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DEPARTMENT OF AEROSPACE STUDIES

Department of Aerospace Studies

Chairperson: Lieutenant Colonel Sarah Hedrick

Faculty

Professor: Lt. Col. Hedrick

Assistant Professor of Aerospace Studies: Captain Todd Glace

Assistant Professor of Aerospace Studies: Captain Nolan Bet

Aerospace Studies (Air Force ROTC)

Total minimum number of credits required for a minor in Aerospace Studies – 22.

The Air Force Reserve Officer Training Corps (AFROTC) program at Wilkes University permits students to earn commissions as officers in the U.S. Air Force while pursuing a university degree. Students enroll in either the four-year or three-year program. Students with three years remaining until graduation may enroll concurrently in the freshman and sophomore Aerospace Studies courses and can complete the four-year program in three years; moreover, any interested student may call the detachment and query staff regarding additional programs available (570-408-4860).

A minor in Aerospace Studies is available to students who complete a minimum of 22 semester hours including the following: up to 16 hours of Aerospace Studies courses (AS 101, 102, 201, 202, 301, 302, 401, 402) and 3 hours for AFROTC Field Training (4-week AFROTC Field Training AS 240), and a minimum of 3 credit hours within one area listed below. This area should explore a discipline other than the student's major.

Additional Courses Required in the Minor (By Concentration)

Business Administration Credits

- BA 151 – Integrated Management Experience 3
- BA 233 – The Legal Environment of Business 3
- BA 234 – Business Law 3
- BA 321 – Marketing 3
- BA 326 – The Selling Process 3
- BA 327 – Marketing Seminar 3
- BA 341 – Managerial Finance 3
- BA 351 – Management of Organizations and People 3
- BA 352 – Production and Operations Management 3
- BA 354 – Organizational Behavior 3
- BA 356 – The Social Responsibility of Business 3

Communication Studies Credits

- COM 101 – Fundamentals of Public Speaking 3
- COM 102 – Principles of Communication 3
- COM 201 – Advanced Public Speaking 3
- COM 202 – Interpersonal Communication 3
- COM 206 – Business and Professional Communication 3
- COM 220 – Introduction to Telecommunications 3
- COM 303 – Organizational Communication 3
- COM 352 – Advanced Public Relations Campaigns 3
- COM 361 – Feature Writing 3
- COM 399 – Cooperative Education 1-6

History Credits

- HST 101 – Historical Foundations of the World 3
- HST 102 – Europe Before 1600 3
- HST 125 – American History I 3
- HST 126 – American History II 3
- HST 328 – History of the Foreign Policy of the United States 3
- HST 334 – The United States, 1900-1945 3
- HST 335 – The United States Since 1945 3
- HST 376 – World War II 3

Political Science Credits

PS 111 – Introduction to American Politics 3
 PS 141 – Introduction to International Politics 3
 PS 151 – Governments of the World 3
 PS 212 – Urban Government and Politics 3
 PS 213 – Political Parties and Political Participation 3
 PS 221 – Introduction to Public Administration 3
 PS 261 – Concepts and Methods in Political Science 3
 PS 331 – The Constitution and the Federal System 3
 PS 332 – Civil Rights and Liberties 3

General Military Course

(Four-Year Program Only)

The first two years of the four-year program constitute the General Military Course (GMC). GMC courses are open to any University student. Students enrolling in these courses do not incur any military service obligation. (Exception: Air Force scholarship recipients incur a commitment at the beginning of their sophomore year.) The GMC curriculum consists of the following: four one-credit Aerospace Studies courses; a non-credit leadership laboratory each semester, which introduces students to U.S. Air Force history and environment, customs, courtesies, drill and ceremonies, and leadership skills; and Physical Training (PT) at least twice weekly.

Field Training

Field training consists of a 13-day, 3-credit Aerospace Studies course conducted at Maxwell AFB AL. It provides students an opportunity to 1) observe Air Force units and people at work, 2) participate in marksmanship, survival, athletics, and leadership training activities, 3) work with contemporaries from other colleges and universities. Transportation from the legal residence of the cadet to the field training base and return, food, lodging, and medical and dental care are provided by the Air Force.

Professional Officer Course (POC)

The last two years of the program constitute the Professional Officer Course (POC). POC courses are open only to AFROTC cadets who have successfully completed Field Training or by permission of the Detachment Commander. The POC curriculum consists of the following: four three-credit Aerospace Studies courses; a non-credit leadership laboratory each semester; leadership studies; introduction to national security affairs; preparation for active duty; and Physical Training (PT) twice weekly.

Professional Development Training (PDT)

(Optional)

The program allows both GMC and POC members to visit a USAF base for up to three weeks during the summer (cadets attending Field Training are not eligible). PD allows the cadet to "shadow" an active duty officer working in the area of the student's career interest (i.e., pilot, navigator, communications, intelligence, etc.). Transportation from the legal residence of the cadet to the PD base and return, food, lodging, and medical and dental care are provided by the Air Force. The participating cadet is also provided a nominal stipend during the program.

Benefits

Commissioning

Students who satisfactorily complete the POC curriculum requirements are commissioned as Second Lieutenants in the U.S. Air Force and will serve on active duty in a career specialty they have chosen, consistent with USAF needs. Qualified students may compete for duty as pilots, combat system operators, engineers, missile or space operations officers, nurses, engineers, meteorologists, computer analysts, security forces, or any of a number of other career fields.

Scholarships

AFROTC offers 2.5 to 5-year full and partial tuition scholarships for which qualified students may compete if they enroll in AFROTC. All scholarship awards are based on individual merit, regardless of financial need, with most scholarship recipients determined by central selection boards. Since scholarship applicants must meet certain academic, physical fitness, and medical requirements to be considered by the scholarship boards, contact the Aerospace Studies Department for more information. High school students wishing to compete for AFROTC college scholarships must complete and submit an application no later than the fall term of their senior year.

All AFROTC scholarship recipients entering or transferring to Wilkes University receive free room and board. To receive free room and board, the scholarship recipient must live in a Wilkes University owned and operated residence hall.

Contracted cadets also receive a monthly stipend, \$300-\$500, depending upon their academic year, and a \$900 annual book allowance.

DEPARTMENT OF AEROSPACE STUDIES

Uniforms and Materials

All uniforms, equipment, and textbooks for AFROTC are supplied by the U.S. Air Force.

DEPARTMENT OF BIOLOGY AND HEALTH SCIENCES

Department of Biology and Health Sciences

Chairperson: Dr. Kenneth M. Klemow

Faculty

Professors: Klemow, Steele, Terzaghi

Associate Professors: Biggers, Gutierrez, Harms, Kadlec, Kalter, Stratford

Assistant Professor: Fortunato, Williams

Faculty Emeriti: Pidcock, Turoczi

Director, Center for Health Sciences and Student Success: Dombroski

Lab Preparation Supervisor: Elias

Faculty of Practice and Education Specialist: Chapman

DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY

Department of Chemistry & Biochemistry

Chairs: Dr. Amy Bradley

Faculty

Professor: Castejon, Mencer

Associate Professors: Bradley, Henkels, Trujillo, Wignot

Assistant Professors: Bleche, Henry, Youmans

Faculty of Practice: Pitchford

Faculty Emeriti: Faut, Rozelle, Stine

Laboratory Director: Bianco

Lab Assistant and Technician: Tambasco

Total minimum number of credits required for a major in Biochemistry leading to the B.S. degree – 122

Total minimum number of credits required for a major in Chemistry leading to the B.A. degree – 121

Total minimum number of credits required for a major in Chemistry leading to the B.S. degree - 121

Total minimum number of credits required for a minor in Chemistry – 22

The Wilkes Chemistry and Biochemistry programs are accredited by the American Chemical Society for the professional training of chemists. ACS accreditation will be maintained for the B.S. programs in Chemistry and Biochemistry. Students who complete either of these B.S. programs are certified for membership eligibility in the Society at graduation. Students completing the B.A. program in Chemistry may be certified, dependent upon students' choice of chemistry courses.

DEPARTMENT OF COMMUNICATION STUDIES

Department of Communication Studies

Chairperson: Dr. Evene Estwick

Faculty

Professors Emeriti: Elmes-Crahall, Kinney

Professor: Stine

Associate Professors: Briceño, Churcher, Estwick

Instructor: Mellon

Director of the Television Center: Mattern

Radio Station Manager: Rock

Total minimum number of credits required for a major in Communication Studies leading to the B.A. degree - 120

Total minimum number of credits required for a minor in Communication Studies - 18

The major in Communication Studies is a student centered program that emphasizes excellence in professional skills, ethical standards, and provides the hands-on experience expected of tomorrow's communication leaders. Our mission is to develop civically engaged leaders who have the ability to integrate global and technical issues within the context of personal and professional excellence. The integration emerges from a focus on oral, written, and interpersonal skills, ethics, collaborative learning, research, and the value of diversity. The major offers concentrations in Strategic Communication, Rhetorical Studies, Media Production, and Multimedia Journalism.

DEPARTMENT OF EDUCATION

Department of Education - Undergraduate

Chairperson: Dr. Suzanne Murray-Galella

Faculty

Professor: Polachek

Associate Professor: Galella, Frantz-Fry

Assistant Professor: Hnasko

Faculty of Practice: Kaster

Faculty Emeriti: J. Bellucci, Fahmy

The Education Department Programs

Mission of the Teacher Education Program

The Mission of the Teacher Education Program is to provide the educational community and society at large with competent, caring, and ethical educators who are life-long learners, reflective practitioners, and effective communicators. The Teacher Education program provides opportunities for students to grow academically and professionally. The program promotes an appreciation for diversity, as well as a regard for research-based and innovative practices. The ethic of service and dedication are expected of Teacher Education candidates to meet the diverse needs of all students within the learning community.

The Teacher Education Program (TEP) information in this *2019-20 Undergraduate Bulletin* addresses the following certification programs as mandated by the Pennsylvania Department of Education (PDE) that will be followed by all students starting in Fall 2010 or after. The programs are:

1. Pre-kindergarten through fourth grade (PK-4) certification has replaced the Kindergarten through sixth grade (K-6) certification.
2. Middle Level certification in grades four through eight (4-8) with five areas of concentration: Mathematics, Science, English, Language Arts and Reading, Social Studies, and Mathematics/Science.
3. Secondary Education grades 7-12, with teacher certification in Biology, Chemistry, English, Earth & Space Science (with a major in Earth and Environmental Sciences), Physics, Spanish, and Social Studies (with a major in History or Political Science).
4. Special Education dual certifications that specify a grade band of pre-kindergarten through eighth grades (PK-8) or seventh through twelfth grades (7-12) (these have replaced the pre-kindergarten through twelfth grade [PK-12] generalist certificate).
NOTE: Special Education Dual Certification (PK-8) is not a stand-alone program; it must be coupled with the major in Elementary and Early Childhood Education or Middle Level Education. On the Secondary level, Special Education Dual Certification (7-12) is not a stand-alone program; it may be added to any one of the nine academic majors with the Secondary Education major or minor.

Students are expected to review and comply with all policies of the Wilkes University Education Teacher Education Program and of the Pennsylvania Department of Education (PDE). Each semester, students should consult with their academic advisor for any changes or considerations. The Education Department maintains specific advising checklists and policy documents to guide students in their respective programs. NOTE: Policies may change or be revised according to new or updated Pennsylvania Department of Education (PDE) regulations.

