

**UNDERGRADUATE AND PROFESSIONAL MAJOR CHANGE BULLETIN NO. 3  
Fall 2016**

**--REQUIREMENTS—**

The requirements listed below reflect the undergraduate major curricular changes approved by the Catalog Subcommittee since approval of the last Undergraduate Major Change Bulletin. All changes are underlined. Deletions are crossed out. The column to the far right indicates the date each change becomes effective. Note: Items marked {S} have been streamlined and do not require Catalog Subcommittee review.

<b>Dept</b>	<b>Proposed</b>	<b>Effective Date</b>
<p><b>General Studies</b> {S} Revise schedule of studies for clarification of existing requirements for Bachelor of Science in General Studies – Sciences – Biological/Mathematical/Physical Sciences Options.</p>	<p><b>General Studies - Biological/Mathematical/Physical Sciences Plan A and Plan B (120 Hours)</b></p> <p>The Biological/Mathematical/Physical Sciences plan within General Studies is for students who are interested in interdisciplinary programs in science or mathematics which offer broader options in course selections than are possible within single departments. Students who wish to earn a Bachelor of Science degree will devise an approved, coherent program of study with the coordinator which fulfills an academic or career goal and includes prerequisites consistent with the 300-400-level major course work. In addition, each student will satisfy the University Core Requirements and any additional requirements of the College of Arts and Sciences. <u>Students must complete two [M] courses and Aat least 40 of the 120 hours for the degree must be at the 300-400-level.</u></p> <p><u><b>General Studies—Biological Sciences.</b> This degree has two plans of study (Plan A or Plan B). Both require BIOLOGY 106 and 107, CHEM 105, 106, and 345, and MATH 140 or 171.</u></p> <p><u>Plan A students complete 24 credits (minimum 15 credits at the 300-400 level) from the following academic areas: biology, biochemistry, botany, genetics and cell biology, microbiology, zoology, and approved biology-based courses in agriculture. In addition, students must complete a 15 credits (minimum 6 credits upper division) from a concentration area outside of the biological sciences. Both concentration areas require a minimum 2.0 GPA.</u></p> <p><u>Plan B students complete a total of 39 credits (minimum 21 credits at the 300-400 level) in three or more departments or program areas chosen from biology, biochemistry, botany, genetics and cell biology, microbiology, zoology, and approved biology-based courses in agriculture. Students must complete a minimum of 9 credits in each department or program area with a minimum 2.0 GPA.</u></p> <p><u>Students may not use General Studies Biological Sciences as part of a double major with either biology or zoology. Students will work with their academic</u></p>	<p><b>8-16</b></p>

advisor in the School of Biological Sciences to plan individual courses of study for this option of the Bachelor of Science degree.

**General Studies- Mathematical Sciences. Primary Concentration:** Students are required to complete minimum of 24 credits (minimum 15 credits at the 300-400 level) including MATH 171, 172, 273, and 220. Other approved coursework includes any MATH course, or STAT 360, 370, 422, 423, 443, 446, 447, or 456. Secondary concentration: a minimum of 15 semester credits (including a minimum 6 credits at the 300-400-level), must be completed in another academic department, program or area published in the catalog with a minimum 2.0 minor concentration GPA.

**General Studies- Physical Sciences.** This degree has two plans of study (Plan A or Plan B). Both require, CHEM 105 and 106, MATH 171 and 172 and PHYSICS 201 and 202.

Plan A students must have a primary and secondary concentration. For the primary concentration students are required to complete minimum of 24 credits (minimum 15 credits at the 300-400 level) from one of the following areas any Astronomy, Civil Engineering, Chemical Engineering, Chemistry, Computer Science, Electrical Engineering, Geology, Math, Mechanical Engineering, Materials Science Engineering, Physics or Statistics. For the secondary concentration a minimum of 15 semester credits (including a minimum 6 at the 300-400-level), must be completed in another academic department, program or area published in the catalog. Both concentration areas require a minimum 2.0 GPA.

