

The Graduate Curriculum Committee (GCC)
Meeting Minutes
Wednesday, February 20, 2013

Regular Members Present:

Jim Decker (Chair)
Bob Thompson (Vice Chair)
Carol Brown
Amy Carr-Richardson
Hamid Fonooni
Will Forsythe
Rich Franklin
Linda Mayne

Regular Members Excused:

Ravi Paul

Ex-Officio Members Present:

Meaghan Johnson and Linner Griffin

Ex-Officio Members Excused:

None

Academic Program Planning and Development:

Kimberly Nicholson

Guests:

College of Education: Ron Preston
College of Health and Human Performance: Anthony Kulas and Tim Kelley
Thomas Harriot College of Arts and Sciences: Christine Avenarius, Jungmin Choi and Heather Ries

Actions of Committee:

I. Call to Order

1. Report on Graduate Council (GC) Actions

Dr. Thompson shared the 01-16-13 GCC minutes were approved. Discussion took place regarding the 5000-level standard operating procedure (SOP), and the English package containing the first set of revised 5000-level courses, which will be included in the 02-06-13 GCC minutes. Dr. Decker shared the Graduate Council Executive Committee (GCEC) has a copy of the proposed 5000-level SOP.

2. The 01-16-13 GCC minutes were approved electronically and forwarded to the Graduate Council for agenda placement

II. Thomas Harriot College of Arts and Sciences, Department of Mathematics

Proposal of New Course: MATH 6300

Approved as amended

- (1.) Revise date
- (2.) Revise requested action
- (3.) Revise justification
- (4.) Revise course description
- (5.) Revise course credit
- (6.) Revise changes in degree hours of your programs
- (7.) Revise course objectives
- (8.) Revise grading scale
- (9.) Revise marked catalog copy

III. Thomas Harriot College of Arts and Sciences, Department of Anthropology

Proposal of New Course: ANTH 6050

Approved as amended

- (1.) Revise method of delivery
- (2.) Revise justification

IV. College of Education, Department of Mathematics, Science, and Instructional Technology Education

Deletion of Existing Certificate(s): Certificate in Virtual Reality in Education and Training

Approved as amended

- (1.) Revise memorandum of request to include reference to graduate faculty
- (2.) Revise request to discontinue a certificate or minor form to correct the CIP code and check all applicable boxes

V. College of Allied Health Sciences, Department of Occupational Therapy – postponed

Postponed to the 03-06-13 meeting as there were no representatives from the unit in attendance to present the package.

Revision of Existing Courses: OCCT 6001, 6002

Postponed to the 03-06-13 GCC meeting

Revision of Existing Degree: Master of Science in Occupational Therapy

Postponed to the 03-06-13 GCC meeting

Deletion of Existing Accelerated Program: Professional Master's Degree Path in Occupational Therapy

Postponed to the 03-06-13 GCC meeting

VI. College of Health and Human Performance, Department of Health Education and Promotion

Revision of Existing Degree: MA in Health Education

Approved

VII. College of Health and Human Performance, Department of Health Education and Promotion

Proposal of New Courses: EHST 6520, 6530

Postponed to the 03-06-13 GCC meeting

- (1.) The unit was asked to attempt to address concerns raised by the College of Technology and Computer Science, Department of Technology Systems regarding overlap and duplication. The GCC stated an attempt at reconciliation should be made prior to package review.
- (2.) It was noted that Dr. TJ Mohammad rescinded his request for speaking privileges to represent the occupational safety faculty at the meeting following an e-mail communication from Dr. Kelley that the phrase “and safety” would be removed from both the proposed course titles and course descriptions. At the meeting Dr. Kelley shared that following the e-mail communication the environmental health faculty raised the issue that they did not support this change and would prefer to keep the terminology as it is representative of their field of study.
- (3.) Postponement of this package will give the units time to either reconcile or give them both an opportunity to present their perspective to the committee at the 03-06-13 GCC meeting. The GCC confirmed to Drs. Kelley and Kulas that the progress of the EHST package through the approval process will not be halted and that package will either be approved, approved as amended or tabled following committee review.

