MINUTES OF THE MEETING
OF THE GRADUATE ACADEMIC POLICIES AND PROCEDURES COMMITTEE
January 30, 2017
APPROVED

The Graduate AP&P Committee met on Monday, January 30, 2017 at 3:00 pm in the William C. Strickland Conference Room (224) of I.G. Greer Hall.

Present: John Abbott, Mark Bradbury, Amy Cheney, Scott Collier, Patty Dale, Audrey Dentith, Beth Fiske, Marty Hall, Dru Henson, Marie Hoepfl, Holly Hirst, Victor Mansure, Gary McCullough, Kim McCullough, Bill Pollard, Max Poole, Ben Powell, Robert Sanders, Tracy Smith, Susan Staub, Sandra Vannoy

Excused: Debbie Race, Karen Fletcher

Absent: Jeff Bates, Sharron Grimes, Lisa Houser, Nickolas Jordan, Phyllis Kloda, Laura Padgett, Dontrell Parson, William Pelto, Terry Rawls

Guests: Michael Briley, Beth Carroll, Jay Fenwick, Brad Johnson, Georgia Rhoades, Kathleen Schroder, and Benjamin Sousa

1. CALL TO ORDER and INTRODUCTIONS

At 3:04 pm, Chairperson Hoepfl called the meeting to order and introduced new voting member Dr. Ben Powell, who replaces Dr. David Shows, and welcomed back member Dr. Bill Pollard.

2. APPROVAL OF MINUTES

MOTION 1: It was moved (Cheney) and seconded (Collier) to approve the minutes of the November 21, 2016 Graduate AP&P Meeting – PASSED

Chairperson Hoepfl discussed the Curriculum Subcommittee review process whereby proposal changes or clarifications requested by the Subcommittee are communicated to the submitting departments by Associate Dean Rob Sanders, acting as a liaison between the Subcommittee and the submitting departments. If proposal changes are minor in nature, the department(s) can provide those changes via email. If changes are significant, a department must submit a revised proposal. Dru Henson requested that the respective Deans’ offices be included in all email exchanges regarding proposal updates.

A problem can result if proposal changes are not accurately reflected in the meeting minutes, which complicates the work of staff members who are responsible for entering curriculum changes into Banner and the Graduate Bulletin. Chairperson Hoepfl presented a solution whereby proposals needing only minor editorial changes can be “PASSED- with corrections,” with corrections reviewed and approved by the GAPP Committee leadership. The revised proposals will be submitted as FIO items at the next GAPP Committee meeting. In cases where more significant proposal changes are needed, the proposal will be tabled and the department
will be asked to submit a revised proposal, marked as such with “REV” and the date the revision was submitted in the filename/subject line. These revised proposals will be reviewed again by the Curriculum Subcommittee before being considered under Old Business by the full GAPP Committee.

**MOTION 2:**

It was moved (Mansure) and seconded (Abbott) to authorize the GAPP Committee Chairperson, Assistant Chairperson, Dean, and Associate Dean to approve minor editorial changes (spelling, grammar, punctuation) to proposals without sending them back through the Curriculum Subcommittee for approval – **PASSED**

### 3. ANNOUNCEMENTS/FIOs:

**GU_COB_CIS/SCM_2016_1**

Change the prerequisite on the undergraduate course of the dual-listed courses **SCM 4870/MBA 5870. Analytical Models for Supply Chain Management (3).On Demand**. (NOTE: No change is needed for the prerequisite **MBA 5870**.)

Procedural notes: All dual-listed undergraduate course changes are approved through the Undergraduate AP&P Committee. Except as otherwise noted in these minutes, curriculum and policy motions are made from the respective Grad AP&P subcommittees and do not require a second.

### 4. NEW BUSINESS

A. Curriculum Proposals:

**College of Arts & Sciences:**

**Department of Computer Science**

Chairperson Hoepfl introduced guest Dr. Jay Fenwick from the Department of Computer Science to introduce proposals. He explained that proposal **G_CAS_CS_2016_08** was corrected to remove course **CS 5680: Embedded Systems (3)**, changed program of study hours (concentration hours and approved electives) and resubmitted.

**MOTION 3:**

Motion from Curriculum Subcommittee to approve the following proposals from the Department of Computer Science—**PASSED**

**GU_CAS_CS_2016_02**


Course Addition:

**CS 4521. Operating Systems (3).S./CS 5521. Operating Systems (3).S.** to read as follows:
CS 5521. Operating Systems (3).S. An in-depth study of the design and implementation of operating systems including process management, memory management, file systems, and input/output. Lecture two hours, laboratory three hours. Prerequisite: equivalent of CS 3482. [Dual-listed with CS 4521.]

G_CAS_CS_2016_04

Course Addition:
CS 5240. Mobile Device Programming (3). F. Odd-numbered years. Hands-on, experiential exposure developing applications for modern mobile devices. Topics include responsive web applications, web app to native app generation tools (e.g., PhoneGap), but primarily native app development for the Android or IOS platform. Native app development topics include basic application framework and process life cycle, user interface components, persistent data mechanisms, settings/preferences, services and notifications, and debugging. Advanced topics include publishing and updating apps to public distribution stores (e.g., AppleStore), and device-specific functions including gestures, accelerometer, GPS. Modern development tools are used including AndroidStudio or Xcode. Students work individually on prepared projects and a final cumulative project.

G_CAS_CS_2016_05

Course Addition:
CS 5245. Data Programming (3). F. Odd-numbered years. This course brings together students from different disciplines who are working (or want to work) in data science. For students without programming experience, a significant part of the course will be devoted to learning computer programming in a high-level programming language such as Python or Matlab. Students who already know how to program will also gain experience using machine learning and visualization packages for those languages. Other topics will be covered based on student interest such as web scraping, web APIs, recommendation engines, image processing, natural language processing, and graphical user interfaces. Novice programmers will be paired with experienced programmers to complete a class project.

G_CAS_CS_2016_06

Course Addition:
CS 5435. High Performance Database Systems (3). S. Odd-numbered years. This database course places emphasis on some of the concepts of modern, high performance database systems that are beyond an introductory level. These concepts include Advanced Data Modeling and Design, NoSQL Database Systems, Distributed Database Systems, Object Oriented Database Systems, Query Optimization, and Database Administration and Security. Students will read relevant research articles and write papers on different topics throughout the semester and complete a
final project as the product of learning. Prerequisite: CS 3430 or equivalent.

G_CAS_CS_2016_07 Change title and number of hours of CS 5630. Programming Language Translation (4). F. to CS 5631. Programming Language Translation (3). F. Even-numbered years. to read as follows:

CS 5631. Programming Language Translation (3). F. Even-numbered years. Techniques for the translation of programming languages into an appropriate low-level format, including lexical analysis, top-down and bottom-up parsing, memory management. Each student will participate in the writing of a compiler. Lecture two hours, laboratory three hours. Prerequisites: CS 3481 or equivalent, and CS 3490 or equivalent.

MOTION 4: It was moved (Pollard) and seconded (Hirst) to approve the following proposal from the Department of Computer Science–PASSED with corrections

G_CAS_CS_2016_08 Revise the program of study for the Master of Science degree in Computer Science (224A/11.0701) to add five new concentrations:

• Theoretics (224B)
• Systems (224C)
• Web & Mobile (224D)
• Data Science & Visual Computing (224E)
• Foundations (224F)

The revised program of study is at the end of the minutes.

Department of English

Chairperson Hoepfl introduced guests Drs. Georgia Rhoades and Beth Carroll from the Department of English to clarify corrections made to proposal G_CAS_ENG_2016_18 before a vote was taken. They pointed out that the course name changed from the originally submitted History of Rhetoric to Rhetorical Theory.

MOTION 5: Motion from Curriculum Subcommittee to approve proposals from the Department of English–PASSED with corrections

G_CAS_ENG_2016_18 Course Addition: RC 5400. Rhetorical Theory (3). F. Even-numbered years. This course introduces students to contemporary rhetorical theories and to major trends and figures in the history of the rhetorical tradition.
**G_CAS_ENG_2016_19**

**Course Addition:**

RC 5410. Digital and Visual Rhetorics (3). F; Alternate odd-numbered years. This course focuses on rhetorical practice as it is applied in digital environments.

**G_CAS_ENG_2016_20**

Revise the program of study for **Master of Arts in English** (Major Code: 232*/23.0101) to add a concentration in **Rhetoric & Composition (232D)**. The revised program of study is at the end of the minutes.

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**Department of Geography and Planning**

Chairperson Hoepfl introduced guest Dr. Kathleen Schroeder from the Department of Geography and Planning to introduce submitted proposals.

**MOTION 6:**

Motion from Curriculum Subcommittee to approve proposals from the Department of Geography and Planning – **PASSED**

**GU_CAS_G&P_2016_06**

Change the titles and course descriptions of **PLN 4450. Planning for Sustainable Communities (3).S./ PLN 5450. Planning for Sustainable Communities (3).S.** to **PLN 5450. Inside the Sustainable City (3).S.** to read as follows:

**PLN 5450. Inside the Sustainable City (3).S.** This course explores the systems, planning practices, and individuals and organizations across sectors that make towns and cities work. The course considers examples—successes, failures and the more common mixed outcomes—of planning for sustainable communities, characterized by healthy environments, social justice and equity, and strong diverse economies. Major themes include poverty and wealth, production and consumption, conservation and ecosystem services, technology harnessed for sustainability, and individual and collective action. Systems studied include water, energy, waste, transportation, agriculture, construction and design, finance, education, governance, and more. [Dual-listed with PLN 4450.]

