



# MATHEMATICS 7-12 CERTIFICATION

## MASTER OF ARTS IN TEACHING PROGRAM

The mission of the post-bacc secondary mathematics education program is to prepare professionals who understand that pedagogical choices grow from a deep understanding of the disciplinary knowledge of mathematics, in relation to a consideration of the unique needs of learners in 21st century classrooms and beyond. That consideration honors the diverse nature of students in the classroom, and grows from an understanding of the community being served. Starting with this pedagogical-content knowledge, candidates construct standards-based plans that are grounded in a study of best practice as defined by research, models of excellence in the field, and creative contemplation. This includes the Common Core mathematics Standards, as well as the Principles and Standards for School Mathematics developed by the National Council of Teachers of Mathematics. In addition, candidates develop an understanding of the relationships and opportunities for building connections between the Common Core Standards in mathematics and English Language Arts. These connections underscore the importance of developing numerical literacy for all learners. The construction of lesson and unit level plans forms the foundation of a practice pushed forward by reflection, thoughtful revision, and dialogue with other professionals. The emphasis on reflective practice recognizes that both educational policy and learner characteristics are fluid and dynamic. This positions candidates as scholars of their practice, and connoisseurs of the research that informs best practices in social studies teaching and learning and beyond. Candidates understand that this practice grows throughout their career.

### Course Requirements

#### Professional Education Courses Required for Certification

- EDUC 502.2 Intro. to the Education of English Language Learners (spring)  
EDUC 503 Student Development & Instructional Design (40 hr Stage 1&2 Field Exp)

- EDUC 507 Culture, Community & Diversity: Intro. to Critical Pedagogy (40 hour Stage 1&2 Field Experience/ fulfills M3)  
EDUC 530.2 Computer Technology in the Classroom  
EDUC 534 Including Students with Disabilities (spring)  
EDUC 540 Reflective Teaching (offered fall only; 40 hour Stage 3 Field Exp.)  
EDUC 562 Curriculum and Instruction in Mathematics (offered fall only; 110 hour Stage 3 Field Experience)  
EDUC 575-7 Student Teaching  
EDUC 578 Seminar in Secondary Student Teaching

#### Mathematics Courses Required for Certification

- MATH 170 Analytic Geometry & Calculus I (Equivalent Math 106/166 may be substituted)  
MATH 171 Analytic Geometry & Calculus II  
MATH 211 Analytic Geometry & Calculus III  
MATH 212 Discrete Mathematical Structures & Proof (writing intensive)  
MATH 220 Linear Algebra  
MATH 231 Mathematical Statistics I  
MATH 347 Modern Algebra  
MATH 348 Higher Geometry  
MATH 370 Mathematics Seminar

#### Choose ONE of the following courses:

- MATH 254 Differential Equations  
MATH 324 Advanced Calculus  
MATH 366 Introduction to Analysis  
MATH 365 Complex Analysis

#### Choose two co-requisite courses:

- CSCI 120 Computer Science I  
CSCI 121 Computer Science II

PHYS 111 Introductory Physics

PHYS 112 Introductory Physics

### Teacher Action Research

EDUC 500 The Teacher as Inquirer

EDUC 506 The Teacher as Researcher

EDUC 508 The Teacher as Evaluator

EDUC 700 Curriculum Development and Action Research

EDUC 701 Writing a Review of Educational Research

EDUC 702 Reflective Practice Seminar

EDUC 704-5 Literacy-Based Action Research Thesis

## The Field Experience Program

The purpose of the field experience is to provide students with appropriate classroom experiences at each level of their coursework. These experiences are meant to assist the student in determining whether teaching is an appropriate career choice.

