# University of Delaware

# School of Education Master of Education (M.Ed.) in Curriculum and Instruction

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Revised February 2006

# Part I. Program History

#### A. Purpose Statement

The M.Ed. in Curriculum and Instruction (C & I) has two independent but related goals. Primarily, it is a master's degree designed for teachers in the content areas of science, mathematics and social studies who are interested in furthering their pedagogical content knowledge through the study of curriculum inquiry and research on instructional practices. However, a second goal of this program is to provide a vehicle through which individuals with a strong content knowledge background in mathematics or science can obtain initial certification to teach these subjects at the middle school level in math and science and at the secondary school level in science. Additionally, candidates in this degree program may focus on curriculum development more broadly through a specialization in curriculum design.

#### B. Origin of the Program

The M.Ed. in C&I was one of the older master's programs developed in the previously existing College of Education. It was housed in the Department of Educational Development, and originally included specializations in literacy and educational technology as well as math, science, social studies, and curriculum design. In 2003, as part of a larger self-study of its master's programs, the School of Education revised the M.Ed. in C&I and separate masters programs were created in Reading (literacy) and Educational Technology. The current M.Ed. program in C&I is designed to reflect the standards based criteria of the professional organizations in each area of content knowledge reflected in the degree (e.g., National Council of Teachers of Mathematics, National Science Teachers Association). The M.Ed. in C&I was reviewed by the National Council for Accreditation of Teacher Education (NCATE) in 2002-2003 as part of a University-wide accreditation renewal process.

# C. Administration and Faculty

The Committee on Graduate Studies in Education (CGSE) is the School Of Education (SOE)-level committee that has general oversight of all the graduate programs, including the M.Ed. in C&I, in the School of Education. The committee is composed of five faculty members from the School of Education, a graduate student member selected by the Education Graduate Association, and the Assistant Director of the School of Education who serves as the Graduate Coordinator for the School of Education. A separate M.Ed. C&I committee administers the program in terms of admissions and making recommendations for curriculum and policy changes. In addition, committee members serve as advisors to degree candidates. Committee memberships includes SOE faculty possessing content area expertise in mathematics, science, social studies, and curriculum design.

The SOE is committed to the recruitment, support, and retention of full-time, tenure-line faculty members in Curriculum and Instruction. Faculty members who teach graduate courses and advise graduate students in the School of Education must have a doctorate or equivalent. Faculty members in C&I serve as advisors to candidates admitted to the program, teach courses, and evaluate candidates' exhibits and exam responses.

## D. Degrees Offered

The degree awarded to candidates who complete this program will be a Master of Education in Curriculum and Instruction.

# Part II. Admission

### A. University Policy on Admission

Admission to the graduate program is competitive. Those who meet stated minimum requirements are not guaranteed admission, nor are those who fail to meet all of those requirements necessarily precluded from admission if they offer other appropriate strengths.

#### **B.** University Admission Procedures

Applicants must submit all of the following items to the Office of Graduate Studies before admission can be considered:

Students are admitted to this degree program twice a year. Applications are due by November 1 for admission to the spring semester and April 1 for admission to the fall semester. Admission application forms are available from the Office of Graduate Studies, from the departments, and online (http://www.udel.edu/admissions/appinfo.html).

A \$60 nonrefundable application fee must be submitted with the application. Checks must be made payable to the University of Delaware. Applications received without the application fee will not be processed. Foreign students may utilize either a check or an International Postal Money Order to remit payment in U.S. currency.

An official transcript of all previous college records must be sent directly from the institution to the Office of Graduate Studies. Students who have attended the University of Delaware need not supply a transcript from Delaware. Transcripts issued in a language other than English must be accompanied by an official translation into English. If the rank of the student is not displayed on the transcript or diploma, an official letter of explanation and ranking from the institution where the degree was earned is required.

Applicants must submit at least three letters of recommendation. The program faculty recommend that one letter come from a teaching supervisor (e.g., principal or curriculum specialist), and two from individuals qualified to assess the candidate's academic potential, such as a faculty member.