**GU_CAS_G&P_2016_07**

Change the titles and course descriptions of **PLN 4470. Community Development (3).F./PLN 5470. Community Development (3).F.** to **PLN 5470. Community Development: A Sustainable Approach (3).F.** to read as follows:

**PLN 5470. Community Development: A Sustainable Approach (3).F.** Traditional models for community and economic development are giving way to 21st-century strategies using a sustainability framework that crosses temporal and spatial scales, and accounts for multiple dimensions of environment, economy and social equity. This course will explore and apply the language, tools and strategies employed by community development.
professionals, activists, and community members in urban and rural settings. Major topics include poverty and race, housing, economic opportunity, revitalization and gentrification, environmental justice, localism and globalism, and public participation in planning. [Dual-listed with PLN 4470]

**G_CAS_G&P_2016_14**

**Course Addition:**

**GHY 5025. Climate and Society (3). F.** This is an applied climate science course with the aim of providing a broad working knowledge of how climate intersects with society across a wide range of sectors, including agriculture, water resources, air quality, energy, and human health. In this project based course, students will apply data and techniques to understand how climate impacts social and environmental systems. This course is designed to help students develop problem-solving strategies, technical skills, and disciplinary knowledge in applied climate science.

**G_CAS_G&P_2016_15**

**Course Addition:**

**GHY 5015. Climate Change: Physical Science Basis (3). F.** Students will acquire the scientific background and develop the skills necessary to understand elements of climate change. The course will include a comprehensive assessment of climate change detection, attribution, and future climate projections at multiple spatiotemporal scales. Major topics will include observations of climate change in the atmosphere, ocean, and the cryosphere, and at the surface; information from paleoclimate archives; tropical cyclones and extreme weather; carbon and other biogeochemical cycles; clouds and aerosols; anthropogenic and natural radiative forcing; and sea level change.

**GU_CAS_G&P_2016_17**

Change the titles, course descriptions and semester offerings of **GHY 4620. Synoptic and Regional Climatology (3).On Demand./GHY 5620. Synoptic and Regional Climatology (3).F. Alternate years.**

**GHY 5620: Atmospheric Circulation (3) F. Alternate years.** This course focuses on atmospheric circulation at multiple spatial scales. Basic meteorological elements and concepts such as precipitation formation, jet streams, cyclogenesis, and extreme weather are discussed. The course also investigates the major teleconnection patterns of El Niño-Southern Oscillation, Arctic Oscillation, and Madden-Julian Oscillation and their associated regional and global impacts. [Dual listed with GHY 4620]
G_CAS_G&P_2016_18  Change the title and course description from GHY 5000. Research Themes and Methods (3).F. to read as follows:

GHY 5000. Research Themes in Geography (3).F. Study of the historical, ongoing, and emerging research themes in geography; the students will examine and practice the processes of organizing research, synthesizing the literature, and presenting research results in written and oral formats.

G_CAS_G&P_2016_19  Change the title, course description and semester offering of GHY 5800. Advanced Quantitative and Qualitative Methods in Geography (3).S. to GHY 5800. Advanced Quantitative Methods in Geography (3).F. to read as follows:

GHY 5800. Advanced Quantitative Methods in Geography (3).F. This course will examine quantitative procedures commonly used in the analysis of geographic and planning research problems, including research in both human and physical geography. The course focus will be on applications of quantitative procedures in research, but conceptual and theoretical aspects of all procedures will be discussed. Students will apply quantitative methods to a geographic topic and will report on the results in a professional quality paper. Prerequisite: GHY 3800 (Introduction to Quantitative Methods) or the equivalent.

G_CAS_G&P_2016_21  Revise the program of study for Master of Arts degree in Geography, Non-Thesis Option (237*/45.0701) to add a Concentration in Climate Change (237E). The revised program of study is at the end of the minutes.

MOTION 7: It was moved (Abbott) and seconded (Pollard) to approve the following proposals from the Department of Geography and Planning – PASSED

GU_CAS_G&P_2016_09  Course Addition (dual-listed):
PLN 5030. Planning for Climate Resilience (3). F. City planners have many tools to address the impacts of local growth, environmental protection, economics and social equity. What is currently lacking are plans that account for climate change and build the capacity for resilience and adaptation in the face of the negative outcomes. In this course, we will gain a better understanding of climate change and the ways in which the cultural and political discourse influences our capability to address the climate change challenge at the local, regional, national and international level. [Dual-listed with PLN 4030.]
Delete courses GHY 4240. Transportation Geography and Planning (3).F./ GHY 5240. Transportation Geography and Planning (3).F.

Change the title and course description of PLN 4240. Transportation Geography and Planning (3).F. to PLN 4240. Sustainable Transportation Planning (3).F.

Course Addition:
PLN 5240. Sustainable Transportation Planning (3).F to read as follows:

PLN 5240. Sustainable Transportation Planning (3).F. Not all transportation is cars. In order to create a sustainable transportation system planners understand how a transportation network that supports transit, biking, walking and cars in an interconnected and equitable manner can connect the built environment. Major topics include transportation policy and planning, environmental implications of transportation decisions, equity, technology, non-motorized and group travel modes, active living and active travel, public health and strong communities, and emerging models. [Dual-listed with PLN 4240.]

MOTION 8: It was moved (Hirst) and seconded (Mansure) to table the following proposal from the Department of Geography and Planning for return to Curriculum Subcommittee for review of a revised submission - PASSED

G_CAS_G&P_2016_22 Revise the Program of Study for the Graduate Program in Geography to add Certificate in Climate Change. [TABLED]

Department of Government and Justice Studies

MOTION 9: Motion from Curriculum Subcommittee to approve proposals from the Department of Government and Justice Studies – PASSED with one abstention (Bradbury)

GU_CAS_GJS_2016_13 Change the course descriptions and semester offerings of PS 4741. European Governments and Politics (3).S. Alternate years./ PS 5741. European Governments and Politics (3).S. Alternate years. to read as follows:

PS 5741. European Governments and Politics (3). On Demand. This course provides an overview of the political development of Europe since World War II. We will compare the enduring features of West European politics, such as parliamentary democracy and the welfare state, with the dramatic changes in Eastern Europe, from the Communist seizure of power to the
collapse of Communism. We will also explore the common challenges facing Europe today, such as regional integration and the rise of nationalism. [Dual-listed with PS 4741.]

GU_CAS_GJS_2016_21 Delete dual-listing of courses PA 4665. Public Management (3).S. / PA 5665. Public Management (3).S. to read as follows:

PA 5665. Public Management (3).S. A study of the organization and operation of government agencies and their role in policy making and implementation and an examination of the various concepts and theories pertaining to administrative behavior and to the performance of the basic tasks of management.

G_CAS_GJS_2016_24 Revise the Program of Study for the Master of Public Administration, Town, City, and County Management concentration (279C). The changes to the program of study is at the end of the minutes.

Department of Languages, Literatures and Cultures

Chairperson Hoepfl introduced guest Dr. Ben Sousa from the Department of Languages, Literatures and Cultures to address any questions about the submitted proposal.

MOTION 10: Motion from Curriculum Subcommittee to approve proposal from the Department of Department of Languages, Literatures and Cultures – PASSED

G_CAS_LLC_2016_08 Revise the Program of Study for the MA in Romance Languages (Major Code: 222*). The revised program of study is at the end of the minutes.

Department of Physics and Astronomy

Chairperson Hoepfl introduced guests Dr. Michael Briley and Mr. Brad Johnson from the Department of Department of Physics and Astronomy to address any questions about the submitted proposal.

MOTION 11: Motion from Curriculum Subcommittee to approve following proposals from the Department of Physics and Astronomy – PASSED


Physical Principles of Electron Microscopy (3).F. to read as follows:

**PHY 5860. Physical Principles of Electron Microscopy (4).F.** This course provides an overview of the fundamental principles, instrumentation, and methods of scanning electron microscopy, including all electron optical components (electron sources and guns, electron lenses, deflectors, and stigmators) and complete electron optical system physics. This overview is complemented by a thorough investigation of the electron beam-solid interaction physics and the resulting measurable signals. Image formation physics and a wide range of applications including qualitative and quantitative analysis techniques are fully developed in this course. Lecture three hours, laboratory three hours. [Dual-listed with PHY 4860.]

Course Addition:

**G_CAS_P&A_2016_14**

**PHY 5450. Programmable Logic Controllers (4).F.** This course provides an introduction to the Allen-Bradley CompactLogix Programmable Logic Controller (PLC), industrial hardware components, and a variety programming languages including Ladder Logic, Structured Text and Sequential Function Chart. Students will complete laboratory exercises that simulate real-world industrial process-control and automation. PLC networking, Human-Machine Interface (HMI) design and control/feedback circuitry will also be explored. Corequisite: PHY 4330/5330.

**MOTION 12:**

It was moved (Mansure) and seconded (Abbott) to approve the following proposals from the Department of Physics and Astronomy – PASSED

Course Addition:

**G_CAS_P&A_2016_13**

**PHY 5850. Advanced Materials Science Laboratory (3).S.** This course provides an understanding of the relationship between structure and properties for materials via advanced laboratories. This course broadly covers material systems including: metals, ceramics, polymers, composites, semiconductors, and nanomaterials. Laboratories include the characterization of material properties and structure with advanced microscopies, tensile testing of metals, and synthesis of polymers, metal nanoparticles, and carbon nanotubes, among others. Prerequisites: Open to students enrolled in the engineering physics graduate program or with permission of the instructor.

Revise the **Program of Study for the MS in Engineering Physics (113*/40.0801).** The revised program of study is at the end of the minutes.
Beaver College of Health Sciences

MOTION 13: Motion from Curriculum Subcommittee to approve proposals from the Beaver College of Health Sciences, with corrections– PASSED

GU_HS_2016_1 Create a new course prefix CHS for the Beaver College of Health Sciences to facilitate development of interprofessional coursework.

G_HS_2016_2 Course Additions:
CHS 5530-5549. Selected Topics (1-4). On Demand. Subject matter may vary from term to term depending on student interest and need. A student may enroll more than once in a selected topics course provided that the content does not duplicate that of the previous course.

G_HS_2016_3 Course Addition:
CHS 5950. Interprofessional Fieldwork. (0). On Demand. Provides the opportunity to integrate knowledge acquisition in the classroom with interprofessional fieldwork experiences. CORRECTION to add: Graded on an S/U basis.