Plan B students must complete 39 credits (minimum of 21 credits in the 300-400 level) in three or more physical sciences with a minimum of 9 credits in each concentration area and a minimum 2.0 GPA in each concentration area.

#### **Plan A— Primary/Secondary Concentration**

Primary concentration: a minimum of 24 semester credits, including at least 15 300-400 level credits, must be completed in biological sciences, in mathematics or in a single physical science with a minimum 2.00 primary concentration GPA. Students who complete one of the above primary concentrations will receive a Bachelor of Science degree with a primary concentration in general biological sciences (Gen B), general mathematics (Gen M) or general physical sciences (Gen P).

Secondary concentration: a minimum of 15 semester credits, including at least 6 300-400 level credits, must be completed in another academic department, program or area published in the catalog with a minimum 2.0 minor concentration GPA.

#### **Plan B— Three Related Areas in Biological Sciences**

A combination of biological sciences courses of at least 39 credits in three or more departments or programs. 9 credits in each department or program area

	<p>are required and 21 300-400 level hours must be completed with at least a 2.0 GPA in these courses. The related areas in general biological sciences (Gen B) include biology, biochemistry, botany, genetics and cell biology, microbiology, zoology and approved biology based courses in agriculture. Students who complete a Plan B curriculum receive a Bachelor of Science degree with a primary concentration in general biological sciences (Gen B).</p> <p><b>Prerequisite Courses</b></p> <p><b>General Biological Sciences (Gen B):</b> One year biology, one semester introductory calculus, one year general chemistry, and one semester organic chemistry.</p> <p><b>General Physical Sciences (Gen P):</b> One year calculus, one year calculus-based physics, and one year general chemistry. (Students who plan a major concentration in chemistry should also include quantitative and organic chemistry. Physical geology is a prerequisite for 300-400 level geology courses.)</p> <p><b>General Mathematics (Gen M):</b> three semesters of calculus and linear algebra.</p>																																					
<p><b>Integrative Physiology and Neuroscience</b> Revise graduation requirements for Bachelor of Science in Neuroscience – General Option</p>	<p><b>Neuroscience - General Option (120 Hours)</b></p> <table border="0"> <thead> <tr> <th colspan="2"><b>Third Year</b></th> </tr> <tr> <th><i>First Term</i></th> <th><i>Hours</i></th> </tr> </thead> <tbody> <tr> <td>Behavior Course<sup>2</sup></td> <td><u>3 or 4</u></td> </tr> <tr> <td>MBIOS 303</td> <td>4</td> </tr> <tr> <td>Statistics<sup>3</sup></td> <td><u>3 or 4</u></td> </tr> <tr> <td>Neuroscience Electives<sup>1</sup></td> <td>4</td> </tr> <tr> <th><i>Second Term</i></th> <th><i>Hours</i></th> </tr> <tr> <td>Humanities [HUM]</td> <td>3</td> </tr> <tr> <td>NEUROSCI 404</td> <td>4</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td><u>9/10</u></td> </tr> <tr> <th