

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Department: Biological and Environmental Science	Submission Date: 1/18/2018
Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Concentration <input type="checkbox"/>	
Catalog Year of Implementation (must be next academic year or later): 2018-19	
If retroactive, specify catalog year: Enter retroactive catalog year.	

I. SUMMARY OF PROPOSED PROGRAM CHANGE INFORMATION

	Check if no change	
CURRENT (required)		PROPOSED CHANGE (if applicable)
Program Name: BIOLOGY MAJOR, BS DEGREE Teacher Preparation in Biology Concentration	<input checked="" type="checkbox"/>	
Credit Hours: 130	<input type="checkbox"/>	127-128

If yes, enter a justification for the change in credit hours.

The Core Curriculum rules for students who are pursuing an educational licensure allow multiple courses required for the major to also count for Core Curriculum requirements. This results in a slight decrease in the total number of credits required for the degree program.

Course(s) to be added:	<input checked="" type="checkbox"/>	
Course(s) to be removed: PHIL 315 or 316; MATH 261	<input type="checkbox"/>	No Goal 12 in new Core Curriculum; PHYS 103 will be the only option for the additional degree requirement
Indicate courses to be substituted for removed courses		
Course(s) to be changed:	<input checked="" type="checkbox"/>	
CHEM 111 counted as an additional degree requirement; MATH 171 required as Goal 5; PHYS 103 required for Goal 6; EDUC 467	<input type="checkbox"/>	CHEM 111 required as Scientific Reasoning pillar; MATH 171 required as Quantitative Reasoning pillar; PHYS 103 moved into additional degree requirement; EDUC 487 listed as correct requirement
Other Changes: incorrectly listed as a requirement		

II. PROPOSED REVISION IN CATALOG DESCRIPTION OF PROGRAM

See separate pages at end

III. RATIONALE FOR PROPOSED CHANGES

The Core Curriculum necessitated program changes in the additional degree requirements and Goal 12. To avoid an increase in the total credits for the degree, only PHYS 103 will be listed for the additional degree requirement; MATH 261 would be one additional credit and students on this concentration were not selecting that option anyway. EDUC 467 was incorrectly listed as a requirement; this is being corrected to EDUC 487.

IV. RESOURCE ASSESSMENT, IF CHANGE WARRANTS IT

A. Estimate any change in staff requirements that would result from the program change.

None

B. Estimate the amount and cost of any extra equipment, library resources, computer hardware or software, or other resources that would be required to carry out the program change.

None

V. AFFECTED DEPARTMENTS OR PROGRAMS

If the proposed program changes could have an impact on other departments or programs, the appropriate affected chairs or program directors should be notified of the proposed changes.

A. List other departments/programs that might be affected.

B. List individuals contacted and date contacted.

[Click here to respond.](#)

All curriculum proposals/changes are processed in the date order received.

Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

For the Curriculum Development Handbook and all forms, see <http://blogs.longwood.edu/curriculum/>.

The signature page follows as a separate sheet.

V. APPROVALS

Department: Biological and Environmental Science

Program Name: BIOLOGY MAJOR, BS DEGREE Teacher Preparation in Biology Concentration

SIGNATURE PAGE

	Date Received	Date Approved	Signature
1. Department Curriculum Committee Chair	_____	_____	_____
2. Department Chair	_____	_____	_____
The Department Chairs, whose programs may be affected, have been notified:			
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
3. College Dean	_____	_____	_____
4. College Curriculum Committee	_____	_____	_____
5. EPC	_____	_____	_____
6. Faculty Senate *	_____	_____	_____
7. Provost/VPAA *	_____	_____	_____
8. OAIR * (notification)	_____	_____	_____
9. BOV/SCHEV *	Provost/VPAA will submit materials for approval		
10. Received by Registrar	_____		

*** Substantive changes, including changes in degree program title, require additional approvals. See the approval process matrices on the Academic Initiatives and Curriculum Development blog and consult the EPC chair prior to submitting materials.**

All curriculum proposals/changes are processed in the date order received. In order to be included in the next academic year's catalog, all paperwork must be submitted no later than:

- February 1 to the College Curriculum Committee
- March 1 to the Educational Policy Committee (EPC)

Changes that affect spring advising for fall classes must have received approval from EPC and Senate before the registrar opens up the fall schedule for registration in March. Such proposals should reach the chair of EPC by the end of the fall semester. Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

Proposed Catalog Changes:

BIOLOGY MAJOR, BS DEGREE

Teacher Preparation in Biology Concentration

A. General Education Core Curriculum Requirement/~~37-credits~~ 39-40 credits

~~MATH 171 is required for General Education Goal 5.~~

~~PHYS 103 is required for General Education Goal 6.~~

~~PHIL 315 or 316 is required for General Education Goal 12.~~

~~SCED 490 satisfies General Education Goal 14.~~

EDUC 245 is required for the major and will fulfill the Human Behavior and Social Institutions pillar

CHEM 111 is required for the major and will fulfill the Scientific Reasoning pillar

MATH 171 is required for the major and will fulfill the Quantitative Reasoning pillar

MATH 301 is required for the major and will fulfill the Quantitative Reasoning Perspective

B. Additional Degree Requirements/~~7-credits~~ 4 credits

~~MATH 261 or MATH 301/3 credits~~ PHYS 103 Conceptual Physics/4 credits

~~CHEM 111/4 credits~~

C. Major Requirements/~~49-credits~~ 50 credits (plus 9 credits included in the Core Curriculum)

1. CORE REQUIREMENTS/~~26-credits~~ 27 credits

BIOL 120 Integrative Biology/4 credits

BIOL 250 Introduction to Genetics and Cell Biology/4 credits

BIOL 251 Introduction to Ecology and Evolution/4 credits

BIOL 288 Sophomore Seminar/3 credits

BIOL 488 Senior Capstone in Biology /3 credits

BIOL 489 Senior Assessment/0 credits

CHEM 111 Fundamentals of Chemistry I/4 credits (3 of which counted in the Core Curriculum)

CHEM 112 Fundamentals of Chemistry II/4 credits

CHEM 211 Organic Chemistry I Lecture/3 credits

CHEM 213 Organic Chemistry Laboratory I/1 credit

PHYS 103 Conceptual Physics/4 credits (counted in Additional Degree Requirement)

MATH 171 Statistical Decision Making/3 credits (counted in the Core Curriculum)

MATH 301 Applied Statistics/3 credits (counted in the Core Curriculum)

2. AREA REQUIREMENTS/12 credits

All students must successfully complete at least one class from each area below.

CELL AND MOLECULAR AREA

BIOL 305 General Microbiology/4 credits

BIOL 324 Genetics/4 credits

BIOL 326 Cell Biology/4 credits

BIOL 360 Developmental Biology/4 credits

ECOLOGY AND EVOLUTION AREA

BIOL 330 Conservation Biology/4 credits

BIOL 341 Ecology/4 credits

BIOL 342 Biogeography /4 credits

BIOL 399 Evolution/4 credits

ORGANISMAL AREA

BIOL 301 Comprehensive Human Anatomy and Physiology/4 credits

BIOL 303 Vertebrate Morphology//4 credits

BIOL 309 Plant Biology/4 credits

BIOL 315 Invertebrate Zoology/4 credits

3. BIOLOGY ELECTIVE REQUIREMENTS/11 credits

Students must complete at least 11 additional Biology elective credits from BIOL 206-498, with a minimum of 3 credits from BIOL 400 to BIOL 491. These biology electives may be selected from additional courses in the areas or from the elective courses offered on a rotating basis. However, to meet Virginia teaching licensure requirements, the Teacher Preparation in Biology Concentration requires that these electives, or the above area requirements, include a course in each of the following topics: botany (satisfied by BIOL 309 or BIOL 460 with a field botany focus), zoology (satisfied by BIOL 303, 306, or 315), and anatomy/physiology (satisfied by BIOL 206, 207, 301, or 302).

D. Secondary Education Licensure, Grades 6-12/~~37-credits~~ 34 credits (plus 3 credits included in the Core Curriculum)

EASC 300 Dynamic Planet/3 credits

EDUC 245 Human Growth and Development/3 credits (counted in the Core Curriculum)

EDUC 260 Introduction to the Teaching Profession/2 credits

EDUC 432 Content Area Literacy/3 credits

~~EDUC 467 Classroom Management and System Issues (Elementary & Middle)/3 credits~~

EDUC 487 Classroom Management and System Issues/3 credits

EDUC 473 Inquiry into the Classroom Community/3 credits

SCED 152 Principles of Secondary Education in Science/1 credit

SCED 252 Practicum in Science Education I/2 credits

SCED 451 The Teaching of Secondary Science/2 credits

SCED 482 Directed Teaching in the Secondary School/9 credits

SCED 490 Research Methods in Science Education/3 credits (~~1 of these 3 credits satisfies General Education Goal 14~~)

SPED 389 Survey of Exceptional Children/3 credits

***For additional endorsement to teach Chemistry, Minor in Chemistry/23 credits**

***For additional endorsement to teach Physics, Minor in Physics/20 credits**

***Students seeking endorsement in these areas must meet criteria established by the State Department of Education.**

E. Total Credits required for BS in Biology with Teacher Preparation in Biology Concentration /~~130~~ 127-128

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Department: Chemistry and Physics	Submission Date: 1/30/2018
Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Concentration <input checked="" type="checkbox"/> Certificate <input type="checkbox"/>	
Catalog Year of Implementation (must be next academic year or later): 2018-19	
If retroactive, specify catalog year: Enter retroactive catalog year.	