Department of Nutrition

MOTION 14: Motion from Curriculum Subcommittee to approve proposals from the Department of Nutrition– PASSED

G_HS_NHM_2016_7 Change title and course description from NUT 5210. Nutrition for the Elderly (3).F. to read as follows:

NUT 5210. Nutrition for Older Adults (3).F.
An overview of the physiology, nutritional needs and nutritional status of older adults and the interaction of nutrition, disease and medication.

Reich College of Education

Department of Curriculum and Instruction

MOTION 15: Motion from Curriculum Subcommittee to approve the following proposals from the Department of Curriculum and Instruction – PASSED with corrections and with one abstention (Smith)

G_COE_CI_2016_3 Course Addition:
CI 5910: Applied Curriculum Specialist Skills (3). On Demand. This course offers site-based experiences of leadership and management for prospective curriculum specialists. Students will
be placed with competent administrative/supervisory personnel and
will observe, participate in, and evaluate curriculum issues existing
in public schools, public school systems, or other appropriate
agencies along with attending class to explore issues and
applications of curriculum specialist standards. Graded on an S/U
basis.

G_COE_CI_2016_4  Course Addition:
CI 5880: Educational Regulations and Policies (3). On
Demand. This course examines key issues that govern daily and
long-range decisions of educational leaders. The course focuses on
understanding North Carolina and federal codes, policies, and
significant precedent and will emphasize analysis of concepts such
as finance, personnel, risk management, curriculum, student
services, teacher rights, torts, student rights, and access.

G_COE_CI_2016_5  Revise the Program of Study for the Master of Arts: Curriculum
Specialist (Major Code: 416A/13.0301). The revised program of
study is at the end of the minutes.

GU_COE_CI_2016_8  Delete courses and remove all dual-listings for the following:
• BE 5510. Office Management (3).F.
• BE 5650. Information Processing Applications for Business
  and Education Professionals (3).F.
• BE 5660. Classroom Management and Assessment (2-3).F.
• BE 5810. Seminar (3).On Demand.
• BE 5850. Management of Occupational Education Youth
  Organizations (3).S.

Doctoral Program in Educational Leadership

MOTION 16:  Motion from Curriculum Subcommittee to approve proposals from
the Doctoral Program in the Department of Educational
Leadership—PASSED

G_COE_EDL-_2016_1  Change course exemptions for earned credits hours toward
the Educational Doctorate degree (Ed.D.) to read as follows:

Students who hold the Education Specialist Degree: Students who
hold an earned Ed.S. degree from Appalachian State will be
exempt from 24 - 30 credit hours of course work in the doctoral
program. A student who holds an Ed.S. from a regionally
accredited university may be exempt from up to 30 credit hours of
coursework in the doctoral program. The exemption is not
automatic. Specific Ed.S. coursework that might substitute for
doctoral coursework will be identified after evaluation of eligible
courses by the Program Director. All other degree requirements
remain in effect. For further information on exemptions, contact the program director.

Department of Family & Child Studies

MOTION 17: Motion from Curriculum Subcommittee to approve proposals from the Department of Family & Child Studies—PASSED with corrections

GU_COE_FCS_2016_1 Change the title and course descriptions of FCS 4611. The Hospitalized Child (3).S./ FCS 5611. The Hospitalized Child (3).S. to FCS 5611. Psycho-social Care of Families and Children in the Hospital (3) SS. to read as follows (hyphen removed in graduate course title):

FCS 5611. Psychosocial Care of Families and Children in the Hospital (3).SS. This course is designed to prepare students to work in non-medical professions with families and children in a hospital setting. The course includes an understanding of procedures, illnesses, and stress along with theory and practice to better serve families. This course is taught by a Certified Child Life Specialist and meets the requirements for the Child Life Council. [Dual-listed with FCS 4611.]

Department of Leadership & Educational Studies

MOTION 18: Motion from Curriculum Subcommittee to approve the following proposals from the Department of Leadership & Educational Studies—PASSED

G_COE_LES_ITC_2016_1 Change catalog for the Master of Arts in Educational Media (Major Code: 437*/13.0501). Catalog changes are at the end of the minutes.

G_COE_LES_ITC_2016_2 Change course description of course ITC 5910. Applications of Digital Technologies (3).On Demand. to read as follows:

ITC 5910. Applications of Digital Technologies (3).On Demand. This capstone course provides students the opportunity to incorporate their knowledge and experiences to date by working individually and in teams to develop, deploy and evaluate applications of digital technologies in educational organizations. In doing so, students will gain practical experience while taking the initiative for independent and authentic learning. Graded on an S/U basis. Prerequisite: Permission of instructor or program director.
G_COE_LES_ITC_2016_4  Revise the Program of Study for the Graduate Certificate in New Media Literacies and Global Perspectives (461A/13.0501). The revised program of study is at the end of the minutes.

MOTION 19: It was moved (Cheney) and seconded (Hirst) to approve the following proposals from the Department of Leadership & Educational Studies— PASSED

G_COE_LES_ITC_2016_3  Revise the Program of Study for the Graduate Certificate Instructional Technology Facilitation (464A/13.0501). The revised program of study is at the end of the minutes.

MOTION 20: It was moved (Cheney) and seconded (Mansure) to approve the following proposals from the Department of Leadership & Educational Studies— PASSED with one abstention (Hoepfl)

G_COE_LES_ITC_LIB_2016_1 Create a dual Master's degree structure between the MA in Educational Media, Instructional Technology Specialist/K-12 concentration (437F) and the MLS in Library Science (465A). Bulletin and program of study is at the end of the minutes.

Department of Reading Education and Special Education

MOTION 21: Motion from Curriculum Subcommittee to approve the following proposals from the Department of Reading Education and Special Education— PASSED

G_COE_RESE_2016_1 Revise the Program of Study of the Master of Arts in Reading Education (Code 449A). The revised program of study is at the end of the minutes.

G_COE_RESE_2016_6 Revise the Program of Study for Autism Spectrum Disorders minor (445/13.1013). The changes to the program of study are at the end of the minutes.


G_COE_RESE_2016_8 Change prerequisites for dual-listed courses SPE 4025 Inclusion (3).F;S. / SPE5205. Inclusion (3).F;S. to read as follows:

SPE 5205. Inclusion (3).F;S. This course examines inclusion as it relates to students with disabilities and how to integrate them into general education classrooms and K-12 schools. Current issues, collaborative relationships, and effective teaching and modification
approaches for all students will be discussed. [Dual-listed with SPE 4205.]

G_COE_RESE_2016_9  Change course description SPE 5230. Assessment and Instruction of Individuals with Intellectual Disabilities (3).F. to read as follows:

SPE 5230. Assessment and Instruction of Individuals with Intellectual Disabilities (3).F. This course identifies, reviews, and analyzes current research and literature related to the study of intellectual disabilities. The course also provides in-depth study in ecological assessment and individualized curriculum development for individuals with intellectual disabilities, and it also provides in-depth study and examination of the social construction of intellectual disabilities in society.

MOTION 22:  It was moved (Mansure) and seconded (Pollard) to table the following proposals from the Department of Reading Education and Special Education—PASSED

G_COE_RESE_2016_3  Course Addition:

SPE 6110. Literacy Instruction for Students with Challenging Behaviors/(3). F;S. [TABLED]

G_COE_RESE_2016_4  Revise the Program of Study for MA in Special Education (476*/13.1001). [TABLED]


MOTION 23:  It was moved (Mansure) and seconded (Pollard) to table the following proposals from the Department of Reading Education and Special Education—PASSED

G_COE_RESE_2016_2  Change the title and course requirements of the Reading and Literacy Program Concentration within the Doctoral Program in Educational Leadership from Reading and Literacy Concentration (Code: 702E) to Literacy and Exceptionalities (Code: 702x). [TABLED]

B. Policy Proposals:

5. OLD BUSINESS
6. **DISCUSSION ITEMS/ANNOUNCEMENTS**

A. Graduate School Updates

1. Max Poole mentioned that Monday, January 30, 2017 is Census day; the day that the enrollment “snapshot” is taken for spring semester.
2. Max Poole discussed the Presidential Executive Order pertaining to travel of individuals from seven particular countries and the implications for the University.
3. Rob Sanders mentioned that *Acalog* (online bulletin software) is being implemented and will most likely change the look of the online catalog.
4. Rob Sanders shared that the Director and Associate Director of Graduate Admissions, along with the IT Analyst, traveled to Connecticut for training in the new admissions software called *Slate*.
5. Max Poole mentioned that he, Jim Denniston, Lisa Curtin, and Rob Sanders will be in Winston-Salem to attend the discussion of the Psy-D program at the NC Graduate Schools Deans Council meeting.

B. Committee Member Updates

1. Holly Hirst requested a discussion pertaining to Distance Education program policies and procedures in the future.
2. Tracy Smith requested more general graduate programming issues discussion in the future.

7. **ADJOURNMENT**

**MOTION 24:**

It was moved (Mansure) and seconded (Bradbury) that the meeting be adjourned at 5:07 pm. Chairperson Hoepfl reminded members that the next meeting will be held on Monday, February 20, 2017.
Master of Science in Computer Science [PROPOSED]

Department of Computer Science
College of Arts and Sciences

The Department of Computer Science offers a Master of Science degree in Computer Science (224A/11.0701). The Department of Computer Science offers the Master of Science degree in Computer Science (Major Code: 224*/11.0701), with five concentrations:

- Theoretics (224x)
- Systems (224x)
- Web & Mobile (224x)
- Data Science & Visual Computing (224x)
- Foundations (224x)

The Computer Science MS program is for students who would like to advance beyond the undergraduate level of professional competence or to prepare for future doctoral study. The curriculum includes a balance between theory and applications and is built around a core of required courses in the basic areas of computer science—upon a set of core courses that cover the breadth of the fundamental areas of computer science. Through an appropriate selection of elective courses and thesis topics, students may choose either a theory emphasis or an applications emphasis concentration electives students engage a depth of study in a specialization of the discipline. The program normally can be completed in two years with the appropriate undergraduate education or work experience.

