

MATHEMATICS EDUCATION

Program Information

The School of Teaching & Learning offers the Master of Arts in Education (M.A.E.) degree in Mathematics Education. More information about the requirements for this degree can be found in the Graduate Degrees (<https://gradcatalog.ufl.edu/graduate/degrees/>) section of this catalog.

The **Master of Arts in Education (M.A.E.) in Mathematics Education program** is designed for individuals interested in gaining expertise in mathematics education and strengthening their background in mathematics. The program offers flexible options to ensure that it can support a range of academic and professional goals. Students can choose from one of the following programs of study:

1. A **30-credit** degree option with studies focused on important issues in mathematics education.
2. A combined **30-credit** degree option with our Educator Preparation Institute (EPI), which offers aspiring teachers an 18-credit EPI licensure program plus the additional 12 credits needed for the MAE. Students interested in this option must also apply to the EPI program by April 15th and plan to start during the summer term.
3. A **36-credit** degree option that includes 18 graduate credits in mathematics. Although this is a higher-credit option, it is a popular choice for anyone interested in teaching mathematics in a community college.

All three options require 18 credits of course offerings within the School of Teaching and Learning, including a thesis or project-in-lieu of thesis.

What kind of students typically are enrolled in the M.A.E. in mathematics education program?

- Practicing or aspiring teachers who want to strengthen their abilities to teach mathematics in a variety of instructional settings.
- Experienced teachers who have the eventual goal of earning a doctorate in mathematics education enabling them to work in a teacher education/mathematics education program at an institution of higher education.
- Individuals who plan to teach at the community college level. Requirements to teach at the community college level vary depending on the individual campus. Typically, individuals must have a minimum of 18 credits in graduate mathematics. Candidates are encouraged to consult the community college where they desire employment for the exact employment requirements.

Admission Requirements:

B.A. or B.S. in mathematics, mathematics education, or related field; 2.7 overall GPA and 3.0 upper division GPA; and completing all other general admission requirements

Graduation Requirements:

3.0 GPA (overall and in major); completion of course requirements; thesis or project-in-lieu of thesis

What might a program of study look like in the M.A.E. in mathematics education?

The program of study form is customized to address the unique needs of each student and is developed in consultation with a mathematics education advisor. While there are different requirements for each of the

above options, all options require a thesis or project-in-lieu of thesis to be completed in the graduating semester.

Please visit this website for additional information about the M.A.E. degree program in Mathematics Education: <https://education.ufl.edu/math-education/masters/>.

Degrees Offered

Degrees Offered with a Major in Mathematics Education

- Master of Arts in Education
- Master of Education

Requirements for these degrees are given in the Graduate Degrees (<http://gradcatalog.ufl.edu/graduate/degrees/>) section of this catalog.

Courses

School of Teaching and Learning Departmental Courses

Code	Title	Credits
EDE 5940	Integrated Teaching and Learning	3
EDE 6266	Teaching and Learning in Elementary Classrooms	3
EDE 6325	Teacher Inquiry/Action Research	3
EDE 6905	Individual Work	1-5
EDE 6948	Internship in Elementary Schools	3-12
EDE 7047	Issues in Teacher Education	3
EDF 5552	Role of School in Democratic Society	3
EDF 6520	History of Education	3
EDF 6544	Philosophical Foundations of Education	3
EDF 6616	Education and American Culture	3
EDF 6636	Theorizing Race and Racism in Educational Research	3
EDF 6639	Anti-Black Racism in Education	3
EDF 6812	Comparative Education	3
EDF 6866	Education in Latin America	3
EDF 6939	Critical Race Theory in Educational Research	3
EDF 7934	Seminar in Educational Foundations	3
EDG 5666	Knowing and Learning in Secondary Schools	3
EDG 6017	Writing for Academic Purposes	3
EDG 6047	Teacher Leadership for Educational Change	3
EDG 6207	Transforming the Curriculum	3
EDG 6226	Foundations of Research in Curriculum & Instruction	3
EDG 6228	Qualitative Research for Practitioner Scholars	3
EDG 6229	Qualitative Research in Curriculum and Instruction	3
EDG 6305	Multiple Perspectives on Teaching and Learning	3
EDG 6348	Instructional Coaching for Enhanced Student Learning	3
EDG 6356	Teaching, Learning and Assessment	3
EDG 6378	Learning Science with Technology	3
EDG 6415	Culturally Responsive Classroom Management	3
EDG 6445	Meeting the Educational Needs of Students Living in Poverty	3
EDG 6648	Research Design in Curriculum and Instruction	3