Teacher Education Program Admission Requirements:

PDE requires that students preparing for teacher certification must be formally admitted to the Teacher Education Program at Wilkes University. Admission criteria for formal admission to the Teacher Education Program include:

- complete 48 semester hour credits, including six credits of Mathematics and six credits of English,
- submit the following current, valid clearances:
 - Act 34 State Police Criminal Record Check [must report 'NO CRIMINAL RECORD IN PA'];
 - ACT 151 Child Abuse History Clearance [must report 'NO RECORD EXIST IN PA DEPARTMENT OF HUMAN SERVICES DATABASE'];
 - Act 114 FBI Fingerprint Check, [must report 'SEARCH OF FINGERPRINTS HAS REVEALED NO PRIOR ARREST']and a
 - completed Act 24 Arrest/Conviction Report and Certification Form.
 - Act 31 - Completed online mandated reporter training (https://www.reportabusepa.pitt.edu/webapps/portal/execute/tabs/tabAction?tab_tab_group_id=_91_1)

NOTE: If there is a criminal infraction on any of these clearances, a field experience placement in a school is unlikely. Therefore, this will result in the student not being able to take the class(es.) Decisions about permitting students to observe or student teach in a school are made by the school district. The University cannot guarantee that persons with entries in their criminal record will be permitted to be assigned to field placements. While State law bars certain offenders from schools, districts often impose more

extreme requirements. The Coordinator of Field Experience Placements, the Coordinator of the Teacher Education Program, and the Education Department Chairperson will consult with the student who has entries on any clearances to determine whether a placement in a school district might be likely or not.

- complete and submit formal the Teacher Education Program Application, personal Philosophy of Education, Disposition Assessment, signed Code of Professionalism and Academic Honesty, and a signed Student Acknowledgement of Grade Point Average (GPA) and Test of Basic Skills (form shown below). This process is completed during [[ED-190]] or upon transfer from another institution. [Here](https://www.education.pa.gov/Educators/Certification/CertTestingRequirements/Pages/default.aspx) is the information from the Pennsylvania Department of Education indicating required scores for all tests of basic skills: <https://www.education.pa.gov/Educators/Certification/CertTestingRequirements/Pages/default.aspx>

Student Acknowledgement of Grade Point Average (GPA) and Test of Basic Skills (TBS) Policy of the Wilkes University Education Department

Students pursuing teacher certification at Wilkes University must comply with the following:

1. Prior to enrolling in:

- [[ED-190]]: Effective Teaching with Field Experience and
- [[ED-191]]: Integrating Technology into the Classroom
 - earn a final course grade of 2.50 in [[ED-180]]: Educational Psychology and
 - achieve an overall Grade Point Average (GPA) of 2.50.-

2. **By the end of the Fall or Spring semester break**, students in [[ED-190]] must complete the online practice Praxis Core for all or any required sections of the test. The practice modules of the Reading, Mathematics, and Writing tests are available at <https://www.longsdalepub.com/courses/praxis/start/index.html> School number: 84332 School Key: praxis core.

3. **By the last week of the semester, students must take an authentic test of basic skills: PAPA or Praxis Core.** To receive course credit, students must submit a copy of the registration form to the [[ED-190]] professor. These forms will be submitted to the Teacher Education Program Coordinator. Students must take the necessary modules of the PAPA test: Reading, Mathematics, and Writing. Registration information is available at <http://www.pa.nesinc.com> [Fee waivers are available; students need to apply at the beginning of the semester to receive waivers, if eligible, in a timely way.]

OR

complete necessary tests of the Praxis Core Academic Skills for Educators (CORE): Reading, Mathematics, and Writing. Registration information is available at www.ets.org/praxis/pa [Fee waivers may be available; students need to apply by the ETS deadlines to receive waivers in a timely way.]*

4. Prior to enrolling in:

- [[ED-220]]: Teaching Culturally and Linguistically Diverse Learners
- [[EDSP-210]]: Teaching Students with Special Needs
- [[ED-263]]: Child Development and Cognition I (15 hours of field experience)
- [[ED-264]]: Child Development and Cognition II (30 hours of field experience)-
- [[EDSP-225]]: Teaching Students with High Incidence Disabilities with field experience (*Cross List* with **EDSP 501**)
 - Students must earn a final course grade of 2.5 in [[ED-180]], [[ED-190]] and [[ED-191]],
 - earn an overall Grade Point Average (GPA) of 2.85,
 - complete an authentic test of basic skills [SAT/ACT or Praxis Core or PAPA].

5. Prior to enrolling in Special Education Dual Certification designated courses,

- [[EDSP-226]]: Teaching Students with Low Incidence Disabilities w/ field experience (*Cross List* with **EDSP 502**)
- [[EDSP-227]]: Behavior Intervention and Support w/field experience (*Cross List* with **EDSP 503**)
 - Students must meet all of the requirements for [[ED-220]], [[ED-263]], [[ED-264]], [[EDSP-210]], and [[EDSP-225]], and
 - Have passing scores in the required modules of a test of basic skills [SAT/ACT or Praxis Core or PAPA].-

6. **Prior to admission to the Teacher Education Program** and to enrolling for any 300-level Education course and/or content methods course, students must:

- Pass all modules of any test of basic skills in Reading, Writing, and Mathematics; students may 'mix and match' qualifying scores from the SAT/ACT and the PAPA and the Praxis Core. (See more info below)
- Earn a 3.0 Grade Point Average (GPA)
- Submit a completed Teacher Education Program Application.

7. **To maintain enrollment in the Teacher Education Program**, students must earn at least a 2.5 in all 200-level and 300-level Education courses; if they do not, they must repeat the course.

NOTE: Transfer students who already have completed [[ED-190]] must comply with #2 and #3 in their first semester at Wilkes.

Information on the Pennsylvania Department of Education Basic Skills Assessment

Basic Skills Assessments – Composite Score Option

- Students may combine reading, writing and mathematics module scores from different test providers to meet the basic skills requirements.
- Students may use the composite score method to meet the requirement when they do well in one or two areas to compensate for a lower score in the other area.
- The composite score is the sum of the passing scores. Use the Composite Score Calculator when mixing tests. Note When using the composite score, each test must meet or exceed the minimum score listed.

IMPORTANT: Detailed information about the Basic Skills Assessments, minimum composite score requirements, SAT/ACT, PAPA and Praxis I scores is available [here](#).

Elementary and Early Childhood Education Major

Total minimum number of credits required for a major in Elementary and Early Childhood Education Leading to the B.A. degree — 124.

Total minimum number of credits required for a major in Elementary and Early Childhood Education leading to the B.A. degree with Dual Special Education Certification - 133

Mission of the Elementary and Early Childhood Program

The mission of the Elementary and Early Childhood Program is to prepare highly effective teachers who have the knowledge, skills, and competencies to prepare PreK-4 students to achieve academic success, and who are prepared to serve a diverse group of children and families in a variety of educational settings.

Wilkes offers an option of a part-time, fully online completion degree pathway within the elementary and early childhood program for transfer students entering with an Associate's degree or at least 55 transferrable credits. This pathway is designed for the working adult to continue their education part time in an online environment and follows the same course sequence as the traditional program.

Elementary and Early Childhood Education is a major leading to pre-kindergarten through fourth grade (PK-4) certification. This program incorporates an 18-credit minor in Reading. Elementary and Early Childhood Education majors take methods of teaching courses in reading, language arts, mathematics, science, social studies, the arts, physical education and health, as well as courses in educational theory and practice, assessment, and classroom management. Students must fulfill all of the following requirements:

1. complete all course work, field experiences, clearances, appropriate tests of basic skills, and student teaching;
2. complete the following General Education Curriculum requirements, which include:
 - First Year Foundations ([[FYF-101]]) – 3 credits,
 - Oral Communications - fulfilled by OPO courses in Education major;
 - English Composition and Literature - 7 credits, completed within the first 48 credit hours as required by the PDE:
 - [[ENG-101]]—Composition (4 cr.)
 - [[ENG-120]]—Introduction to Literature and Culture (3 cr.)
 - Mathematics - 6 credits, completed within first 48 credit hours as required by the PDE
 - [[MTH-101]]—Solving problems Using Mathematics or
 - [[MTH-103]]—Mathematics for Elementary School Teachers I or
 - [[MTH-104]]—Mathematics for Elementary School Teachers II or two higher numbered courses in mathematics
 - Computer Literacy - [[CS-115]] (3 cr.)
 - Foreign Language or Philosophy ([[PHL-101]], [[PHL-110]]) - 3 credits (Foreign Language is highly recommended)
 - History - 3 credits:
 - [[HST-101]]--Historical Foundations of the Modern World
 - additionally [[HST-125]]—American History I (3 credits) is required for certification
 - Science - 6 credits in two different areas and at least one course that includes a laboratory component:
 - [[BIO-105]] or higher --Biology
 - [[EES-105]] or higher --Environmental Sciences
 - [[CHM-105]] or higher-- Chemistry
 - [[PHY-105]] or higher-- Physics
 - Psychology - 3 credits: [[PSY-101]]—General Psychology
 - Social Sciences - 3 credits in one of the following areas:
 - [[ANT-101]] – Introduction to Anthropology
 - [[EC-102]] - Principles of Economics II
 - [[PS-111]] - Introduction to American Politics (highly recommended)
 - [[SOC-101]] - Introduction to Sociology

- Visual and Performing Arts - 3 credits in one of the following areas:
 - [[ART-101]] - Experiencing Art or [[ART-140]] or
 - [[DAN-100]] - Dance Appreciation: Comprehensive Dance Forms or
 - [[MUS-101]] - Introduction to Music I or
 - [[THE-100]] - Approach to Theater
 - [[IM-101]] - Integrated Media Foundations I

3. complete the following Education courses (All courses are 3 credits unless otherwise noted). Students must follow the requirements for all coursework as set forth in the Student Acknowledgement of Grade Point Average (GPA) and Test of Basic Skills (TBS) Policy of the Wilkes University Education Department

- [[ED-190]] - Effective Teaching with Field Experience (40 hours of field experience)
- [[ED-191]] - Integrating Technology into the Classroom (C.I. course).
- [[EDSP-210]] - Teaching Students with Special Needs
- [[ED-220]] - Teaching Culturally and Linguistically Diverse Learners
- [[EDSP-225]] - Teaching Students with High Incidence Disabilities with field experience (*Cross List* with **EDSP 501**)
- [[ED-263]] - Child Development and Cognition I (15 hours of field experience)
- [[ED-264]] - Child Development and Cognition II (30 hours of field experience)

NOTE: Students must meet all the requirements for and be admitted to the Teacher Education Program to proceed to all 300-level Education courses.

- [[ED-310]] - Health, Physical Education, and Safety in Early Childhood and Elementary Education
- [[ED-321]] - Literacy Foundations I (30 hours of field experience;)
- [[ED-322]] - Literacy Foundations II
- [[ED-323]] - Differentiated Reading
- [[ED-324]] - Children's Literature
- [[ED-325]] - Applied Reading Strategies (15 hours of field experience; Prerequisite: [[ED-321]])
- [[ED-330]] - Mathematics in Early Childhood and Elementary Education
- [[ED-341]] - Language Arts in Early Childhood and Elementary Education (OPO course)
- [[ED-344]] - Assessment in Early Childhood and Elementary Education (This course replaces [[EDSP-300]], Assessment in Special Education, for students completing dual certification in PK-4 and Special Education, PK-8.)
- [[ED-345]] - Assessment in Education
- [[ED-350]] - The Arts in Early Childhood and Elementary Education
- [[ED-360]] - Social Studies in Early Childhood and Elementary Education
- [[ED-363]] - School, Family, and Community (This course is not required for students completing dual certification in PK-4 and Special Education, PK-8.)
- [[ED-370]] - Science in Early Childhood and Elementary Education
- [[ED-385]] - Classroom Management
- [[EDSP-388]] - Inclusionary Practices (taken in conjunction with [[ED-390]])
- [[ED-390]] - Student Teaching with Seminar (12 credits; OPO course)

Students should regularly consult with their academic advisors and the Education Department for any changes or considerations. The Education Department maintains specific advising checklists and policy documents to help guide students in their respective programs.

