Department of Mathematical Sciences
PREPARING TO TEACH SECONDARY SCHOOL MATHEMATICS, GRADES 6-12

The most common method to qualify to be a secondary school mathematics teacher is to follow the program for a major in Mathematical Sciences with an emphasis in Mathematics Education. General education requirements, as well as required and elective mathematics courses and professional education courses, are listed in the appropriate undergraduate catalog and summarized on page 3 of this document. Recent updates of state and university requirements may not appear in catalogs, so regular contact with your advisor is highly recommended. Postgraduate students, students-at-large, and graduate students may be licensed whether or not they pursue a second Bachelor’s degree.

Prospective secondary teachers should confer with their advisors in Mathematical Sciences by the sophomore year and continue to do so each semester. Student teaching is discussed in a required meeting with the Coordinator(s) of Teacher Certification in Mathematics three semesters prior to student teaching. Each student should make a careful plan of courses to ensure all requirements for the program will be met. Students are encouraged to add courses for an endorsement in an additional area.

Guidelines for Meeting Licensure Requirements

1) **Mathematics Major** The B.S. Major in Mathematical Sciences with Mathematics Education emphasis is a 75 semester hour program. See Appendix D for General Education requirements for Initial Teacher Licensure.

2) **Second Teaching Area Endorsement** A second teaching area is recommended. See an advisor for endorsement requirements or check ISBE requirements through the State of Illinois. Candidates for Illinois endorsements in other content areas must pass the ICTS Content Area Test in each endorsement area.

3) **PSYC 102 (Introduction to Psychology)** This 3 hr course, a general education elective in social sciences, should be completed before junior standing. It is a prerequisite for EPS 406.

4) **U.S. History and U.S. Government** One 3 hr course in each area should be completed in the first two years. Courses will satisfy general education requirements. (HIST 260 or 261 AND POLS 100)

5) **Social Issues Experience** Documented completion of any First Aid/CPR course offered by the American Red Cross, [http://www.redcross.org/](http://www.redcross.org/) at a hospital/community center, etc., or experience with drug abuse education or a demonstrated social issue experience in schools.

6) **Interdisciplinary Studies** 3 hr course: EPFE 201.

7) **Test of Academic Proficiency of the Illinois Licensure Testing System** You must pass the Test of Academic Proficiency (TAP) before you can enroll in ILAS 301. You must pass the TAP and also the Math Content Area Test before you can enroll in MATH 401 and MATH 412 and before you can be formally admitted to the Mathematics Teacher Licensure Program. Information, study guides and registration materials are online, [http://www.icts.nesinc.com/](http://www.icts.nesinc.com/) The Assessment of Professional Teaching Test must be passed prior to the conclusion of student teaching before you can be entitled for licensure.

8) **EPS 406 (Issues in Human Development and Learning in the Middle School and High School Years)** This 3 hr course should be completed during the junior year. Transfer students often take this in spring semester of the junior year. PRQ: Jr Standing (60 hr), PSYC 102 (3 hr) and overall NIU GPA of 2.50. CRQ: ILAS 201; EPS 406 is often taken with ILAS 301.
10) **Clinical Experiences**

Students must complete 130 clock hours of clinical experiences before student teaching. Clinicals involve observation in both middle school and high school mathematics classes and classroom teaching experiences.

- For ILAS 201, ILAS 301, MATH 401 and MATH 413, students must have a completed Criminal Background Check (CBC) with no record, and documentation of a current negative TB test submitted to the Coordinator of Teacher Certification in Mathematics. The procedure for obtaining the CBC is determined by the each respective school district where students are placed.
- ILAS 201 (1 hr; 40 clock hr) recommend sophomore year.
- ILAS 301 (2 hr; 50 clock hr) recommend junior year, concurrently w/EPS 406.
- MATH 401 (1 hr; 40-50 clock hr) concurrently w/MATH 412 and after EPS 406.
- ILAS 201 and ILAS 301 applications may be downloaded from [www.math.niu.edu](http://www.math.niu.edu) under Teacher Certifications, Applications.
- ILAS 201 and ILAS 301 applications are due the first Wednesday in October for Spring Semester enrollment and the first Wednesday in March for Fall Semester enrollment.
- MATH 401/MATH 413 Student Teaching Applications may be downloaded from [www.math.niu.edu](http://www.math.niu.edu) under Teacher Certification, Applications by following the provided links and are initially due the first Thursday of the semester immediately prior to the semester you take MATH 401.
- Approximately one week before registration. Permits to Register for ILAS 201 and ILAS 301 will be emailed to applicants. For MATH 401/MATH 412 and for MATH 410, there will be a signup sheet in the Department of Mathematical Sciences, Watson 320. A signup sheet will also be available to request a permit for ETR 440. A permit number will be emailed to candidates who are on track to student teach within two semesters.
- Applicants w/ teaching experience in grades 6-12, as verified by an employer, may not need to complete all of the pre-student teaching clinical experiences, at the discretion of CLAS.