2 Mathematics Education

EDG 6664	Survey of Research on STEM Education	3	EME 7938	Seminar in Educational Media and Instructional Design	3
EDG 6668	Teaching Adults	3	ESE 5426	Data-Driven Decision Making for Secondary Teachers	3
EDG 6805C	K-12 Computer Programming Foundations I	3	ESE 6345	Effective Teaching and Classroom Management	3
EDG 6806C	K-12 Computer Programming Foundations II	3	ESE 6905	Individual Work	1-4
EDG 6807	Issues and Trends in K-12 Computer Science Education	3	ESE 6939	Special Topics	3
EDG 6905	Individual Work	1-6	ESE 6945	Student Teaching in Secondary School	2-9
EDG 6910	Supervised Research	1-5	ETE 6141	K-12 Computer Sc Pedagogy I	3
EDG 6930	Schooling & the Marginalization of Students	3	ETE 6142	K-12 Computer Sc Pedagogy II	3
EDG 6931	Special Topics	1-4	FLE 6165	Bilingual-Bicultural Education	3
EDG 6940	Supervised Teaching	1-5	FLE 6167	Cross-Cultural Communication for Teachers	3
EDG 6953	TLSI Online Portfolio Preparation	1-3	LAE 5341	Language Arts: Teaching Nonfiction Writing	3
EDG 6971	Research for Master's Thesis	1-15	LAE 6298	Literacy & Language Instruction	3
EDG 6973	Project in Lieu of Thesis	1-9	LAE 6339	Curriculum, Methods, and Assessment in Secondary English Language Arts	3
EDG 7224	Critical Pedagogy	3	LAE 6348	Teaching Multiliteracies	3
EDG 7252	Perspectives in Curriculum, Teaching, and Teacher Education	3	LAE 6407	Early Childhood Children's Literature	3
EDG 7303	Teacher Learning and Socialization in High Poverty Schools	3	LAE 6446	Multicultural Literature for Children and Adolescents	3
EDG 7359	Professional Development and Teacher Learning	3	LAE 6865	Teaching Media Literacy with the Internet	3
EDG 7365	Practitioner Research: Data Collection and Analysis	3	LAE 6869	Teaching Digital Storytelling	3
EDG 7941	Field Experience in Curriculum and Instruction	1-4	LAE 6939	Literacy, Family, and Culture	3
EDG 7979	Advanced Research	1-12	LAE 6945	Practicum and Assessment for Teachers of Secondary School English	3
EDG 7980	Research for Doctoral Dissertation	1-15	LAE 6946	Children's Literature in Educational Settings	3
EDG 7982	Practitioner Research: Theory & Practice	3	LAE 7934	Seminar in Composition Theory and Practice	3
EME 5054	Foundations of Educational Technology	3	LAE 7936	Seminar in English Language Arts	3
EME 5207	Designing Technology-Rich Curricula	3	LAE 7938	Lit, Cult and Politics	3
EME 5404	Instructional Computing II	3	MAE 5332	Secondary School Mathematics Methods and Assessment	3
EME 5405	Internet in K-12 Instruction	3	MAE 5347	Teaching K-8 Mathematics for Understanding	3
EME 6059	Blended Learning Environments	3	MAE 5396	Using Formative Assessment to Improve Mathematical Learning	3
EME 6065	Human-Computer Interaction and the Learner	3	MAE 5945	Secondary School Mathematics Practicum	3-6
EME 6066	Issues and Trends in Educational Technology Research	3	MAE 6313	Problem Solving in School Mathematics	3
EME 6067	Emerging Learning Technologies	3	MAE 6349	Classroom Contexts that Support Self-Regulated Learning and Mathematical Understanding	3
EME 6074	Mobile Technologies in Education	3	MAE 6916	Inquiry in Mathematics Teaching	3
EME 6156	Games and Simulations for Teaching and Learning	3	MAE 7899	Mathematics Education Seminar	3
EME 6208	Designing Integrated Media Environments I	3	MUE 7938	Music Education Seminar	3
EME 6209	Designing Integrated Media Environments II	3	RED 5337	Reading in the Secondary School	3
EME 6235	Managing Educational Projects	3	RED 5355	Reading Instruction in the Elementary School	3
EME 6236	Distance Education Leadership and Management	3	RED 5399	Practices in Beginning Reading Instruction	3
EME 6458	Distance Teaching and Learning	3	RED 6346	Seminar in Reading	3-6
EME 6480	Quantitative Methods in Educational Technology Research	3	RED 6448	Diagnosing and Remediating Reading Difficulties	3
EME 6606	Advanced Instructional Design	3	RED 6520	Classroom Literacy Assessment and Instruction	3
EME 6609	Instructional Design	3	RED 6546C	Diagnosis of Reading Difficulties	3
EME 6637	Managing and Analyzing Multimodal Educational Data	3	RED 6548C	Remediation of Reading Difficulties	3
EME 6638	Theory, Design, and Development of Stealth Assessment for Learning	3	RED 6647	Trends in Reading	3
EME 6645	Neurotechnologies in Education	3	RED 6843	Reading Practicum	1
EME 6651	Learning Analytics Concepts and Techniques	3	RED 6941	Practicum in Diagnosis and Remediation of Reading Difficulties	3
EME 6935	Seminar: Distance Education Issues and Applications	1	RED 7019	Foundations of Literacy	3
EME 6945	Practicum in Educational Media and Instructional Design	3-8	SCE 5140	Science Curriculum Development	3
EME 7345	Implementing Educational Technology Innovations (ETIs)	3	SCE 5316	Inquiry-Based Science Teaching	3
			SCE 5695	Diversity and Equity in Science Teaching	3
			SCE 5765	Data-Driven Science Instruction	3