Elementary and Early Childhood Education Major with Dual Special Education Certification in PK-8

The mission of the Dual Special Education Program is to develop competent, caring, and ethical educators who are able to meet the diverse learning needs of all students across a variety of age, grade, and ability levels. The preparation program will facilitate competence in areas of academic, social, and emotional growth, and methods of maximizing a student's capabilities through diagnostic and instructionally adaptive practices.

Students majoring in Elementary and Early Childhood Education and also pursuing dual certification in Special Education PK-8 will complete the following courses in addition to the Elementary and Early Childhood Education program requirements:

- [[ED-180]] - Educational Psychology
- [[EDSP-226]] - Teaching Students with Low Incidence Disabilities w/ field experience (*Cross List* with **EDSP 502**)
- [[EDSP-227]] - Behavior Intervention and Support w/field experience (*Cross List* with **EDSP 503**)
- [[EDSP-300]] - Assessment in Special Education (This course replaces the PK-4 course [[ED-344]] - Assessment in Early Childhood and Elementary Education.)
- [[EDSP-302]] - Secondary Transition in Special Education (*Cross List* with **EDSP 505**)

All EDSP courses, in combination, will substitute for the PK-4 [[ED-363]] -- School, Family, & Community course. Special Education certification candidates will complete half their student teaching in a special education setting and half in a regular education setting

Middle Level Education Major

Total minimum number of credits required for a major in Middle Level Education leading to the B.A. Degree - varied by concentration.

Total minimum number of credits required for a major in Middle Level Education leading to the B.A. degree with Dual Special Education Certification - credits vary according to concentration.

Mission of the Middle Level Education Program

The mission of the Middle Level Education Program is to develop competent, caring, and ethical educators with strong subject matter content preparation and authentic, clinical field experiences. This preparation will address the broad set of issues, knowledge, and competencies that are relevant to middle school teaching and learning in Science, Mathematics, English/Language Arts and Reading, and Social Studies. Equipped with this knowledge and these skills, the teaching candidates will enable their students in grades four through eight to achieve academic success.

Middle Level Education is a major leading to fourth through eighth grade (4-8) certification. Candidates will choose to complete one of the following middle level concentration areas:

- English/Language Arts/Reading
- Mathematics
- Science
- Social Studies
- Mathematics and Science

Middle level education majors take courses in methods of teaching, educational theory and practice, as well as content courses across all four concentrations. All middle level education students must fulfill all of the following requirements:

1. complete all course work, field experiences, clearances, appropriate tests of basic skills, and student teaching;
2. complete the following General Education Curriculum requirements, which include:
 - First Year Foundations ([[FYF-101]]) – 3 credits,
 - Oral Communications - fulfilled by OPO courses in Education major;
 - English Composition and Literature - 7 credits, completed within the first 48 credit hours as required by the PDE:
 - [[ENG-101]]—Composition (4 cr.)
 - [[ENG-120]]—Introduction to Literature and Culture (3 cr.)
 - Mathematics - 6 credits, completed within first 48 credit hours as required by the PDE
 - Computer Literacy - [[CS-115]] (3 cr.)
 - Foreign Language or Philosophy ([[PHL-101]], [[PHL-110]]- 3 credits (Foreign Language is highly recommended)
 - History - 3 credits:
 - [[HST-101]]--Historical Foundations of the Modern World
 - Science - 6 credits in two different areas and at least one course that includes a laboratory component, refer to science requirement for each concentration area
 - Psychology - 3 credits: [[PSY-101]]—General Psychology
 - Social Sciences - 3 credits, refer to Social Science requirement for each concentration area
 - Visual and Performing Arts - 3 credits in one of the following areas:
 - [[ART-101]] - Experiencing Art or [[ART-140]] or
 - [[DAN-100]] - Dance Appreciation: Comprehensive Dance Forms or
 - [[MUS-101]] - Introduction to Music I or
 - [[THE-100]] - Approach to Theater
 - [[IM-101]] - Integrated Media Foundations I
3. complete the following Education courses (All courses are 3 credits unless otherwise noted).

NOTE: Departmental permission is required to register for all courses with field experiences.

- [[ED-180]] - Educational Psychology
- [[ED-190]] - Effective Teaching with Field Experience (40 hours)
- [[ED-191]] - Integrating Technology into the Classroom (C.I. course)
- [[EDSP-210]] - Teaching Students with Special Needs
- [[ED-220]] - Teaching Culturally and Linguistically Diverse Learners
- [[EDSP-225]] - Teaching Students with High Incidence Disabilities with field experience (*Cross List* with **EDSP 501**)

NOTE: Students must meet all the requirements for and be admitted to the Teacher Education Program to proceed to all 300-level Education courses.

- [[ED-326]] - Adolescent Literature (English, Language Arts and Reading Concentration only)
- [[EDSP- 300]] - Assessment in Special Education

- [[ED-345]] - Assessment in Education (this course is replaced by [[EDSP-302]] - Special Education Methods - for students completing the dual certification in Middle Level and Special Education)
- [[ED-375]] - Middle Level and Secondary Education Methods with Field Experience (40 hours; 4 credits)
- [[ED-380]] - Content Area Literacy
- [[EDSP-388]] - Inclusionary Practices (taken in conjunction with [[ED-390]])
- Methods courses as relevant to specialization (40 hours of field experience; 4 credit courses);
 - English concentration - [[ENG-393]];
 - Science concentration - [[ED-371]];
 - Social Science concentration - [[ED-381]];
 - Mathematics concentration - [[MTH-303]];
 - Mathematics and Science concentration - [[MTH-303]] and [[ED-371]]
- [[ED-390]] - Student Teaching with Seminar (12 credits; OPO course)

ENGLISH/LANGUAGE ARTS/READING CONCENTRATION: Candidates will complete all afore-cited General Education, Education and Methods requirements in addition to the following content courses:

- [[ENG-201]] (4 cr.), [[ENG-225]], and three of the following English survey courses: [[ENG-233]], [[ENG-234]], [[ENG-281]] (recommended), [[ENG-282]] (recommended), and [[ENG-324]]
- [[MTH-101]], [[MTH-103]], [[MTH-104]], and [[MTH-150]]
- [[HST-125]]
- [[BIO-105]], [[EES-105]], [[CHM-105]], [[PHY-105]]
- [[PS-111]]

MATHEMATICS CONCENTRATION: Candidates will complete all afore-cited General Education, Education and Methods requirements in addition to the following content courses:

- [[MTH-101]], [[MTH-103]], [[MTH-104]], [[MTH-111]], [[MTH-114]], [[MTH-150]], [[MTH-231]], and [[MTH-343]]
- [[ENG-201]] or [[ENG-202]] and [[ENG-225]]
- [[BIO-105]], [[EES-105]], [[CHM-105]], [[PHY-105]]
- [[HST-125]]
- [[PS-111]]

SCIENCE CONCENTRATION: Candidates will complete all afore-cited General Education, Education and Methods requirements in addition to the following content courses:

- [[BIO-121]], [[BIO-122]], [[BIO-225]]
- [[GEO-211]], [[EES-251]], [[EES-280]]
- [[CHM-105]]
- [[PHY-105]]
- [[ENG-201]] or [[ENG-202]] and [[ENG-225]]
- [[MTH-101]], [[MTH-103]], [[MTH-104]] and [[MTH-150]]
- [[HST-125]]
- [[PS-111]]

SOCIAL STUDIES CONCENTRATION: Candidates will complete all afore-cited General Education, Education and Methods requirements in addition to the following content courses:

- [[HST-102]], [[HST-125]], [[HST-126]], and one 300-level history course
- [[EC-102]] or [[ANT-101]] or [[ANT-102]]
- [[PS-111]]
- [[PS-141]] or [[PS-151]]
- [[SOC-101]]
- [[ENG-201]] or [[ENG-202]] and [[ENG-225]]
- [[MTH-101]], [[MTH-103]], [[MTH-104]] and [[MTH-150]]
- [[BIO-105]], [[EES-105]], [[CHM-105]], and [[PHY-105]]

MATHEMATICS AND SCIENCE CONCENTRATION: Candidates will complete all afore-cited General Education, Education and Methods requirements in addition to the following content courses:

- [[BIO-105]], [[BIO-121]], [[BIO-122]]; [[CHM-105]]; [[PHY-105]]; and [[EES-105]], [[GEO-211]]
- [[MTH-103]], [[MTH-104]], [[MTH-111]], [[MTH-114]], and [[MTH-150]]
- [[ENG-201]] or [[ENG-202]] and [[ENG-225]]
- [[HST-125]]
- [[PS-111]]

Middle Level Education Major with Dual Special Education Certification in PK-12

The mission of the Dual Special Education Program is to develop competent, caring, and ethical educators who are able to meet the diverse learning needs of all students across a variety of age, grade, and ability levels. The preparation program will facilitate competence in areas of academic, social, and emotional growth, and methods of maximizing a student's capabilities through diagnostic and instructionally adaptive practices.

Students majoring in Middle Level Education and also pursuing dual certification in Special Education PK-12 will complete the following courses in addition to the afore-cited Middle Level Education program requirements (not the course substitutions permitted):

- [[EDSP-226]] – Teaching Students with Low Incidence Disabilities with Field Experience (20 hours)(*Cross List* with **EDSP 502**)
- [[EDSP-227]] – Behavior Intervention and Support with Field Experience (20 hours)(*Cross List* with **EDSP 503**)
- [[EDSP-300]] – Assessment in Special Education
- [[EDSP-302]] – Secondary Transition in Special Education (*Cross List* with **EDSP 505**)

Special Education certification candidates will complete half their student teaching in a special education setting and half in a regular education setting.

Secondary Education Programs of Study for the Major and Minor Leading to Secondary Certification

The mission of the Secondary Education Program is to develop competent educators with strong subject matter content preparation and authentic, clinical field experiences. This preparation will address the broad set of issues, knowledge, and competencies that are relevant to secondary school teaching and learning. The majors that can be prepared to teach include: Biology, Chemistry, Earth & Environmental Science, English, Social Studies (via History and Political Science majors), Mathematics, Physics, and Spanish (K-12). The students must complete the major and may add either the Secondary Certification minor or the Secondary Education major. Equipped with this knowledge and these skills, the teaching candidates will enable their students in grades seven through twelve to achieve academic success.

The Wilkes University Department of Education offers programs leading to Pennsylvania Department of Education (PDE) secondary (grades 7 – 12) certification in the following areas: **Biology, Chemistry, Earth and Space Science, English, General Science, Mathematics, Physics; Social Studies, and Spanish (a K-12 certification)**. Admission to Wilkes University is only the first step in gaining acceptance into the Teacher Education Program (TEP). Requirements for admission to the TEP are in compliance with the mandates of PDE. Students may choose to major or minor in Secondary Education; both the major and the minor lead to certification.

Beginning in 2015-2016, students may choose to pursue a major in Secondary Education, but it is important to note that the major in Secondary Education is *not* a stand-alone major. It must be taken in conjunction with one of the nine content area certification majors. English, History, Mathematics, and Spanish are the four content majors at Wilkes University that would readily accommodate the option for students to complete a Secondary Education major within an eight-semester time frame. The other five content majors—Biology, Chemistry, Earth and Environmental Science, Physics, and Political Science—may not readily allow for completion of a major in Secondary Education within an eight-semester time frame. However, students in these five majors may choose to pursue a major in Secondary Education if they are willing to take coursework beyond the eight semesters. Students in all nine majors have the option of pursuing the minor in Secondary Education as well as Dual Certification in Special Education 7-12.