11) **Admission to the Teacher Licensure Program**

- Admission requires approval by the Department of Mathematical Sciences. Application for admission is done through a conference with a Department Advisor two semesters prior to student teaching.
- Formal admission to the program is a pre-requisite to Student Teaching.
- For Department approval, students are expected to meet the criteria listed in Appendix A.

12) **Student Teaching**

- The Student Teaching Application must be submitted to, and tentatively approved by, the Coordinator of Teacher Certification in Mathematical Sciences two semesters prior to the semester of Student Teaching.
- The Department of Mathematical Sciences grants final permission for students to student teach in mathematics upon satisfaction of the requirements listed in Appendix B.
- All three tests required by the Illinois Licensure Testing System must be passed as stated in #7 on Page 1.
- Senior or graduate standing is required. Student teaching (MATH 413) is offered in both Fall and Spring. See Appendix C for additional information.
- Choice of schools is generally restricted to schools in the quadrilateral bounded on the North-South by I-90 and US 30/US 34; East-West by I-294 and IL Route 2.
Secondary (6-12) Mathematics Teacher Licensure Requirements

PLANNING & MEETING THESE REQUIREMENTS IS A STUDENT RESPONSIBILITY

Checklist of non-mathematics requirements (See Appendix D) [See your advisor for the specific list of approved courses.]

_____ COMS 100 Fundamentals of Oral Communication (3)
_____ ENG 103 and 104 (6) or ENG 105 (3)
_____ PSYC 102 Introduction to Psychology (3)
_____ U.S. History (3) HIST 260 OR HIST 261
_____ U.S. Government (3) POLS 100
_____ English literature course or LIT course (taught in English) to fulfill Humanities requirement (3)
_____ Humanities Electives (6) [See your advisor for the list of approved courses. One course must be in CVPA.]
_____ Science (courses in 2 fields; at least 2 courses in one field, including one lab course) (9)
_____ Social Issues (First Aid/CPR Certification or approved course/experience)
_____ Interdisciplinary Studies (usually EPFE 201) (3)

Test of Academic Proficiency, Illinois Licensure Testing System

_____ ILAS 201 Clinical Experience; 40 clock hours (1)
_____ EPFE 400 Foundations of Education (3)
_____ ILAS 301 Clinical Experience; 50 clock hours (2)
_____ EPS 406 Issues in Human Development and Learning in MS/HS (3)

_____ TLSE 457 Systems for Integrating the Exceptional Student in the Regular Classroom (3)

Mathematics Content Area Test, Illinois Licensure Testing System

_____ ADMISSION TO THE MATHEMATICS TEACHER LICENSURE PROGRAM

_____ ETR 440 Secondary Classroom Assessment (3)

_____ Assessment of Professional Teaching, Illinois Licensure Testing System

Checklist of Mathematics, Statistics, and Computer Science courses

_____ MATH 229 Calculus I (4)
_____ MATH 230 Calculus II (4)
_____ MATH 232 Calculus III (4)
_____ MATH 240 Linear Algebra and Applications (4)
_____ CSCI 240 C++ (4) or CSCI 230 FORTRAN (4)
_____ STAT 350 Introduction to Probability and Statistics (3)
_____ MATH 353 Axiomatic Geometry (3)
_____ MATH 360 Model Building in Applied Mathematics (3)
_____ MATH 401 Clinical Experience; 40-50 clock hours (1)
_____ MATH 410 Methods of Instruction in the Mathematics Curriculum for Middle School (3)
_____ MATH 412 Methods of Instruction in the Mathematics Curriculum for Secondary School (3)
_____ MATH 413 Student Teaching (12)
_____ MATH 420 Abstract Algebra I (3)
_____ MATH 430 Advanced Calculus I (3)

One Additional Course From:

_____ MATH 380 Elementary Combinatorics (3)
_____ MATH 416 Topics in Mathematics for Teachers (3)
_____ MATH 434 Numerical Linear Algebra (3)
_____ MATH 435 Numerical Analysis (3)
_____ MATH 440 Elements of Complex Analysis (3)
_____ MATH 444 Linear Programming and Network Flows (3)
_____ MATH 450 Introduction to Topology (3)
_____ MATH 480 Number Theory (3)

One Additional Course From:

_____ MATH 421 Abstract Algebra II (3)
_____ MATH 423 Linear and Multilinear Algebra (3)
_____ MATH 431 Advanced Calculus II (3)
_____ MATH 456 Linear Geometry (3)
_____ STAT 470 Introduction to Probability Theory (3)
_____ MATH 480 Number Theory (3)
SAMPLE PROGRAMS OF STUDY
Note: Many other combinations of courses are possible.