International student applicants must demonstrate a satisfactory level of proficiency in the English language if English is not their first language. The Test of English as a Foreign Language (TOEFL) is offered by the Educational Testing Service in test centers throughout the world. TOEFL scores more than two years old cannot be validated or considered official. International students must be offered admission to the University and provide evidence of adequate financial resources before a student visa will be issued. The University has been authorized under federal law to enroll nonimmigrant alien students. International students are required to purchase the University-sponsored insurance plan or its equivalent.

It is a Delaware State Board of Health Regulation and a University of Delaware mandate that all entering graduate students born after January 1, 1957 give proof of proper immunization for measles, mumps, and rubella. If immunization requirements are not met, the student will not be eligible to register. Specific information may be obtained from the Student Health Service (302) 831-2226.

# C. Specific Requirements for Admission into the M.Ed. in C & I

Admission decisions are made by the M.Ed. C&I faculty members in the applicant's area of content specialization. Students will be admitted to the program based upon enrollment availability and their ability to meet the following minimum recommended entrance requirements:

- Baccalaureate degree from an accredited college or university.
- An officially reported GRE score. Students are normally expected to have a minimum score of 1050 on math and verbal sections combined.
- An undergraduate GPA of 3.0 or higher.
- For students whose native language is not English, an officially reported minimum TOEFL score of 600 (paper-based test) or 250 (computer-based test).
- A written statement of goals and objectives, including a statement that clearly identifies the applicant's area of specialization interest within the program as well as their certification status and intentions.
- The following additional admission requirements apply to applicants for the mathematics education concentration:

Applicants must have completed a minimum of 15 credit hours in undergraduate and/or graduate level mathematics approved by the mathematics education faculty, including a course in Calculus prior to admission. Approved courses will be equivalent to the University of Delaware mathematics courses at the 200-level or higher.

Students interested in the Middle School Mathematics Certification Option:

Applicants must have completed a minimum of 15 credit hours in undergraduate and/or graduate level mathematics approved by the mathematics education faculty, including a two-course sequence in Calculus prior to admission. Approved courses will be equivalent to the University of Delaware

mathematics courses at the 200-level or higher.

Applicants must have passed Praxis I according to the currently required State of Delaware certification requirements.

• The following additional admission requirement applies to applicants for the secondary mathematics education concentration:

Applicants must have completed a minimum of 30 credit hours in undergraduate and/or graduate level mathematics approved by the mathematics or mathematics education faculty, including a course in Calculus prior to admission. Approved courses will be equivalent to the University of Delaware mathematics courses at the 200-level or higher.

• The following additional admission requirement applies to applicants who are seeding certification within the secondary science education concentration:

Applicants must have completed the equivalent of an undergraduate major or a graduate degree in biology, chemistry, physics, geology, engineering or other science related field.

Applicants who are seeking initial certification to teach secondary science must submit scores for the Praxis II Content Area Test that is directly applicable to the subject area in which they intend to teach (e.g., Biology, Chemistry, Physics). Applicants to this concentration who are already certified to teach would not be required to submit Praxis II scores as part of their admission application.

#### D. Admission Status

Students admitted into the M.Ed. in C&I may be admitted into one of two categories:

- 1) Regular. Regular status is offered to students who meet all of the established entrance requirements and who have the ability, interest, and commitment necessary for successful study at the graduate level in a degree program.
- 2) Provisional. Provisional status is offered to students who are seeking admission to the degree program but lack one or more of the specified prerequisites. All provisional requirements must be met within the deadline given before regular status can be granted. Students admitted with provisional status are generally not eligible for assistantships or fellowships.