Directives for Gaining Admission to the Teacher Education Program to Pursue Secondary Education Certification

- **Schedule a meeting with Coordinator of the Secondary Education Program:** Students should plan to meet with the Education Department Coordinator of the Secondary Education Program as early as possible in their matriculation at Wilkes to ensure completion of the certification program within four years. At that meeting, students will receive an information packet about their programs of study in their academic major and the Education courses that will lead to certification.
- **Study major area of study and declare the major or minor in Secondary Education:** Students should begin their studies in an academic major related to certification and declare Secondary Education as a major or minor.
- **Fulfill English and Mathematics Requirements:** As required by the PDE, within the first 48 credit hours, students should complete the following courses: English - 7 credits to include [[ENG-101]] (Composition) and [[ENG-120]] (Introduction to Literature and Culture) and Mathematics - 6 credits.
- **Complete ED 180 and earn a final grade of 2.5 or higher:** There is no required GPA for ED 180. A grade of 2.5 in ED 180, as well as an overall GPA of 2.5, is required, however, to enroll in [[ED-190]] and [[ED-191]].
- **Comply with placement requirements and secure proper clearances.**
- **Apply for admission to the Teacher Education Program:** During [[ED-190]], students must begin the application process for admission to the Teacher Education Program. Transfer students who transfer in [[ED-190]] begin this process their first semester.
- **Pass all modules of the Tests of Basic Skills.**
- **Achieve the required GPA:** Students must earn a minimum of 2.5 in [[ED-180]], [[ED-190]], and [[ED-191]] and achieve an overall GPA of 2.85 to enroll in 200-level education. Then, to enter 300-level courses, students must achieve a 3.0 GPA.
- **Register for and pass PRAXIS II and if Dual certification Special Education 7-12 is completed register for PECT Special Education 7-12 Test:** Preferably prior to student teaching or at the conclusion of formal studies in the chosen major field,

or prior to student teaching, students should take the appropriate PRAXIS II examination. This is required for certification in Pennsylvania. Complete information about registration, test dates, study guides is available at <http://www.ets.org/praxis>; the Department also provides guidance, resources, and support.

- **Self-monitor progress:** Students are responsible to monitor their GPAs each semester; students will be dropped from course(s) if required GPA is not achieved or if all three tests of Basic Skills are not passed before enrolling in 300-level courses.

The Secondary Education Major* and Minor

The Secondary Education major and minor consists of the following courses:

- [[ED-180]] - Educational Psychology
- [[ED-190]] - Effective Teaching with Field Experience (40 hours)
- [[ED-191]] - Integrating Technology into the Classroom (C.I. course).
- [[ED-220]] - Teaching Culturally and Linguistically Diverse Learners
- [[EDSP-210]] - Teaching Students with Special Need
- [[EDSP-225]] - Teaching Students with High Incidence Disabilities with field experience (*Cross List with EDSP 501*)

Note: Students must meet all the requirements for and be admitted to the Teacher Education Program to proceed to all 300 level Education courses.

- [[ED-345]] - Assessment in Education (*required for major only)
- [[ED-375]] – Middle Level and Secondary Education Methods with Field Experience (40 hours) (required for major only)
- [[ED-380]] - Content Area Literacy (*not* required for English majors who are only pursuing the minor.)
- ED 3XX (Secondary Methods course in the area of the major degree)
 - These method courses are offered in the fall semester, *except* MTH 303, which is offered *in the fall semester of odd years only*.
 - [[ED-300]] - Teaching of Foreign Languages with Field Experience (40 hours)
 - [[ED-371]] - Teaching Methods in Science with Field Experience (40 hours)
 - [[ED-381]] - Teaching Methods Social Studies with Field Experience (40 hours)
 - [[ENG-393]] - The Teaching of English with Field Experience (40 hours)
 - [[MTH-303]] - The Teaching of Mathematics with Field Experience (40 hours)
- [[EDSP-388]] - Inclusionary Practices (3 credits; co-requisite: ED 390)
- [[ED-390]] - Student Teaching with Seminar (12 credits; OPO course)

Other *recommended* courses for Secondary Education are

- [[PSY-222]] - Adolescent Psychology (required course for some majors)
- A foreign language

Candidates must maintain a 2.0 GPA in their secondary major courses and a cumulative 3.0 to remain in the Teacher Education Program.

SECONDARY EDUCATION CERTIFICATION REQUIREMENTS BY ACADEMIC MAJORS

- **Biology:** Students seeking certification should follow the Bachelor of Arts (B.A.) curriculum in Biology. The B.A. curriculum offers flexibility so that students seeking secondary certification can include the professional semester of student teaching in the

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seventh or eighth semester. Students seeking secondary certification in Biology are required to take the following courses in the major:

- [[BIO-121]] – Principles of Modern Biology I
- [[BIO-122]] - Principles of Modern Biology II
- [[BIO-225]] – Population and Evolutionary Biology
- [[BIO-226]] – Cellular and Molecular Biology
- [[BIO-391]] – Senior Research Project I
- [[BIO-392]] – Senior Research Project II
- [[BIO-397]] – Professional Preparation Techniques
- [[CHM-113]] – Elements and Compounds Lab
- [[CHM-115]] – Elements and Compounds
- [[CHM-114]] – The Chemical Reaction Lab
- [[CHM-116]] – The Chemical Reaction
- [[CHM-231]] – Organic Chemistry I
- [[CHM-233]] – Organic Chemistry I Lab
- [[CHM-232]] – Organic Chemistry II
- [[CHM-234]] – Organic Chemistry II Lab
- [[MTH-111]] – Calculus I
- [[MTH-114]] – Calculus
- [[PHY-171]] – Principles of Classical and Modern Physics
- [[PHY-174]] – Application of Classical and Modern Physics
- Major Electives (12 – 16 credits): One from each of the four areas: Molecular and Cellular; Structural and Functional; Diversity and Populational; and Botanical

In addition, students must take the required Education courses and special methods course ([[ED-371]]) followed by student teaching as listed under Secondary Education Requirements.

- **Chemistry:** Students seeking chemistry certification should follow the Bachelor of Arts (B.A.) curriculum in Chemistry. The B.A. curriculum offers flexibility so that students seeking secondary certification can include the professional semester of student teaching in the seventh or eighth semester. Students seeking secondary certification in Chemistry are required to take the following courses for the major:
 - [[CHM-113]] – Elements and Compounds Lab
 - [[CHM-115]] – Elements and Compounds
 - [[CHM-114]] – The Chemical Reaction Lab
 - [[CHM-116]] – The Chemical Reaction
 - [[CHM-231]] – Organic Chemistry I
 - [[CHM-233]] – Organic Chemistry I Lab
 - [[CHM-232]] – Organic Chemistry II
 - [[CHM-234]] – Organic Chemistry II Lab
 - [[CHM-246]] – Analytical Chemistry Lab
 - [[CHM-248]] – Analytical Chemistry
 - [[CHM-322]] – Advanced Inorganic Chemistry
 - [[CHM-323]] - Inorganic Chemistry Lab
 - [[CHM-341]] – Instrumental Methods for Chemical Analysis
 - [[CHM-343]] – Instrumental Methods for Chemical Analysis Lab
 - [[CHM-355]] – Physical Chemistry for Life Science
 - [[CHM-357]] – Physical Chemistry for Life Science Lab
 - [[CHM-365]] – Medical Biochemistry
 - [[CHM-370]]/371/372 (one credit total required)
 - [[CHM-390]] – Junior Seminar
 - [[CHM-391]] – Senior Research I (OPO)
 - [[CHM-392]] – Senior Research II (OPO)
 - [[CS-125]] – Computer Science I
 - [[MTH-111]] – Calculus I
 - [[MTH-112]] – Calculus II
 - [[MTH-212]] – Multivariable Calculus
 - [[PHY-201/203]] – General Physics I
 - [[PHY-202/204]] – General Physics II
 - Major Electives (six credits required)

In addition, students must take the required Education courses and special methods course ([[ED-371]]) followed by student teaching as listed under Secondary Education Requirements.

- **Earth and Space Science or General Science:** Students seeking Earth and Space Science certification should follow the Bachelor of Arts (B.A.) curriculum in Earth and Environmental Sciences. This curriculum emphasizes human interactions with the earth and environmental sciences while still requiring an extensive background in the sciences. The B.A. curriculum offers flexibility so that students seeking secondary certification can include the professional semester of student teaching in the seventh or eighth semester. Required science courses for the Earth and Space Science certification include the following courses for the major:

- [[CHM-113]] – Elements and Compounds Lab
- [[CHM-115]] – Elements and Compounds
- CS Elective
- [[EES-210]] – Global Climatic Change
- [[GEO-211]] – Physical Geology
- [[GEO-212]] – Historical Geology
- [[GEO-213]] – Physical Geology Lab
- [[EES-230]] – Ocean Science
- [[EES-240]] – Principles of Environmental Science
- [[EES-241]] – Principles of Environmental Science Lab
- [[EES-251]] – Synoptic Meteorology
- [[EES-280]] – Principles of Astronomy
- [[EES-302]] – Literature Methods
- [[EES-304]] – Environmental Data Analysis
- [[EES-394]] – Field Study
- [[EES-391]] – Senior Projects I
- [[EES-392]] – Senior Projects II
- EES Elective:
 - [[GIS-271]] – Environmental Mapping I
 - [[GIS-272]] – Environmental Mapping II
 - [[MTH-150]] – Elementary Statistics
 - [[PHY-171]] – Principles of Classical and Modern Physics
 - [[PHY-174]] – Applications of Classical and Modern Physics

Optional course work for General Science certification

- [[BIO-121]] – Principles of Modern Biology I
- [[BIO-122]] – Principles of Modern Biology II or
- [[BIO-225]] – Population and Evolutionary Biology
- [[CHM-114]] – The Chemical Reaction Lab
- [[CHM-116]] – The Chemical Reaction

In addition, students must take the required Education courses and special methods course ([[ED-371]]) followed by student teaching as listed under Secondary Education Requirements.

- **English:** The B.A. curriculum offers flexibility so that students seeking secondary certification can include the professional semester of student teaching in the seventh or eighth semester. Students seeking secondary certification in English are required to take the following courses for the major:
 - [[ENG-101]] – Composition
 - [[ENG-120]] – Introduction to Literature and Culture
 - [[ENG-201]] – Writing about Literature and Culture
 - [[ENG-225]] – Comparative Grammar
 - [[ENG-324]] – History of the English Language
 - Three of four survey courses (it is recommended that students seeking certification take all four survey courses):
 - [[ENG-233]] – Survey of English Literature I
 - [[ENG-234]] – Survey of English Literature II
 - [[ENG-281]] – Survey of American Literature I
 - [[ENG-282]] – Survey of American Literature II
 - 12 credit hours in English courses at the 300-level, including [[ENG-397]] – Seminar

In addition, students must take courses in the following areas: major authors, period or movement, and genre and the required Education courses and [[ENG-393]]

- **Mathematics:** Students seeking Mathematics certification should follow the Teacher Certification Track and elect to pursue a Bachelor of Arts (B.A.) or Bachelor of Science (B.S.) degree. The curriculum for either offers flexibility so that students seeking secondary certification can include the professional semester of student teaching in the seventh or eighth semester. The

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requirements for each degree are found in this bulletin under the section for the Department of Mathematics and Computer Science. Students seeking certification in Mathematics must take the following courses for the major:

- [[CS-125]] – Computer Science I
- [[MTH-111]] – Calculus I
- [[MTH-112]] – Calculus II
- [[MTH-212]] – Multivariable Calculus
- [[MTH-214]] – Linear Algebra
- [[MTH-231]] - Discrete Mathematics
- [[MTH-302]] - Introduction to Higher Mathematics
- [[MTH-311]] – Real Analysis
- [[MTH-331]] – Introduction to Abstract Algebra I
- [[MTH-343]] – Introduction to Geometry
- [[MTH-351]] – Probability and Mathematical Statistics I
- [[MTH-391]] – Senior Seminar
- [[PSY-101]] – General Psychology
- Mathematics Electives: nine credits for B.A.; twelve credits for B.S.
- Science Electives: six credits for B.A.; twelve credits for B.S.

