EIU in MAT 1441
- Opening MAT 1441 class usually included student introductions and some sharing of common high school experiences as well as perceptions of what calculus (and higher mathematics in general) is about and why it is required

2 Introductory Courses

- Calculus sequence draws on applications from biological and physical sciences and business.
- Technology course (MAT 2270) addresses how to demonstrate the underlying meaning of the the mathematics they have learned so far, across several courses
- Computer science course (MAT 2170) focuses on logical thinking and analysis not just on the technical aspects of programming

3 Transitional Courses

- MAT 2550 and MAT 2800
- Challenge the idea of mathematics as just a set of computational rules
- Emphasis on problem solving and logical thinking
- Begin to relate mathematical rigor to clear thinking in other contexts

4 Capstone Courses

- MAT 4900 – History of Mathematics
 - Mathematical ideas in historical perspective (relative to other mathematics)
 - Mathematical ideas in historical perspective (relative to the times they were developed)
 - Brings together mathematical ideas from across several previous courses
 - Assignments ask for integration of mathematical ideas across time and area
- MAT 3400 – Teaching Secondary Mathematics
 - Career and societal goals addressed
 - Mathematical ideas pulled together from several previous courses
 - Peer teaching to enhance communication skills
 - Reflective items required in Live Text Portfolio

5 Practical Work Experiences

- Live Text Portfolio includes reflections on practicum experiences in schools
- Student Teaching

6 Co-Curricular Experiences

- Undergraduate tutoring program
- Challenge of the Week
- Putnam Exam and ISMAA Problem Solving Competition
- Student presentations at undergraduate mathematics conferences
- Students encouraged to apply for REUs across the country
- Students encouraged to do study abroad
 - Mathematics programs such as in Moscow or Budapest
 - Foreign (or US) academic exchange type programs with some major courses transferred back

7 Student Life

- Math Club
- Kappa Mu Epsilon