I. SUMMARY OF PROPOSED PROGRAM CHANGE INFORMATION

CURRENT (required)	Check if no change	PROPOSED CHANGE (if applicable)
Program Name: Chemistry Major, BS Degree	<input checked="" type="checkbox"/>	
Credit Hours: 53 (General Chemistry Conc.); 120 total	<input type="checkbox"/>	60 (General Chemistry Conc.); 120 total
If yes, enter a justification for the change in credit hours. Enter a justification for the change in credit hours.		
Course(s) to be added:	<input type="checkbox"/>	CHEM 111, CHEM 325, CHEM 380, CHEM 412, MATH 171
Course(s) to be removed:	<input checked="" type="checkbox"/>	
Indicate courses to be substituted for removed courses		
Course(s) to be changed: PHYS 201, PHYS 202	<input type="checkbox"/>	PHYS 120, PHYS 121
		Increase number of credits in CHEM 492, 496, or 498 from 1 credits to 2 credits; decrease in credit for CHEM electives from 4 credits to 3 credits; CHEM 111 moved from ADR to Core/major
Other Changes:	<input type="checkbox"/>	

II. PROPOSED REVISION IN CATALOG DESCRIPTION OF PROGRAM

CHEMISTRY MAJOR, BS DEGREE

A. ~~General Education Core Requirement~~ Core Curriculum/30 39-40 credits**

~~Completion of MATH 261 waives General Education Goal 5.~~

~~Completion of PHYS 202 waives General Education Goal 6.~~

~~Completion of CHEM 492/496/498 or SCED 490 waives General Education Goal 14.~~

All Chemistry majors must take CHEM 111 to satisfy the Scientific Reasoning Pillar Requirement.

All Chemistry majors must take MATH 171 to satisfy the Quantitative Reasoning Pillar Requirement.

All Chemistry majors in the Teacher Preparation Concentration must take EDUC 245 to satisfy the Human Behavior & Social Institutions Pillar Requirement.

****Transfer Students with 25 or more transferrable credits – see the section on General Education, which substitutes for the Core Curriculum**

B. Additional Degree Requirements/8 4 credits

~~MATH 262/4 credits~~

~~CHEM 111/4 credits~~

C. CHEMISTRY MAJORS MUST CHOOSE ONE OF THE FOLLOWING CONCENTRATIONS:

General Chemistry Concentration/53 60 credits

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CHEM 111	Fundamentals of Chemistry I/4 credits (3 of the 4 credits are counted in the Core Curriculum)
CHEM 112	Fundamentals of Chemistry II/4 credits
CHEM 113	Chemistry Recitation I/1 credit
CHEM 211	Organic Chemistry I Lecture/3 credits
CHEM 212	Organic Chemistry II Lecture/3 credits
CHEM 213	Organic Chemistry Laboratory I/1 credit
CHEM 214	Organic Chemistry Laboratory II/1 credit
CHEM 215	Organic Chemistry Recitation/1 credit
CHEM 302	Introduction to Chemical Problem Solving/2 credits
CHEM 324	Thermodynamics/3 credits
CHEM 325	Thermodynamics Laboratory/1 credit
CHEM 350	Quantitative Analysis/4 credits
CHEM 351	Instrumental Analysis/3 credits
CHEM 370	Inorganic Chemistry /3 credits
CHEM 380	Inorganic Chemistry Laboratory/1 credit
CHEM 401	Quantum Mechanics/3 credits
CHEM 402	Advanced Chemical Laboratory Problem Solving I/2 credits
CHEM 403	Advanced Chemical Laboratory Problem Solving II/2 credits
CHEM 412	Biochemistry/4 credits
PHYS 201 120	University General Physics I/4 credits
PHYS 202 121	University General Physics II/4 credits
MATH 171	Statistical Decision Making/3 credits (credits are counted in the Core Curriculum)
MATH 261	Differential and Integral Calculus/4 credits (MATH 164 is a pre-requisite)

Choose at least ~~one~~ **two** credits from the following:

CHEM 492	Internship in Chemistry/1-15 credits
CHEM 496	Research Projects in Chemistry/1-4 credits
CHEM 498	Honors Research in Chemistry/3 credits

Chemistry Electives - choose from CHEM **295**, 371, 372, 373, ~~CHEM 375~~, ~~CHEM 390~~ (no more than 2 credits), 392 (no more than 2 credits), ~~CHEM 412~~, ~~CHEM 467~~ (no more than 2 credits), ~~CHEM 495~~ / **4 3** credits

Teacher Preparation in Chemistry Concentration/~~86~~ **82** credits

CHEM 111	Fundamentals of Chemistry I/4 credits (3 of the 4 credits are counted in the Core Curriculum)
CHEM 112	Fundamentals of Chemistry II/4 credits
CHEM 113	Chemistry Recitation I/1 credit
CHEM 211	Organic Chemistry I Lecture/3 credits
CHEM 212	Organic Chemistry II Lecture/3 credits
CHEM 213	Organic Chemistry Laboratory I/1 credit
CHEM 214	Organic Chemistry Laboratory II/1 credit
CHEM 215	Organic Chemistry Recitation/1 credit
CHEM 302	Introduction to Chemical Problem Solving/2 credits
CHEM 324	Thermodynamics/3 credits
CHEM 325	Thermodynamics Laboratory/1 credit
CHEM 350	Quantitative Analysis/4 credits
CHEM 370	Inorganic Chemistry /3 credits
CHEM 380	Inorganic Chemistry Laboratory/1 credit
CHEM 351	Instrumental Analysis/3 credits
PHYS 201 120	University General Physics I/4 credits
PHYS 202 121	University General Physics II/4 credits
MATH 171	Statistical Decision Making/3 credits (credits are counted in the Core Curriculum)
MATH 261	Differential and Integral Calculus/4 credits (MATH 164 is a pre-requisite)
BIOL 120	Integrative Biology/4 credits
EASC 300	Dynamic Planet/3 credits
EDUC 245	Human Growth and Development/3 credits (credits are counted in the Core Curriculum)
EDUC 260	Introduction to the Teaching Profession/2 credits
EDUC 432	Content Area Literacy/3 credits

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

EDUC 487	Classroom Management and System Issues/3 credits
EDUC 473	Inquiry into the Classroom Community/3 credits
SCED 152	Principles of Secondary Education in Science/1 credit
SCED 252	Practicum in Science Education I/2 credits
SCED 451	The Teaching of Secondary Science/2 credits
SCED 482	Directed Teaching in the Secondary School/9 credits
SCED 490	Research Methods in Science Education/3 credits
SPED 489	Survey of Exceptional Children/3 credits

~~Chemistry Electives—choose from CHEM 371-373, CHEM 375, CHEM 390 (no more than 2 credits), 392 (no more than 2 credits), CHEM 401, CHEM 402, CHEM 412, CHEM 467 (no more than 2 credits), CHEM 495/4 credits.~~

D. General Electives (General Chemistry Concentration ONLY)/~~29~~ 16-17 credits

Students wishing to prepare for a health-related professional school (medical, pharmacy, dental, etc.) are strongly encouraged to choose the following courses: BIOL 120/4 credits, BIOL 250/4 credits, BIOL 206/4 credits, BIOL 207/4 credits, BIOL 304/4 credits, ~~CHEM 412/4 credits~~, COMM 101/3 credits, ECON 217(or 218) ~~OR MATH 171(or 270)/3 credits.~~

E. Total credits required for BS in Chemistry (General Chemistry concentration)/120

Total credits required for BS in Chemistry (Teacher Preparation concentration)/~~120~~ 125-126

III. RATIONALE FOR PROPOSED CHANGES

Longwood University serves a unique niche in our state, being the only comprehensive university in Southside Virginia. Statewide, only two public institutions (Old Dominion University and Virginia Tech) offer an undergraduate degree in biochemistry. However, eleven out of the fifteen public institutions in Virginia offer ACS-approved chemistry programs. Adding ACS approval to our chemistry degree will improve our competitiveness with our peer institutions.

The American Chemical Society (ACS) promotes excellence in undergraduate chemistry education by providing a foundation that programs can use to develop their curriculum. Programs that are accredited by the ACS offer rigorous, broad based programs that train students to become competent professionals in many different scientific fields. The ACS degree is appropriate for undergraduate students who wish to pursue graduate education in chemistry or employment in industry and indicates a level of competence that employers and graduate schools recognize across the country.

A careful analysis of our curriculum indicates that we are meeting most of the guidelines set forth in the "ACS Guidelines and Evaluation Procedures for Bachelor's Degree Programs". We currently meet all of the instrumentation requirements and library resources. We also have the required faculty and support staff. We need to update our curriculum to meet all of the requirements set forth by the ACS. The following changes to our current curriculum are required:

1. The addition of laboratory hours at the upper level to meet the minimum number of required lab hours (CHEM 325 and CHEM 380 are both 1-credit, 3-clock hour laboratory courses).
2. A biochemistry requirement for all chemistry majors (currently it is an elective).
3. An internship requirement, either a teaching assistant in a lower level lab or an independent study research project. This requirement will be almost identical to the current General Education

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Goal 14 that all students must complete. The only difference is an increase in credits from 1 to 2.

This program change also incorporates aspects of the new Core Curriculum and accommodates changes being made by another program (PHYS). Several of the courses required in the chemistry program rely on statistics. As such, the chemistry faculty have chosen to require MATH 171 in the major (and for the QR Core requirement), which will allow for additional chemistry content to be delivered in CHEM 350 and 403 in lieu of the statistics currently taught in those courses. The physics program is making significant changes. Specifically, an increase in the number of credits in the PHYS 201/202 sequence and an alteration in the progression of these courses has resulted in a change to our PHYS requirements. Students will now take PHYS 120/121 instead of the new PHYS 220/221/222/223 sequence.