In addition, students must take [[PSY-101]] (General Psychology) and the required Education courses and special methods course ([[MTH-303]], offered in odd years only) followed by student teaching as listed under Secondary Education Requirements.

Physics: The B.A. curriculum offers flexibility so that students seeking secondary certification can include the professional semester of student teaching in the seventh or eighth semester. Students seeking secondary certification in Physics are required to take the following courses for the major:

- [[PHY-201]]– General Physics I ~ PHY 204 General Physics I lab
- [[PHY-202]]– General Physics II ~ PHY 205 General Physics II lab
- [[PHY-203]]–General Physics III ~ PHY 206 Modern Physics lab
- [[PHY-311]]–Thermodynamics
- [[PHY-312]]–Analytical Mechanics
- [[PHY-314]]–Quantum Mechanics
- [[PHY-391]]–Senior Projects I
- [[PHY-392]]–Senior Projects II
- [[MTH-111]] – Calculus I
- [[MTH-112]] – Calculus II
- [[MTH-211]]–Differential Equations
- [[MTH-212]] – Multivariable Calculus
- [[EE-337]]– Electromagnetics I
- [[EE-140]]– Scientific Programming or [[CS-125]]
- [[CHM-113]] – Elements and Compounds Lab
- [[CHM-115]] – Elements and Compounds

Social Studies: Students seeking Social Studies certification will major in either History or Political Science. The B.A. curriculum offers flexibility so that students seeking secondary certification can include the professional semester of student teaching in the seventh or eighth semester.

Students pursuing a History major and seeking secondary certification in Social Studies are required to take the following courses for the major:

- [[HST-102]] – Europe Before 1600
- [[HST-125]] – American History I
- [[HST-126]] – American History II
- [[HST-297]] – Historical Research and Methods
- [[HST-397]] – Seminar
- History Electives: 15 credits at the 300-level with the following distribution: two courses in American topics; two courses in non-American topics; and one course any topic.

The following courses are also required of History majors for Social Studies Certification:

- [[ANT-101]] – Introduction to Anthropology or [[ANT-102]] – Cultural Anthropology
- [[EC-101]] – Principles of Economics or [[EC-102]] – Principles of Economics II
- [[PS-111]] – Introduction to American Politics
- [[PS-141]] – • PS-141 – Introduction to International Politics
- [[PSY-101]] – General Psychology
- [[PSY-222]] – Adolescent Psychology or [[PSY-221]] – Developmental Psychology

- [[SOC-101]] – Introduction to Sociology
- Mathematics – six credits ([[MTH-150]] – Elementary Statistics—is highly recommended)

In addition, students must take the required Education courses and special methods course (ED 381) followed by student teaching as listed under Secondary Education Requirements.

Students pursuing a Political Science major and seeking secondary certification in Social Studies are required to take the following courses for the major:

- [[PS-111]] – Introduction to American Politics
- [[PS-141]] – Introduction to International Politics
- [[PS-151]] – Governments of the World
- [[PS-260]] – Introduction to Political Thinking
- [[PS-265]] – Quantitative Reasoning for the Social Sciences
- [[PS-380]] – Political Science Senior Project
- Major Electives: 21 credits (nine credits must be at the 300-level)

The following courses are also required of Political Science majors for Social Studies Certification:

- [[ANT-101]] – Introduction to Anthropology or [[ANT-102]] – Cultural Anthropology
- [[EC-101]] – Principles of Economics or [[EC-102]] – Principles of Economics II
- [[HST-125]] – American History I
- [[HST-126]] – American History II
- [[PSY-101]] – General Psychology
- [[PSY-222]] – Adolescent Psychology or [[PSY-221]] – Developmental Psychology
- [[SOC-101]] – Introduction to Sociology
- Mathematics – six credits ([[MTH-150]] – Elementary Statistics—is highly recommended)

In addition, students must take the required Education courses and special methods course (ED 381) followed by student teaching as listed under Secondary Education Requirements.

Spanish: The B.A. curriculum offers flexibility so that students seeking PK-12 certification can include the professional semester of student teaching in the seventh or eighth semester. Students seeking PK-12 certification in Spanish must take the following courses for the major:

- [[SP-101]] – Elementary Spanish I
- [[SP-102]] – Elementary Spanish II
- [[SP-203]] – Intermediate Spanish I
- [[SP-204]] – Intermediate Spanish II
- [[SP-205]] – Conversation
- [[SP-206]] – Advanced Grammar, Stylistics, and Composition
- [[SP-208]] – Culture and Civilization of Spain
- [[SP-209]] – Cultures and Civilization of Latin America
- [[SP-220]] – Listening and Comprehension
- [[SP-298]] – Topics
- [[SP-301]] – Introduction to Latin American Literature
- [[SP-307]] – Survey of Spanish Literature I or [[SP-308]] – Survey of Spanish Literature II
- [[SP-398]] – Adv. Conversation through Literacy Texts
- [[SP-398]] – Mapp Hisp. Women Writing (WGS/HRS)
- [[ED-390]] – Spanish Capstone
- [[ANT-102]] – Cultural Anthropology
- [[PSY-221]] – Developmental Psychology

In addition, students must take the required Education courses and special methods course ([[ED-300]]) followed by student teaching as listed under Secondary Education Requirements.

Special Education Major

This major will prepare you to teach students with special needs from Birth - 21 years of age.

Mission

The mission of the Special Education Major is to develop competent, caring, and ethical educators who are able to meet the diverse learning needs of all students across a variety of age, grade, and ability levels. The preparation program will facilitate competence in areas of academic, social, and emotional growth, and methods of maximizing a student's capabilities through diagnostic and instructionally adaptive practices.

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A Special Education major leads to certification in Special Education (PK-12) with an embedded minor in Reading Education. Special Education majors will have experiences working with students with a variety of learning differences and ages and in a variety of settings.

Total minimum number of credits required for a major in Special Education degree – 124.

PK-12 Special Education Major

- [[FYF-101]] - First-Year Foundations
- [[PSY-101]] - PSY 101 General Psychology
- [[HST-101]] - Historical Foundations of the Modern World
- [[ENG-101]] – Composition
- [[ED-180]] - Educational Psychology
- AREA II (no lab)
- [[ED-190]] - Effective Teaching
- [[ED-191]] - Integrating Technology
- AREA IV
- AREA III
- AREA II W/Lab
- [[EDSP-210]] - Intro.to Spec Needs
- [[ENG-120]] - Introduction to Literature and Culture
- [[MTH-103]] - Mathematics for Elementary School Teachers I
- [[ED/EDSP-263]] – Child Development and Cognition I
- [[HST-125]] -American History I
- [[EDSP 225]] - Teaching Students with High Incidence Disabilities with field experience (*Cross List with EDSP 501*)
- [[MTH-104]] - Mathematics for Elementary School Teachers II
- [[ED-220]] Teaching Culturally and Linguistically Diverse Learners
- [[CS-115]] - Computers and Applications
- AREA I
- [[EDSP-310]] - Health, PE, Safe
- [[EDSP-301]] -Infants, Todd, Child. w/sp needs
- [[ED-321]] - Lit Found I
- [[ED-325]] - Reading Strategies
- [[ED-324]] - Child & Adol. Lit.
- [[ED-322]] - Lit Found II
- [[EDSP 300]] - Sp.Ed Assess and Eval
- [[ED-341]] - Language Arts in Early Childhood and Elementary Education
- [[ED-323]] - Diff. Read. Methods
- [[ED-363]] - Fam., School & Comm
- [[EDSP-226]] -Teaching Students with Low Incidence Disabilities w/ field experience (*Cross List with EDSP 502*)
- [[EDSP-302]] - Sec. Sp. Ed Transition (*Cross-listed with EDSP 505*)
- [[EDSP-319]] - Principles of Law/Sp. Ed. Law(*Cross-listed with ED 519*)
- [[ED-380]] - Content Area Literacy
- [[EDSP-227]] - Behavior Intervention and Support w/field experience (*Cross List with EDSP 503*)
- [[EDSP-388]] - Inclusionary Practices
- [[ED-390]] - Student Teaching with Seminar **40

Teacher Education Program Requirements for Student Teaching for All Majors and Minors:

1. Successful completion of the requirements for TEP Admission and Retention;
2. Achievement of the major and minor GPA requirements;
3. Attendance at the Student Teaching Placement Meeting in the semester prior to student teaching;
4. Completion of all required paperwork obtained at the Student Teaching Placement Meeting in the semester prior to student teaching;
5. Submission of all clearances with no offenses;
6. Completion of all required course work and fieldwork, with the exception of ED 390: Student Teaching and EDSP 388: Inclusionary Practice;
7. Registration form with advisor's signature for PK-4 and Middle Level Education majors; or
8. For Secondary Education majors or minors, approval of student teaching eligibility by the major content area academic department chair and advisor, the Education Department, and the Teacher Education Committee.

NOTE: Student teaching placement is contingent upon availability of supervisors and decisions of school administrators. Students may not student teach in a school from which they have graduated. Students are expected to reside within driving distance from Wilkes University when completing the student teaching semester. Students should not plan to work while student teaching.

Teacher Education Program Requirements for Graduation and Certification

1. Meet the major and minor GPA requirements;
2. Complete all Wilkes University and TEP requirements;
3. Successfully complete Student Teaching, including satisfactory scores on each category of the Pennsylvania Statewide Evaluation Form for Student Professional Knowledge and Practice (PDE 430);
4. Provide evidence of passing scores on all relevant PRAXIS II tests or PECT (PA Educator Certification Tests) for the appropriate area or subjects. NOTE: A student may graduate without passing all PRAXIS II tests or PECT, but cannot obtain PDE certification;
5. Complete the Wilkes University application for graduation, which is provided by the University Registrar;
6. Review and complete the graduation audit with academic advisor and submit documentation to Student Services;
7. Submit PDE Application online via TIMS (Teacher Information Management System).

NOTE: Program Requirements may change at the discretion of the Pennsylvania Department of Education.

Information about the Exit Tests Required for Specific Certification Areas

PRAXIS II or PECT tests should be taken prior to student teaching and/or at the conclusion of studies in student's major field. Educational Testing Service (ETS) schedules administration of PRAXIS II tests at intervals throughout the year. Refer to www.ets.org/praxis for specific dates, locations, and times. Pearson administers PECT tests for Special Education and PreK-4; information about specific dates, locations, and times is available at <http://www.pa.nesinc.com>.