# Part III. Degree Requirements for the M.Ed. in Curriculum and Instruction

# A. Degree Requirements

This M.Ed. program, including the specializations and all concentrations, requires 33 credit hours of course work. Specific requirements follow:

# 1. Curriculum Design Specialization:

Required Core coursework	6 credits
EDUC 640, Introduction to Curriculum	
EDUC 600, Teacher as Researcher <b>OR</b>	
EDUC 607, Educational Research Procedures <b>OR</b>	
EDUC 660, Applied Educational Measurement	
Elective Coursework	27 credits
This program has a Thesis and Non-Thesis Option. Students take 21 credits of	
electives plus 6 credits of Master's Thesis (EDUC 869) for the Thesis Option.	
Students take 27 credits of elective coursework for the Non-Thesis Option.	
Elective coursework may include EDUC 897, Curriculum Theory or EDUC 860	
Curriculum Inquiry or other graduate credit from the student's areas of interest	
such as content-area education courses, especially as they relate to curriculum	
design, multicultural or diversity education courses, or courses in educational	
policy.	
TOTAL CREDITS FOR DEGREE	33 credits

# 2. Social Studies Education Concentration:

Required Core coursework	9 credits
EDUC 640, Introduction to Curriculum	
EDUC 600, Teacher as Researcher <b>OR</b>	
EDUC 607, Educational Research Procedures <b>OR</b>	
EDUC 660, Applied Educational Measurement	
EDUC 645, Topics: Social Education Issues	
Elective Coursework	24 credits
This program has a Thesis and Non-Thesis Option. Students take 18 credits of	
electives plus 6 credits of Master's Thesis (EDUC 869) for the Thesis Option.	
Students take 24 credits of elective coursework for the Non-Thesis Option.	
Elective coursework may include EDUC 612, Ethnic Studies & Multicultural	
Education or graduate coursework from the departments of history,	
anthropology, economics, geography, linguistics, philosophy, psychology,	
sociology, or urban affairs.	
TOTAL CREDITS FOR DEGREE	33 credits