IV. RESOURCE ASSESSMENT, IF CHANGE WARRANTS IT

A. Estimate any change in staff requirements that would result from the program change.

A minimum of five (5) full time, permanent faculty members whose areas of specialty cover all five of the major areas of chemistry (analytical, organic, physical, inorganic, and biochemistry or polymers). We have hired a new biochemist, beginning in Fall 2018, to support this ACS requirement.

B. Estimate the amount and cost of any extra equipment, library resources, computer hardware or software, or other resources that would be required to carry out the program change.

None

V. AFFECTED DEPARTMENTS OR PROGRAMS

If the proposed program changes could have an impact on other departments or programs, the appropriate affected chairs or program directors should be notified of the proposed changes. Where teaching licensure may be affected, the licensure officer should also be notified.

A. List other departments/programs that might be affected.

BIOL, PHYS

B. List individuals contacted and date contacted.

Mark Fink, Fall 2017

Tim Holmstrom, has been involved in the process throughout

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For the Curriculum Development Handbook and all forms, see <http://blogs.longwood.edu/curriculum/>.

The signature page follows as a separate sheet.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

V. APPROVALS

Department: Chemistry and Physics

Program Name: Chemistry Major, BS Degree (General Chemistry Conc.)

SIGNATURE PAGE

	Date Received	Date Approved	Signature
1. Department Curriculum Committee Chair	_____	_____	_____
2. Department Chair	_____	_____	_____
The Department Chairs, whose programs may be affected, have been notified:			
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
3. College Dean	_____	_____	_____
4. College Curriculum Committee	_____	_____	_____
5. EPC	_____	_____	_____
6. Faculty Senate *	_____	_____	_____
7. Provost/VPAA *	_____	_____	_____
8. OAIR * (notification)	_____	_____	_____
9. BOV/SCHEV *	Provost/VPAA will submit materials for approval		
10. Received by Registrar	_____		

*** Substantive changes, including changes in degree program title, require additional approvals. See the approval process matrices on the Academic Initiatives and Curriculum Development blog and consult the EPC chair prior to submitting materials.**

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- February 1 to the College Curriculum Committee
- March 1 to the Educational Policy Committee (EPC)

Changes that affect spring advising for fall classes must have received approval from EPC and Senate before the registrar opens up the fall schedule for registration in March. Such proposals should reach the chair of EPC by the end of the fall semester. Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Department: Chemistry and Physics	Submission Date: 1/30/2018
Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Concentration <input checked="" type="checkbox"/> Certificate <input type="checkbox"/>	
Catalog Year of Implementation (must be next academic year or later): 2018-19	
If retroactive, specify catalog year: Enter retroactive catalog year.	

I. SUMMARY OF PROPOSED PROGRAM CHANGE INFORMATION

CURRENT (required)	Check if no change	PROPOSED CHANGE (if applicable)
Program Name: Chemistry Major, BS Degree	<input checked="" type="checkbox"/>	
Credit Hours: 86 (Teacher Prep Conc.); 120 total	<input type="checkbox"/>	82 (Teacher Prep Conc.); 125-126 total
<p>If yes, enter a justification for the change in credit hours.</p> <p>In making changes to the General Chemistry concentration (to seek ACS accreditation), we realized that the chemistry major is light on laboratory credits. In order to remedy this and manage the total number of credits in this concentration, we decided to remove the CHEM elective and specify that Teacher Prep students take additional laboratory courses (CHEM 325 and 380). Additionally, changes to the Core Curriculum credit hours necessitated a change in the total credit hours.</p>		
Course(s) to be added:	<input type="checkbox"/>	CHEM 111, MATH 171
Course(s) to be removed:	<input type="checkbox"/>	CHEM electives (4 credits) removed
Indicate courses to be substituted for removed courses		CHEM 325, CHEM 380
Course(s) to be changed: PHYS 201, PHYS 202	<input type="checkbox"/>	PHYS 120, PHYS 121
Other Changes:	<input type="checkbox"/>	CHEM 111 moved from ADR to Core/major

II. PROPOSED REVISION IN CATALOG DESCRIPTION OF PROGRAM

CHEMISTRY MAJOR, BS DEGREE

A. ~~General Education Core Requirement~~ Core Curriculum/30 39-40 credits**
~~Completion of MATH 261 waives General Education Goal 5.~~
~~Completion of PHYS 202 waives General Education Goal 6.~~
~~Completion of CHEM 492/496/498 or SCED 490 waives General Education Goal 14.~~
All Chemistry majors must take CHEM 111 to satisfy the Scientific Reasoning Pillar Requirement.
All Chemistry majors must take MATH 171 to satisfy the Quantitative Reasoning Pillar Requirement.
All Chemistry majors in the Teacher Preparation Concentration must take EDUC 245 to satisfy the Human Behavior & Social Institutions Pillar Requirement.

****Transfer Students with 25 or more transferrable credits – see the section on General Education, which substitutes for the Core Curriculum**

B. Additional Degree Requirements/8 4 credits
MATH 262/4 credits
CHEM 111/4 credits

C. CHEMISTRY MAJORS MUST CHOOSE ONE OF THE FOLLOWING CONCENTRATIONS:

PROGRAM CHANGE CURRICULUM FORM

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General Chemistry Concentration/~~53~~ 60 credits

CHEM 111	Fundamentals of Chemistry I/4 credits (3 of the 4 credits are counted in the Core Curriculum)
CHEM 112	Fundamentals of Chemistry II/4 credits
CHEM 113	Chemistry Recitation I/1 credit
CHEM 211	Organic Chemistry I Lecture/3 credits
CHEM 212	Organic Chemistry II Lecture/3 credits
CHEM 213	Organic Chemistry Laboratory I/1 credit
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CHEM 370	Inorganic Chemistry /3 credits
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CHEM 402	Advanced Chemical Laboratory Problem Solving I/2 credits
CHEM 403	Advanced Chemical Laboratory Problem Solving II/2 credits
CHEM 412	Biochemistry/4 credits
PHYS 201 120	University General Physics I/4 credits
PHYS 202 121	University General Physics II/4 credits
MATH 171	Statistical Decision Making/3 credits (credits are counted in the Core Curriculum)
MATH 261	Differential and Integral Calculus/4 credits (MATH 164 is a pre-requisite)

Choose at least ~~one~~ **two** credits from the following:

CHEM 492	Internship in Chemistry/1-15 credits
CHEM 496	Research Projects in Chemistry/1-4 credits
CHEM 498	Honors Research in Chemistry/3 credits

Chemistry Electives - choose from CHEM **295**, 371, 372, 373, ~~CHEM 375~~, ~~CHEM 390~~ (no more than 2 credits), 392 (no more than 2 credits), ~~CHEM 412~~, ~~CHEM 467~~ (no more than 2 credits), ~~CHEM 495~~/ **4 3** credits

Teacher Preparation in Chemistry Concentration/~~86~~ 82 credits

CHEM 111	Fundamentals of Chemistry I/4 credits (3 of the 4 credits are counted in the Core Curriculum)
CHEM 112	Fundamentals of Chemistry II/4 credits
CHEM 113	Chemistry Recitation I/1 credit
CHEM 211	Organic Chemistry I Lecture/3 credits
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EASC 300	Dynamic Planet/3 credits
EDUC 245	Human Growth and Development/3 credits (credits are counted in the Core Curriculum)
EDUC 260	Introduction to the Teaching Profession/2 credits

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EDUC 432	Content Area Literacy/3 credits
EDUC 487	Classroom Management and System Issues/3 credits
EDUC 473	Inquiry into the Classroom Community/3 credits
SCED 152	Principles of Secondary Education in Science/1 credit
SCED 252	Practicum in Science Education I/2 credits
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SCED 482	Directed Teaching in the Secondary School/9 credits
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SPED 489	Survey of Exceptional Children/3 credits

~~Chemistry Electives—choose from CHEM 371-373, CHEM 375; CHEM 390 (no more than 2 credits), 392 (no more than 2 credits), CHEM 401, CHEM 402, CHEM 412, CHEM 467 (no more than 2 credits), CHEM 495/4 credits.~~

D. General Electives (General Chemistry Concentration ONLY)/29 16-17 credits

Students wishing to prepare for a health-related professional school (medical, pharmacy, dental, etc.) are strongly encouraged to choose the following courses: BIOL 120/4 credits, BIOL 250/4 credits, BIOL 206/4 credits, BIOL 207/4 credits, BIOL 304/4 credits, ~~CHEM 412/4 credits~~, COMM 101/3 credits, ECON 217(or 218) ~~OR MATH 171(or 270)/3 credits.~~

E. Total credits required for BS in Chemistry (General Chemistry concentration)/120

Total credits required for BS in Chemistry (Teacher Preparation concentration)/~~120~~ 125-126

III. RATIONALE FOR PROPOSED CHANGES

This program change incorporates aspects of the new Core Curriculum and accommodates changes being made by another program (PHYS). Several of the courses required in the chemistry program rely on statistics. As such, the chemistry faculty have chosen to require MATH 171 in the major (and for the QR Core requirement), which will allow for additional chemistry content to be delivered in CHEM 350 in lieu of the statistics currently taught in those courses.

The physics program is making significant changes. Specifically, an increase in the number of credits in the PHYS 201/202 sequence (new numbers are 220/221/222/223) and an alteration in the progression of these courses has resulted in a change to our PHYS requirements. Students will now take PHYS 120/121 instead of the new PHYS 220/221/222/223 sequence.

In making changes to the General Chemistry concentration (to seek ACS accreditation), we realized that the chemistry major is light on laboratory credits. In order to remedy this and manage the total number of credits in this concentration, we decided to remove the CHEM elective and specify that Teacher Prep students take additional laboratory courses (CHEM 325 and 380).