PROGRAM OF STUDY FOR THE MASTER OF SCIENCE IN COMPUTER SCIENCE

Admission Requirements: Baccalaureate degree from an accredited college or university; complete application to the Graduate School; official general GRE exam scores; undergraduate course work in: Advanced programming in a high-level language; Discrete mathematics; Introductory theoretical computer science; Data structures; Assembly language; Computer architecture; Calculus (two semesters); Matrix or linear algebra; Calculus-based probability and/or statistics.

To be considered for admission, applicants must meet or exceed the criteria for admission to the Graduate School. Meeting this condition does not guarantee admission.

Location: On Campus

| Course Requirements for the Master of Science in Computer Science (Code: 224A*) |
|-----------------------------------------------|------------------|
| Semester Hours Required (minimum): 30 (THESIS) or 36 |

Required Courses
- CS 5100: Seminar in Computer Science (3)
- CS 5110: Design and Analysis of Algorithms (3)
- CS 5483: Computer Architecture (3)
- CS 5520-5521: Operating Systems (4–3)
- CS 5666: Software Engineering (3)

<table>
<thead>
<tr>
<th>Theoretics (224x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 s.h. of graduate courses chosen from:</td>
</tr>
<tr>
<td>o CS 5120: Applications of Graph Theory &amp; Combinatorics (3)</td>
</tr>
<tr>
<td>o CS 5440: Topics in Artificial Intelligence (3)</td>
</tr>
<tr>
<td>o CS 5500: Theoretical Computer Science (3)</td>
</tr>
<tr>
<td>o CS 5631: Programming Language Translation (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems (224x)</td>
</tr>
<tr>
<td>9 s.h. of graduate courses chosen from:</td>
</tr>
<tr>
<td>o CS 5450: Computer Networking (3)</td>
</tr>
<tr>
<td>o CS 5465: Advanced Computer Graphics (3)</td>
</tr>
<tr>
<td>Course Options</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>CS 5483: Computer Architecture (3)</td>
</tr>
<tr>
<td>CS 5560: Advanced Operating Systems (3)</td>
</tr>
<tr>
<td>CS 5620: Real-time Systems (4)</td>
</tr>
<tr>
<td><strong>OR</strong></td>
</tr>
<tr>
<td>Web &amp; Mobile (224x)</td>
</tr>
<tr>
<td>9 s.h. of graduate courses chosen from:</td>
</tr>
<tr>
<td>• CS 5240: Mobile Device Programming (3)</td>
</tr>
<tr>
<td>• CS 5569: Human-Computer Interfaces (3)</td>
</tr>
<tr>
<td>• CS 5570: Design and Analysis of User Interfaces (3)</td>
</tr>
<tr>
<td>• CS 5667: Advanced Software Engineering (3)</td>
</tr>
<tr>
<td><strong>OR</strong></td>
</tr>
<tr>
<td>Data Science &amp; Visual Computing (224x)</td>
</tr>
<tr>
<td>9 s.h. of graduate courses chosen from:</td>
</tr>
<tr>
<td>• CS 5245: Data Programming (3)</td>
</tr>
<tr>
<td>• CS 5310: Numerical Analysis with Computer Applications (3)</td>
</tr>
<tr>
<td>• CS 5435: High Performance Database Systems (3)</td>
</tr>
<tr>
<td>• CS 5710: Data Mining &amp; Knowledge Discovery in Sci. Data (3)</td>
</tr>
<tr>
<td>• CS 5720: Scientific Computing with Visualization (3)</td>
</tr>
<tr>
<td>• CS 5740: Digital Image Processing (3)</td>
</tr>
<tr>
<td><strong>OR</strong></td>
</tr>
<tr>
<td>Foundations (224x)</td>
</tr>
<tr>
<td>9 s.h. of graduate elective courses related to a theme and approved by the program director</td>
</tr>
</tbody>
</table>

**Thesis Option (CHOOSE ONE)**

<table>
<thead>
<tr>
<th>With Thesis (14 s.h.)</th>
<th>OR</th>
<th>Without Thesis (20 s.h.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 5998: Thesis Preparation (3)</td>
<td></td>
<td>CS 5800: Project (3)</td>
</tr>
<tr>
<td>CS 5999: Thesis (6)</td>
<td></td>
<td>17 s.h. of approved graduate electives Approved Electives (12)</td>
</tr>
<tr>
<td>Approved Electives (5-6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Requirements for the MS in Computer Science:**

- **Thesis**: Optional
- **Proficiency**: Not required
- **Candidacy**: Required for thesis option; awarded upon approval of thesis committee and prospectus
- **Comprehensive**: A grade of B- or less in any of the required courses listed above requires passing a separately administered examination for the course; an oral defense of the thesis or project is also required
- **Product of Learning**: Not required
Master of Science in Computer Science

Department of Computer Science
College of Arts and Sciences

The Department of Computer Science offers the Master of Science degree in Computer Science (Major Code: 224x/11.0701), with five concentrations:

- Theoretics (224x)
- Systems (224x)
- Web & Mobile (224x)
- Data Science & Visual Computing (224x)
- Foundations (224x)

The Computer Science MS program is for students who would like to advance beyond the undergraduate level of professional competence or to prepare for future doctoral study. The curriculum includes a balance between theory and applications and is built upon a set of core courses that cover the breadth of the fundamental areas of computer science. Through an appropriate selection of concentration electives students engage a depth of study in a specialization of the discipline. The program normally can be completed in two years with the appropriate undergraduate education or work experience.

**PROGRAM OF STUDY FOR THE MASTER OF SCIENCE IN COMPUTER SCIENCE**

**Admission Requirements:** Baccalaureate degree from an accredited college or university; complete application to the Graduate School; official general GRE exam scores; undergraduate course work in: Advanced programming in a high-level language; Discrete mathematics; Introductory theoretical computer science; Data structures; Assembly language; Computer architecture; Calculus (two semesters); Matrix or linear algebra; Calculus-based probability and/or statistics.

To be considered for admission, applicants must meet or exceed the criteria for admission to the Graduate School. Meeting this condition does not guarantee admission.

**Location:** On Campus

**Course Requirements for the Master of Science in Computer Science (Code: 224A*)**
**Semester Hours Required (minimum): 36**

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS 5100: Seminar in Computer Science (3)</td>
<td></td>
</tr>
<tr>
<td>CS 5110: Design and Analysis of Algorithms (3)</td>
<td></td>
</tr>
<tr>
<td>CS 5521: Operating Systems (3)</td>
<td></td>
</tr>
<tr>
<td>CS 5666: Software Engineering (3)</td>
<td></td>
</tr>
<tr>
<td><strong>Total Required Courses</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

| Theoretics (224x)                                      |                |
| 9 s.h. of graduate courses chosen from:               |                |
| • CS 5120: Applications of Graph Theory & Combinatorics (3) |          |
| • CS 5440: Topics in Artificial Intelligence (3)       |                |
| • CS 5550: Theoretical Computer Science (3)            |                |
| • CS 5631: Programming Language Translation (3)        |                |

| Systems (224x)                                        |                |
| 9 s.h. of graduate courses chosen from:               |                |
| • CS 5450: Computer Networking (3)                    |                |
| • CS 5465: Advanced Computer Graphics (3)             |                |
| • CS 5483: Computer Architecture (3)                  |                |
| • CS 5560: Advanced Operating Systems (3)             |                |

<table>
<thead>
<tr>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>9</strong></td>
</tr>
<tr>
<td>Thesis Option (CHOOSE ONE)</td>
<td>With Thesis</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td></td>
<td>CS 5998: Thesis Preparation (3)</td>
</tr>
<tr>
<td></td>
<td>CS 5999: Thesis (6)</td>
</tr>
<tr>
<td></td>
<td>Approved Electives (6)</td>
</tr>
</tbody>
</table>

Other Requirements for the MS in Computer Science:

- **Thesis**: Optional
- **Proficiency**: Not required
- **Candidacy**: Required for thesis option; awarded upon approval of thesis committee and prospectus
- **Comprehensive**: A grade of B- or less in any of the required courses listed above requires passing a separately administered examination for the course; an oral defense of the thesis or project is also required
- **Product of Learning**: Not required
The Department of English offers the following graduate programs:

- **Master of Arts in English (Major Code: 232*/23.0101)** with concentrations in
  - College Teaching (232B)
  - General English (232C)
  - **Rhetoric and Composition (232x)**
- **Graduate Certificate in Rhetoric and Composition (132A/23.0101)**
- **Graduate minor in English (235/23.0101)**

NOTE: For every master’s program, students should plan a Program of Study with the Graduate Advisor in English during the first semester after enrollment. In all cases, a student must complete 24 hours in English on their program of study.

**PROGRAM OF STUDY FOR THE GRADUATE MINOR IN ENGLISH (Code: 235)**

A graduate minor in English consists of 8-12 semester hours selected from graduate English offerings, except ENG 5989.
PROGRAM OF STUDY FOR THE GRADUATE CERTIFICATE IN RHETORIC AND COMPOSITION

Admission Requirements: Master's degree from an accredited college or university or currently enrolled in a graduate program at Appalachian; complete application to the Graduate School; writing sample; letter of intent. Applicants with a bachelor's degree may apply, but must submit official GRE general exam scores as well.