Revision of Existing Degree: MS in Environmental Health

Postponed to the 03-06-13 GCC meeting

Deletion of Existing Courses: EHST 5510, 5520, 5530, 5540

Postponed to the 03-06-13 GCC meeting

VIII. Old Business

None

IX. New Business

1. Suggested Policy for Dissertation and Thesis Credit

Feedback from the GCC:

- (1.) Suggested policy dated 08-14-97 was discussed.
- (2.) A search of the official graduate catalog revealed that all but one thesis course (BMSC 7000) appears to be set up as (1-9 s.h.) and all but two dissertation courses (CRM 9000 and CSDI 9000) appear to be set up at (3-12 s.h.), excluding dissertation summer research courses.
- (3.) It was noted that it appears the Graduate School approved an update to all dissertation and thesis courses at some point in the past to respond to this draft policy.
- (4.) Dr. Decker shared that ECON 9000 was approved by the GCC as a (3-9 s.h.) course as part of a program development package. This course is not yet effective and can most likely be fixed prior to inclusion in the catalog. The first review by the GCC for CRM

- 9000 was for (3-12 s.h.), however at some time in the review and revision process the s.h. was changed to (3 s.h.) and approved. This appears to have been an oversight.
- (5.) Dr. Griffin stated that (3-9 s.h.) is appropriate and applicable.
 - (6.) There was some discussion regarding the funding model. Dr. Thompson confirmed that this suggested policy predates the current funding model and that this policy was an attempt to get all students participating in dissertation or thesis research with faculty support enrolled.
 - (7.) Dr. Decker will report the GCC feedback to Dean Gemperline.

2. Providing Graduate Credit for Experience ([Gallup/Lumina Foundation Poll](#))

Feedback from the GCC:

- (1.) The Gallup/Lumina Foundation Poll was reviewed and discussed.
- (2.) Dr. Decker shared that higher education is being rethought to include consideration of experience toward credentials.
- (3.) Dr. Forsythe was not in favor of granting experience toward credentialing unless there was a standardized test to be used as a measurement.
- (4.) Dr. Thompson added that granting credentials based on experience would not be accepted by the accrediting body for his discipline.
- (5.) Dr. Mayne shared some issues that are encountered in the nursing field. Currently medics and veterans have extensive trauma experience that exceeds many traditional nursing students, however they are lacking the theoretical and biological foundation received in the classroom. Although they have a tremendous amount of technical experience, they would be unable to test out of the courses.
- (6.) A question was raised regarding the ability to test out of graduate courses. Dr. Thompson confirmed that students can currently test out at the graduate level.
- (7.) Dr. Decker added that there is a credit by examination process in place at the graduate level.
- (8.) Dr. Brown stated that the Department of Public Instruction (DPI) is moving away from counting experience for licensure. Where portfolios were accepted in the past, this is not going to continue to be the case.
- (9.) Dr. Decker will share the GCC feedback.

Marked Catalog Copy:

II. Thomas Harriot College of Arts and Sciences

Department of Mathematics

<http://www.ecu.edu/cs-acad/grcat/coursesmath.cfm>

MATH: Mathematics

5000. Introduction to Sampling Design (3) (F)
P: MATH 3308 or 3229 or consent of instructor. Fundamental principles of survey sampling. Data sources and types, questionnaire design, various sampling schemes, sampling and nonsampling errors, and statistical analysis.
5002. Logic for Mathematics and Computer Science (3) (S) Same as CSCI 5002
P: CSCI 3510 or MATE 3223 or 2775 or MATH 2427 or 2775 or 3256 or PHIL 3580 or equivalent. Methods of mathematical logic that have important applications in mathematics and computer science.
5021. Theory of Numbers I (3)
P: MATH 3263 or consent of instructor. Topics in elementary and algebraic number theory such as properties of integers, Diophantine equations, congruences, quadratic and other residues, and algebraic integers.
5031. Applied Statistical Analysis (3) (WI)
May not count toward mathematics hours required for the mathematics concentration of the MA. P: MATH 2228, 3584; or equivalent; or consent of instructor. Topics include analysis of variance and covariance, experimental design, multiple and partial regression and correlation, nonparametric statistics, and use of computer statistical package.
5064. Introduction to Modern Algebra II (3)
May not be taken for credit by those having completed MATH 6011. P: MATH 3263 or consent of instructor. Continuation of development of topics begun in MATH 3263. Normal subgroups, factor groups, homomorphism, rings, ideals, quotient rings, and fields.
5101. Advanced Calculus I (3)
P: MATH 2173 or consent of instructor. Axioms of real number system, completeness, sequences, infinite series, power series, continuity, uniform continuity, differentiation, Riemann integral, Fundamental Theorem of Calculus.
5102. Advanced Calculus II (3)
P: MATH 3256, 5101; or consent of instructor. Mathematical analysis of functions of several real variables. Includes limits, continuity, differentiation, and integration of multivariable functions.
5110. Elementary Complex Variables (3)
May not be taken for credit by those having completed MATH 6111. P: MATH 2173. Complex numbers, analytic functions, mapping by elementary functions, integrals, residues, and poles.
5121. Numerical Analysis in One Variable (3)
P: MATH 2173. Numerical analysis of problems with one independent variable. Solution of nonlinear equations in one unknown, interpolation and approximation of functions of one variable, numerical integration, and numerical differentiation and optimization.
5122. Numerical Analysis in Several Variables (3)
P: MATH 2173, 3256, 4331. Numerical analysis of problems with several independent variables. Numerical solution of ordinary differential equations, systems of linear equations,