IV. RESOURCE ASSESSMENT, IF CHANGE WARRANTS IT

A. Estimate any change in staff requirements that would result from the program change.

None

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B. Estimate the amount and cost of any extra equipment, library resources, computer hardware or software, or other resources that would be required to carry out the program change.

None

V. AFFECTED DEPARTMENTS OR PROGRAMS

If the proposed program changes could have an impact on other departments or programs, the appropriate affected chairs or program directors should be notified of the proposed changes. Where teaching licensure may be affected, the licensure officer should also be notified.

A. List other departments/programs that might be affected.

None

B. List individuals contacted and date contacted.

Suzanne Donnelly has been involved in the process throughout.

All curriculum proposals/changes are processed in the date order received.

Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

For the Curriculum Development Handbook and all forms, see <http://blogs.longwood.edu/curriculum/>.

The signature page follows as a separate sheet.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

V. APPROVALS

Department: Chemistry and Physics

Program Name: Chemistry Major, BS Degree (Teacher Prep Conc.)

SIGNATURE PAGE

	Date Received	Date Approved	Signature
1. Department Curriculum Committee Chair	_____	_____	_____
2. Department Chair	_____	_____	_____
The Department Chairs, whose programs may be affected, have been notified:			
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
3. College Dean	_____	_____	_____
4. College Curriculum Committee	_____	_____	_____
5. EPC	_____	_____	_____
6. Faculty Senate *	_____	_____	_____
7. Provost/VPAA *	_____	_____	_____
8. OAIR * (notification)	_____	_____	_____
9. BOV/SCHEV *	Provost/VPAA will submit materials for approval		
10. Received by Registrar	_____		

*** Substantive changes, including changes in degree program title, require additional approvals. See the approval process matrices on the Academic Initiatives and Curriculum Development blog and consult the EPC chair prior to submitting materials.**

All curriculum proposals/changes are processed in the date order received. In order to be included in the next academic year's catalog, all paperwork must be submitted no later than:

- February 1 to the College Curriculum Committee
- March 1 to the Educational Policy Committee (EPC)

Changes that affect spring advising for fall classes must have received approval from EPC and Senate before the registrar opens up the fall schedule for registration in March. Such proposals should reach the chair of EPC by the end of the fall semester. Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Department: English and Modern Languages	Submission Date: 2/14/2018
Major <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Concentration <input type="checkbox"/> Certificate <input type="checkbox"/>	
Catalog Year of Implementation (must be next academic year or later): 2018-19	
If retroactive, specify catalog year: Enter retroactive catalog year.	

I. SUMMARY OF PROPOSED PROGRAM CHANGE INFORMATION

CURRENT (required)	Check if no change	PROPOSED CHANGE (if applicable)
Program Name: Minor in English	<input checked="" type="checkbox"/>	
Credit Hours: 18	<input checked="" type="checkbox"/>	
If yes, enter a justification for the change in credit hours. Change from Gen. Ed. to Core Curriculum.		
Course(s) to be added:	<input type="checkbox"/>	
Course(s) to be removed:	<input type="checkbox"/>	
Indicate courses to be substituted for removed courses		
Course(s) to be changed:	<input type="checkbox"/>	
Other Changes: General Education exclusions	<input type="checkbox"/>	Remove General Education exclusions

II. PROPOSED REVISION IN CATALOG DESCRIPTION OF PROGRAM

Minor in English/18 credits

ENGL 209 Introduction to Literary Analysis/3 credits

Choose one of the following:

- ENGL 325 British Literature: Medieval to Renaissance/3 credits
- ENGL 326 British Literature: Restoration to Romanticism/3 credits
- ENGL 335 American Literature: Contact to Romanticism/3 credits

Choose one of the following:

- ENGL 327 British Literature: Victorian to Contemporary/3 credits
- ENGL 336 American Literature: Realism to Contemporary/3 credits

One 400-level course (excluding ENGL 400)/3 credits

English electives, 200-level* and above (excluding ENGL 400) /6 credits

~~*NOTE: ENGL 201, 202, 203, and 400 are designed to fulfill General Education Goals. These courses may not be used as English electives for the English minor or to fulfill degree requirements for Humanities courses.~~

III. RATIONALE FOR PROPOSED CHANGES

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

This program change also incorporates aspects of the new Core Curriculum.

IV. RESOURCE ASSESSMENT, IF CHANGE WARRANTS IT

A. Estimate any change in staff requirements that would result from the program change.

B. Estimate the amount and cost of any extra equipment, library resources, computer hardware or software, or other resources that would be required to carry out the program change.

None

V. AFFECTED DEPARTMENTS OR PROGRAMS

If the proposed program changes could have an impact on other departments or programs, the appropriate affected chairs or program directors should be notified of the proposed changes. Where teaching licensure may be affected, the licensure officer should also be notified.

A. List other departments/programs that might be affected.

B. List individuals contacted and date contacted.

All curriculum proposals/changes are processed in the date order received.
Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

For the Curriculum Development Handbook and all forms, see <http://blogs.longwood.edu/curriculum/>.

The signature page follows as a separate sheet.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

V. APPROVALS

Department: English and Modern Languages

Program Name: Minor in English

SIGNATURE PAGE

	Date Received	Date Approved	Signature
1. Department Curriculum Committee Chair	_____	_____	_____
2. Department Chair	_____	_____	_____
The Department Chairs, whose programs may be affected, have been notified:			
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
3. College Dean	_____	_____	_____
4. College Curriculum Committee	_____	_____	_____
5. EPC	_____	_____	_____
6. Faculty Senate *	_____	_____	_____
7. Provost/VPAA *	_____	_____	_____
8. OAIR * (notification)	_____	_____	_____
9. BOV/SCHEV *	Provost/VPAA will submit materials for approval		

10. Received by Registrar _____

*** Substantive changes, including changes in degree program title, require additional approvals. See the approval process matrices on the Academic Initiatives and Curriculum Development blog and consult the EPC chair prior to submitting materials.**

All curriculum proposals/changes are processed in the date order received. In order to be included in the next academic year's catalog, all paperwork must be submitted no later than:

- February 1 to the College Curriculum Committee
- March 1 to the Educational Policy Committee (EPC)

Changes that affect spring advising for fall classes must have received approval from EPC and Senate before the registrar opens up the fall schedule for registration in March. Such proposals should reach the chair of EPC by the end of the fall semester. Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

<p>PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE</p>

Master of Science - Athletic Training

Jenn Cuchna, PhD, MBA, MEd, LAT, ATC, *Coordinator of Clinical Education, Assistant Professor of Athletic Training*

Lindsey Stokes, PhD, LAT, ATC, *Program Director, Assistant Professor of Athletic Training*

Margaret Thompson, EdD, LAT, ATC, *Associate Professor of Athletic Training*

The Athletic Training program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE) and is designed to prepare students for a career in the field of athletic training. The course of study leading to the Master of Science degree includes two years of professional and clinical education within the program. Admission to the Athletic Training Program is competitive. Students who have completed their Bachelor degree at Longwood cannot be assured admission to the master's degree program in athletic training.

Formal Admission to the Athletic Training Program

Students must be formally admitted to Longwood University Graduate Studies and meet the prerequisite requirements for the athletic training program.

Admission to the athletic training program is contingent upon the student satisfactorily completing the following prerequisites:

- A. Bachelor degree from a four-year institution
- B. Possess a 2.75 cumulative overall GPA
- C. Successfully completed prerequisite courses with a C- or better for the following:
 - a. Anatomy and Physiology with lab (6-8 credits)
 - b. Statistics (3 credits)
 - c. Biomechanics (3-4 credits)
 - d. Exercise Physiology (3-4 credits)
 - e. Physics (4 credits)
 - f. Psychology (3 credits)
 - g. Nutrition or Sports Nutrition (3-4 credits)
 - h. Medical Terminology (2-3 credits)
- D. Possess or obtain a certification in Emergency and Cardiac Care with AED by the time of enrollment within the Program
- E. Submit two letters of recommendation
 - a. One from a certified and state licensed athletic trainer
 - b. One from a current or former professor regarding academic performance
- F. Verify completion of 75 hours of directed observation of at least one certified and state licensed athletic trainer.
- G. A physical and technical standards assessment must be completed and performed by one of the following providers: nurse practitioner, physician assistant, medical doctor (MD), or doctor of osteopathic medicine (DO). The evaluation form provided by the Longwood Athletic Training Program following the Technical Standards can be found on the Athletic Training website. Completed submissions must be provided prior to starting the program.

The admissions process is three-fold. Applicants must:

- 1) submit the application materials as outlined above;
- 2) complete a virtual admissions interview with the athletic training faculty;
- 3) complete a formal on-site interview for finalists invited by the athletic training faculty.

Each phase is formally evaluated by the Athletic Training Review Committee. Assessments for each student are placed in rank order for each component of the application process. A final rank ordering is based on the total of all components of the application process. Preliminary admission decisions are made by the Athletic Training Review Committee based on collective results across all pre-admission categories. At the completion of stage three, students will be informed by the program director of the admission decision or denial.

** Accelerated admission into the Longwood Athletic Training Program is possible with the completion of all prerequisite coursework and application materials and requirements listed above in conjunction with all of the following:

- A. Cumulative overall GPA of 3.5 or higher
- B. Prerequisite coursework with a 3.2 GPA or higher

Students who meet the accelerated admission criteria are only required to complete an admission interview with the athletic training faculty. The applicant may choose to have either a virtual or on-site interview.