# 3. Mathematics Education Concentration

Required Core coursework	18 credits
EDUC 640, Introduction to Curriculum	
EDUC 600, Teacher as Researcher <b>OR</b>	
EDUC 607, Educational Research Procedures <b>OR</b>	
EDUC 660, Applied Educational Measurement	
EDUC 730, Implementing Middle School Mathematics Using Technology <b>OR</b>	
MATH 585, Technology in Secondary Mathematics	
EDUC 634, Topics in Mathematics Curricula: Grades K-8	
EDUC 635, Teaching Mathematics in the Elementary School <b>OR</b>	
MATH 584, Advanced Secondary Mathematics Methods	
EDUC 636, Teaching Mathematics in the Middle School	
Elective Coursework	15 credits
Select courses in mathematics or mathematics education with the approval of	15 creats
the faculty advisor. Students may choose to complete a Master's Thesis for 6	
credits and take an additional 9 credits of coursework to satisfy this requirement.	
TOTAL CREDITS FOR DEGREE	33 credits
Non-Registered Degree Requirements for this Concentration:	
A Comprehensive Exam is required after completion of 27 credits of master's	
coursework.	
The Praxis II Middle School Mathematics or Secondary Mathematics Exam is	
required after completion of 27 credits of master's coursework.	
Students in this concentration who are seeking initial certification as a	
middle school mathematics teacher must have completed 30 undergraduate	
and/or graduate mathematics credit hours before and/or during the	
and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty	
and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware	
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and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware and/or at another institution). Students who complete this requirement, the requirements for the M.Ed. in Curriculum and Instruction with a Concentration in Mathematics Education, and the following additional requirements are eligible for Institutional Recommendation for Middle School Mathematics teacher certification.  1. Take the Praxis II Middle School Mathematics Exam (20069) or Mathematics: Content Knowledge (10061) Exam	
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and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware and/or at another institution). Students who complete this requirement, the requirements for the M.Ed. in Curriculum and Instruction with a Concentration in Mathematics Education, and the following additional requirements are eligible for Institutional Recommendation for Middle School Mathematics teacher certification.  1. Take the Praxis II Middle School Mathematics Exam (20069) or Mathematics: Content Knowledge (10061) Exam  2. Complete the following four mathematics courses (which can be considered elective courses in the M.Ed. program).  MATH 582 Discrete Studies in Mathematics MATH 583 Probability and Statistics for Educators Geometry and Measurement for Middle School Teachers	
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and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware and/or at another institution). Students who complete this requirement, the requirements for the M.Ed. in Curriculum and Instruction with a Concentration in Mathematics Education, and the following additional requirements are eligible for Institutional Recommendation for Middle School Mathematics teacher certification.  1. Take the Praxis II Middle School Mathematics Exam (20069) or Mathematics: Content Knowledge (10061) Exam  2. Complete the following four mathematics courses (which can be considered elective courses in the M.Ed. program).  MATH 582 Discrete Studies in Mathematics MATH 583 Probability and Statistics for Educators Geometry and Measurement for Middle School Teachers Patterns and Algebra for Middle School Teachers  3. In addition to completing the 33 credits in the M.Ed. program, complete the	18 credits
and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware and/or at another institution). Students who complete this requirement, the requirements for the M.Ed. in Curriculum and Instruction with a Concentration in Mathematics Education, and the following additional requirements are eligible for Institutional Recommendation for Middle School Mathematics teacher certification.  1. Take the Praxis II Middle School Mathematics Exam (20069) or Mathematics: Content Knowledge (10061) Exam  2. Complete the following four mathematics courses (which can be considered elective courses in the M.Ed. program).  MATH 582 Discrete Studies in Mathematics MATH 583 Probability and Statistics for Educators Geometry and Measurement for Middle School Teachers Patterns and Algebra for Middle School Teachers	<mark>above degree</mark>
and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware and/or at another institution). Students who complete this requirement, the requirements for the M.Ed. in Curriculum and Instruction with a Concentration in Mathematics Education, and the following additional requirements are eligible for Institutional Recommendation for Middle School Mathematics teacher certification.  1. Take the Praxis II Middle School Mathematics Exam (20069) or Mathematics: Content Knowledge (10061) Exam  2. Complete the following four mathematics courses (which can be considered elective courses in the M.Ed. program).  MATH 582 Discrete Studies in Mathematics MATH 583 Probability and Statistics for Educators  Geometry and Measurement for Middle School Teachers Patterns and Algebra for Middle School Teachers  3. In addition to completing the 33 credits in the M.Ed. program, complete the following five education courses (18 credits).	
and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware and/or at another institution). Students who complete this requirement, the requirements for the M.Ed. in Curriculum and Instruction with a Concentration in Mathematics Education, and the following additional requirements are eligible for Institutional Recommendation for Middle School Mathematics teacher certification.  1. Take the Praxis II Middle School Mathematics Exam (20069) or Mathematics: Content Knowledge (10061) Exam  2. Complete the following four mathematics courses (which can be considered elective courses in the M.Ed. program).  MATH 582 Discrete Studies in Mathematics MATH 583 Probability and Statistics for Educators MATH 584 Geometry and Measurement for Middle School Teachers MATH 590 Patterns and Algebra for Middle School Teachers  3. In addition to completing the 33 credits in the M.Ed. program, complete the following five education courses (18 credits).  EDUC 613 Adolescent Development and Educational Psychology	<mark>above degree</mark>
and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware and/or at another institution). Students who complete this requirement, the requirements for the M.Ed. in Curriculum and Instruction with a Concentration in Mathematics Education, and the following additional requirements are eligible for Institutional Recommendation for Middle School Mathematics teacher certification.  1. Take the Praxis II Middle School Mathematics Exam (20069) or Mathematics: Content Knowledge (10061) Exam  2. Complete the following four mathematics courses (which can be considered elective courses in the M.Ed. program).  MATH 582 Discrete Studies in Mathematics MATH 583 Probability and Statistics for Educators MATH 586 Geometry and Measurement for Middle School Teachers MATH 590 Patterns and Algebra for Middle School Teachers  3. In addition to completing the 33 credits in the M.Ed. program, complete the following five education courses (18 credits).  EDUC 613 Adolescent Development and Educational Psychology Diversity in Secondary Education	<mark>above degree</mark>
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and/or graduate mathematics credit hours before and/or during the program. These credits must be approved by the math education faculty (these mathematics courses may be taken at the University of Delaware and/or at another institution). Students who complete this requirement, the requirements for the M.Ed. in Curriculum and Instruction with a Concentration in Mathematics Education, and the following additional requirements are eligible for Institutional Recommendation for Middle School Mathematics teacher certification.  1. Take the Praxis II Middle School Mathematics Exam (20069) or Mathematics: Content Knowledge (10061) Exam  2. Complete the following four mathematics courses (which can be considered elective courses in the M.Ed. program).  MATH 582 Discrete Studies in Mathematics MATH 583 Probability and Statistics for Educators MATH 586 Geometry and Measurement for Middle School Teachers MATH 590 Patterns and Algebra for Middle School Teachers  3. In addition to completing the 33 credits in the M.Ed. program, complete the following five education courses (18 credits).  EDUC 613 Adolescent Development and Educational Psychology Diversity in Secondary Education	<mark>above degree</mark>