numerical linear algebra and matrix algebra, systems of nonlinear equations, and systems of ordinary differential equations.

5131. Deterministic Methods in Operations Research (3)
P: MATH 2173; 3307 or 5801. Mathematical models; linear programming; simplex method, with applications to optimization; duality theorem; project planning and control problems; and elementary game theory.
5132. Probabilistic Methods in Operations Research (3)
P: MATH 2173, 3256; 3307 or 5801. Introduces stochastic processes. Queuing theory with applications to inventory theory and forecasting, Poisson and Markov processes, reliability simulation, decision analysis, integer programming, and nonlinear programming.
5270. Pascal Using the Microcomputer (3)
May not be taken by students who have successfully completed CSCI 2610. May not count toward MATH or CSCI major or minor. P: MATH 1065 or equivalent. Pascal language and use in problem solving utilizing a microcomputer.
5311. Mathematical Physics (3) Same as PHYS 5311
P: MATH 4331; PHYS 2360; or consent of instructor. Mathematical methods important in physics. Emphasis on application. Functions of complex variables, ordinary and partial differential equations, integrals and integral transforms, and special functions.
5322. Foundations of Mathematics (3) (WI)
P: MATH 3233, 3263; or equivalent. Fundamental concepts and structural development of mathematics. Non-Euclidean geometries, logic, Boolean algebra, and set theory. Construction of complex number systems. Transfinite cardinal numbers and study of relations and functions. Topics developed as postulational systems.
5521. Readings and Lectures in Mathematics (3)
Individual work with student.
5551. The Historical Development of Mathematics (3)
P: MATH 3233; C: MATH 2172 or consent of instructor. History of mathematics from antiquity to present. Emphasis on study of significant problems which prompted development of new mathematics. Uses computer resources and library for research of topics and solutions.
5581. Theory of Equations (3)
P: MATH 2173 or consent of instructor. Topics include operations with complex numbers, De Moivre's Theorem, properties of polynomial functions, roots of general cubic and quartic equations, methods of determining roots of equations of higher degree, and methods of approximating roots.
5601. Non-Euclidean Geometry (3)
P: MATH 3233 or consent of instructor. Non-Euclidean geometries, finite geometries, and analysis of other geometries from point of view of properties which remain invariant under certain transformations.
5774. Programming for Research (3) Same as CSCI 5774
For graduate student who wishes to use computer science to meet required research skills of his or her dept. May not count toward MATH major or minor. P: General statistics course or consent of instructor. Emphasis on minimum-level programming skill and use of statistical packages.
5801. Probability Theory (3)
P: MATH 2173 or 3307. Axioms of probability, random variables and expectations, discrete and continuous distributions, moment generating functions, functions of random variables, Central Limit Theorem, and applications.
6000. Introduction to Graduate Mathematics (3)
May not be taken for credit after MATH 5101 or 6011. P: Consent of director of graduate studies or advisor. Introduces advanced mathematics for beginning graduate students. Covers

various proof methods and provides rigorous introduction to topics in logic, number theory, abstract algebra, and analysis.

6001. Matrix Algebra (3)

P: MATH 3256 or consent of instructor. Properties of vectors and matrices and their applications.