Several courses in the professional education sequence require day-time field experiences. These are: EDUC 503, Student Development & Instructional Design, and EDUC 507, Culture, Community, & Diversity: Introduction to Critical Pedagogy, both of which require a 40 hour Stage 1&2 field experience; EDUC 540, Reflective Teaching in Secondary Schools, with a 40 hour Stage 3 field experience; and EDUC 562, Curriculum and Instruction in Secondary - Mathematics, with a 110 hour Stage 3 pre-student teaching field experience. The Education Department's Director of Field Experiences is responsible for securing all field placements which will be in local public or private schools. Candidates who are not able to complete these experiences will be required to take EDUC 586.2 Stage 1&2 Early Field Experience or EDUC 558.2 Stage 3 Pre-Student Teaching Field Experience prior to acceptance into student teaching.

Stage 4 Student Teaching is the culminating experience of the teacher preparation program. It takes place under the supervision of qualified program faculty and cooperating teachers. Student teachers will have two placements during the semester. All U.S. placements are in Pennsylvania schools near the College. In addition to the daily classroom experience, students are required to attend a weekly seminar with their College supervisors.

## Important Guidelines

- Students must have an overall GPA of 2.7 in order to take education courses numbered above 510.
- All education courses must be completed prior to beginning student teaching. No other courses should be taken during the student teaching semester.
- Students must have prior written approval by the program coordinator if they plan to complete any of these courses at another institution.

## The Requirement for Basic Skills Assessment

Students in all Pennsylvania Instructional I teacher certification programs must successfully complete basic skills assessments in reading, mathematics and writing. Currently there are two testing options. You may take either the Pearson PECT Pre-service Academic Performance Assessment (PAPA) or the ETS Praxis Core Academic Skills for Educators (CORE) exams. Please consult test provider websites for additional information regarding test content, testing locations and registration procedures. See: <http://www.pa.nesinc.com>, select 'tests', then 'PAPA' and/or <https://www.ets.org/praxis/about/core/>.

Students may qualify for exemption from the basic skills assessment exams based on their SAT or ACT scores. Please contact the Education Department regarding exemptions and other test related questions you may have.

Candidates are encouraged to take the PAPA or CORE exams prior to or during the sophomore year. If not exempt, all teacher certification candidates will be required to pass these tests prior to admission into the teacher certification program and participation in any Stage 3 Field Experiences.

A content knowledge Praxis Level II tests administered by ETS is also required. Content knowledge tests should be taken after most appropriate course work has been completed, but prior to student teaching. The Praxis Series Registration Bulletin found online at: <http://www.ets.org/praxis/about/bulletin/> will have the most up-to-date information. Test scores should be reported to Moravian College (RA2418) and the Pennsylvania Department of Education. Students who test in another state must list PDE as a score recipient to avoid processing delays of their teaching certificate. Test results for in state tests are automatically reported to the Pennsylvania Department of Education.

### Testing Requirements for Mathematics (7-12)

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#### \*Basic Skills Assessments

(Administered by Pearson or ETS)

**PAPA Modules:**  
Reading/Math/Writing  
**or CORE Modules:**  
Reading/Math/Writing  
**or testing EXEMPTION**  
based on SAT/ACT scores

\*REQUIRED PRIOR TO Acceptance into the Teacher Certification Program and Participation in STAGE 3 PST Field Experiences.

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#### Content Area Test

(One Required,  
Administered by ETS)

**Mathematics:**  
**\*\*Content Knowledge**  
**Test Code: 5161**

\*\*REQUIRED PRIOR TO CERTIFICATION IN PENNSYLVANIA.

## Clearance Requirements

There are three clearance checks required of ALL STUDENTS by the Pennsylvania Department of Education at every level of Field Experience. These are: FBI Federal Criminal History Record, Pennsylvania State Police Criminal Record Check, and Pennsylvania Child Abuse History Clearance. Students will be placed in field experiences only if all background checks are clear of record. Clearances must be updated annually and valid for the entire field placement. Unless clearances have been updated, students will be unable to register for Education courses with field experiences.

In addition, all students must have a TB test within three months of the start of any field placement.