# 4. Secondary Mathematics Education Concentration

Required Core coursework	27 credits
EDUC 640, Introduction to Curriculum	
EDUC 600, Teacher as Researcher <b>OR</b>	
EDUC 607, Educational Research Procedures <b>OR</b>	
EDUC 660, Applied Educational Measurement	
EDUC 636, Teaching Mathematics in the Middle School	
EDUC 518, Mathematical Models and Applications	
MATH 581, On the Nature of Proof	
MATH 583, Probability and Statistics for Education	
MATH 584, Advanced Secondary Mathematics Methods	
MATH 585, Technology in Secondary Mathematics	
MATH 586, Mathematical Problem Solving	
-	
Elective Coursework	6 credits
Select courses in mathematics or mathematics education with the approval of	
the faculty advisor. Coursework prior to entering the program or while	
completing the program must cover the following topics: Geometry and	
Measurement; and Discrete Mathematics. Students may choose to complete a	
Master's Thesis for 6 credits to satisfy this requirement.	
	<u> </u>
TOTAL CREDITS FOR DEGREE	33 credits
Non-Registered Degree Requirements for this Concentration:	
Non-Registered Degree Requirements for this Concentration:  A Comprehensive Exam is required after completion of 27 credits of master's	
A Comprehensive Exam is required after completion of 27 credits of master's	
A Comprehensive Exam is required after completion of 27 credits of master's coursework.  The Praxis II Secondary Mathematics Exam is required after completion of 27	
A Comprehensive Exam is required after completion of 27 credits of master's coursework.	

# 5. Science Education Concentration

Required Core coursework	12 credits
EDUC 640, Introduction to Curriculum	
EDUC 600, Teacher as Researcher <b>OR</b>	
EDUC 607, Educational Research Procedures <b>OR</b>	
EDUC 660, Applied Educational Measurement	
EDUC 641, Science Curriculum and Instruction	
EDUC 642, Topics in Science Education	
Elective Coursework	21 credits
This program has a Thesis and Non-Thesis Option. Students take 15 credits of electives plus 6 credits of Master's Thesis (EDUC 869) for the Thesis Option.	
Students take 21 credits of elective coursework for the Non-Thesis Option.	
TOTAL CREDITS FOR DEGREE	33 credits
Non-Registered Degree Requirements for this Concentration:	
A Comprehensive Exam is required after completion of 27 credits of master's coursework.	
Students in this concentration who are seeking initial certification as a secondary science teacher must complete the additional coursework below:	24 credits above degree requirements
EDUC 613, Educational Psychology: Social Aspects	
EDUC 614, Educational Psychology: Cognitive Aspects	
EDUC 619, Diversity in the Classroom	
EDUC 622, Literacy in the Content Areas	
EDUC 658, Discipline and Classroom Management	
EDUC 696, Methods of Teaching Secondary Science	
EDUC 808, Internship in Education (6 credits) OR	
EDUC 400, Student Teaching (9 credits)	

# Part IV. General Information

# A. Financial Assistance

Financial assistance for full-time students in the M.Ed. program is obtained from a variety of external sources and will therefore vary in form and availability. Assistance will be awarded on a competitive basis to applicants best fitting the needs of the granting agencies and sponsoring faculty. Students receiving graduate assistantships will be expected to work up to 20 hours per week on faculty projects and students are expected to maintain full-time status.