6011, 6012. Modern Algebra I, II (3,3)

P for 6011: MATH 3263 or equivalent; P for 6012: MATH 6011. Basic algebraic structures. Groups, rings, modules, integral domains, and fields.

6022. Theory of Numbers II (3)

P: MATH 5021. Advanced topics in algebraic and analytic number theory.

6100. Mathematics of Risk Analysis (3)

P: MATH 2172, 3307, 3308; or consent of instructor. Single-period mathematical risk theory is covered, including approaches to modeling and measuring (insurance) risks. Topics include (univariate) distribution theory: exponential dispersion models, elliptical distributions, (a,b,k) class, heavy-tailness; risk measurement: value-at-risk, expected shortfall, coherency; policy modifications: deductibles, (co)insurance, limits. Students are prepared to take the Society of Actuaries Exam P "Probability" and Exam C "Construction and Evaluation of Actuarial Models."

6111, 6112. Introduction to Complex Variables I, II (3,3)

P for 6111: MATH 5102; P for 6112: MATH 6111. I. Analytic functions, mapping of functions, differentiation and integration, power series, and residues. II. Integral functions, infinite products, Mittag-Leffler expansion, maximum modulus theorem, convex functions, the Schwarz Christoffel transformation, analytic continuation, Riemann surfaces, and selected topics in functions of a complex variable.

6121, 6122. Real Variables I, II (3,3)

P for 6121: MATH 5101 or consent of instructor; P for 6122: MATH 6121 or consent of instructor. I. Study of functions of one real variable and convergence of sequences and series of functions: functions of bounded variation, measures, measurable sets, measurable functions, convergence almost everywhere, absolutely continuous functions, Lebesgue integration, differentiation, and the Fundamental Theorem of the Calculus. II. Lebesgue spaces and associated inequalities, measures in R^n , measure spaces and the associated theory of integration and differentiation; the Radon-Nikodym Theorem with applications to probability and statistics.

6150. Graph Theory (3)

P: MATH 2300 or consent of instructor. Structure of graphs, trees, connectivity, Eulerian and Hamiltonian graphs, planar graphs, graph colorings, matchings, independence, and domination.

6251, 6252. Advanced Placement Mathematics for Secondary Teachers I, II (3,3)

May count toward certificate renewal or certification in teaching gifted and talented students. May not count toward MA in mathematics. Intensive study of topics covered in Calculus AB and Calculus BC of advanced placement mathematics.

6271. Teaching Collegiate Mathematics (2)

P: Consent of instructor. Curricula and methods of teaching mathematics to adults in colleges and technical schools.

[6300. Financial and Actuarial Mathematics \(3\)](#)

[P: Math 2172, 3307; or consent of instructor. A comprehensive introduction of the mathematical interest theory. Topics include time value of money, annuities, loan repayment, bond, and valuation of derivative securities. Prepares the student for the Society of Actuaries Exam FM "Financial Mathematics", and MFE "Models for Financial Economics".](#)

6401, 6402. Introduction to Partial Differential Equations I, II (3,3)