colspan="2"><b>Fourth Year</b></th> </tr> <tr> <th><i>First Term</i></th> <th><i>Hours</i></th> </tr> <tr> <td>NEUROSCI 430 [M]</td> <td>4</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td>11</td> </tr> <tr> <th><i>Second Term</i></th> <th><i>Hours</i></th> </tr> <tr> <td>NEUROSCI 403 [M]</td> <td>3</td> </tr> <tr> <td>NEUROSCI 490 [CAPS]</td> <td>3</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td>9</td> </tr> </tbody> </table>	<b>Third Year</b>		<i>First Term</i>	<i>Hours</i>	Behavior Course <sup>2</sup>	<u>3 or 4</u>	MBIOS 303	4	Statistics <sup>3</sup>	<u>3 or 4</u>	Neuroscience Electives <sup>1</sup>	4	<i>Second Term</i>	<i>Hours</i>	Humanities [HUM]	3	NEUROSCI 404	4	Electives <sup>4</sup>	<u>9/10</u>	<b>Fourth Year</b>		<i>First Term</i>	<i>Hours</i>	NEUROSCI 430 [M]	4	Electives <sup>4</sup>	11	<i>Second Term</i>	<i>Hours</i>	NEUROSCI 403 [M]	3	NEUROSCI 490 [CAPS]	3	Electives <sup>4</sup>	9	<p><b>8-17</b></p>
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<p><b>Integrative Physiology and Neuroscience</b> Revise graduation requirements for Bachelor of Science in Neuroscience – Pre-Medical and Pre-Dental</p>	<p><b>Neuroscience – Pre-Medical and Pre-Dental Option (120 Hours)</b></p> <p>Students may certify in general neuroscience (including Pre-Medical/Pre-Dental and Pre-Veterinary options) after completing a minimum of 24 semester hours with a 3.0 minimum GPA overall, and a 3.0 minimum GPA in BIOLOGY 106, BIOLOGY 107, CHEM 105, CHEM 106 or 116, MATH 140 or 171, PHYSICS 101 or 201 or 205, and PHYSICS 102 or 202 or 206 or CHEM 345.</p> <p><u>Students are encouraged to take the MCAT after completion of the third year.</u></p> <table border="0" style="width: 100%;"> <tr> <td colspan="2"><b>Third Year</b></td> </tr> <tr> <td><i>First Term</i></td> <td style="text-align: right;"><i>Hours</i></td> </tr> <tr> <td>Behavior Course<sup>1</sup></td> <td style="text-align: right;">3 <u>or</u> 4</td> </tr> <tr> <td>MBIOS 303</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Statistics Course<sup>2</sup></td> <td style="text-align: right;">3 <u>or</u> 4</td> </tr> <tr> <td>Neuroscience Electives<sup>3</sup></td> <td style="text-align: right;">5</td> </tr> <tr> <td><i>Second Term</i></td> <td style="text-align: right;"><i>Hours</i></td> </tr> <tr> <td>BIOLOGY/MBIOS 301</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Humanities [HUM]</td> <td style="text-align: right;">3</td> </tr> <tr> <td>NEUROSCI 404</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td style="text-align: right;"><u>5</u>6</td> </tr> <tr> <td colspan="2"><b>Fourth Year</b></td> </tr> <tr> <td><i>First Term</i></td> <td style="text-align: right;"><i>Hours</i></td> </tr> <tr> <td>NEUROSCI 430 [M]</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td style="text-align: right;">11</td> </tr> <tr> <td><i>Second Term</i></td> <td style="text-align: right;"><i>Hours</i></td> </tr> <tr> <td>NEUROSCI 403 [M]</td> <td style="text-align: right;">3</td> </tr> <tr> <td>NEUROSCI 490 [CAPS]</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td style="text-align: right;">9</td> </tr> </table>	<b>Third Year</b>		<i>First Term</i>	<i>Hours</i>	Behavior Course <sup>1</sup>	3 <u>or</u> 4	MBIOS 303	4	Statistics Course <sup>2</sup>	3 <u>or</u> 4	Neuroscience Electives <sup>3</sup>	5	<i>Second Term</i>	<i>Hours</i>	BIOLOGY/MBIOS 301	4	Humanities [HUM]	3	NEUROSCI 404	4	Electives <sup>4</sup>	<u>5</u> 6	<b>Fourth Year</b>		<i>First Term</i>	<i>Hours</i>	NEUROSCI 430 [M]	4	Electives <sup>4</sup>	11	<i>Second Term</i>	<i>Hours</i>	NEUROSCI 403 [M]	3	NEUROSCI 490 [CAPS]	3	Electives <sup>4</sup>	9	<p><b>8-17</b></p>
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<p><b>Integrative Physiology and Neuroscience</b> Revise graduation requirements for Bachelor of Science in Neuroscience – Pre-Veterinary Option</p>	<p><b>Neuroscience – Pre-Vet Option (120 Hours)</b></p> <p>Students may certify in general neuroscience (including Pre-Medical/Pre-Dental and Pre-Veterinary options) after completing a minimum of 24 semester hours with a 3.0 minimum GPA overall, and a 3.0 minimum GPA in BIOLOGY 106, BIOLOGY 107, CHEM 105, CHEM 106 or 116, MATH 140 or 171, PHYSICS 101 or 201 or 205, and PHYSICS 102 or 202 or 206 or CHEM 345.</p> <p><u>Students are encouraged to take the GRE after completion of the third year and apply to Veterinary School by the end of the first term of the fourth year.</u></p> <table border="0"> <tr> <td colspan="2"><b>Third Year</b></td> </tr> <tr> <td><i>First Term</i></td> <td style="text-align: right;"><i>Hours</i></td> </tr> <tr> <td>Behavior Course<sup>1</sup></td> <td style="text-align: right;"><u>3 or 4</u></td> </tr> <tr> <td>MBIOS 303</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Statistics Course<sup>2</sup></td> <td style="text-align: right;"><u>3 or 4</u></td> </tr> <tr> <td>Neuroscience Electives<sup>3</sup></td> <td style="text-align: right;">5</td> </tr> <tr> <td><i>Second Term</i></td> <td style="text-align: right;"><i>Hours</i></td> </tr> <tr> <td>Humanities [HUM]</td> <td style="text-align: right;">3</td> </tr> <tr> <td>NEUROSCI 404</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td style="text-align: right;">9</td> </tr> <tr> <td><del>Take GRE over the summer</del></td> <td></td> </tr> <tr> <td colspan="2"><b>Fourth Year</b></td> </tr> <tr> <td><i>First Term</i></td> <td style="text-align: right;"><i>Hours</i></td> </tr> <tr> <td>NEUROSCI 430 [M]</td> <td style="text-align: right;">4</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td style="text-align: right;">11</td> </tr> </table>	<b>Third Year</b>		<i>First Term</i>	<i>Hours</i>	Behavior Course <sup>1</sup>	<u>3 or 4</u>	MBIOS 303	4	Statistics Course <sup>2</sup>	<u>3 or 4</u>	Neuroscience Electives <sup>3</sup>	5	<i>Second Term</i>	<i>Hours</i>	Humanities [HUM]	3	NEUROSCI 404	4	Electives <sup>4</sup>	9	<del>Take GRE over the summer</del>		<b>Fourth Year</b>		<i>First Term</i>	<i>Hours</i>	NEUROSCI 430 [M]	4	Electives <sup>4</sup>	11	<p><b>8-17</b></p>