Major	Test(s)	Required for	Passing Score
Secondary Education Certification (7-12) Praxis II			
Biology	Biology 7-12 Biology: Content Knowledge (5235)	Certification in Biology 7-12	147
Chemistry	Chemistry 7-12 Chemistry: Content Knowledge (5245)	Certification in Chemistry 7-12	154
Earth & Space Science	Earth and Space Science 7-12 Earth and Space Sciences: Content Knowledge (5571)	Certification in Earth & Space Science 7-12	157
General Science	General Science 7-12 General Science: Content Knowledge (5435)	Certification in General Science 7-12	146
English	English 7-12 English Language Arts: Content Knowledge (5038)	Certification in English 7-12	167
History	Social Studies 7-12 Social Studies: Content Knowledge (5081)	Certification in Social Studies 7-12	157
Political Science	Social Studies: Content Knowledge (0081 or 5081)	Certification in Social Studies 7-12	157
Mathematics	Mathematics 7-12 Mathematics: Content Knowledge (5161)	Certification in Mathematics 7-12	160
Physics	Physics 7-12 Physics: Content Knowledge (5265)	Certification in Physics 7-12	140
Spanish	Spanish P-12 Spanish: World Language (5195) and Fundamental Subjects: Content Knowledge (0511/5511)	Certification in Spanish PK-12	168 World Lang. & 150 Fundamental Subjects
Spanish	Spanish PK-12 ACTFL OPI/OPIc/ProFluent+ and WPT: World Languages Intermediate High	Certification in Spanish PK-12	LTI
PA Grades 4-8 Middle Level: Modules 1, 2, 3, and Concentration Tests required for certification			
Middle Level	PA Grades 4-8: Module 1- Pedagogy (5153)	Certification in Middle Level	162

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Middle Level	PA Grades 4-8: Module 2- English Language Arts & Social Studies (5154)	Certification in Middle Level	152
Middle Level	PA Grades 4-8: Module 3- Mathematics & Science (5155)	Certification in Middle Level	164
Middle Level	English PA Grades 4-8: Subject Concentration - English Lang.Arts (5156)	Certification in Middle Level: English & Lang. Arts	156
Middle Level	Science PA Grades 4-8: Subject Concentration - Science (5159)	Certification in Middle Level: Science	156
Middle Level	Social Studies PA Grades 4-8: Subject Concentration - Social Studies (5157)	Certification in Middle Level: Social Studies	150
Middle Level	Mathematics A Grades 4-8: Subject Concentration - Mathematics (5158)	Certification in Middle Level Mathematics	173

Elementary and Early Childhood			
Grades PreK-4: Modules 1, 2, 3 required for certification (Pearson http://www.pa.nesinc.com)			
Grades 5-6 Add on Modules to PK-4 (ETS www.ets.org/praxis)			
Elem and Early Childhood	Pre-K-4 Module 1: Child Dev, Assessment, Professionalism (8006)	PreK-8 Certification	197
Elem and Early Childhood	Pre-K-4 Module 2: Lang, Social Stud, Arts (8007)	PreK-8 Certification	193
Elem and Early Childhood	Pre-K-4 Module 3: Math, Science, Health (8008)	PreK-8 Certification	193
Elem and Early Childhood	PA Grades 4-8: Module 2- English Language Arts & Social Studies (5154)	PreK-8 Certification	152
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Elem and Early Childhood			
Special Education Certification Tests (PECT http://www.pa.nesinc.com)			
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DEPARTMENT OF ELECTRICAL ENGINEERING AND PHYSICS

Department of Electrical Engineering and Physics

Chairperson: Mr. Robert R. Taylor

Faculty

Professors: Srinivasan

Associate Professors: Harms, Lucent, Nazzal, Sabouni

Assistant Professors: Du, Sha

Faculty Emeriti: Placek

Staff: Saporito, Stapleton

Mission

Our Mission is to mentor the engineering leaders of the future by

- establishing a solid foundation in Science and Mathematics
- intensive development in problem analysis and design in Electrical Engineering
- fostering of students into professionals through internships for Industry or through undergraduate research experiences for Graduate School, both of which improve communication and teamwork skills and introduce life-long learning
- enhancing an awareness of Ethics and Social Responsibilities as consequences of our actions

Electrical Engineering

Total minimum number of credits required for a Bachelor of Science Degree in Electrical Engineering – 130.

Total minimum number of credits required for a minor in Computer Engineering –19-21

Engineering is a creative profession in which technological problems are met within the framework of scientific possibilities, economic constraints, and cultural preferences. The four-year Bachelor of Science degree program in Electrical Engineering (EE) is dedicated to the principle of preparing its students for industry and graduate study with the expectation of eventual leadership responsibilities. It provides the knowledge and investigative skills, both theoretical and experimental, to responsibly address professional and societal needs through modern curricula, hands-on experience, and a personalized academic environment. Students are encouraged to be well-prepared in the sciences and mathematics. To that end, its faculty and facilities focus on an emphasis of design and industrial experience, student-faculty-industry cooperative projects, teamwork, the adoption of new technologies, and the hands-on student utilization of laboratories and computing systems.

The EE program is designed to achieve a balance among the major areas of Communication Systems, Microelectronics, and Computer Systems. The student may choose to specialize within the EE program in any of the following areas: Communication and Information Systems; Microcontroller Based System Design; Embedded Computing Systems; and Design and Fabrication of Microelectronic Devices and Circuits.

The Electrical Engineering program maintains professional accreditation by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012; Telephone: (410) 347-7700).

Our program objectives are encompassed in the mission statement above. Our program educational outcomes are to have the:

1. Ability to apply knowledge of mathematics, science, and engineering.
2. Ability to design and conduct experiments and to analyze and interpret data.
3. Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health, safety, manufacturability, and sustainability.
4. Ability to function on multi-disciplinary teams.
5. Ability to identify, formulate, and solve engineering problems.
6. Understanding of professional and ethical responsibility.
7. Ability to communicate effectively.
8. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
9. Recognition of the need and ability to engage in life-long learning.
10. Knowledge of contemporary issues.
11. Ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

A description of individual course outcomes and updated program educational objectives and outcomes is available in the Department office and on the [Department Website](#).

DEPARTMENT OF ELECTRICAL ENGINEERING AND PHYSICS

A Master of Science degree in Electrical Engineering (MSEE) and a Master of Science degree in Bioengineering (MSBEGR) are also available. These degree programs are described in the Graduate Bulletin. Engineering students may also elect to complete a minor in Computer Engineering and/or Physics.

Honors in Electrical Engineering

Upon the recommendation and approval of the faculty of the Electrical Engineering and Physics Department, an honor student in Electrical Engineering will be recognized upon completion of the following requirements:

- achievement of an overall GPA of 3.25 or better;
- receipt of grades of 3.00 or better in all engineering courses of his or her field of study;
- pursuit of independent research or special projects in engineering; and
- presentation of research results or special project at meetings, conferences, or through the publication of a paper.

The distinction "Honors in Electrical Engineering" will be recorded on the student's transcript upon graduation.

Student Activities

Professional societies in which students participate include the Institute of Electrical and Electronic Engineers (IEEE), the Society of Women Engineers (SWE), the Pennsylvania Society of Professional Engineers (PSPE), and the Engineering Student Activities Council (ESAC). Students also participate in various on-campus activities and design competitions.

Transfer Credit Policy

No credits will be transferred to Wilkes University unless prerequisites of Wilkes University courses have been satisfied. Transfer credits must follow the proper course sequence as specified in the Wilkes University bulletin. For transfer credits to be awarded the required prerequisite(s) must be satisfied during the first year at Wilkes University.

Cooperative Education

An important feature of the electrical engineering program is the Cooperative Education experience, a valuable option usually scheduled between the junior and senior years. An internship is strongly encouraged through summers and senior year even if it isn't taken for credit. Participants derive three advantages from a co-op experience: a determination of how they wish to fill their elective courses during the senior year; an enhanced ability to conduct a job search; and a greater recognition that career opportunities may be stimulating and fulfilling as well as financially rewarding. The Cooperative Education opportunity provides a natural extension of the college experience. The co-op option for credit can only be taken one time for either 3 or 6 credits as described below:

1. The requirements for the **6 credit hours** co-op are as follows:
 - a) The co-op project should distinctly demonstrate an **engineering design & analysis component**.
 - b) The student, working with his or her manager, should submit **weekly** project reports to the faculty advisor.
 - c) The working hours should not be less than **20** hours per week and the total **300** hours should spread out at least 10 weeks.
 - d) The student should make a **15 minute** final oral presentation to a general audience.
 - e) The student should submit a final project report of approximately **25 pages** (double-spaced) for the body of the report with no limit on details to be included in an appendix. The final report should include at least the background of the company, project background, technical work, and project reflection.
2. The requirements for the **3 credit hours** co-op are as follows:
 - a) The co-op project should distinctly demonstrate an **engineering component**.
 - b) The student, working with his or her manager, should submit **bi-weekly** project reports to the faculty advisor.
 - c) The working hours should not be less than **10** hours per week and the total **150** hours should spread out at least 10 weeks.
 - d) The student should make a **10 minute** final oral presentation to a general audience.
 - e) The student should submit a final project report of approximately **15 pages** (double-spaced) for the body of the report with no limit on details to be included in an appendix. The final report should include at least the background of the company, project background, technical work, and project reflection.

DEPARTMENT OF ENGLISH

English Department

Chairperson: Dr. Mischelle Anthony

Faculty

Professors: Kuhar

Associate Professors: Anthony, Davis, Hamill, Kelly, Stanley

Faculty Emeriti: Fiester, R. Heaman, Karpinich

DEPARTMENT OF ENVIRONMENTAL ENGINEERING AND EARTH SCIENCES

Department of Environmental Engineering and Earth Sciences

Chairperson: Dr. Marleen Troy

Faculty

Professors: Murthy, Troy, Whitman

Associate Professors: Frederick

Assistant Professor: Finkenbinder, Karimi, Karnae

Lecturers: Kaster, McMonagle

Laboratory Manager: McMonagle

Office Assistant: Garrison

The Department of Environmental Engineering and Earth Sciences (EEES) offers the following degree programs: the B.S. in Civil Engineering, the B.S. in Environmental Engineering; the B.S. in Environmental Science; the B.S. in Geology; and the B.A. in Earth and Environmental Science. EEES envisions future accreditation of the Civil Engineering program by EAC-ABET. The Environmental Engineering program is accredited by the EAC-ABET. The engineering programs incorporate a strong background in the fundamentals of engineering with a blend of science and advanced engineering courses. The Environmental Science program combines a foundation in the related sciences and primary earth reservoirs (water, land, air, and life) with concentrations in either Earth Science or Biology. The Geology program provides a comprehensive curriculum that includes the fundamentals of geology with courses responsive to the needs of industrial employment sectors. The Geology program meets the academic requirements for Pennsylvania State professional licensure.

All EEES programs emphasize the value of integrative learning in the classroom, laboratory and field. Modern laboratories are well-equipped to support a wide range of courses and research experiences. Easy access to exceptional off-campus sites provides training in field methods that augment the curricula. A dedicated computer laboratory for geospatial technology (Geographic Information System, Global Positioning System, Remote Sensing) supports all EEES programs and research/project activities in the science and engineering fields.

Civil Engineering

Total minimum number of credits required for a major in Civil Engineering leading to the B.S. degree – 128.

Environmental Science

Total minimum number of credits required for a major in Environmental Science leading to the B.S. degree – 126

Total minimum number of credits required for a major in Earth and Environmental Science leading to the B.A. degree with Secondary Teaching Certification in Earth and Space Science – 129

Environmental Engineering

Total minimum number of credits required for a major in Environmental Engineering Leading to the B.S. Degree - 130

Geographic Information Science (GIScience)

Certificate

Total minimum number of credits required for a certificate - Introductory Track -15

Total minimum number of credits required for a certificate - Advanced Track -15

Geology

Total minimum number of credits required for a major in Geology leading to the B.S. degree -122

Minors

Total minimum number of credits required for a minor in Earth and Environmental Science -18

Total minimum number of credits required for a minor in Geology -18

Total minimum number of credits required for a minor in Sustainability Management - 18

DEPARTMENT OF FINANCE, ACCOUNTING AND MANAGEMENT

Department of Finance, Accounting and Management

Chairperson: Dr. Ruth Hughes

Faculty

Professors: Rexer, Taylor

Associate Professors: Chisarick, Frear, Hughes, Matus, Wang

Assistant Professors: Bui, Kim, Muszynski

Faculty of Practice: Ghai, Pyke

Faculty Emeriti: Raspen, Liuzzo

Director of Graduate Programs: Dr. Marianne Rexer

Director of Personal & Professional Development Programming: Bridget Turel

- [Accounting](#)
- [Financial Investments](#)
- [Corporate Finance](#)
- [Management](#)
- [Business Analytics Minor](#)
- [Supply Chain Management Minor](#)

DEPARTMENT OF INTEGRATIVE MEDIA, ART AND DESIGN

Department of Integrative Media, Art and Design

Credit Requirements

Total minimum number of credits required for a major in Digital Design + Media Art leading to the B.F.A. or B.A. degree -122

Total minimum number of credits required for a minor in Digital Design + Media Art - 21

Total minimum number of credits required for a minor in Studio Art - 18

Total minimum number of credits required for a minor in Art History - 18

Digital Design and Media Art Major

The transformation and convergence of media, information, technology, art, culture, business, and entertainment has created a global growth market that is reorienting the ways in which we learn about ourselves and others, conduct business, express ourselves, and play.