Entrance into the Program

Applicants must be willing to complete and submit a criminal background check upon entrance into the program. Beyond the standard University requirements for immunizations, students will be required to obtain additional immunizations or screenings to satisfy the communicable disease and immunization requirements for clinical education sites. Post-admission and prior to the start of the MSAT program, students must be able to verify the following:

- 1) Completed Hepatitis B series
- 2) Varicella vaccine or titer
- 3) Meningococcal vaccine
- 4) Evidence of a negative TB test in the past 12 months
- 5) Tetanus shot within the past 10 years
- 6) Flu shot

Clinical Education Requirements

The clinical education experience occurs over the span of five semesters in the program. Students will complete their clinical education during year one at traditional clinical sites (i.e., high school and/or collegiate setting). A general medical clinical experience will occur over the second summer within the program, where students are able to observe other healthcare professionals in a variety of settings (i.e., physical therapy, cardiology, family practice, and emergent care). The general medical experience is immersive; therefore, students will be expected to live and/or commute to the clinical site(s) designated by the athletic training program.

Additional immersive experiences will occur during year two; students will be expected to commute and also complete online and/or hybrid courses while completing these clinical education experiences. Before entering the final semester of the clinical education experience,

students must complete the qualifying exams, both written and practical, with a minimum of 70% as a passing score. Remediation will be required for students who do not meet the passing score, resulting in the student not moving forward to the final phase of the clinical education sequence. The student's progress in the program may be delayed due to the extent of remediation required. During the final semester of the program, the student will relocate and be completely immersed in a culminating clinical experience while completing all coursework online.

During the clinical education portion of the program, students will accumulate at least 1,600 hours under the direction of a preceptor and/or clinical affiliate site supervisor. The scaffolding of the clinical experiences prepares the student for a final culminating experience that serves as a transition from the academic experience to the professional setting, allowing the student to function as an entry-level athletic training professional. It is the student's financial responsibility to obtain housing and transportation accommodations for the clinical education experiences. Guidance will be provided by the Coordinator of Clinical Education.

Professional Portfolio

The completion of an acceptable professional portfolio, ATTR 691, is a requirement for the Master of Science in Athletic Training degree program as the culminating experience and exit requirement for the program. Students are scaffolded by their advisor throughout the program regarding professional portfolio requirements. During the final semester of enrollment, students are required to develop and present a professional portfolio which documents their mastery of program standards and highlights their growth throughout the program. Grading is Pass/Not Pass. A student who earns a Not Pass is allowed to retake ATTR 691 once. Should the student earn a second No Pass, the student will be dismissed from the graduate program.

PROGRAM REQUIREMENTS

ATTR 500: Introduction and Application of Athletic Training Principles (4 credits)
ATTR 505: Functional Anatomy (2 credits)
ATTR 510: Clinical Orientation (1 credit)
ATTR 515: Acute Care of Injuries and Illnesses (2 credits)
ATTR 520: Clinical Practicum 1 (2 credits)
ATTR 530: Clinical Practicum 2 (2 credits)
ATTR 540: Principles of Evidence-Based Practice & Research (3 credits)
ATTR 545: Evidence Based Practice and Epidemiology (3 credits)
ATTR 550: Principles of Therapeutic Interventions (3 credits)
ATTR 560: Evaluation and Interventions of the Lower Extremity and Lumbar Spine (4 credits)
ATTR 565: Applied Therapeutic Interventions (3 credits)
ATTR 570: Evaluation and Interventions of the Cervical Spine and Upper Extremity (4 credits)
ATTR 580: Research in Athletic Training (2 credits)
ATTR 590: Biostatistics (2 credits)
ATTR 600: Clinical Practicum 3A (3 credits)
ATTR 610: Clinical Practicum 3B (3 credits)
ATTR 620: Clinical Practicum 4 (3 credits)
ATTR 630: Clinical Practicum 5 (6 credits)
ATTR 640: Evaluation and Interventions of General Medical Conditions (4 credits)

ATTR 650: Public Health and Athletic Training Administration (3 credits)
ATTR 660: Evaluation and Interventions of the Spine and Pelvis (4 credits)
ATTR 670: Athletic Training Career and Certification Exam Preparation (1 credit)
ATTR 680: Dissemination of Athletic Training Research (3 credits)
ATTR 691: Professional Portfolio (1 credit)

TOTAL CREDITS: 68

GRADUATE NEW PROGRAM CURRICULUM FORM
MAJOR OR CONCENTRATION OR PROFESSIONAL ENDORSEMENT OR
CERTIFICATE
Within an existing degree program*

*For a new degree program, in addition to EPC program and course forms you must complete all procedures and forms found in the "SCHEV Proposal Guidelines."

Department: Health, Athletic Training, Recreation, & Kinesiology		Submission Date: 02/08/2018
Degree: Master of Science	Program Name: Athletic Training	
Major <input checked="" type="checkbox"/>	Concentration <input type="checkbox"/>	Endorsement <input type="checkbox"/> Certificate <input type="checkbox"/>
Catalog Year of Implementation (must be next academic year or later): 2019-2020		

I. OUTLINE OF THE PROPOSED MAJOR, CONCENTRATION, ENDORSEMENT OR CERTIFICATE, INCLUDING CATALOG COPY

Please see attached catalog copy.

II. NEW COURSES THAT WILL BE PROPOSED AS PART OF THIS PROGRAM

Please see attached catalog copy.

III. RATIONALE FOR PROGRAM

The bachelor's degree in Athletic Training can no longer admit students as of 2022. In accordance with the national mandate from the Commission on Accreditation of Athletic Training Education, the professional (entry-level) athletic training degree must be offered at the graduate level.

IV. RESOURCE ASSESSMENT, IF CHANGE WARRANTS IT

A. Estimate additional staff requirements for this program.

None

B. Estimate the amount and cost of any extra equipment, library resources, computer hardware or software, or other resources that would be required to carry out this program.

Costs will be covered by the added \$30 per credit program fee.

V. ANTICIPATED ENROLLMENT IN PROGRAM AFTER FIVE (5) YEARS

Average of 20 students per cohort

VI. AFFECTED DEPARTMENTS OR PROGRAMS

If the proposed program could have an impact on other departments or programs, the appropriate affected chairs or program directors should be notified of the proposed changes. Where teaching licensure may be affected, the licensure officer should also be notified.

Licensure Officer: Enter name of licensure officer if applicable.

Date Notified: Select date.

<p style="text-align: center;">GRADUATE NEW PROGRAM CURRICULUM FORM MAJOR OR CONCENTRATION OR PROFESSIONAL ENDORSEMENT OR CERTIFICATE</p>
--

<p>A. List other departments/programs that might be affected.</p>
--

N/A

<p>B. List individuals contacted and date contacted.</p>

N/A

All curriculum proposals/changes are processed in the date order received.
Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

For the Curriculum Development Handbook and all forms, see <http://blogs.longwood.edu/curriculum/>.

The signature page follows as a separate sheet.

GRADUATE NEW PROGRAM CURRICULUM FORM MAJOR OR CONCENTRATION OR PROFESSIONAL ENDORSEMENT OR CERTIFICATE

V. APPROVALS

Department: Health, Athletic Training, Recreation, and Kinesiology

Program Name: MS - Athletic Training

SIGNATURE PAGE

	Date Received	Date Approved	Signature
1. Department Curriculum Committee Chair	_____	_____	_____
2. Department Chair	_____	_____	_____
3. College Dean	_____	_____	_____
4. Graduate Dean	_____	_____	_____
5. Graduate Curriculum Committee	_____	_____	_____
6. EPC	_____	_____	_____
7. Faculty Senate	_____	_____	_____
8. Provost/VPAA *	_____	_____	_____
9. OAIR (notification)	_____	_____	_____
10. BOV/SCHEV *	Provost/VPAA will submit materials for approval		
11. Received by Registrar	_____		

* New degree programs, spin-off or new CIP codes must be submitted to BOV and SCHEV.

All curriculum proposals/changes are processed in the date order received. In order to be included in the next academic year's catalog, all paperwork must be submitted no later than:

- February 1 to the Graduate Curriculum Committee
- March 1 to the Educational Policy Committee (EPC)

Changes that affect spring advising for fall classes must have received approval from EPC and Senate before the registrar opens up the fall schedule for registration in March. Such proposals should reach the chair of EPC by the end of the fall semester. Submission within the deadlines does not guarantee processing in time for the next academic year's catalog. For new degree programs that must go to SCHEV for approval, entry into the catalog may not occur for at least another year.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Department: Music		Submission Date: 2/1/2018	
Major <input checked="" type="checkbox"/>	Minor <input type="checkbox"/>	Concentration <input type="checkbox"/>	Certificate <input type="checkbox"/>
Catalog Year of Implementation (must be next academic year or later): 2018-19			
If retroactive, specify catalog year: Enter retroactive catalog year.			

I. SUMMARY OF PROPOSED PROGRAM CHANGE INFORMATION

CURRENT (required)	Check if no change	PROPOSED CHANGE (if applicable)
Program Name: Bachelor of Music, Visual and Performing Arts, Concentration in Education	<input checked="" type="checkbox"/>	
Credit Hours: 122-126	<input type="checkbox"/>	125-129

If yes, enter a justification for the change in credit hours.

Several things occurred simultaneously which resulted in the credit hour change:

- 1 – A year and a half ago, our department hired a new Coordinator for Music Education who has a Ph.D. in Music Education. This degree was important to fulfill recommendations from our accrediting body, which had twice noted our lack of a faculty member with this degree (we have other Ph.D. degrees and predominantly DMA degrees). This credential was also important to our department, as we had already been discussing potential changes to our music education curriculum and needed input from someone with a terminal degree specifically in music education. With this hire, we charged our new Coordinator with evaluating our curriculum and recommending changes to bring our program up to date.
- 2 – A change from General Education to Core Curriculum not only changed specific details in the program outline but also brought forward the desire to remove hidden requirements from degree programs. All music majors are required to register for an ensemble each semester, but these credits were previously “hidden” for music education majors. We brought these requirements into the degree outline.
- 3 – Our department underwent a 10-year accreditation review, resulting in recommendations for changes in our degree programs.