Four year program (Spring Student Teaching)*

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<th>Year</th>
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<th>Spring Semester</th>
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<td>MATH 420 (3)</td>
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<td>MATH 430 (3)</td>
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<td></td>
<td>MATH 412 (3)**</td>
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Four and a half year program (Fall student teaching)*

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<td>MATH 413 (12)</td>
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*General Education Requirements are taken throughout the program.

**Maximum of two math content courses may be taken in the semester MATH 412 is taken.

***Typical MATH ELEC courses chosen: STAT 470 and MATH 416, but one course from each of the elective lists on Page 3 will satisfy the requirements.
APPENDIX A
DEPARTMENT OF MATHEMATICAL SCIENCES POLICY
Granting, Delaying, or Denying Approval For Admission to Teacher Licensure

I. Normally, the Department of Mathematical Sciences approval will be granted to mathematics majors and/or licensure candidates who, during the semester of application:

Attend a mandatory Teacher Licensure Advisement Session with a designated representative of the Department of Mathematical Sciences. The session is normally held two semesters prior to the semester of student teaching. At this time, students should meet the following requirements:

A. Have a grade of C or better for all MATH and STAT courses and for all Professional Education courses.

B. Have a minimum GPA of 2.25 in Mathematical Sciences courses which are available for credit toward the major and/or licensure.

C. Have a minimum GPA of 2.25 in Mathematical Sciences courses numbered above 230 available for credit toward the major and/or licensure.

D. Have a minimum overall NIU GPA of 2.50 (undergrad or post grad) or a minimum overall GPA of 3.00 for students-at-large or graduate students.

E. At NIU, have completed: MATH 232 or MATH 240 and at least one MATH or STAT course numbered 350 or above, or have completed at NIU, two MATH or STAT courses numbered 350 or above.

F. Have completed, or be enrolled in, courses including 70 clock hours of pre-student teaching clinical experiences.

G. Pass the Test Academic Proficiency of the Illinois Licensure Testing System

II. Normally, approval will be delayed for an applicant who does not satisfy IA, IB, IC, ID or IE; delayed status will be changed to Approved status when removal of deficiencies is reported by the applicant to the Department. If an applicant's delayed status continues beyond the semester (including summer if the applicant is enrolled) succeeding the one during which a Teacher Licensure Advisement Session was attended, the applicant must attend an Advising Session again before approval is granted.

III. Approval may be granted, delayed, or denied solely on the basis of recommendations from Members of the Mathematical Sciences Faculty; final action in this case will be taken by a Faculty Committee appointed by the Department Chair.

IV. If any course in which the grade of F was received is retaken, the most recent grade received is used in computing the GPA; if not retaken, the F is included in computing the GPA.

V. Transfer students: Courses taken at other institutions are included in the Mathematics GPA computations.

VI. Transfer students: For exceptional cases, IE or IF may need to be given special consideration.
APPENDIX B
DEPARTMENT OF MATHEMATICAL SCIENCES POLICY
Granting or Denying Permission to Student Teach in Mathematics

To be granted final permission from the Department to student teach in mathematics, it is expected that the mathematical sciences major and/or licensure candidate will:

1. Have satisfactorily completed all other courses required for licensure prior to student teaching.

2. Have satisfactorily completed 130 clock hours of pre-student teaching clinical experiences.

3. Have satisfactorily met requirements for GPAs and grades:
   A. Have a minimum GPA of 2.25 in Mathematical Sciences courses available for credit toward the major and/or licensure. (If a course in which the grade of F was received is retaken, the most recent grade received is used in computing the GPA.)
   
   B. Have a minimum GPA of 2.25 in Mathematical Sciences courses numbered above 230 available for credit toward the major and/or licensure.

   C. Have a grade of C or better in at least three of the following required mathematics content courses:
      C1. MATH 420
      C2. MATH 430
      C3. One Additional Course from: MATH 380, MATH 416, MATH 434, MATH 435, MATH 440, MATH 444, MATH 450, MATH 480
      C4. One Additional Course from: MATH 421, MATH 423, MATH 431, MATH 456, STAT 470, MATH 480
      Note: This policy applies to students as of Fall 2008.
      Transfer students: Courses taken at other institutions are included in Math GPA computation.