Wilkes University requires a minimum of 122 credit hours for a B.F.A. and B.A. degree in Digital Design + Media Art. These include completion of the General Education Requirements and 40 credit hours of Integrative Media Core courses. The B.A. also requires the completion of a minor in one of the following cognate disciplines: Art; Business Administration; Communication Studies; Computer Science; English; Entrepreneurship; Marketing; Theatre Arts (Acting and Directing); or Theatre Arts (Theatre Design).

The B.F.A. requires the General Education Requirements and 40 credit hours of Integrative Media Core courses. Also, the cognate minor in art and 21 credit-hours of art- or design-based electives, plus two alternate DDMA core courses as defined. A minimum of 2 art history courses are also included in the requirement totaling to 65% of courses taken in the topics of art and design.

The Digital Design + Media Art major uses integrated product development as a conceptual framework. Simulating real working environments, students will come together to work in teams, combining various skills to fill core positions including production manager, producer, director, art director, editor, motion designer, writer, interactive guru, coder, animator, f/x artist, etc., as in a production studio. Students will develop a significant portfolio to present to prospective employers within deadline-oriented, high-end studio environments as in feature film, broadcast, interactive, government, corporate, and independent production companies.

The Integrative Media major core curriculum consists of at least 40 credits hours of study comprising the following courses:

[[ART-111]]	Fundamentals of Color and Design	3 cr
[[BA-153]]	Management Foundations I	3 cr
[[CS-125]]	Computer Science I	4 cr.
[[COM-102]]	Principles of Communication	3 cr
[[ENG-202]]	Technical & Professional Writing	3 cr
[[ENT-203]]	Opportunity Identification: Creativity, & Innovation	3 cr
[[IM-101]]	Integrative Media Foundations I	3 cr
[[IM-201]]	Integrative Media Foundations II	3 cr
[[IM-301]]	Principles of Motion and Layering	3 cr
[[IM-302]]	Integrative Media Principles of Interactivity	3 cr
[[IM-320]]	Integrative Media Concept Development & Processes	3 cr
[[IM-391]]	Integrative Media Project I*	3 cr
[[IM-392]]	Integrative Media Project II*	3 cr
[[IM-399]]	Cooperative Education	1-6 cr.
[[IM-400]]	Integrative Media Portfolio Capstone*	3 cr

*Each of these courses must be completed with a minimum final grade of 2.5 in order to meet degree requirements.

Cognate Minors

Students majoring in Digital Design + Media Art are required to complete a minor in a cognate discipline (Art, Business Administration, Communication Studies, Computer Science, English, Entrepreneurship, Game and Emergent Technology, Marketing, or Theatre Arts – Acting and Directing, or Theatre Arts – Theatre Design). This minor area of study provides for each

DEPARTMENT OF INTEGRATIVE MEDIA, ART AND DESIGN

student a specialized skill concentration within the Digital Design + Media Art program experiences. Students will be continually asked to use the knowledge and skills from their cognate minor discipline within the Integrative media project team structure. To the extent possible, courses in each cognate minor have been selected to augment the Digital Design + Media Art major program.

Students interested in pursuing a double major should consult carefully with their academic advisor. Also, available for experience is involvement in Studio 20. This student operated production club works with non-profit, start-up, and internal Wilkes clients to produce a variety of creative content in a real-world production setting.

DEPARTMENT OF MARKETING, SPORTS MANAGEMENT, AND HOSPITALITY LEADERSHIP

Department of Marketing, Sports Management and Hospitality Leadership

Chairpersons: Dr. Woojun Lee

Faculty

Associate Professors: Xiao

Assistant Professors: Lee, Lee, Ma, Tessema, Turner

Faculty Emeriti: Alves, Batory, Liuzzo, Raspen

Interim Director of Allan P. Kirby Center: Charles Pierce

Director of Graduate Programs: Dr. Marianne Rexer

Director of ABBA: Dr. Marianne Rexer

Director of SBDC: Dorothy Lane

Director of Personal & Professional Development Programming: Bridget Turel

- [Marketing Major](#)
- [Marketing Minor](#)
- [Entrepreneurship Minor](#)
- [Leadership Minor](#)
- [Sports Management Major](#)
- [Sports Management Minor](#)
- [Hospitality Leadership Major](#)
- [Hospitality Leadership Minor](#)
- [Personal Professional Development](#)

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Department of Mathematics and Computer Science

Co-Chairpersons: Dr. Barbara A. Bracken and Dr. John Harrison

Faculty

Professors: Koch, Kong

Associate Professors: Bracken, Harrison, Kapolka, Lew, Sullivan

Assistant Professor: Sullivan, Young, Chepushtanova, Luo

Faculty of Practice: Gapinski, Pryor

Faculty Emeriti: Merrill, Tillman, Wong, Berard

DEPARTMENT OF MECHANICAL ENGINEERING & ENGINEERING MANAGEMENT

Department of Mechanical Engineering & Engineering Management

Chairperson: Dr. Henry Castejon

Faculty

Professors: Castejon, Ghorieshi, Kalim, Razavi

Associate Professors: Bednarz, Zhu

Assistant Professors: Baddour, Ghamari, Mu

Faculty of Practice: Greiner

Office Assistant: Colavitti

Mission

Our mission is to enable the professional development of students' abilities for analysis, design, and innovation. Our department emphasizes engineering as a creative, hands-on profession. Teamwork, ethics, and communication permeate the educational experience to enhance the graduate's technical problem solving ability. Wilkes Engineering graduates will possess the vision, confidence, and will to pursue and assume increasing responsibilities in engineering and leadership within a global context.

Vision

Our vision is to be recognized as one of the finest engineering programs in Pennsylvania.

Values

We foster the values of Wilkes University: mentorship, scholarship, diversity, innovation, and community. Our unique contribution as an engineering department is that we advance the university values in practical ways, specifically:

- **Preparedness:** Prepare students to enter the workforce as engineers with skills and knowledge relevant to economic, environmental, social, and global needs.
- **Mentorship:** Create a nurturing environment to help students reach their full potential in academics, innovation, and career aspirations.
- **Integrity:** Teach students to make ethical professional choices, and live this value ourselves in our interactions with students and with each other.
- **Collaboration:** Partner with industry and community in order to improve our programs, find and fund research projects, and provide opportunities for students.
- **Hands-on Experience:** Encourage students to design, create, and experiment to reinforce their classroom learning.
- **Community:** Design our programs and devise solutions to address challenges within our community and improve the community through our involvement.

Engineering

Total minimum number of credits required for a major in Applied and Engineering Sciences leading to the B.S. degree – 120

Total minimum number of credits required for a major in Engineering Management leading to the B.S. degree – 130

Total minimum number of credits required for a major in Mechanical Engineering leading to the B.S. degree – 130

Engineering is a creative profession in which technological problems are met within the framework of scientific possibilities, economic constraint, and cultural preference. The Wilkes University engineering programs provide the knowledge and investigative skills, both theoretical and experimental, to responsibly address professional and societal needs through modern curricula, hands-on experience, and a personalized academic environment. Students intending to major in Engineering are encouraged to be well prepared in the sciences and mathematics. Wilkes offers a Bachelor of Arts degree in Physics, which provides a substantive physics foundation in a two-track program. Engineering students may also elect to complete a minor in Physics.

Wilkes University offers five engineering programs. Three programs—Electrical Engineering, Environmental Engineering, and Mechanical Engineering—maintain professional accreditation by the Engineering Accreditation Commission of ABET (ABET, 415 North Charles Street, Baltimore, MD 21201; Telephone: (410) 347-7700).

Two additional engineering programs are configured to provide greater flexibility to pursue depth and breadth in specific areas of interest to the student: Applied and Engineering Sciences and Engineering Management. Mechanical Engineering, Applied and

Engineering Sciences, and Engineering Management are housed in the Department of Mechanical Engineering and Engineering Management, and Electrical Engineering and Physics are housed in the Department of Electrical Engineering and Physics.

Honors in Mechanical Engineering

Upon the recommendation and approval of the Mechanical Engineering faculty, the honor student in Mechanical Engineering will be recognized upon completion of the following requirements:

- achievement of an overall Grade Point Average (GPA) of 3.25 or better;
- achievement of a Major Field Average (MFA) of 3.75 or better;
- receipt of grades of 2.00 or better in every course comprising the Major Field Average.

The distinction "Honors in Mechanical Engineering" will be recorded on the student's transcript upon graduation.

Student Activities

Professional societies in which students participate include the American Society of Mechanical Engineers (ASME), the Society of Women Engineers (SWE), the Pennsylvania Society of Professional Engineers (PSPE), and the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). The Engineering Student Activities Committee (ESAC) is a club that encourages interaction and skill development among all engineering majors. Each group hosts various events and competitions throughout the academic year. Students are invited to join the Wilkes University student chapters of these organizations, which offer excellent opportunities for leadership, networking, and professional development.

Department Transfer Credit Policy

Students requesting transfer credit must follow all Wilkes University policies as outlined in the current bulletin. No credits will be transferred to Wilkes University unless their prerequisites have been satisfied. Transfer credits must follow the proper course sequence as specified in the Wilkes bulletin. For transfer credits to be awarded, the required prerequisite(s) must be satisfied during the first year at Wilkes. A current Wilkes student requesting a course for transfer should first consult his/her advisor and complete the proper paperwork with required signatures before attempting the course.

Cooperative Education

An important feature of all engineering programs at Wilkes University is the Cooperative Education experience, a valuable option usually scheduled during the junior year. An internship is encouraged through summers and senior year even if it is not taken for credit (students should register for the zero-credit co-op in these instances). Participants derive three advantages from any co-op experience: a determination of how they wish to fill their elective courses; an enhanced ability to conduct a job search; and a greater recognition that career opportunities may be stimulating and fulfilling as well as financially rewarding. The Cooperative Education opportunity provides a natural extension of the college experience. The co-op option for credit may be taken only one time for either three (3) or six (6) credits as described below. The zero-credit option is encouraged for any internship in which a student is not participating for credit and may be taken as many times as a student wishes. All registered internships at any credit level, including the zero-credit option, appear on a student's transcript.

1. The requirements for the **0-credit hour** co-op are as follows:
 - a. The co-op project should distinctly demonstrate an **engineering** component.
 - b. The working hours should not be less than **10 hours** per week and the total **150 hours** should spread out at least 10 weeks.
 - c. The student should make a **10-minute** final oral presentation to a general audience.
2. The requirements for the **3-credit hours** co-op are as follows:
 - a. The co-op project should distinctly demonstrate an **engineering** component.
 - b. The student, working with his or her manager, should submit bi-weekly project reports to the faculty advisor.
 - c. The working hours should not be less than **10 hours** per week and the total **150 hours** should spread out at least 10 weeks.
 - d. The student should make a **10-minute** final oral presentation to a general audience.
 - e. The student should submit a final project report of approximately **15 pages** (double-spaced) for the body of the report with no limit on details to be included in an appendix. The final report should include at least the background of the company, project background, technical work, and project reflection.
3. The requirements for the **6-credit hours** co-op are as follows:
 - a. The co-op project should distinctly demonstrate an **engineering design & analysis** component.
 - b. The student, working with his or her manager, should submit bi-weekly project reports to the faculty advisor.
 - c. The working hours should not be less than **20 hours** per week and the total **300 hours** should spread out at least 10 weeks.
 - d. The student should make a **15-minute** final oral presentation to a general audience.
 - e. The student should submit a final project report of approximately **25 pages** (double-spaced) for the body of the report with no limit on details to be included in an appendix. The final report should include at least the background of the company, project background, technical work, and project reflection.