# B. Application for Advanced Degree

To initiate the process for degree conferral, candidates must submit an "Application for Advanced Degree" to the Office of Graduate Studies. The application deadlines are February 15 for Spring candidates, May 15 for Summer candidates, and September 15 for Winter candidates. The application must be signed by the candidate's adviser and by the Director or the Assistant Director of the School of Education. There is an application fee of \$50 for master's degree candidates and a \$95 fee for doctoral degree candidates. Payment is required when the application is submitted.

#### C. Graduate Grade Point Average

Students must have a minimum overall cumulative grade point average of 3.0 to be eligible for the degree. In addition, the grades in courses applied toward the degree program must equal at least 3.0. All graduate-numbered courses taken with graduate student classification at the University of Delaware are applied to the cumulative index. Credit hours and courses for which the grade is below "C-" do not count toward the degree even though the grade is applied to the overall index. Candidates should see that their instructors have submitted all final grades.

# D. Time Limits for the Completion of Degree Requirement

Time limits for the completion of degree requirements begin with the date of matriculation and are specifically expressed in the student's letter of admission. The University policy for students entering a master's degree program is ten consecutive semesters to complete the degree requirements. Students who change their degree plan and have transferred from one degree program to another degree program are given ten consecutive semesters from the beginning of the first year in the latest program.

# E. Extension of the Time Limit

An extension of time limit may be granted for circumstances beyond the student's control. Requests for time extensions must be made in writing and approved by the student's adviser and the Director or Assistant Director of the School of Education. The Director/Assistant Director will forward the request to the Office of Graduate Studies. The Office of Graduate Studies will determine the student's eligibility for a time extension and will notify the student in writing of its decision to grant an extension of time.

# F. Transfer of Credit Earned as a Continuing Education Student at the University of Delaware

Students who complete graduate credits with the classification of CEND (Continuing Education Nondegree) at the University of Delaware may use a maximum of 9 graduate credits earned with this classification toward their graduate degree. The CEND credits, grades, and quality points become a part of the student's academic record and grade point average. CEND credit can be transferred provided that: (a) the course was at the graduate level, (b) the course was taken within the time limit appropriate for the degree, (c) the course was approved by the student's adviser and the Director/Assistant Director of the School of Education, and (d) the course was in accord with the requirements for the degree.

## G. Transfer of Credit from Another Institution

Graduate credit earned at another institution will be evaluated at the written request of the student. Such a request should be submitted first to his or her advisor using a Request for Transfer of Graduate Credit form. A maximum of 9 credits required for the degree will be accepted provided that such credits: (a) were earned with a grade of no less than B-, (b) are approved by the student's adviser and the Director/Assistant Director of the School of Education, (c) are in accord with the requirements of the degree, (d) are not older than five years, and (e) were completed at an accredited college or university. The credits, but not the grades or quality points, are transferable to University of Delaware graduate records. Graduate courses counted toward a degree received elsewhere may not be used. Credits earned at another institution while the student was classified as a continuing education student at that institution are not eligible to be transferred to one's graduate degree at the University of Delaware. Credits from institutions outside of the United States are generally not transferable to the University of Delaware.

# H. Transfer of Credit from the Undergraduate Division at the University of Delaware

Students who wish to transfer credits from their undergraduate record to their graduate record may transfer a limited number by arranging with the department to have these courses approved by their instructors before the courses are taken. These courses must be at the graduate-level, and the student must perform at the graduate level. They must be in excess of the total required for the baccalaureate degree, must have grades of no less than B-, and must not be older than five years. The credits, grades, and quality points will transfer.