Location: On Campus

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Course Requirements for the Graduate Certificate in Rhetoric and Composition (Code: 132A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Semester Hours Required (minimum): 12</td>
</tr>
<tr>
<td></td>
<td>• RC 5300: Studies in Rhetoric and Composition (3)</td>
</tr>
<tr>
<td></td>
<td>• Choose one of the following courses</td>
</tr>
<tr>
<td></td>
<td>o RC 5100: Composition Theory, Practice, and Pedagogy (3)</td>
</tr>
<tr>
<td></td>
<td>o ENG 4500: Appalachian Writing Project (6)</td>
</tr>
<tr>
<td></td>
<td>• Choose one of the following options</td>
</tr>
<tr>
<td></td>
<td>o RC 5990: Capstone in Rhetoric and Composition (3)</td>
</tr>
<tr>
<td></td>
<td>o ENG 5999: Thesis (6)</td>
</tr>
<tr>
<td></td>
<td>• 3 s.h. of approved graduate elective credit related to the Capstone Project</td>
</tr>
</tbody>
</table>

12 or 15

PROGRAM OF STUDY FOR THE MASTER OF ARTS IN ENGLISH

Admission Requirements: Baccalaureate degree* from an accredited college or university; complete application to the Graduate School; official general GRE exam scores; statement of intent; writing sample.

*An applicant who does not have an undergraduate degree in English but who has exceptional qualifications should contact the Director of Graduate Studies in the Department of English.

To be considered for admission, applicants must meet the criteria for admission to the Graduate School. Meeting this condition does not guarantee admission.
**Location:** On Campus

<table>
<thead>
<tr>
<th>Course Requirements for the Master of Arts in English (Code: 232*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours Required (minimum): 36</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>18</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ENG 5000: Bibliography and Research (3)</td>
<td></td>
</tr>
<tr>
<td>• 15 s.h. of approved ENG graduate courses (9 s.h. in British Literature and 6 s.h. in American Literature)</td>
<td></td>
</tr>
</tbody>
</table>

**Concentration (CHOOSE ONE)**

<table>
<thead>
<tr>
<th>General English Concentration (Code: 232C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ENG 5998: Thesis Preparation (3)</td>
</tr>
<tr>
<td>• ENG 5999: Thesis (3)</td>
</tr>
<tr>
<td>• 12 s.h. of additional graduate ENG electives chosen with approval of the graduate advisor; courses from other disciplines must be approved in advance.</td>
</tr>
</tbody>
</table>

**OR**

<table>
<thead>
<tr>
<th>College Teaching Concentration (Code: 232B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ENG 5150: Teaching Literature (3)</td>
</tr>
<tr>
<td>• ENG 5160: Teaching Apprenticeship (1+1=2)</td>
</tr>
<tr>
<td>• ENG 5200: Issues in Teaching English (3)</td>
</tr>
<tr>
<td>• RC 5100: Composition Theory, Practice and Pedagogy (3)</td>
</tr>
<tr>
<td>• 7 s.h. chosen from the following; other courses related to writing, literature or teaching may be selected with approval of the graduate advisor.</td>
</tr>
<tr>
<td>o RC 5120: Teaching in the Writing Center (1)</td>
</tr>
<tr>
<td>o RC 5121: Teaching Basic Writing (1)</td>
</tr>
<tr>
<td>o RC 5122: Teaching Expository Writing (1)</td>
</tr>
<tr>
<td>o RC 5124: Teaching Writing Across the Curriculum (1)</td>
</tr>
<tr>
<td>o RC 5300: Studies in Rhetoric and Composition (3)</td>
</tr>
<tr>
<td>o HE 5635: Adult Development and Learning Theories (3)</td>
</tr>
<tr>
<td>o HE 5050: Designing Adult Learning Experiences Using Technology (3)</td>
</tr>
<tr>
<td>o ENG 5998: Thesis Preparation (3) – counts only if thesis is also completed</td>
</tr>
<tr>
<td>o ENG 5999: Thesis (3)</td>
</tr>
</tbody>
</table>


### Rhetoric and Composition Concentration (Code: 232x)

- RC 5100  Composition Theory, Practice, and Pedagogy (3)
- RC 5300  Studies in Rhetoric and Composition (3) or RC 5410 Digital & Visual Rhetorics (3)
- RC 5400  Rhetoric and Theory (3)

AND

- 3 s.h. from the following:
  - RC 5120  Teaching in the Writing Center (1)
  - RC 5121  Teaching RC 0900, Basic Writing (1)
  - RC 5122  Teaching RC 1000, Expository Writing (1)
  - RC 5124  Teaching RC 2001, Introduction to Writing Across the Curriculum (1)
  - RC 5510 Graduate Writing Workshop (1)
  - ENG 5998 Thesis prep Preparation (3) and ENG 5999 Thesis (3) (on a topic in the field of Rhetoric and Composition)

### Other Requirements for the MA in English:

- **Thesis**: Required for the General English Concentration and the Rhetoric and Composition Concentration; optional elective for the College Teaching Concentration.
- **Proficiency**: Required for the General English Concentration; reading knowledge of a foreign language demonstrated by transcript evidence of two years undergraduate study of a foreign language or by examination arranged in the Department of Languages, Literatures and Cultures.
- **Candidacy**: Required; see the program director for specific timeline and requirements.
- **Comprehensive**: Presentation of teaching portfolio required for the College Teaching Concentration. See the program director regarding portfolio requirements.
- **Product of Learning**: Not required.
PROPOSED Catalog

Master of Arts in Geography
Graduate Certificate in Geographic Information Science
Graduate Certificate in Planning
Graduate Minor in Geography

Department of Geography and Planning
College of Arts and Sciences

Kathleen Schroeder, Chair and Professor
schroederk@appstate.edu

Baker Perry, Graduate Program Director and Associate Professor
perrylb@appstate.edu

The Department of Geography and Planning offers the following graduate programs:

- Master of Arts degree in Geography, Thesis Option (237A/45.0701)
- Master of Arts degree in Geography, Non-Thesis Option (237*/45.0701) with concentrations:
  - General Geography (237B)
  - Geographic Information Science (237D)
  - Planning (237C)
  - Climate Change (237X)
- Graduate Certificate in Geographic Information Science (114A/45.0701)
- Graduate Certificate in Planning (109A/45.0701)
- Graduate Minor in Geography (241/45.0701)

The graduate degree programs in Geography are designed to provide students with a broad range of academic and professional options. Foundations of the programs include preparing students for: 1) Ph.D. work in geography or planning, and 2) professional opportunities in applied geography and planning.

Past graduates have found jobs working in fields such as: geographic information science, environmental analysis and policy development, transportation planning, urban planning, satellite image analysis, cartography, regional planning and sustainable development, economic development, and land resource management.

Faculty and students are actively engaged in research investigating: climate change, biome change, GIS applications (viticulture; flood modeling; property valuation; visualization), globalization processes, economic development, community development, transportation and land use, precipitation climatology, mountain environments, and natural hazards.

The Department also offers graduate certificates in Planning and in GIScience for students interested in gaining proficiency in those areas without completing an entire degree. Completion of the certificate does not guarantee admission into the MA degree program.
Admission Requirements: Baccalaureate degree* from an accredited college or university; complete application to the Graduate School; official general GRE exam scores; cover letter (not to exceed two pages) stating reasons why applicant wishes to enter the program.

*Students entering the graduate program without a baccalaureate degree in geography are required to make up deficiencies in the areas of physical geography, human geography, and geographic techniques in consultation with the graduate committee.

To be considered for admission, applicants must meet the criteria for admission to the Graduate School. The faculty will give preference to applicants who meet or exceed the following: An undergraduate GPA at or above a 3.0 on a 4.0 scale and at least one score on the GRE (V, Q, or A) at or above the 50th percentile. Meeting these criteria does not guarantee admission.

Location: On Campus

Course Requirements for the Master of Arts in Geography (Non-Thesis Option)

Semester Hours Required (minimum): 36

Required Courses

- GHY 5000: Research Themes in Geography (3)
- GHY 5800: Advanced Quantitative Methods in Geography (3)

General Concentration (Code: 237B)

- Choose one of:
  - GHY/PLN 5858: Directed Research (3)
  - GHY 5900: *Internship in Geography (6)
- 24 to 27 s.h. of interdisciplinary graduate electives

Concentration (CHOOSE ONE) OR

Geographic Information Science Concentration (Code: 237D)

- GHY 5150: Seminar in Geographic Information Science (3)
- GHY 5810: Digital Image Processing (3)
- GHY 5812: Advanced GIS (3)
- GHY 5814: Principles of GeoComputation (3)
- GHY 5900: *Internship in Geography (6-9)
- 9 to 12 s.h. of graduate electives
Planning Concentration (Code: 237C)

- GHY/PLN 5400: Planning Theory and Process (3)
- PLN 5431: Planning Methods and Techniques (3)
- PLN 5730: Land Use Controls, Planning Law, and Ethics (3)
- Choose one of:
  - GHY/PLN 5858: Directed Research (3)
  - GHY 5900: *Internship in Geography (6)
- 9 s.h. of planning graduate electives
- 6 to 9 s.h. of interdisciplinary graduate electives

Climate Change (Code: 237X)

- GHY 5015: Climate Change: Physical Science Basis (3)
- GHY 5025: Climate & Society (3)
- PLN 5030: Planning for Climate Resilience (3)
- Choose one of:
  - GHY 5150: Seminar in GIScience (3)
  - GHY 5810: Digital Image Processing (3)
  - GHY 5812: Advanced GIS (3)
  - TEC 5210 Theory & Practice of Engineering Thermodynamics (3)
- Choose one of:
  - GHY/PLN 5858: Directed Research (3)
  - GHY 5900 Internship in Geography (6)
- 12 to 15 s.h. of interdisciplinary graduate electives

*The Internship will not be initiated until the degree Program of Study has been approved. The student will complete a research project dealing with the internship experience and an oral defense of the project in lieu of a thesis.