4. Have a grade of C or better for all MATH and STAT courses and for all Professional Education courses.

5. Have a minimum NIU GPA of 2.50 for undergrads and post grads

6. Have a minimum NIU GPA of 3.00 for students-at-large or grad students

7. Pass the Mathematics Content Area Test prior to enrollment in MATH 401 and MATH 412 and pass the Assessment of Professional Teaching Test through the Illinois Licensure Testing System before the conclusion of student teaching.
APPENDIX C
DEPARTMENT OF MATHEMATICAL SCIENCES POLICY
Math 401: Clinical Experience and MATH 413: Student Teaching

MATH 401 Clinical Experience
1. Permission to register for MATH 401 is contingent upon successful completion of/enrollment in 70 clock hours of pre-student teaching clinical experiences and meeting of NIU and Math GPA requirements per Appendix A.
2. Successful completion of the MATH 401 clinical component is required before student teaching begins. Completion of MATH 401 requires placement confirmation in the student teaching school.
3. If a student needs to postpone student teaching prior to its beginning, then the student withdraws from MATH 401, if he/she has not already completed it.
4. If a student engages in unprofessional conduct or is working unsatisfactorily with public school students, he/she will not be allowed to continue in MATH 401 and will automatically receive an unsatisfactory grade. In the event that a student is not allowed to complete MATH 401, written notification will be sent to student and to the school in which the student is working.
5. A written appeal of this decision may be made by the student to the chair of the Teacher Education Committee. The appeal document should include a statement giving reasons why termination of the clinical experience was inappropriate. Appeals will be processed in accordance with the appeals procedure for licensure candidates in the Department of Mathematical Sciences, and copies of the procedure are available in the Department Office.
6. Evaluation of the student's performance will be made through conferences between the student and the supervisor and will be conveyed when possible through written communication. A written final evaluation will be shown to the student and then placed in the student's department file.
7. Applicants with previous teaching experience at the 6-12 level, as verified by the employer, may not need to complete all the pre-student teaching clinical experiences, at the discretion of the Department.

MATH 413 Student Teaching
1. Admission to student teaching is governed by criteria in Appendix B and successful completion of MATH 401.
2. If admission to student teaching is denied after placement has occurred, written notification is sent to the school where the student teacher has been placed.
3. If a student engages in unprofessional conduct or is working unsatisfactorily with public school students, he/she will not be allowed to continue his/her student teaching experience. Such a student may petition the Department to re-enroll in student teaching in a subsequent semester.
4. Procedure for withdrawal from the student teaching experience:
   - In the event that a student is removed from the student teaching experience, written notification will be sent to the student and to the school in which the student is working.
   - A written appeal of the withdrawal may be made by the student to the chair of the Teacher Education Committee. The appeal document should include a statement giving reasons why the withdrawal was inappropriate. The appeal will be processed in accordance with the appeals procedure for licensure candidates in the Department of Mathematical Sciences. A copy of this procedure may be obtained in the Department office.
5. Evaluation of the student's performance will be made through conferences between the student, the cooperating teacher and the University Supervisor and will be conveyed to the Coordinator of Student Teaching through written communication. A written final evaluation will be shown to the student and placed in the student's NIU Career Services credentials file and in the Department file.
6. Applicants presenting required prior credit in student teaching and evidence of prior teaching experience, as verified by the employer, may not need to complete all required clinical hours, at the discretion of the Department.
All students seeking initial teacher licensure in mathematics for grades 6 - 12 must complete the following general education requirements. No courses for licensure should be taken as pass/fail. [See your advisor for the specific list of approved courses.]

1. Core Competency (9 hours)
   (a) Oral Communication (3 hours)
   (b) Written Communication (6 hours) [or equivalent of ENGL 105]

2. Humanities & the Arts (12 hours)
   (a) U.S. History (3 hours)
   (b) English course or literature course [taught in English] (3 hours)
   (c) Other approved course work (6 hours)

3. Science (9 hours)
   Course work in at least two science fields with a minimum of two courses in one science field. Course work must include at least one science lab course.

4. Social Science (6 hours)
   (a) U.S. Government (3 hours)
   (b) Other approved course work (3 hours) [usually PSYC 102]

5. Interdisciplinary Studies (3 hours)
   EPFE 201.

6. Social Issues Experience
   Documented completion of any First Aid/CPR course offered by American Red Cross http://www.redcross.org/ at a hospital/community center, etc., or experience with drug abuse education or an approved, documented social issue experience in schools. If you are interested in NIU coursework, the following courses also satisfy the requirement: KNPE 262 (First Aid and CPR), PHHE 201 (Social and Individual Patterns of Drug Use), PHHE 304 (Drug Use and Abuse) or PHHE 437 (Assessment, Treatment & Prevention of Drug & Alcohol Addiction)

APPENDIX E
DEPARTMENT OF MATHEMATICAL SCIENCES POLICY

Because of the Middle School Endorsement requirements issued by the Illinois State Board of Education, it is recommended, at this time, that both students-at-large and graduate students take either the undergraduate professional education courses or consult with the Coordinator of Teacher Certification in Mathematics for possible equivalent graduate level courses.