Major changes in the program as a result of these factors include:

- 1 – Adding 7 credits of ensemble to the degree program
- 2 – Removing 2 credits of applied primary from the degree program
- 3 – Adding 1 credit of Show Choir Techniques for Choral Music Education majors, a course we have long needed and which functions as an equivalent to Marching Band Techniques already required for Instrumental Music Education majors
- 4 – Adding 1 credit of Beginning Ukulele OR Beginning Guitar, courses we have also long recognized as missing from our curriculum and which we consider essential for teaching general music at every level
- 5 – Adding 3 credits of SPED 489, Survey of Exceptional Children. This course is recommended after many meetings and discussions among SPED, Art, and Music Education faculty, and is already required for Art Education and Theatre Education majors. Arts teachers encounter students with exceptionalities at all levels due to inclusion requirements mandated by federal and local governments. Arts teachers are expected to work with students of all abilities, but are often missing training on best practices. The current program does not require any courses in SPED. With the addition of this class and an approved substitution of SPED 305 – Behavior Management for EDUC 467 – Classroom Management (also done in Art Education), our graduates would be qualified to accommodate and modify their future music teaching for all students, including those with special needs. With these two classes in the major, our students can more easily add a Special Education minor and/or apply for the +1 Masters Program in Special Education.

While the current Core Curriculum allows for students pursuing Virginia licensure to count credits toward their major in more than two pillars, our licensure requirements fall within our discipline and too specialized to be considered for general education making it impossible for our students to take advantage of this opportunity.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Course(s) to be added:	MUSC 157 or MUSC 158; MUSC 449 in the Choral Track; SPED 489	<input type="checkbox"/>	Require one from MUSC 157 – Beginning Ukulele or MUSC 158 – Beginning Guitar; Add MUSC 449 – Show Choir Techniques in the Choral Track; Add SPED 489 – Survey of Exceptional Children
Course(s) to be removed:		<input type="checkbox"/>	
Indicate courses to be substituted for removed courses			
	EDUC 467 – Classroom Management and System Issues (Elementary & Middle)	<input type="checkbox"/>	SPED 305 – Behavior Management
Other Changes:	List existing ensemble requirements	<input type="checkbox"/>	

II. PROPOSED REVISION IN CATALOG DESCRIPTION OF PROGRAM

BACHELOR OF MUSIC

Visual and Performing Arts

Concentration in Education

(Applied Areas: Voice, Piano, Brass, Woodwinds, Percussion)

The degree Bachelor of Music with a Concentration in Education K-12 is designed to prepare the student to be endorsed and to teach music in the schools. Each student develops proficiency in voice or in instrumental studies, and acquires the skills necessary to communicate musical concepts. Through opportunities to observe and to teach in classroom situations each student develops professional teaching skills and dispositions.

To be admitted as a music education major, students must achieve a Virginia passing score on the Praxis I Case Math and VCLA (may be completed before entering Longwood) OR an equivalent passing score on the SAT or ACT, AND must maintain a 3.0 GPA. See details in the Teacher Prep section of the catalog (p. 323).

~~A. General Education Core Requirements/38 credits~~

A. Core Curriculum Requirements/39-40 credits.

Take MUSC 225, Introduction to World Music, in the Aesthetic Expression Pillar

Take EDUC 245, Human Growth and Development, in the Human Behavior and Social Institutions Pillar

Take MUSC 331, History of Music I, at the Perspectives level

B. Additional Degree Requirements/~~6 credits~~ 3 credits

Humanities/3 credits not in music

~~MUSC 225, World Music/3 credits~~

C. Music Core Courses/~~23-26~~ 20-23 credits

NOTE: Remove separate listing before BM degrees; include listing here

Required of all students seeking any Bachelor of Music Degree

MUSC 113 Theory of Music I/2 credits

MUSC 114 Theory of Music II/2 credits

MUSC 115 Aural Skills I/1 credit

MUSC 116 Aural Skills II/1 credit

MUSC 119 Introduction to Computer Applications in Music/1 credit

MUSC 163 Beginning Piano I/1 credit*

PROGRAM CHANGE CURRICULUM FORM

UNDERGRADUATE

MUSC 164	<i>Beginning Piano II/1 credit*</i>
MUSC 185	<i>Performance Observation/0 credits</i>
MUSC 213	<i>Theory of Music III/2 credits</i>
MUSC 214	<i>Theory of Music IV/2 credits</i>
MUSC 215	<i>Aural Skills III/1 credit</i>
MUSC 216	<i>Aural Skills IV/1 credit</i>
MUSC 219	<i>Introduction to Recording Techniques/1 credit</i>
MUSC 225	<i>Introduction to World Music/3 credits, counted in Core Curriculum</i>
MUSC 263	<i>Intermediate Piano I/1 credit*</i>

(*May be waived from any or all of the above piano classes by passing the Piano Proficiency/not required of keyboard primary)

MUSC 264	<i>Intermediate Piano II/1 credit</i>
MUSC 313	<i>Form and Analysis/3 credits</i>
MUSC 331	<i>History of Music I/3 credits, counted in Core Curriculum</i>
MUSC 341	<i>Conducting/2 credits</i>

D. Major Education Requirements/~~24-25 credits~~ 32 credits

Courses specific to the CHORAL track/~~24 credits~~

MUSC 140 Diction for Singers I/2 credits
MUSC 141 Diction for Singers II/2 credits
MUSC 157 *Beginning Ukulele/1 credit*
or
MUSC 158 *Beginning Guitar/1 credit*
MUSC 225 *Introduction to World Music/3 credits, counted in Core Curriculum*
MUSC 340 *Instrumental Survey/3 credits*
MUSC 342 *Advanced Choral Conducting/2 credits*
MUSC 412 *Arranging/2 credits*
MUSC 449 *Show Choir Techniques / 1 credit*
MUSC 483 ~~Applied Capstone Course/2 credits~~ *Applied Primary, Degree Recital/2 credits*
(1 credit satisfies General Education Goal 14)

Applied Music/~~12 credits~~ 10 credits*
Ensembles/7 credits

Courses specific to the INSTRUMENTAL track/~~25 credits~~

MUSC 157 *Beginning Ukulele/1 credit*
or
MUSC 158 *Beginning Guitar/1 credit*
MUSC 165 *Strings/1 credit*
MUSC 167 *Percussion/1 credit*
MUSC 205 *Vocal Ensemble/2 credits*
MUSC 225 *Introduction to World Music/3 credits, counted in Core Curriculum*
MUSC 343 *Advanced Instrumental Conducting/2 credits*
MUSC 361 *Brass/1 credit*
MUSC 363 *Woodwinds/1 credit*
MUSC 365 *Vocal Techniques/1 credit*
MUSC 412 *Arranging/2 credits*
MUSC 444 *Marching Band Fundamentals/1 credit*
MUSC 483 ~~Applied Capstone Course/2 credits~~ *Applied Primary, Degree Recital/2 credits*
(1 credit satisfies General Education Goal 14)

Applied Music/~~12 credits~~ 10 credits*
Ensembles/7 credits

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

**Music education majors who do not pass the Sophomore Promotional, or who are not making satisfactory progress in Applied Music study, will be advised to add a semester of Applied Music study prior to their Degree Recital.*

E. Professional Education Courses/17 credits

MUSC 145 Introduction to Music Education/1 credit

EDUC 245 Human Growth and Development/~~3 credits~~ 3 credits, counted in Core Curriculum

EDUC 260 Introduction to the Teaching Profession (Music section preferred)/2 credits

~~EDUC 467 Classroom Management and System Issues (Elementary & Middle)/3 credits~~

SPED 305 Behavior Management/3 credits

MUSC 332 History of Music II/3 credits

MUSC 441 Elementary ~~School~~ Music Methods and Materials/3 credits

MUSC 442 Choral Methods and Materials/2 credits

or MUSC 443 Instrumental Methods and Materials/2 credits

SPED 489 Survey of Exceptional Children/3 credits

F. Field Experience/14 credits

MUSC 345 Practicum in Elementary School/1 credit

MUSC 346 Practicum in Secondary School/1 credit

EDUC 410 Directed Elementary/Secondary Teaching for Art and Music/12 credits

G. Total Credits Required for Bachelor of Music with a Concentration in Education/~~122-126~~ 125-129

III. RATIONALE FOR PROPOSED CHANGES

Add Beginning Ukulele or Beginning Guitar: This equips our students for any level of general music teaching. Ukulele is a common instrument especially at the elementary level, and guitar is a common course offering at the secondary level. Either of these classes equip our students with the ability to accompany themselves when no piano is present, and also to teach beginning classes on these instruments. The pedagogy and approach are similar, thus the skills are transferrable between instruments.

MUSC 225, Introduction to World Music: Previously listed as an Additional Degree Requirement. With the reduction in ADRs related to the new Core Curriculum, this course had to be moved into major requirements. Information from this course is included in the Music Praxis examination.

MUSC 483, Degree Recital: Now 2 credits instead of 3. 1 credit used to count toward Goal 14; now Student Teaching will count as the Capstone Experience.

Applied Music, 10 credits: Reduction by one semester in applied primary study. This change was made to enable students to complete their Degree Recital before the semester in which they are completing music education requirements and state testing requirements. This number of applied primary credits is similar to sister universities in Virginia and around the country.