- P for 6401: MATH 4331 or consent of instructor; P for 6402: MATH 6401 or consent of instructor. I. Linear and nonlinear partial differential equations of the first order with emphasis on formal aspects of these equations. Use of partial differential equations in analysis, geometry, and physical sciences is considered where appropriate. II. Continuation of MATH 6401 to include nonlinear partial differential equations of the second order and higher orders. Certain theoretical aspects of partial differential equations and a limited amount of Fourier Series, Fourier transforms, Laplace transforms, and boundary value problems are included.
- 6411, 6412. Ordinary Differential Equations I, II (3,3)
P for 6411: MATH 4331 or consent of instructor; P for 6412: MATH 6411 or consent of instructor. I. Existence, uniqueness, and technique of solutions to first and second order differential equations are considered. Bases for linear equations, stability, and series solutions about an ordinary point are considered. II. Autonomous systems, series solutions about a regular singular point, and Sturm-Liouville Systems are examined.
6500. Special Topics (3)
May be repeated for credit with change of topic. P: Consent of instructor. Selected topics of current interest.
6561. Properties of Infinite Series (3)
P: Consent of instructor. Infinite series beyond advanced calculus level.
6571. Elements of Probability (3)
May not count toward mathematics requirement for MATH MA. P: Consent of instructor. Axiomatic development of probability from set operations viewpoint. Use of probability measures.
6601. An Introduction to Differential Geometry (3)
P: MATH 2173, 3256. Basic ideas of differential geometry through study of curves and surfaces in three-dimensional space. Regular curves, regular surfaces, Gauss Map, and intrinsic and global differential geometry of surfaces.
- 6611, 6612. Introduction to Higher Geometry I, II (3,3)
P for 6611: MATH 3233 or consent of instructor; P for 6612: 6611. I. Homogeneous linear equations and linear dependence; projections and rigid motions, homogeneous Cartesian coordinates; linear dependence of points and lines; point geometry and line geometry; harmonic division and cross ratio; one and two-dimensional projective transformations. II. Continuation of study of projective coordinates in the plane; introduces various types of geometries; study of point curves and line curves with intensive study of point conics and line conics.
6651. Introduction to Topology (3)
P: MATH 5101. Metric spaces and basic point-set topology, open sets, closed sets, connectedness, compactness, and limit points.
6802. Statistical Inference (3)
P: MATH 3307 or 5801; consent of instructor. Estimation and hypothesis testing from both classical and Bayesian points of view. Use of t, F, and chi-squared distributions. Least squares procedures.
6803. The Linear Model (3)
P: MATH 3256, 5801. Topics include general linear model, regression models, design models, estimation of parameters, theory of least squares, and testing general linear hypotheses.
6804. Stochastic Processes (3)
P: MATH 3256, 5801. Most widely used models for random phenomena which vary with time. Topics include Markov, Poisson, birth and death, and stationary processes.
6805. Topics in Mathematical Statistics (3)
P: MATH 3256, 5801. Mathematical theory of certain topics in statistics outside range of MATH 6802. Topics vary by faculty and student interests.
7000. Thesis (1-6)

May be repeated. May count maximum of 6 s.h.

7001. Thesis: Summer Research (1)

May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

III. Thomas Harriot College of Arts and Sciences

Department of Anthropology

<http://www.ecu.edu/cs-acad/grcat/coursesANTH.cfm>

ANTH: ANTHROPOLOGY

5005. Contemporary Latin American Cultures (3) Introduces varied and diverse cultural groups in modern Latin America.

5010. Advanced Archaeological Methods and Theory (3) P: ANTH 3077 or equivalent or consent of instructor. Advanced survey of methodology relevant to analysis of archaeological cultures. Emphasis on research design, processes of culture change, and theoretical applications.

5015. Advanced Ethnographic Methods and Theory (3) 3 hours per week and field research projects. P: ANTH 3050 or equivalent or consent of instructor. Advanced training in ethnographic field methods and theory. Emphasis on individual and group research.

5030. Economic Anthropology (3) P: ANTH 2200 or consent of instructor. Production, distribution, and consumption of goods and services from an anthropological perspective. Emphasis on ways in which society and culture influence economic behaviors in underdeveloped regions.

5065. Maritime Anthropology (3) P: ANTH 2200 or consent of instructor. Systematic study of human adaptations to marine environments around the world from prehistoric to contemporary periods. Emphasis on cross-cultural examinations of nonindustrial societies.

5120. Archaeology of the Southeastern US (3) P: ANTH 2000 or consent of instructor. Intensive study of prehistoric cultures in Southeastern US. Emphasis on cultural dynamics and environmental relationships.

5125. Historical Archaeology (3) P: ANTH 2000 or consent of instructor. Development and practice of historical archaeology with theoretical and methodological contributions. Contemporary issues, including on-going projects in NC and Southeast.

5126. Public Archaeology (3) P: ANTH 2000 or consent of instructor. Pragmatic approach to archaeology beyond academic setting, including legislative mandates, contract archaeology, and public education.

5175. Advanced Archaeological Field Training (6) 40 hours of field research per week (summer). P: ANTH 3077 or 3175 or equivalent; or consent of instructor. Research methods applied to specific archaeological field problems.

5201. Special Topics in Archaeology (3) May be repeated for maximum of 6 s.h. P: Graduate standing or consent of instructor. Advanced level. Topics vary depending on student interest and current issues.