Other Requirements for the MA in Geography (Non-thesis):

- **Thesis:** Not required
- **Proficiency:** Not required
- **Candidacy:** Not required
- **Comprehensive:** Required
- **Product of Learning:** Not required
CURRENT AND PROPOSED PROGRAM OF STUDY FOR THE MASTER OF PUBLIC ADMINISTRATION, TOWN, CITY, AND COUNTY MANAGEMENT CONCENTRATION

**Current:**

Town, City and County Management Concentration (Code: 279C)

15 s.h. from the following courses

- GHY/PLN 5400: Planning Theory and Process (3)
- PS 5330: Problems in State and Local Government (3)
- PA 5560: Local Government Administration (3)
- PA 5665: Public Management (3)
- PLN 5431: Planning Methods and Techniques (3)
- PLN 5730: Land Use Controls, Planning Law, and Ethics (3)

**Proposed:**

Town, City and County Management Concentration (Code: 279C)

9 s.h. of graduate courses chosen from the following:

- PA 5560: Local Government Administration (3)
- PA 5461: Public Financial Management (3)
- A graduate-level course in Planning (3)

Plus 6 s.h. of graduate courses chosen in consultation with the MPA Director
PROGRAM OF STUDY FOR THE MASTER OF ARTS IN ROMANCE LANGUAGES

Admission Requirements: Baccalaureate degree in the target language or a closely related field from an accredited college or university; complete application to the Graduate School; official general GRE exam scores; writing sample in the target language; audiotaped interview for evaluation of oral command of target language (see guidelines at: http://dllc.appstate.edu (link is external)); two undergraduate literature courses and two culture courses. International students must submit a writing sample in English and must pass an oral interview in English.

To be considered for admission, applicants must meet the criteria for admission to the Graduate School. In addition, the program faculty will give preference to applicants who meet or exceed the following: Cumulative Undergraduate GPA: 3.0 or higher; GPA in subject area: 3.2. Meeting this condition does not guarantee admission.

*K-12 Teaching Concentration Applicants: You must provide evidence of NC "A" licensure or the equivalent from another state prior to admission.

Location: On and Off Campus, with some on-line and blended instruction offerings

<table>
<thead>
<tr>
<th>Course Requirements for the Master of Arts in Romance Languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Hours Required (minimum): 36</td>
</tr>
</tbody>
</table>

- LLC 5590: Issues in Teaching Foreign Languages and Cultures (3)
- LLC 5601: Bilingualism and Second Language Acquisition (3)

French College Teaching Concentration (Code: 222C) (6 s.h.) (Does not lead to licensure)

- Select 6 s.h. from the following
  - HE 5050: Designing Adult Learning Experiences Using Technology (3)
  - HE 5420: The Community College (3)
  - HE 5430: Organization and Governance in Higher Education (3)
  - HE 5440: College and University Teaching (3)
  - HE 5630: The Adult Learner (3)
  - HE 6631: Teaching and Learning in Postsecondary Education (3)
  - HE 6900: Higher Education Internship/Field Study (2-8)
OR
French K-12 Teaching Concentration + (Code: 222B) (9 s.h.)

+Leads to NC Teacher Licensure: Requirements for this degree were designed, and have been approved by the appropriate bodies at the state level, to meet the advanced competencies as mandated in the North Carolina Excellent Schools Act for Master-level teacher education programs. Students must complete 3 education courses.

- CI/SPE 5045: Advanced Topics in Diversity (3)
- CI/LSA 5585: Teacher Leadership and School Improvement (3)
- LLC 5525: Product of Learning (3)

OR
Spanish College Teaching Concentration (Code: 222E) (6 s.h.) (Does not lead to licensure)

- Select 6 s.h. from the following
  - HE 5050: Designing Adult Learning Experiences Using Technology (3)
  - HE 5420: The Community College (3)
  - HE 5430: Organization and Governance in Higher Education (3)
  - HE 5440: College and University Teaching (3)
  - HE 5630: The Adult Learner (3)
  - HE 6631: Teaching and Learning in Postsecondary Education (3)
  - HE 6900: Higher Education Internship/Field Study (2-8)

OR
Spanish K-12 Teaching Concentration + (Code: 222D) (9 s.h.)

+Leads to NC Teacher Licensure: Requirements for this degree were designed, and have been approved by the appropriate bodies at the state level, to meet the advanced competencies as mandated in the North Carolina Excellent Schools Act for Master-level teacher education programs. Students must complete 3 education courses.

- CI/SPE 5045: Advanced Topics in Diversity (3)
- CI/LSA 5585: Teacher Leadership and School Improvement (3)
- LLC 5525: Product of Learning (3)
Spanish Language Concentrators:

- Choose 21 or 24 s.h. from the following courses
  - SNH 5001: Hispanic Children's and Adolescent Literature (3)
  - SNH 5002: Masterpieces of Hispanic Art and Literature (3)
  - SNH 5003: Hispanic Short Fiction (3)
  - SNH 5005: The 20th Century Hispanic Novel (3)
  - SNH 5023: Poetry in Spain and Latin America (3)
  - SNH 5024: Theatre and Performance in the Hispanic World (3)
  - SNH 5026: Hispanic Cultural Studies (3)
  - SNH 5027: The Media in Latin America and Spain (3)
  - SNH 5028. Seminar in Spanish Linguistics (3)
  - SNH 5030: Latin American Thought Through Literature and Film (3)
  - SNH 5075: Migration in Literature and Film (3)
  - SNH 5555: History of the Spanish Language (3)
  - SNH 5565: Advanced Spanish Expression (3)
  - Electives (SNH 5500, SNH 5530-5549, LLC 5530-5549), chosen with the approval of the Advisor or the Program Director (0-6)

French Language Concentrators:

- Choose 21 or 24 s.h. from the following courses
  - FRE 5001: Francophone Children's and Adolescent Literature (3)
  - FRE 5002: Masterpieces of Francophone Art and Literature (3)
  - FRE 5003: French Women Writers (3)
  - FRE 5004: The French Media (3)
  - FRE 5021: Poetry of French Expression (3)
  - FRE 5023: Theater and Performance in French (3)
  - FRE 5025: French Cultural Studies (3)
  - FRE 5026: Francophone Cultures (3)
  - FRE 5555: History of the French Language (3)
  - FRE 5565: Advanced French Expression (3)
  - 0-6 s.h. of graduate electives (FRE 5500, FRE 5530-5549, LLC 5530-5549), chosen with the approval of the Advisor or the Program Director

Other Requirements for the MA in Romance Languages

- **Thesis:** Not required
- **Proficiency:** Proficiency in the language is required.
- **Candidacy:** Required; see the program director for specific timeline and requirements for admission to candidacy
- **Comprehensive:**
  - College Teaching Concentrations: Each MA candidate develops a portfolio of representative work generated in the course of the MA Program. The portfolio contains fully revised versions of the candidate's best work produced for all classes in the content area, and serves
as the basis for a one-hour oral comprehensive examination. Refer to specific guidelines for the portfolio at: http://dllc.appstate.edu (link is external).

- K-12 Teaching Concentrations: Requirement is fulfilled via successful presentation of the Product of Learning.

- **Product of Learning:**
  - Community College Teaching: Not required.
  - K-12 Teaching: Requirement is fulfilled via successful completion and presentation of the Product of Learning. Refer to specific guidelines for the Product of Learning at: http://dllc.appstate.edu (link is external).
Master of Science in Engineering Physics
Graduate Minor in Engineering Physics

Department of Physics and Astronomy
College of Arts and Sciences

physics.appstate.edu
Michael Briley, Chair and Professor
brileymm@appstate.edu

Brad Johnson, Graduate Program Director
johnsonbg2@appstate.edu

The Department of Physics and Astronomy offers the following graduate program:

- **Master of Science degree in Engineering Physics (113*/40.0801) with concentrations in**
  - Systems and Laboratory Automation (113B)
  - Professional Science Master's in Instrumentation and Automation (113C)
  - Professional Science Master's in Nanoscience for Advanced Materials (113D)
- **Graduate Minor in Engineering Physics (147/40.0801)**

The MS program is designed to prepare individuals for technical careers in industrial, governmental, and independent laboratories as well as for teaching positions at the community college level. It may also serve as an intermediate step for those who later elect to pursue a Ph.D. in applied physics, engineering physics, engineering, nanoscience, material science or a related area.

Graduate students will choose a research area of Applied Physics, Atmospheric Physics, Biophysics and Optical Sciences, Nanoscience, Electronics Instrumentation, Optics Instrumentation, or Astronomical Instrumentation and Observations.

The concentration in Systems and Laboratory Automation is a more traditional MS program that contains thesis and non-thesis options. The other concentrations are professional science master's (PSM) concentration, which require a core of business and communications courses (12 semester hours). The PSM concentrations do not have a thesis option, but require an internship.

**PROGRAM OF STUDY FOR THE GRADUATE MINOR IN ENGINEERING PHYSICS (Code: 147)**

A graduate minor in Engineering Physics consists of 8-12 semester hours selected from graduate level PHY offerings, except PHY 5989.

**PROGRAM OF STUDY FOR THE MASTER OF SCIENCE IN ENGINEERING PHYSICS**
**Admission Requirements:** Baccalaureate degree in physics, astronomy or any science or related area such as mathematics, computer science or engineering from an accredited college or university; complete application to the Graduate School; official general GRE exam scores.

To be considered for admission, applicants must meet the criteria for admission to the Graduate School. Meeting this condition does not guarantee admission.