Student in Major Classification Categories

Students attain Sophomore standing after successfully completing all Freshman-year required engineering courses.

Students attain Junior standing after successfully completing all Sophomore-year required engineering courses.

Students attain Senior standing after successfully completing all Junior-year required engineering courses.

DIVISION OF BEHAVIORAL AND SOCIAL SCIENCES

Division of Behavioral & Social Sciences

Chairperson: Dr. Kyle L. Kreider

Faculty

Professors: Bohlander, Garr, Kreider, Schicatano, Tindell, Tuttle

Associate Professors: Miller, Newell, Seeley, Thomas, Wilczak

Assistant Professors: Maieran, Toll

Visiting Assistant Professors: Feeser

Faculty Emeriti: Charnetski, Baldino, DeYoung, Farrar, Merryman, Natzke, Stetten, Tuhy,

DIVISION OF GLOBAL CULTURES: HISTORY, LANGUAGES & PHILOSOPHY

Division of Global Cultures: History, Languages & Philosophy

Chair: Dr. Chris Zarpentine

Faculty

Professors: Bianco (Spanish), Hepp (History), Morrison (Diversity/Cultural Studies), Riggs (History), Winkler (Anthropology)

Associate Professors: Garcia (Spanish), Kuiken (History), Paul (Philosophy), Zarpentine (Philosophy)

Assistant Professors: Shimizu (History), Sopcak-Joseph (History)

Faculty Emeriti: Berlatsky (History), Cox (History), Hupchick (History), Karpinich (Foreign Languages), Marban (Foreign Languages), Rodechko (History), Wenger (History)

DIVISION OF PERFORMING ARTS

Division of Performing Arts

Chairperson: Mr. Jon Liebetrau

The Division of Performing Arts comprises the programs in Theatre, Musical Theatre, Music and Dance.

Theatre Faculty

Associate Professor: Dawson, Liebetrau

Technical Director: Barnhart

Dance Faculty

Director of Dance: Degnan-Boonin

Faculty of Practice: Mariani

Music Faculty

Assistant Professor: Johnson

Visiting Assistant Professor: Levy

The Division of Performing Arts offers a B.F.A. degree in Musical Theatre, a B.A. degree in Theatre Arts, a B. A. degree in Theatre Design and Technology and minor areas of study in Dance, Music, and Theatre. Students pursuing a B.A. in Theatre Arts may also elect to add a concentration in Acting & Directing, Design & Technology, or Dance.

Total minimum number of credits required for a major in Musical Theatre leading to the B.F.A. degree — 122

Total minimum number of credits required for a major in Theatre Arts leading to the B.A. degree — 121

Total minimum number of credits required for a major in Theatre Design and Technology leading to the B.A. degree — 121

Total minimum number of credits required for a minor in Theatre Arts — 18

Total minimum number of credits required for a minor in Dance — 18

Total minimum number of credits required for a minor in Music — 18

Musical Theatre Major

The B.F.A. in Musical Theatre provides pre-professional training in voice, acting, dance, and music theory as a foundation to a career in musical theatre. The program also offers opportunities for advanced study in each area. The Musical Theatre major combines the liberal arts core curriculum with the required 67 credits of theatre classes and 21 credits of electives.

Theatre Arts Major

The B.A. in Theatre Arts program educates students in a variety of theatre disciplines such as performance, design, production, theatre history, literature and criticism. Theatre Arts majors may opt to follow a course sequence in the following concentrations: Acting & Directing, Design & Tech, and Dance. The program combines the liberal arts core curriculum with the required 45 credits of theatre classes and 39 credits of electives. Theatre Arts majors may opt to use their electives to double major in another field.

Theatre Design and Technology Major

The B.A. in Theatre Design and Technology provides pre-professional training in the fundamentals of scenic design, lighting design, costume design and technical production and provides in-depth study and experience through classroom and practical application. The program combines the liberal arts core curriculum with the required 60 credits of theatre classes and 24 credits of electives.

INTERDISCIPLINARY MAJORS

Interdisciplinary Majors

Individualized Studies

This program is designed for those capable and motivated students who wish to undertake a course of study that cannot be provided by any of the offered bachelor's degree programs. The student will be responsible for submitting to the Academic Studies Committee no later than the first semester of the student's junior year 1) an Individualized Studies request form and 2) a coherent written proposal for a specialized program of study. The Individualized Studies request form is available in the Office of the Registrar.

The proposal should articulate what the program of study is, why the existing structured degree programs do not fulfill the requirements of the specialized program of study, and how the student will make use of existing Wilkes courses to accomplish his or her degree requirements. The proposal may be composed solely by the student; the student should, however, seek the advice of his or her advisor in formulating the plan. The program of studies may incorporate courses offered by all departments at the University and must be of a duration to require, minimally, three additional semesters of full-time study for completion. NOTE: All prerequisites for courses included in the specialized program must be met.

The student's record must demonstrate consistent excellence in academic achievements. In addition, with approval of the appropriate department chairperson and the Academic Standards Committee, academic credit may be assigned for Prior Learning Experience, that is, learning achieved by means of appropriate off-campus study, work, and travel, or for knowledge and skills developed prior to enrollment at the University. For information on Prior Learning Assessment Policies and Procedures at Wilkes University, contact the Prior Learning Assessment Coordinator in the University College.

The entire proposal must be submitted to and approved by the student's advisor(s) and by the Academic Standards Committee before work is begun on the specialized program of study.

Degree Requirements

The minimal requirements for the baccalaureate degree in Individualized Studies are 1) the accumulation of at least 120 credits, 2) completion of the Wilkes University General Education Curriculum, including a capstone experience, and 3) the completion of an appropriate number of junior- and senior-level courses.

For examples of existing specialized and expanded degree programs, see descriptions of the following majors: Applied and Engineering Sciences; Biology with a minor in Earth and Environmental Sciences and a Marine Science option; Computer Information Systems; Criminology; Health Sciences; Integrative Media; International Studies; Medical Technology; Musical Theatre; and Nursing.

INTERDISCIPLINARY MINORS

Interdisciplinary Minors

Women's and Gender Studies

Director: Dr. Jennifer Thomas

Women's and Gender Studies Coordinating Committee:

Dr. Robert Bohlander, Psychology; Dr. Barbara Bracken, Mathematics; Dr. Mia Briceño, Communication Studies; Dr. Helen Davis, English; Dr. Maria Grandinetti, Nursing; Dr. Andreea Maierean, Political Science; Dr. Ellen Newell, Psychology; Heather Sincavage, Integrative Media, Art and Design; Dr. Wagiha Taylor, Sidhu School of Business; Dr. Jennifer Thomas, Psychology; Dr. Robert Tuttle, Sociology; Dr. Andrew Wilczak, Sociology; Dr. Linda Winkler, Anthropology

Total minimum number of credits required for a minor in Women's and Gender Studies — 18.

The Women's and Gender Studies Program at Wilkes University welcomes students interested in the study of women, gender, sexuality, and feminism. This interdisciplinary program offers courses in a wide range of subject areas in the Social Sciences, Humanities, Sciences, and Contemporary Arts.

The Women's and Gender Studies Minor focuses on expanding traditional scholarship by studying the ways in which gender has structured intellectual and social traditions. The minor is designed to add a professionally and personally valuable concentration for students majoring in such areas as business, sociology, English, communications, psychology, and nursing, as well as for students in pre-medical and pre-law courses of study.

Students may earn the minor by taking Women's Studies 301 ([[WS-301]]) in their junior or senior year and an additional 15 hours of designated Women's and Gender Studies eligible courses. Students are additionally required to complete a capstone research project that addresses gender as a category of analysis in the Women's Studies 301 course. It is expected that students will have completed several Women's and Gender Studies eligible courses before enrolling in Women's Studies 301.

Students who wish to declare the minor in Women's and Gender Studies should contact the Director of Women's and Gender Studies Program.

Minors are also available in a variety of other fields including, but not limited to, Aerospace Studies, Art, Computer Engineering, Criminology, Dance, International Studies, Music, Neuroscience, Policy Studies, and Statistics. See the appropriate sections in this bulletin for details about these areas of minor study.

SPECIAL PROGRAMS

Special Programs

- [Army Military Science](#)
- [MBA 4 + 1](#)
- [PharmD/MBA](#)
- [Pre-Law Studies](#)
- [Other Special Programs](#)

THE PASSAN SCHOOL OF NURSING

The Passan School of Nursing

Dean: Dr. Deborah A. Zbegner

Faculty

Associate Professors: Hirthler (Chairperson, Graduate Program), Grandinetti (Chairperson, Undergraduate Program), Havrilla, Lucas, Malkemes, Miskovsky, Sweeney, Victor

Assistant Professors: Burry, Chavez, Cook, Murphy, Nwabueze

Faculty of Practice: Cheslick, Hauze, Jones, Musto, Olengenski, Ruppert

Visiting Instructor: Gaydos

Faculty Emeriti: Druffner, Merrigan, Schreiber, Stewart, Zielinski

Director of Clinical Nursing Simulation Center: Stefanko

Accelerated Baccalaureate Nursing Program Coordinator: Sunday

LPN/BSN Program Coordinator: Pacuska

Student Affairs Coordinator: Drozdis

THE SCHOOL OF PHARMACY

The School of Pharmacy

DEAN: Dr. Scott Stolte

Assistant Deans: Dr. Jennifer Malinowski, Dr. Julie Olenak **Chairperson, Department of Pharmaceutical Sciences:** Dr. Marie Roke-Thomas **Chairperson, Department of Pharmacy Practice:** Dr. Judith DeLuca **Director of Assessment:** Dr. Meagan Mielczarek **Director of Experiential Education:** Ms. Shellie Holt-Macey

Faculty

Professors: DeLuca, Olenak

Associate Professors: Bolesta, Bommareddy, J. Ference, K. Ference, Franko, Jacobs, Malinowski, Manning, McManus, Pezzino, Roke-Thomas, Trombetta, VanWert

Assistant Professors: Gruver, Kheloussi, Kieck, Lewis, Mielczarek, Nguyen, Tucker, Warunek

Instructors: Holt-Macey, Powers

Professor Emeriti: Kibbe, Witczak

Dean Emeriti: Graham

The School of Pharmacy offers a program of professional study leading to the Doctor of Pharmacy (Pharm.D.) degree. The purpose of the program is to prepare graduates for a successful, lifelong career providing contemporary, patient-centered care in a variety of healthcare settings.

The U.S. healthcare system continues to undergo rapid change. The role of pharmacists and medication therapy in the healthcare system is evolving. We strive to prepare graduates who have the knowledge and skills to engage in innovative practice today and the desire for lifelong learning that will prepare them for what comes in the future.

We instill a strong foundation of knowledge in the basic sciences (e.g., pharmaceuticals, pharmacology, medicinal chemistry, anatomy and physiology), clinical sciences (e.g., therapeutics, pharmacokinetics, pathophysiology), and social sciences (e.g., psychology, sociology, economics, health, policy, management) while honing the skills that are needed to provide optimal care for patients (e.g., physical assessment, patient counseling, clinical decision-making).

Our vision is to develop meaningful interprofessional education (IPE) activities where all students participate in both experiential and didactic settings. Through IPE, students understand the roles and responsibilities of health care professionals that are essential to patient care, gain first-hand experience in interdisciplinary collaboration, and develop their own individual professional identity as part of a larger team. These competencies are designed so that graduating students are trained to work as a team in optimizing patient health and outcomes. The goal of the IPE curriculum is to provide students with a set of skills and attitudes necessary to practice in an interprofessional environment.

While knowledge and skills are essential, we also ensure that our students develop as responsible citizens with highly professional demeanors who advocate, serve, care, and lead.