5202. Special Topics in Cultural Anthropology (3) May be repeated for maximum of 6 s.h. P: Graduate standing or consent of instructor. Advanced level. Topics vary depending on student interest and current issues.

5203. Special Topics in Physical Anthropology (3) May be repeated for maximum of 6 s.h. P: Graduate standing or consent of instructor. Advanced level. Topics vary depending on student interest and current issues.

6007. Medical Anthropology and Public Health: A Global Perspective (3) Same as MPH 6007 Explores the issues related to the fields of medical anthropology and public health leading toward developing global health interventions.

6020. Advanced Physical Anthropology Methods and Theory (3) P: Graduate standing or consent of instructor. Advanced training. Primate behavior, human genetics, anthroposcopy, anthropometry, dermatoglyphics, and osteometry.

[6050. Advanced Research Methods in Cultural Anthropology \(3\)](#)
[Advanced training in qualitative and quantitative methods of data collection and data analysis.](#)

6101. Core Course: Archaeology (3) P: Admission to anthropology graduate program or consent of instructor. Methodological concepts, cultural-historical applications, and theoretical orientations appropriate to contemporary research in archaeology.

6102. Core Course: Cultural Anthropology (3) P: Admission to anthropology graduate program or consent of instructor. Contemporary research in subfield of cultural anthropology.

6103. Core Course: Physical Anthropology (3) P: Admission to anthropology graduate program or consent of instructor. Contemporary research in subfield of physical anthropology.

6104. Anthropological Research Design (3) P: Admission to anthropology graduate program or consent of instructor. Analytical techniques most useful to anthropologists. Persuasive writing and organizational skills necessary to develop effective research program.

6106. Anthropological Perspectives of Security (3) P: Explores issues related to security and violence within a cultural process, and theoretical orientation related to cultural anthropology.

6501, 6502, 6503. Independent Reading and Research (1,2,3) May be repeated for maximum of 6 s.h. for thesis and internship option and 3 s.h. for non-thesis option. P: Consent of instructor. Intensive research in selected subdiscipline of anthropology.

6993, 6994. Internship (3,3) 140 hours of supervised field experience. P: Admission to ANTH graduate program.

7000. Thesis (3) May be repeated. May count maximum of 3 s.h.

7001. Thesis: Summer Research (1) May be repeated. No credit may count toward degree. Students conducting thesis research may only register for this course during the summer.

ANTH Banked Courses

6105. Anthropological Research Design and Analytical Laboratory (1)

IV. College of Education

Department of Mathematics, Science, and Instructional Technology Education

<http://www.ecu.edu/cs-acad/grcat/programMATE.cfm>

College of Education

Department of Mathematics, Science, and Instructional Technology Education

Susan Ganter, Chair, 352-A Flanagan Building

Ronald V. Preston, Director of Students, 352E Flanagan Building

MA in Science Education

The MA in science education is specifically designed for individuals who intend to teach in a community college or junior college setting or who simply wish to increase their expertise in a science content area. The program is open to those students who hold undergraduate degrees in science education or in a science content area.

Admission requirements: Satisfactory entrance examination score; minimum GPA of 2.7 on all undergraduate work or a minimum GPA of 3.0 for classes taken in the senior year or in the undergraduate major; favorable recommendation from the departmental admission committee.

Course requirements: A minimum of 36 s.h. is required, with at least 18 s.h. at the 6000 level or above. The specific program of courses must meet the requirements below and be approved by the student's advisor.

1. A minimum of 18 s.h. of concentration in either biological, physical, and/or earth science. Appropriate prefixes include BIOL, CHEM, GEOL, or PHYS.
2. Six s.h. of suitable electives taken under advisement.
3. Twelve s.h. of course work in science education, including specified core courses.

A thesis is required. A comprehensive examination in science education must be passed at the completion of the program.

MAEd in Instructional Technology

The MAEd in instructional technology is designed for students seeking employment in schools or other agencies as technology facilitators, coordinators, or program directors. The mission of the program is to prepare professionals in the field of instructional technology to plan, implement, and evaluate technology programs within a collaborative teaching environment. See the MAEd as listed under the College of Education general information for Master of Arts in Education (MAEd) for requirements for the MAEd in instructional technology. Students completing the MAEd in instructional technology are eligible for NC licensure 077 – Instructional Technology Specialist Computers.