Ensembles, 7 credits: This requirement has always existed but these credits were "hidden".

Replace EDUC 468 with SPED 305 Behavior Management: This brings the music education major into agreement with the art education and theatre education majors, and provides more relevant behavior management information for music teachers.

Add SPED 489 Survey of Exceptional Children: This brings the music education major into agreement with the art education major, and provides our students with necessary information to function as a music educator in the 21st century.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

IV. RESOURCE ASSESSMENT, IF CHANGE WARRANTS IT

A. Estimate any change in staff requirements that would result from the program change.

We expect teaching loads to shift within the department so that no additional faculty are required. The number of students now taking SPED classes is small and should not impact SPED staffing.

B. Estimate the amount and cost of any extra equipment, library resources, computer hardware or software, or other resources that would be required to carry out the program change.

[Click here to respond.](#)

V. AFFECTED DEPARTMENTS OR PROGRAMS

If the proposed program changes could have an impact on other departments or programs, the appropriate affected chairs or program directors should be notified of the proposed changes. Where teaching licensure may be affected, the licensure officer should also be notified.

A. List other departments/programs that might be affected.

Special Education, School of Education

B. List individuals contacted and date contacted.

Kevin Doyle, 1/25/18

Chris Jones, 1/25/18

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For the Curriculum Development Handbook and all forms, see <http://blogs.longwood.edu/curriculum/>.

The signature page follows as a separate sheet.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

V. APPROVALS

Department: Music

Program Name: Bachelor of Music, Visual and Performing Arts, Concentration in Education

SIGNATURE PAGE

	Date Received	Date Approved	Signature
1. Department Curriculum Committee Chair	_____	_____	_____
2. Department Chair	_____	_____	_____
The Department Chairs, whose programs may be affected, have been notified:			
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
3. College Dean	_____	_____	_____
4. College Curriculum Committee	_____	_____	_____
5. EPC	_____	_____	_____
6. Faculty Senate *	_____	_____	_____
7. Provost/VPAA *	_____	_____	_____
8. OAIR * (notification)	_____	_____	_____
9. BOV/SCHEV *	Provost/VPAA will submit materials for approval		
10. Received by Registrar	_____		

*** Substantive changes, including changes in degree program title, require additional approvals. See the approval process matrices on the Academic Initiatives and Curriculum Development blog and consult the EPC chair prior to submitting materials.**

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- February 1 to the College Curriculum Committee
- March 1 to the Educational Policy Committee (EPC)

Changes that affect spring advising for fall classes must have received approval from EPC and Senate before the registrar opens up the fall schedule for registration in March. Such proposals should reach the chair of EPC by the end of the fall semester. Submission within the deadlines does not guarantee processing in time for the next academic year's catalog.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Department: Psychology	Submission Date: 1/26/2018
Major <input type="checkbox"/> Minor <input checked="" type="checkbox"/> Concentration <input type="checkbox"/> Certificate <input type="checkbox"/>	
Catalog Year of Implementation (must be next academic year or later): 2018-19	
If retroactive, specify catalog year: 2015-16	

I. SUMMARY OF PROPOSED PROGRAM CHANGE INFORMATION

CURRENT (required)	Check if no change	PROPOSED CHANGE (if applicable)
Program Name: <u>NeuroStudies</u>	<input type="checkbox"/>	<u>Neuroscience Studies</u>
Credit Hours: <u>19</u>	<input type="checkbox"/>	<u>19-20</u>
<p>If yes, enter a justification for the change in credit hours. Neuroscience Studies minor credit hours are adjusted to accommodate the option of the 4 credit NEUR 105 course as a minor requirement.</p>		
Course(s) to be added: _____	<input type="checkbox"/>	<u>NEUR 105, NEUR 210, PSYC/BIOL 313, PSYC 315</u>
Course(s) to be removed: _____	<input type="checkbox"/>	<u>NEUR 151, NEUR 301, PSYC 405</u>
<p>Indicate courses to be substituted for removed courses</p>		
Course(s) to be changed: _____	<input checked="" type="checkbox"/>	_____
Other Changes: _____	<input type="checkbox"/>	<u>Editing NeuroStudies to Neuroscience Studies throughout catalog for consistency</u>

II. PROPOSED REVISION IN CATALOG DESCRIPTION OF PROGRAM

MINOR in ~~NeuroStudies~~ **Neuroscience Studies**

Faculty

Maxwell Hennings, PhD, *Assistant Professor of Psychology*

Catherine L. Franssen, PhD, *Assistant Professor of Psychology, Director of Neuroscience Studies Program*

Eric Laws, Ph.D., *Professor of Psychology*

The mission of the Longwood University ~~NeuroStudies~~ **Neuroscience Studies** Minor is to engage students from across the curriculum with neuroscience, with the aim of meeting Longwood University's vision to create lifelong learners connected to what is new in the world. The relatively new, rapidly growing, and pervasive field of neuroscience intersects with nearly every discipline. Through the interdisciplinary ~~NeuroStudies~~ **Neuroscience Studies** Minor, students will improve critical & independent thinking skills as well as scientific literacy, and prepare for careers in both science and non-science fields. Students from a variety of academic areas are encouraged to participate in this educational experience. Courses for this program are designed to inform students about the foundational concepts and current events in neuroscience, and provide an intentional focus on development of the interrelationships of neuroscience across the liberal arts.

Requirements for the 19-20-credit hour Minor in ~~NeuroStudies~~ **Neuroscience Studies**:

In order to complete a minor in ~~NeuroStudies~~ **Neuroscience Studies**, students must:

1. File a form of intention to pursue the Minor at the Registrar's Office
2. Earn a grade of "B-" or better in ~~NEUR/PSYC 151~~ **or NEUR 105**, NEUR/PSYC 321, NEUR/~~PSYC~~ 405. Earn a grade point average of 2.0 in all additional courses chosen to meet the minor requirements.

PROGRAM CHANGE CURRICULUM FORM

UNDERGRADUATE

Take all of the following courses/ 10-11 credits:

NEUR 105 Introduction to Neuroscience/4 credits
OR ~~NEUR 151~~/PSYC 151 Introduction to Biopsychology/3 credits
 NEUR 321/PSYC 321 Behavioral Neuroscience/ 4 credits
 NEUR405/~~PSYC 405~~ Interdisciplinary Neuroscience Applications/ 3 credits

Choose 9 credit hours from the following:

BIOL 206 Human Anatomy and Physiology I/4 credits
 OR BIOL 301 Comprehensive Human Anatomy and Physiology/4 credits
 BIOL306 Vertebrate Physiology/4 credits
 BIOL 360 Developmental Biology/4 credits
 BIOL 412 (CHEM 412) Biochemistry/4 credits
 BIOL 426 Cell Biology/4 credits
 BIOL 475 Animal Behavior/4 credits
OR PSYC 315 Comparative Animal Behavior/3 credits
 CHEM 351 Instrumental Analysis/3 credits
 CHEM 371 Advanced Organic/3 credits
 CSDS455 Neurology in Human Communications/3 credits
 CSDS460 Introduction to Neurogenic Communication Disorders/2 credits
 CMSC 389 Artificial Intelligence/3 credits
 KINS215 Exercise Is Medicine/3 credits
 KINS375 Exercise Science Seminar/3 credits
 KINS386 Biomechanics/ 4 credits
 KINS387 Exercise Physiology/4 credits
 MANG 362 Organizational Behavior/ 3 credits
~~MATH 325 (CMSC 325) Mathematical Modeling and Simulation/3 credits~~
~~NEUR (PSYC 301) Psychobiology of Stress/ 3 credits~~
NEUR 210 Decision Making/ 3 credits
 NEUR 390 Directed or Independent Research in Neuroscience/ 1-3 credits
 NEUR 490 Directed or Independent Research in Neuroscience/ 1-3 credits
 NEUR 492 Internship in Neuroscience/ 1-3 credits
 NEUR 495 Special Topics in Neuroscience/3 credits
 NEUR 498 Honors Research in Neuroscience/ 1-3 credits
 PHIL 355 Philosophy of Mind/ 3 credits
 PHYS 300 Mathematical Physics/ 4 credits
 PHYS 326 Optics/4 credits
 PHYS 331 AC/DC Circuits/4 credits
 PHYS 341 Electronics/4 credits
 PSYC300 Sensation & Perception/4 credits
PSYC 301 Psychobiology of Stress/ 3 credits
PSYC 313 (BIOL 313) Hormones & Behavior/3 credits
 PSYC324 Learning/4 credits
 PSYC452 Psychopharmacology/3 credits
 RECR303 Physical Disabilities/3 credits
 RECR320 Facilitation Techniques I/3 credits
 RECR321 Facilitation Techniques II/3 credits

III. RATIONALE FOR PROPOSED CHANGES

Delete NEUR 151 (remove cross-list)- PSYC 151 remains unchanged
 Delete NEUR 301 (remove cross-list)- PSYC 301 remains unchanged
 Delete PSYC 405 (remove cross-list)- NEUR 405 remains unchanged
 Add New Course PSYC/BIOL 313 (Hormones & Behavior)- new elective for Neuroscience Studies minor
 Add New Course NEUR 210 (Decision Making)- new elective for Neuroscience Studies minor
 Add New Course PSYC 315 (Comparative Animal Behavior) - new elective for Neuroscience Studies minor
 Replace NeuroStudies with Neuroscience Studies to maintain coherence throughout university publications
 Include NEUR 105 as optional prerequisite for Neuroscience Studies minor

<p style="text-align: center;">PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE</p>
--

<p>Delete MATH/CMSC 325 from Neuroscience Studies minor - course has been deleted</p>

IV. RESOURCE ASSESSMENT, IF CHANGE WARRANTS IT

<p>A. Estimate any change in staff requirements that would result from the program change.</p>

No change

<p>B. Estimate the amount and cost of any extra equipment, library resources, computer hardware or software, or other resources that would be required to carry out the program change.</p>
--

No change

V. AFFECTED DEPARTMENTS OR PROGRAMS

If the proposed program changes could have an impact on other departments or programs, the appropriate affected chairs or program directors should be notified of the proposed changes. Where teaching licensure may be affected, the licensure officer should also be notified.