**Location:** On Campus

### Course Requirements for the Master of Science in Engineering Physics

**Semester Hours Required:** See specific concentrations below

<table>
<thead>
<tr>
<th>Required Courses</th>
<th>Semester Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 5011: Applied Physics Colloquium (0) (Must be taken twice)</td>
<td>10</td>
</tr>
<tr>
<td>PHY 5330: Digital Electronics (4)</td>
<td></td>
</tr>
<tr>
<td>PHY 5400: Professional Skills (1)</td>
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<tr>
<td>PHY 5405: Graduate Seminar (1)</td>
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</tr>
<tr>
<td>PHY 5730: Analog Systems (4)</td>
<td></td>
</tr>
</tbody>
</table>

#### Concentration (CHOOSE ONE)

**Systems and Laboratory Automation Concentration (Code: 113B)**

- Hours in concentration: 23 (THESIS) or 26
- Total hours required for degree: 33 (THESIS) or 36

  - PHY 5735: Microcontrollers (4)
  - PHY 5740: Sensors and Transducers (4)
  - PHY 5550: Directed Research in Applied Physics (1+1+1=3) OR PHY 5900: Internship (1+1+1=3)
  - Choose thesis (12 s.h.) or non-thesis option (15 s.h.):
    - 6 s.h. of graduate electives approved by the graduate program director
    - OR
    - 15 s.h. of graduate electives with approval of graduate program director

**PSM in Instrumentation and Automation Concentration (Code: 113C)**

- Hours in concentration: 26
- Total hours required for degree: 36

  - PHY 5735: Microcontrollers (4)
  - PHY 5740: Sensors and Transducers (4)
  - PHY 5900: Internship (3)
  - 12 s.h. of Professional Core Courses approved by graduate program director:
    - ENG 5520: Technical Writing (3) or similar technical communications course
    - 9 s.h. of graduate courses from (BUS 5000:5998, MBA 5000:5998, TEC 5149)
  - 3 s.h. of graduate electives approved by graduate program director

**PSM in Nanoscience for Advanced Materials Concentration (Code: 113D)**
Hours in concentration: 28 or 29
Total hours required for degree: 38 or 39

- PHY 5845: Nanoscience and Technology (3)
- PHY 5860: Physical Principles of Electron Microscopy (3)
- PHY 5861: Physical Principles of Electron Microscopy Laboratory (1)
- PHY 5900: Internship (3)
- 7-8 s.h. of Related Coursework: Choose 2 of the following 3 with approval of graduate program director
  - PHY 5740: Sensors and Transducers (4)
  - A course in solid state physics (3)
  - PHY 5850: Advanced Materials Science Laboratory (3)
- 12 s.h of Professional Core Courses approved by graduate program director:
  - ENG 5520: Technical Writing (3) or similar technical communications course
  - 9 s.h. of graduate courses from (BUS 5000:5998, MBA 5000:5998, TEC 5149)

Other Requirements for the MS in Engineering Physics:

- **Thesis**: Optional
- **Proficiency**: Not required
- **Candidacy**: Required for thesis option; admission to candidacy is awarded upon approval of thesis committee and prospectus
- **Comprehensive**:
  - An oral defense of the thesis is required for the thesis option of **Systems and Laboratory Automation**.
  - For non-thesis option and other concentrations: A written and oral comprehensive examination is required.
- **Product of Learning**: Not required
Current Program of Study for the Master of Arts: Curriculum Specialist

Course Requirements for the Master of Arts – Curriculum Specialist (Code: 416A)

Semester Hours Required (minimum): 39

Required Courses

- CI/SPE 5045: Advanced Topics in Diversity (3)
- CI 5050: Supervision of Instruction (3)
- CI 5055: Connecting Learners and Subject Matter (3)
- CI 5060: Curriculum Planning (3)
- CI 5525: Product of Learning (1-3)
- CI/LSA 5585: Teacher Leadership and School Improvement (3)
- LSA 5010: Public School Administration (3)
- RES 5000: Research Methods (3)
- Choose one course from the three below:
  - CI 5591: Advanced Curriculum Design in Elementary Education (3)
  - CI 5850: Middle School Curriculum (3)
  - Other Approved Curriculum Class (3)  
  34 to 36
- Choose one course from the two below:
  - CI 5900: Internship/Practicum (3)
  - LSA 5900: School Administration and Supervision Internship/Practicum (3)
- Choose one course from the two below:
  - CI/RE/RES/SPE 5040: Teacher as Researcher (3)
  - RES 5560: Classroom Assessment (3)
- Electives
  - 3-5 s.h. of graduate courses to be selected with the advice and approval of the graduate advisor  
  3 to 5
Proposed Program of Study for the Master of Arts: Curriculum Specialist
Effective 2017 - 2018

Course Requirements for the
Master of Arts – Curriculum
Specialist (Code: 416A)
Semester Hours Required
(minimum): 39

- CI/SPE 5045: Advanced Topics in Diversity (3)
- CI 5050: Supervision of Instruction (3)
- CI 5055: Connecting Learners and Subject Matter (3)
- CI 5060: Curriculum Planning (3)
- CI 5525: Product of Learning (1-3)
- CI/LSA 5585: Teacher Leadership and School Improvement (3)
- LSA 5010: Public School Administration (3)
- CI 5041: Assessment to Improve Learning and Inform Teaching (3)
- RES 5000: Research Methods (3)

Choose one course from the three below:
- CI 5591: Advanced Curriculum Design in Elementary Education (3)
- CI 5850: Middle School Curriculum (3)
- Other Approved Curriculum Class (3)

Choose one course from the two below:
- CI 5581 Advanced Curriculum Design (3)
- LSA 5900: School Administration and Supervision Internship/Practicum (3)

Choose one course from the two below:
- CI 5900: Internship/Practicum (3)
- CI/RE/RES/SPE 5040: Teacher as Researcher (3)

Choose one course from the two below:
- RES 5560: Classroom Assessment (3)
- ITC 5220: Digital Technologies in Education (3)

Choose one course from the two below:
- CI 5630: Instructional Technology (3)
- IT 5220: Digital Technologies in Education (3)

Electives
3-5 s.h. of graduate courses to be selected with the advice and approval of the graduate advisor
PROPOSED CATALOG CHANGES TO THE MASTER OF ARTS IN EDUCATIONAL MEDIA
(Proposal G_COE_LES_ITC_2016_1)

Other Requirements for the Master of Arts in Educational Media (Major Code: 437*/13.0501):

**Thesis:** Optional

**Proficiency:** Not required

**Candidacy:** Required; see the program director for specific timeline and requirements for admission to candidacy

**Comprehensive:** Not required

**Product of Learning:** Required
Program of Study for the Graduate Certificate in New Media Literacies and Global Perspectives

Admission Requirements: Baccalaureate degree from an accredited college or university; complete application to the Graduate School.

Location: Online

Course Requirements for the Graduate Certificate in New Media Literacies and Global Perspectives (Code: 461A)
Semester Hours Required (minimum): 18

Required Courses
- CI 5200: Multi-media Image Production (3)
- CI 5310: New Media and Emerging Literacies (3)
- CI 5630: Instructional Technology (3)
- CI 5835: Media Influence and Identity Across Cultures (3)
- ITC 5910: Applications of Digital Technologies (3)
- 3 s.h. of approved graduate electives emphasizing media literacy; suggested:
  - CI 5830: Media Literacy (3)
  - CI 5845: Global Perspectives in Media and Technology (3)
  - CI 5930: Instructional Graphics (3)
  - ITC 5642: Design and Development of Digital Media (3)
PROPOSED CATALOG COPY:

PROGRAM OF STUDY FOR THE GRADUATE CERTIFICATE IN INSTRUCTIONAL TECHNOLOGY FACILITATION

Admission Requirements: Baccalaureate degree from an accredited college or university; complete application to the Graduate School. To be eligible for Computer Teacher (18079) Endorsement or Instructional Technology Facilitator (077) Licensure, applicants must have 'A' level licensure in North Carolina or the equivalent from another state. Only applicants with an existing Master's degree in an educational field may be eligible to add 077 licensure.

Location: Online

Course Requirements for the Graduate Certificate in Instructional Technology Facilitation (Code: 464A)
Semester Hours Required (minimum): 18

Required Courses
- ITC 5220: Digital Technologies in Education (3)
- ITC 5240: Designing Instruction for Digital-Age Learners (3)
- ITC 5350: Technology Policy and Law (3)
- ITC 5550: Professional Development Innovation, and Systemic Change (3)
- LSA 5585: Teacher Leadership and School Improvement (3) OR ITC 5720: Planning for Instructional Technology (3)
- ITC 5910: Applications of Digital Technologies (3)
Dual Degree of Master of Library Science and Master of Educational Media

Department of Leadership and Educational Studies
Reich College of Education

mls.appstate.edu and edtech.appstate.edu
Terry McClannon, Chair and Associate Professor
mcclannontw@appstate.edu
Kim Becnel, Associate Professor and Program Director
becnelke@appstate.edu
Amy Cheney, Associate Professor and Program Director
cheneyal@appstate.edu

The Department of Leadership and Educational Studies offers a dual program leading to the Master of Library Science (MLS) in Library Science, General (Major Code: 465A/25.0101) and the Master of Arts in Educational Media (Major Code: 437*/13.0501), with Instructional Technology Specialist/K12 (Major Code 437F) concentration.

The Department of Leadership and Educational Studies also offers graduate programs in Higher Education, and School Administration. These programs are detailed under separate headings in this bulletin.

The Master of Library Science (MLS) is nationally recognized by the American Association of School Librarians (AASL), nationally accredited by the National Council for Accreditation of Teacher Education (NCATE) and approved by the North Carolina State Department of Public Instruction. The program reflects Media Coordinator (School Librarian) competencies required by the state as well as Public Librarian Certification competencies of the North Carolina Public Librarian Certification Commission. Completion of the program of study entitles the graduate to apply for licensure (076 Media Coordinator) from the State of North Carolina and to apply for Public Librarian Certification from the North Carolina Public Librarian Certification Commission.

Using a combination of off-campus teaching methodologies, the Library Science program mission is to make a positive impact on K-12 students and public library patrons by providing the State of North Carolina with appropriately educated school and public librarians who take leadership roles in the state, nation, and world. High quality faculty, who create authentic learning experiences that blend theory with practice and consistently engage in relevant research, creative, and service activities, help to accomplish this mission. The Library Science program shares a commitment with the Reich College.

The Master of Arts in Educational Media provides an innovative blending of learning opportunities in the design, production, application, and evaluation of a broad range of media and technology. Students are encouraged to pursue work in both traditional and
emerging technologies related to all aspects of educational media. Graduates of the program will be prepared to assume leadership roles in various fields of media and technology. The range of possibilities for students in the four concentrations includes the study of digital technologies in education, multimedia systems and website production, as well as media literacy, instructional design, and telecommunications systems.