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	<p>Apply to <del>Veterinary School</del></p> <p><b>Second Term</b></p> <table border="0"> <tr> <td></td> <td style="text-align: right;"><b>Hours</b></td> </tr> <tr> <td>NEUROSCI 403 [M]</td> <td style="text-align: right;">3</td> </tr> <tr> <td>NEUROSCI 490 [CAPS]</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Electives<sup>4</sup></td> <td style="text-align: right;">9</td> </tr> </table> <hr/> <p><b>Footnotes</b></p> <p><sup>1</sup> Choose one course from: <del>BIOLOGY 438, BIOLOGY 456, PSYCH 470, PSYCH 491, NEUROSCI 305, 333, or NEUROSCI 409.</del></p> <p><sup>2</sup> Choose one course from: <del>MATH/STAT 212, MATH 360, MATH 370, PSYCH 311, STAT 212, 360, 370, or 412, or PSYCH 311.</del></p> <p><sup>3</sup> Approved Neuroscience electives (5 credits) include: BIOLOGY 301, 315, 321, 340, 352, 353, 354, 438, 456; MATH 340; MBIOS 301, 304, 305, 401, 404, 413; NEUROSCI 305, 409, 425, 426; <del>PSYCH 265, 312, 333, 350, 361, 372, 384, 464, 470, 490, 491;</del> PHYSICS 466; <del>PSYCH 265, 312, 333, 350, 361, 372, 384, 464, 470, 490, 491;</del> VET PH 308. Courses may not be used to fulfill more than one requirement. Other courses may be allowed by department consent. Please see your advisor.</p> <p><sup>4</sup> <del>Additional elective choices should include a minimum of 9 credits at the 300-400 level. 300-400 level coursework to meet the University minimum requirement of 40 upper division credits. Consult your advisor regarding elective courses that may be required or recommended for admission to a DVM program.</del></p>		<b>Hours</b>	NEUROSCI 403 [M]	3	NEUROSCI 490 [CAPS]	3	Electives <sup>4</sup>	9	
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<p><b>Integrative Physiology and Neuroscience</b> Revise requirements for Minor in Neuroscience</p>	<p><b>Neuroscience</b></p> <p>Students may apply for a minor in neuroscience once they have completed 60 semester credit hours and have a 2.75 GPA. However, they may take minor coursework at any time as long as they meet the prerequisites. A minor in neuroscience requires 16 credits in Neuroscience, with at least 13 at or above the 300-level. Courses needed to satisfy the minor must include NEUROSCI 301; three credits selected from NEUROSCI 305, <u>333, or 409</u>, <del>PSYCH 470, 491, BIOLOGY 438, or BIOLOGY 456</del>; at least six credits selected from the following: NEUROSCI 403, 404, and 430; and up to four credits of neuroscience related elective coursework (<del>see elective choices for Neuroscience Major</del>). <u>Approved Neuroscience electives include: BIOLOGY 301, 315, 321, 340, 352, 353, 354, 438, 456; MATH 340; MBIOS 301, 304, 305, 401, 404, 413; NEUROSCI 305, 409, 425, 426; PSYCH 265, 312, 333, 350, 361, 372, 384, 464, 470, 490, 491; PHYSICS 466; VET PH 308.</u> Upon the approval of the student's advisor, a student with a minor in neuroscience may include 500-level courses in the minor program, provided the student meets the graduate study requirements and, prior to registration, obtains the consent of the faculty member(s) teaching the course. Students must maintain a minimum 2.75 GPA to remain certified as a neuroscience minor. Credit hours for the minor must include 9 hours of upper-division work taken in</p>	<p><b>8-17</b></p>								