SCE 6117	Science Education in the Elementary School	3
SCE 6337	Secondary Science Methods and Assessment	3
SCE 6930	Seminar in Science Education	3
SCE 6947	Practicum in Secondary Science Teaching and Assessment	3
SMT 6066	Data Wrangling and Visualization in Educational Research	3
SMT 6106	Informal STEM Practice	3
SSE 5945C	Practicum in Secondary Social Studies Teaching and Assessment	3
SSE 6117	Social Studies Education--Elementary School	3
SSE 6133	Secondary School Social Studies Methods and Assessment	3
SSE 6478	Global Studies Methods for Social Studies	3
TSL 5142	ESOL Curriculum, Methods, and Assessment	3
TSL 5335	ESOL and Reading for Secondary Teachers	3
TSL 6145	Curriculum and Materials Development for ESOL K-12	3
TSL 6245	Language Principles for ESOL Teachers	3
TSL 6373	Methods of Teaching ESOL K-12	3
TSL 6440	Testing and Evaluation of ESOL	3
TSL 6670	Multilingualism from a Global Perspective	3
TSL 6700	Issues in ESOL for School Counselors and Psychologists	3

General Courses

Code	Title	Credits
EDG 6047	Teacher Leadership for Educational Change	3
EDG 6207	Transforming the Curriculum	3
EDG 6226	Foundations of Research in Curriculum & Instruction	3
EDG 6356	Teaching, Learning and Assessment	3
EDG 6905	Individual Work	1-6
EDG 6910	Supervised Research	1-5
EDG 6931	Special Topics	1-4
EDG 6940	Supervised Teaching	1-5
EDG 6971	Research for Master's Thesis	1-15
EDG 6973	Project in Lieu of Thesis	1-9
EDG 7224	Critical Pedagogy	3
EDG 7252	Perspectives in Curriculum, Teaching, and Teacher Education	3
EDG 7303	Teacher Learning and Socialization in High Poverty Schools	3
EDG 7941	Field Experience in Curriculum and Instruction	1-4
EDG 7979	Advanced Research	1-12
EDG 7980	Research for Doctoral Dissertation	1-15
EME 6156	Games and Simulations for Teaching and Learning	3
EME 6235	Managing Educational Projects	3
EME 6236	Distance Education Leadership and Management	3

Curriculum, Teaching, and Teacher Education Courses

Code	Title	Credits
EDE 5940	Integrated Teaching and Learning	3
EDE 6266	Teaching and Learning in Elementary Classrooms	3
EDE 6325	Teacher Inquiry/Action Research	3
EDE 6905	Individual Work	1-5

EDE 6948	Internship in Elementary Schools	3-12
EDE 7047	Issues in Teacher Education	3
EDG 6356	Teaching, Learning and Assessment	3
EDG 7224	Critical Pedagogy	3
EDG 7252	Perspectives in Curriculum, Teaching, and Teacher Education	3
EDG 7303	Teacher Learning and Socialization in High Poverty Schools	3
EDG 7982	Practitioner Research: Theory & Practice	3

Educational Technology Courses

Code	Title	Credits
EME 5054	Foundations of Educational Technology	3
EME 5207	Designing Technology-Rich Curricula	3
EME 5404	Instructional Computing II	3
EME 5405	Internet in K-12 Instruction	3
EME 6066	Issues and Trends in Educational Technology Research	3
EME 6208	Designing Integrated Media Environments I	3
EME 6209	Designing Integrated Media Environments II	3
EME 6458	Distance Teaching and Learning	3
EME 6606	Advanced Instructional Design	3
EME 6609	Instructional Design	3
EME 6935	Seminar: Distance Education Issues and Applications	1
EME 6945	Practicum in Educational Media and Instructional Design	3-8
EME 7938	Seminar in Educational Media and Instructional Design	3

ESOL/Bilingual Education Courses

Code	Title	Credits
FLE 6165	Bilingual-Bicultural Education	3
FLE 6167	Cross-Cultural Communication for Teachers	3
TSL 5142	ESOL Curriculum, Methods, and Assessment	3
TSL 6145	Curriculum and Materials Development for ESOL K-12	3
TSL 6245	Language Principles for ESOL Teachers	3
TSL 6373	Methods of Teaching ESOL K-12	3
TSL 6440	Testing and Evaluation of ESOL	3
TSL 6700	Issues in ESOL for School Counselors and Psychologists	3