The K-12 concentration is designed for education professionals and others who wish to enhance their use of digital technologies for teaching and learning. This concentration is designed to prepare traditional and nontraditional students to assume educational leadership roles in the use of instructional technology in public schools, public libraries and related educational settings through active scholarship, reflection, professional discourse and interdisciplinary programs of study based on the integration of theory and practice. This concentration leads to 077 'M' level licensure for Instructional Technology Specialists.

The Department of Leadership and Educational Studies serves the education community and the public through:

- foundations of education courses for teacher education majors
- research courses to help students develop skills and knowledge needed to understand the design, implementation, and evaluation of educational research
- graduate programs in public school administration; community college and higher education administration, teaching, developmental education and adult education; library science; and educational media/instructional technology

General Information for All Students: A student working toward a degree and/or licensure in the Department of Leadership and Educational Studies must develop her/his Program of Study in consultation with an approved advisor. Degree students taking courses without being officially assigned an advisor and receiving the advisor's approval do so at the risk of not having the courses approved as part of the degree program.

Students pursuing or holding graduate degrees in other departments, and also seeking administration and supervision licensure, must take the necessary courses and internship prescribed by the Department of Leadership and Educational Studies.

Courses in the this program are offered online. The method of instruction depends on the course and instructor. Students need access to a computer with Broadband Internet access, a head set, and a microphone. Minimum requirements are Intel Dual Core or Core Duo (PC) 1.6GHz (XP) or 2.0GHz or Intel Mac 1.6GHz (OS 10.6 or Higher), minimum 2 GB memory, 4 GB preferable, and have a video graphics card that supports DirectX 9.0+ and OpenGL 1.3+. Computers less than 2 years old are generally adequate. Additional software may be required.

DUAL PROGRAM OF STUDY FOR THE MASTER OF LIBRARY SCIENCE AND THE MASTER OF EDUCATIONAL MEDIA (INSTRUCTIONAL TECHNOLOGY SPECIALIST/K-12)
Admission Requirements: Baccalaureate degree* from an accredited college or university; complete application to the Graduate School; official general GRE or MAT exam scores.

To be considered for admission, applicants must meet the criteria for admission to the Graduate School. Meeting this condition does not guarantee admission.

Note: Completing this program entitles students to apply for Public Librarian Certification from the North Carolina Public Librarian Certification Commission; in addition, students who hold NC "A" licensure and present passing scores on the specialty area PRAXIS/NTE are entitled to apply for 076 Media Coordinator Licensure from the North Carolina Department of Public Instruction. Students who do not hold a valid North Carolina teaching license will be required to take additional coursework and internship hours in order to seek 076 licensure. Completing this program also allows students to apply for Instructional Technology Specialist (077) licensure from the North Carolina Department of Public Instruction.

Location: Online

Course Requirements for the Dual Master of Library Science (465A) and Master of Arts in Educational Media, Instructional Technology Specialist/K-12 Concentration (Code: 437F)

Semester Hours Required (minimum): 63

<table>
<thead>
<tr>
<th>Required Courses</th>
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</thead>
<tbody>
<tr>
<td>LIB 5010: Collection Development and Management (3)</td>
<td>63</td>
</tr>
<tr>
<td>LIB 5020: Information Sources and Services (3)</td>
<td></td>
</tr>
<tr>
<td>LIB 5030: Organization of Information (3)</td>
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<tr>
<td>LIB 5042: Strategic Administration of Library Resources and Services (3)</td>
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<tr>
<td>LIB 5050: Technology and Libraries: Tools, Resources, and Issues (3)</td>
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<tr>
<td>LIB 5060: Building Connections Through Community and Culture (3)</td>
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<tr>
<td>LIB 5070: Integrating Literature and Media into Instruction (3)</td>
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<tr>
<td>LIB 5080: Collaborative Media Program Planning and Evaluation (3)</td>
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<tr>
<td>LIB 5195: Critical Issues in Literature and Media (3)</td>
<td></td>
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<tr>
<td>LIB 5525: Product of Learning (3)</td>
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<tr>
<td>ITC 5220: Digital Technologies in Education (3)</td>
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<tr>
<td>ITC 5240: Designing Instruction for Digital-Age Learners (3)</td>
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</tr>
<tr>
<td>CI 5310: New Media and Emerging Literacies (3)</td>
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<tr>
<td>ITC 5330: Utilizing Networking and Communications Technologies for Learning (3)</td>
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<tr>
<td>ITC 5440: Digital Learning Environments in a Changing Society (3)</td>
<td></td>
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<tr>
<td>ITC 5350: Technology Policy and Law (3)</td>
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<tr>
<td>ITC 5550: Professional Development, Innovation and Systemic Improvement (3)</td>
<td></td>
</tr>
<tr>
<td>ITC 5620: Vision and Strategies for Integration of Digital Technologies (3)</td>
<td></td>
</tr>
</tbody>
</table>
• ITC 5720: Planning for Instructional Technology (3)
• RES 5000: Research Methods (3)
• CI/LSA 5585: Teacher Leadership and School Improvement (3)
• ITC 5910: Applications of Digital Technologies (3)
• Select one of the following in consultation with an advisor—must be completed in a school media center under supervision of a licensed media coordinator:
  • LIB 5900: Internship/Practicum (1+1+1=3)
  • LIB 5910: Applications of Librarianship Standards (1+1+1=3)

Other Requirements for the Dual MA in Educational Media and Library Science:

• Thesis: Not required
• Proficiency: Not required
• Candidacy: Required; see program directors for specific timeline and requirements for admission to candidacy
• Comprehensive: Not required
• Product of Learning: Two Products of Learning required: one in Library Science and one in Instructional Technology
PROGRAM OF STUDY FOR THE GRADUATE CERTIFICATE IN READING EDUCATION

This certificate does not lead to NC licensure; however, completion of the 12-hour certificate partially fulfills the 18-hour requirement for the add-on Reading Education license for NC and may be used toward the fulfillment of the 39-hour requirement for the MA degree in Reading Education.

**Admission Requirements:** Baccalaureate degree in Reading or a related field from an accredited college or university; [complete application to the Graduate School](#).

**Location:** On Campus and Off Campus; Off-Campus applications are accepted on a rolling basis; please contact the Office of Distance Education for locations (distance.appstate.edu).

**Course Requirements for the Graduate Certificate in Reading Education (Code: 449A)**

**Semester Hours Required (minimum): 12**

Students will select four courses for 12 hours from the following:

- RE 5100: Teaching Beginning Readers and Writers (3)
- RE 5111: Issues, Trends, and Practices in Reading (3)
- RE 5130: Teaching the Language Arts (3)
- RE 5140: Advanced Study of Children's Literature (3)
- RE 5715: Reading Assessment and Correction (3)
- RE 5725: Practicum in the Clinical Teaching of Reading (3)
- RE 5730: Reading and Writing Instruction for Intermediate and Advanced Learners (3)
- RE 5740: Seminar in Clinical Teaching of Reading (3)
- RE 6120: Psychological Processes in Reading (3)
- RE 6568: Language and Linguistics in Reading (3)
- RE 6575: Technology and Literacy (3)
- RE 6700: Historical Trends in Reading Theory and Research (3)
- RE 6731: Advanced Issues in Literacy and Learning (3)
- RE 6735: Severe Reading Disability (3)

Proposed Grad Bulletin and Course Catalogue copy:

PROGRAM OF STUDY FOR THE GRADUATE CERTIFICATE IN READING EDUCATION

This certificate does not lead to NC licensure; however, completion of the 18-hour certificate partially fulfills the 24-hour requirement for the add-on Reading Education license for NC and may be used toward the fulfillment of the 39-hour requirement for the MA degree in Reading Education.
Admission Requirements: Baccalaureate degree in Reading or a related field from an accredited college or university; complete application to the Graduate School.

Location: On Campus and Off Campus; Off-Campus applications are accepted on a rolling basis; please contact the Office of Distance Education for locations (distance.appstate.edu).

Course Requirements for the Graduate Certificate in Reading Education (Code: 449A)

Semester Hours Required (minimum): 18

Students will select six courses for 18 hours from the following:

- RE 5100: Teaching Beginning Readers and Writers (3)
- RE 5111: Issues, Trends, and Practices in Reading (3)
- RE 5130: Teaching the Language Arts (3)
- RE 5140: Advanced Study of Children's Literature (3)
- RE 5715: Reading Assessment and Correction (3)
- RE 5725: Practicum in the Clinical Teaching of Reading (3)
- RE 5730: Reading and Writing Instruction for Intermediate and Advanced Learners (3)
- RE 5740: Seminar in Clinical Teaching of Reading (3)
- RE 6120: Psychological Processes in Reading (3)
- RE 6568: Language and Linguistics in Reading (3)
- RE 6575: Technology and Literacy (3)
- RE 6700: Historical Trends in Reading Theory and Research (3)
- RE 6731: Advanced Issues in Literacy and Learning (3)
- RE 6735: Severe Reading Disability (3)
G_COE_RESE_2016_6 - Change program of study for ASD minor (445/13.1013) to provide greater options for the required research course by listing SPE 5040 and RE 5040 (both courses are currently cross listed) as an option beyond SPE 5030.

Proposed Requirements for the Minor in Autism Spectrum Disorders (9 credit hours)

• Choose from one of the following courses:
  o SPE 5030: Research Informing Practice in Special Education
  o RE/SPE 5040: Teacher as Researcher

• Choose two of the following courses
  o RE 5010: Literacy Instruction and Assessment for Students with Autism Spectrum Disorders
  o SPE 5120: Effective Educational Practices for Students with Autism Spectrum Disorders
  o SPE 5140: Social Communication in Autism Spectrum Disorders
  o SPE 5584: Special Education Law and Leadership
  o CSD 5530-5549: Selected Topics when the topic is related to Autism