MAEd in Mathematics

The MAEd in mathematics is designed for a teacher whose primary teaching assignment is in K-12 mathematics. The MAEd in mathematics consists of three concentrations: elementary, middle school, and high school. For each graduate student, the selection of a concentration will be made in consultation with a mathematics education advisor and will be based on a student's prior education and future career plans. Prior teaching experience is not necessary for admission to this program, but certification to teach is required for admission. Admission materials must include a letter of recommendation from someone aware of the applicant's performance or potential as a classroom teacher.

Degree Requirements

Minimum degree requirement is 36 s.h. of credit.

1. Common core - 15 s.h.
EDUC 6001; MATE 6200 or 6062*, 6206 or 6063*, 6211, 6400
* Students who wish to obtain the elementary mathematics education specialist certificate must take MATE 6062 and MATE 6063.
2. Concentration areas (Choose one.) - 21 s.h.

Elementary concentration (Grades K – 6): 21s.h.

Mathematics for K–6 teachers (12 s.h.)

Students will take the following 4 courses to develop expertise in grades K – 6 mathematics:

MATE 6058, 6059, 6060, 6061

Mathematics for K–12 teachers (9 s.h.)

Students will take 3 of the following courses to develop a broader view of K – 12 mathematics.

Other courses might be acceptable; please consult with your advisor MATE 6120, 6130, 6140, 6331, 6341, 6351, 6361, 6371, 6391

Middle School concentration (Grades 6–9): 21 s.h.

Mathematics for 6–9 teachers (12 s.h.)

Students will take 4 of the following courses to develop expertise in grades 6 – 9 mathematics; other courses might be acceptable; please consult with your advisor: MATE 6331, 6341, 6351, 6361, 6371, 6391

Mathematics for K–12 teachers (9 s.h.)

Students will take 3 of the following courses to develop a broader view of K – 12 mathematics.

Other courses might be acceptable; please consult with your advisor: MATE 6058, 6059, 6060, 6061, 6062, 6063, 6120, 6130, 6140, 6331, 6341, 6351, 6361, 6371, 6391

High School concentration (Grade 9–12): 21 s.h.

Mathematics for 9–12 teachers (12 s.h.)

Students will take 4 of the following courses. Other courses might be acceptable; please consult

with your advisor: MATH 5021, 5031, 5064, 5101, 5102, 5110, 5121, 5131, 5132, 5551, 5581, 5601, 5774, 5801, 6001, 6150, 6251, 6651

Mathematics for K-12 teachers (9 s.h.)

Students will take 3 of the following courses to develop a broader view of K – 12 mathematics. Other courses might be acceptable; please consult with your advisor: MATE 6110, 6120, 6130, 6140, 6150, 6331, 6341, 6351, 6361, 6371, 6391

3. Other requirements

Capstone experience:

The capstone experience (MATE 6400) will consist of an action research project and assignments modeled on the National Board Professional Teaching Standards portfolio. This will allow graduate students to show knowledge of and skills in the use of appropriate materials, pedagogy, and technology in mathematics education.

School-based experience:

Teaching experience at the K-12 level is not mandatory for admittance to the MAEd program. However, for the graduate student not teaching at the pre-college level, some of the course work will require a practicum with an approved school.

MAEd and MAT in Science Education

For requirements for the master of arts in education (MAEd) in science education, please see the MAEd as listed under the College of Education general information for Master of Arts in Education (MAEd). For requirements for the master of arts in teaching (MAT), please see the Department of Curriculum and Instruction. The MAEd program leads to advanced licensure; the MAT program leads to initial licensure.

MS in Instructional Technology

The MS in instructional technology is designed for students seeking employment in institutions of higher education, governmental agencies, businesses, and industry as developers of computer-based instructional materials and other types of instructional materials. The MS in instructional technology program provides a thorough foundation in the design of instruction and the development of instructional materials. The program also helps students develop advanced skills in media production and distance education.

The degree requires a minimum of 36 s.h. of credit as follows: EDTC 6010, 6020, 6025, 6030; 6040, 6135, 6991, 7030, 7040; one research course; and 6 s.h. of electives.