<p>A. List other departments/programs that might be affected.</p>
--

None

<p>B. List individuals contacted and date contacted.</p>

Click here to respond.

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The signature page follows as a separate sheet.

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

V. APPROVALS

Department: Psychology

Program Name: Neuroscience Studies Minor

SIGNATURE PAGE

	Date Received	Date Approved	Signature
1. Department Curriculum Committee Chair	_____	_____	_____
2. Department Chair	_____	_____	_____
The Department Chairs, whose programs may be affected, have been notified:			
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
3. College Dean	_____	_____	_____
4. College Curriculum Committee	_____	_____	_____
5. EPC	_____	_____	_____
6. Faculty Senate *	_____	_____	_____
7. Provost/VPAA *	_____	_____	_____
8. OAIR * (notification)	_____	_____	_____
9. BOV/SCHEV *	Provost/VPAA will submit materials for approval		
10. Received by Registrar	_____		

*** Substantive changes, including changes in degree program title, require additional approvals. See the approval process matrices on the Academic Initiatives and Curriculum Development blog and consult the EPC chair prior to submitting materials.**

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<p>PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE</p>

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

Department: Mathematics and Computer Science	Submission Date: 8/21/2017
Major <input checked="" type="checkbox"/> Minor <input type="checkbox"/> Concentration <input type="checkbox"/>	
Catalog Year of Implementation (must be next academic year or later): 2018-19	
If retroactive, specify catalog year: Enter retroactive catalog year.	

I. SUMMARY OF PROPOSED PROGRAM CHANGE INFORMATION

CURRENT (required)	Check if no change	PROPOSED CHANGE (if applicable)
Program Name: Mathematics	<input checked="" type="checkbox"/>	
Credit Hours: 120	<input checked="" type="checkbox"/>	
If yes, enter a justification for the change in credit hours. Enter a justification for the change in credit hours.		
Course(s) to be added:	<input checked="" type="checkbox"/>	
Course(s) to be removed: CMSC/MATH 350	<input type="checkbox"/>	No Goal 12 in new Core Curriculum
Indicate courses to be substituted for removed courses		
Course(s) to be changed: Goal 14	<input type="checkbox"/>	Math 390, 392, 482, 490, 492, or 498 required in the major
Other Changes: B.S., B.A.: two additional courses	<input type="checkbox"/>	B.S: one additional course; remove B.A. degree

II. PROPOSED REVISION IN CATALOG DESCRIPTION OF PROGRAM

MATHEMATICS MAJOR, ~~BA or~~ BS DEGREE

A. General Education Core Curriculum Requirements/3839-40 credits
~~Majors are required to take MATH 350 for General Education Goal 12.~~
Mathematics majors are required to take MATH 171, which fulfills the Quantitative Reasoning pillar of the Foundations requirements.
Mathematics majors seeking Secondary Education Endorsement (Section D) are required to take EDUC 245, which fulfills the Human Behavior and Social Institutions pillar of the Foundations requirements; and either MATH 304 or MATH 320, which fulfill the Quantitative Reasoning pillar of the Perspectives requirements.

B. BS Degree Additional Degree Requirements/7-8 3-4 credits
~~Students must take an additional 4 credit natural science course and Either CMSC 140 or CMSC 160 to earn a B.S. degree.~~
CMSC 140 Introduction to Programming/3 credits
or CMSC 160 Introduction to Algorithm Design I/4 credits
~~BA Degree Additional Degree Requirements/6 credits~~

C. Major Requirements/41-44 credits43 credits (Plus 4 credits included in General Education)
~~All Majors~~
MATH 171 Statistical Decision Making/3 credits (3 credits counted in Core Curriculum)

PROGRAM CHANGE CURRICULUM FORM

UNDERGRADUATE

MATH 175 Discrete Mathematics/2 credits
MATH 261 The Differential and Integral Calculus I/4 credits (~~3 of these 4 credits satisfy General Education Goal 5~~) **(MATH 164 is a prerequisite)**
MATH 262 The Differential and Integral Calculus II/4 credits
MATH 280 Linear Algebra/3 credits
MATH 300 ~~A Transition to Advanced Mathematics~~ **Proofs and Number Theory/ 3 credits**
MATH 342 Introduction to Modern Algebra/3 credits
MATH 361 Multivariable Calculus/4 credits
MATH 372 Mathematical Probability & Statistics I/3 credits
MATH 461 Senior Seminar **in Mathematics**/2 credits
MATH 462 Advanced Calculus/3 credits
~~CMSC 492~~ **MATH 390 or MATH 392 or MATH 482 or MATH 490 or MATH 492 or MATH 498 or MAED 490/1-3 credit (1 credit satisfies General Education Goal 14) (Additional credits in MATH 482 count toward the Secondary Education endorsement below.)**

Electives/**9-12 credits**

Students must complete a total of 12 additional **credits consisting of Mathematics courses at the hours from 300 - 400 level Mathematics courses, excluding the courses in the list below. Additionally, among Core Curriculum Perspectives courses, only MATH 301, and one of MATH 304 or MATH 320 may count toward Mathematics elective credit.**

Electives may NOT include:

MATH 309 Numeration Systems/3 credits
MATH 310 Probability, and Statistics, and Programming/3 credits
MATH 313 Geometry and Reasoning/3 credits
MATH 350 Ethical Issues in Mathematics and Computer Science/3 credits
MATH 430 Teaching Mathematics in the Middle School/ 3 credits
MATH 451 The Teaching of High School Mathematics/2 credits
MATH 482 Directed Teaching in the Secondary School/12 credits

D. Secondary Education Endorsement, grades 6-12/**26 credits**~~29-31 credits (Plus 1 credit included in general education and 3-6 credits included in the major)~~

~~MATH 245 History of Mathematics/2 credits~~

MATH 304* Mathematics History/(3 credits counted in Core Curriculum)

or **MATH 320* International Studies in Mathematics History/1-3 credits (3 credits counted in Core Curriculum)**

MATH 335* Advanced Euclidean Geometry/3 credits (3 credits counted in Major Requirements)

MATH 451 The Teaching of High School Mathematics/2 credits

MATH 482 Directed Teaching in the Secondary School/12 credits (12 credits (of which 1 credit is counted in Major Requirements))

MAED 152 Principles of Secondary Education in Mathematics/1 credit

MAED 252 Practicum I in Mathematics/2 credits

MAED 352 Practicum II in Mathematics/2 credits

EDUC 245 Human Growth and Development/3 credits (3 credits counted in Core Curriculum)

EDUC 260 Introduction to the Teaching Profession/2 credits

EDUC 432*** Content Area Literacy/3 credits

~~EDUC 467~~ **EDUC 487*** Classroom Management and System Issues (Elementary & Middle)/3 credits**

***MATH 335 and one of MATH 304 or MATH 320 and MATH 335 count towards the mathematics major.**

PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

~~MATH 320 only replaces MATH 245 if taken for 3 credits.~~

***Students must be admitted to the Teacher Preparation Program before they will be permitted to enroll in any subsequent 300-400 level EDUC courses.

E. General Electives (non-teaching majors)/~~31-33~~ **32-37** credits (teaching majors)/~~2-5-9-11~~ credits

F. Total Credits Required for ~~BA~~, BS in Mathematics/120

Total Credits Required for BS in Mathematics with Secondary Teaching Endorsement/120

III. RATIONALE FOR PROPOSED CHANGES

The Core Curriculum requires programs to revise their additional degree requirements, Goal 12, and Goal 14 requirements. For our program, we must also revise Goal 5 language as well.

We removed the BA degree because only three students in the last ten years have pursued it. There are currently no students in this degree designation.

The change to EDUC 487 is reverting an error introduced in the 2016 catalogue without our department's involvement or knowledge.

IV. RESOURCE ASSESSMENT, IF CHANGE WARRANTS IT

A. Estimate any change in staff requirements that would result from the program change.

We anticipate that a change in the Core Curriculum may necessitate additional faculty in the program to allow for the Quantitative Reasoning Perspectives level to be staffed.

B. Estimate the amount and cost of any extra equipment, library resources, computer hardware or software, or other resources that would be required to carry out the program change.

[Click here to respond.](#)

V. AFFECTED DEPARTMENTS OR PROGRAMS

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A. List other departments/programs that might be affected.

[Click here to respond.](#)

B. List individuals contacted and date contacted.

[Click here to respond.](#)

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PROGRAM CHANGE CURRICULUM FORM UNDERGRADUATE

V. APPROVALS

Department: Mathematics and Computer Science

Program Name: Mathematics (B.S. degree and B.A. degree)

SIGNATURE PAGE

	Date Received	Date Approved	Signature
1. Department Curriculum Committee Chair	_____	_____	_____
2. Department Chair	_____	_____	_____
The Department Chairs, whose programs may be affected, have been notified:			
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
Department	_____	Date Notified	_____
3. College Dean	_____	_____	_____
4. College Curriculum Committee	_____	_____	_____
5. EPC	_____	_____	_____
6. Faculty Senate *	_____	_____	_____
7. Provost/VPAA *	_____	_____	_____
8. OAIR * (notification)	_____	_____	_____
9. BOV/SCHEV *	Provost/VPAA will submit materials for approval		
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