Language and Literacy Education Courses

Code	Title	Credits
LAE 6298	Literacy & Language Instruction	3
LAE 6339	Curriculum, Methods, and Assessment in Secondary English Language Arts	3
LAE 6348	Teaching Multiliteracies	3
LAE 6407	Early Childhood Children's Literature	3
LAE 6446	Multicultural Literature for Children and Adolescents	3
LAE 6865	Teaching Media Literacy with the Internet	3
LAE 6869	Teaching Digital Storytelling	3
LAE 6939	Literacy, Family, and Culture	3
LAE 6945	Practicum and Assessment for Teachers of Secondary School English	3
LAE 6946	Children's Literature in Educational Settings	3
LAE 7934	Seminar in Composition Theory and Practice	3
LAE 7936	Seminar in English Language Arts	3

Mathematics Education Courses

Code	Title	Credits
MAE 5332	Secondary School Mathematics Methods and Assessment	3
MAE 5396	Using Formative Assessment to Improve Mathematical Learning	3
MAE 5347	Teaching K-8 Mathematics for Understanding	3
MAE 5945	Secondary School Mathematics Practicum	3-6
MAE 6313	Problem Solving in School Mathematics	3
MAE 7899	Mathematics Education Seminar	3

Reading Education Courses

Code	Title	Credits
RED 5337	Reading in the Secondary School	3
RED 5355	Reading Instruction in the Elementary School	3
RED 5399	Practices in Beginning Reading Instruction	3
RED 6346	Seminar in Reading	3-6
RED 6520	Classroom Literacy Assessment and Instruction	3
RED 6546C	Diagnosis of Reading Difficulties	3
RED 6548C	Remediation of Reading Difficulties	3
RED 6647	Trends in Reading	3
RED 6941	Practicum in Diagnosis and Remediation of Reading Difficulties	3
RED 7019	Foundations of Literacy	3

Science Education Courses

Code	Title	Credits
SCE 5140	Science Curriculum Development	3
SCE 5316	Inquiry-Based Science Teaching	3
SCE 5695	Diversity and Equity in Science Teaching	3
SCE 5765	Data-Driven Science Instruction	3
SCE 6117	Science Education in the Elementary School	3
SCE 6337	Secondary Science Methods and Assessment	3
SCE 6947	Practicum in Secondary Science Teaching and Assessment	3

Secondary Education Courses

Code	Title	Credits
ESE 6345	Effective Teaching and Classroom Management	3
ESE 6905	Individual Work	1-4
ESE 6939	Special Topics	3
ESE 6945	Student Teaching in Secondary School	3-9

Social Foundations of Education Courses

Code	Title	Credits
EDF 5552	Role of School in Democratic Society	3
EDF 6520	History of Education	3
EDF 6544	Philosophical Foundations of Education	3
EDF 6616	Education and American Culture	3
EDF 6812	Comparative Education	3
EDF 7934	Seminar in Educational Foundations	3

Social Studies Education Courses

Code	Title	Credits
SSE 5945C	Practicum in Secondary Social Studies Teaching and Assessment	3
SSE 6117	Social Studies Education--Elementary School	3

SSE 6133	Secondary School Social Studies Methods and Assessment	3
SSE 6478	Global Studies Methods for Social Studies	3

Teacher Leadership for School Improvement Courses

Code	Title	Credits
EDE 6325	Teacher Inquiry/Action Research	3
EDG 6047	Teacher Leadership for Educational Change	3
EDG 6207	Transforming the Curriculum	3
EDG 6415	Culturally Responsive Classroom Management	3
EDG 6953	TLSI Online Portfolio Preparation	1-3

Student Learning Outcomes

Mathematics Education (MAE)

SLO 1 Knowledge

The student will identify, describe, and explain current research on teaching and learning of mathematics

SLO 2 Skills

The student will investigate a significant problem or original question within the field of study.

SLO 3 Professional Behavior

The students will critically evaluate their own effectiveness to plan future lessons and improve the teaching of all students over time.

Mathematics Education (MEd)

SLO 1 Knowledge

The student will identify, describe, and explain research on teaching and learning of mathematics.

SLO 2 Skills

The student will create, select and implement: (1) specific learning goals, (2) appropriate teaching methods and instructional materials, and (3) evaluation strategies aligned with goals, using knowledge of subject matter, learners and classroom management.

SLO 3 Professional Behavior

The student will collaborate with other professionals, such as peers and mentor teachers, to reflect upon their mathematics teaching. Students will communicate high expectations for all PK-12 students.