Certificate in Computer-Based Instruction

The certificate in computer-based instruction enables interested persons to learn basic instructional design, visual design and interface design principles and then, apply these principles using various software tools, including computer-based, online and virtual reality tools. Applicants to the certificate program must have a bachelor's degree and undergraduate GPA of at least 2.5.

The certificate program requires 18 s.h. of graduate-level course in computer-based instruction. Required courses include EDTC 6020, 6030, 6045, 6135, 6240 or 6242, 7030.

Certificate in Distance Learning and Administration

The certificate in distance learning and administration provides interested persons an opportunity to learn the basic principles of distance delivery of classes, to manage distance-delivered classes, and to evaluate their effectiveness. Applicants to the certificate program must meet the same admission requirements as East Carolina University's Graduate School.

The certificate program requires 18 s.h. of graduate-level course work in distance delivery of courses. Required courses include EDTC 6010, 6020, 6300, 7030, 7040, 7330.

Certificate in Elementary Mathematics Education

The elementary mathematics education certificate provides interested elementary education licensed teachers the opportunity to fulfill requirements to apply for the add-on license in K-6 mathematics. Applicants to the certificate program must currently have a teaching license and meet graduate school standards for admission.

Applicants seeking admission must be graduate students or education professionals working in their respective fields. Professionals can enroll as nondegree seeking students. Admission is based on completion of the ECU certificate application and approval by the program coordinator.

The certificate program requires 18 s.h. of graduate-level course work in a program of study designed by a consortium of UNC universities and approved by the NC State Board of Education. Required courses include MATE 6058, 6059, 6060, 6061, 6062, and 6063.

Certificate for Special Endorsement in Computer Education

The certificate for the special endorsement in computer education provides interested licensed teachers the opportunity to fulfill requirements to apply for the endorsement for the position of Technology Facilitator. Applicants to the certificate program must currently have a NC teaching license and meet graduate school standards for admission. Students with an advanced teaching license or MLS may add-on 077 licensure by completing EDTC 6992 Technology Specialists as Teacher Leaders in K-12 School Systems in addition to requirements for the 18079 Special Endorsement.

The certificate program requires 18 s.h. of graduate-level course work in educational technology. Required courses include EDTC 6010, 6020, 6035, 6070, 6139, and 6149.

~~Certificate in Virtual Reality in Education and Training~~

~~The certificate in virtual reality in education and training provides interested persons the opportunity to learn to use basic virtual reality software and to apply that knowledge in educational and training settings. Applicants to the certificate program must meet the same admission requirements as East Carolina University's Graduate School.~~

~~The certificate program requires 15 s.h. of graduate level course work in virtual reality, emphasizing educational and training applications. Required courses include EDTC 6240, 6242, 6244, 6848, 6991, 6992.~~

VI. College of Health and Human Performance

Department of Health Education and Promotion

<http://www.ecu.edu/cs-acad/grcat/programHLTH.cfm>

MA in Health Education

The master of arts degrees in health education and promotion provide advanced academic training for individuals employed or planning to seek employment as health educators in academic, clinical, community, and corporate settings. Undergraduate training in health education or the social and biological sciences is preferred. Applicants with undergraduate preparation deficient in these areas will be required to remove such deficiencies through supplemental course work as designated by the department's graduate faculty.

The basic curriculum plan for the MA in health education and promotion requires 36 s.h. All students take the core courses and then select from one of three options: thesis, internship, or course work. Students select electives in consultation with their advisor.

Core courses: HLTH 6001, 6011, 6110, 6600, 6700, 6800, ~~6901, 6905~~ - ~~24~~ 18 s.h.

Thesis option:

HLTH 7000 - 6 s.h.

Research skills: BIOS 7021 - 3 s.h.

Guided electives - ~~3~~ 9 s.h.

The student writes and orally defends a thesis. The thesis proposal must be approved by the student's advisor and a committee that comprises three health education and promotion faculty and an outside reviewer.

Internship option:

HLTH 6990, 6991 - 6 s.h.

Guided electives - ~~6~~ 12 s.h.

The student completes a 240-hour internship experience and writes an internship report. The student also completes a comprehensive examination covering both core and research skills courses. The graduate advisor selects the committee to examine the student.

Course work option:

Guided electives - ~~12~~ 18 s.h.

The student completes a comprehensive examination covering both core and research skills courses. The graduate advisor selects the committee to examine the student.