	residence at WSU or through WSU-approved education abroad or educational exchange courses.					
<p><b>Mathematics and Statistics</b> Revise Bachelor of Science in Mathematics schedule of studies to break out in Actuarial Science, Applied, and Theoretical Options into individual schedules of studies; revise graduation requirements for Bachelor of Science in Mathematics – Actuarial Science Option.</p>	<p><b>Mathematics – Actuarial Science Option (120 Hours)</b></p> <p><b>Mathematics Major Core Requirements</b> [Same for all three options]</p> <p>In addition to the UCORE requirements and the College of Arts and Sciences requirements, a mathematics major is required to take 13 core courses and a minimum of 4 additional 300-400-level MATH courses specified by a chosen option. Options include: Actuarial Science, Applied Mathematics, Theoretical Mathematics. Courses required for the major may not be taken pass/fail, and a 2.0 minimum GPA is required.</p> <p><b>Certification Requirements</b> [Same for all three options]</p> <ol style="list-style-type: none"> <li>1. Applications for certification are accepted at any time during fall and spring semesters. Decisions are made within ten working days of receipt of application. Application forms are available in the Mathematics Department office.</li> <li>2. Applications are evaluated, and certification decided, by a faculty committee.</li> <li>3. Applicants must have an overall GPA of at least 2.0.</li> <li>4. The mathematics core consists of MATH 171, 172, and 220. These courses (or their equivalent for transfer students) must be completed before application.</li> <li>5. Students with at least a 2.5 GPA in the mathematics core will be certified automatically. Those with less than a 2.0 GPA in the mathematics core will normally not be certified. Others will be considered on a case-by-case basis.</li> <li>6. Appeals on certification decisions are considered by the department chairperson.</li> <li>7. Students who are denied certification may reapply after completing at least 12 more semester hours, whereupon decisions are based on grades in mathematics, science, and computer science courses; cumulative grade point average and grade patterns; and a personal interview.</li> <li>8. Certified students whose cumulative GPA or GPA in MATH courses numbered 171 and above falls below 2.0 for two consecutive semesters, or who are academically deficient, are subject to decertification.</li> <li>9. Applications for recertification are handled in the same manner as certification applications for those previously denied.</li> </ol> <p><b>First Year</b></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 80%;"><i>First Term</i></td> <td style="text-align: right;"><i>Hours</i></td> </tr> <tr> <td>Biological Sciences [BSCI] with lab</td> <td style="text-align: right;">4</td> </tr> </table>	<i>First Term</i>	<i>Hours</i>	Biological Sciences [BSCI] with lab	4	8-17
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Creative & Professional Arts [ARTS]	3
ENGLISH 101 [WRTG]	3
MATH 171 [QUAN]	4
<b><i>Second Term</i></b>	<b><i>Hours</i></b>
CPT S 121	4
<u>ECONS 101 [SSCI]</u>	<u>3</u>
HISTORY 105 [ROOT]	3
MATH 172 <u>or</u> 182	4
MATH 220 <u>or</u> 230	2 <u>or</u> 3
Social Sciences [SSCI] <sup>1</sup>	3
<b>Second Year</b>	
<b><i>First Term</i></b>	<b><i>Hours</i></b>
Humanities [HUM]	3
MATH 273 <u>or</u> 283	2
MATH 301	3
<u>MATH 405</u>	<u>3</u>
PHYSICS 201 [PSCI]	4
Foreign Language, if necessary, or Elective <sup>2</sup>	4
<b><i>Second Term</i></b>	<b><i>Hours</i></b>
<del>Creative &amp; Professional Arts [ARTS], Humanities [HUM], or Social Sciences [SSCI]<sup>1</sup></del>	<del>3</del>
<u>ECONS 102 [SSCI]</u>	<u>3</u>
MATH 315	3
<u>MATH STAT 360</u>	3
MATH 398	1
Foreign Language, if necessary, or Electives <sup>2</sup>	<u>4</u>
Complete Writing Portfolio	
<b>Third Year</b>	
<b><i>First Term</i></b>	<b><i>Hours</i></b>
<del>Diversity [DIVR]</del>	<del>3</del>
MATH 300 [M]	3
MATH 420	3
<del>MATH Option Course<sup>3</sup></del>	<del>3</del>
<u>STAT 443</u>	<u>3</u>
<u>Foreign Language, if needed, and/or Electives<sup>21</sup></u>	<u>3</u>
<b><i>Second Term</i></b>	<b><i>Hours</i></b>
ENGLISH 402 [WRTG] [M]	3
MATH 421 [M]	3
<del>MATH Option Course<sup>3</sup></del>	<del>3</del>



	<p><u>STAT 412 or 423</u> 3</p> <p><u>STAT 446</u> 3</p> <p><u>Foreign Language, if needed, and/or Electives<sup>21</sup></u> 6</p> <p><b>Fourth Year</b></p> <p><b><i>First Term</i></b> <b><i>Hours</i></b></p> <p>MATH 401 [M] 3</p> <p><u>MATH 416</u> 3</p> <p><u>MATH Option Course<sup>3</sup></u> 3</p> <p>Electives<sup>21</sup> 9</p> <p><b><i>Second Term</i></b> <b><i>Hours</i></b></p> <p><u>Diversity [DIVR]</u> 3</p> <p><u>MATH 402 [M]</u> 3</p> <p>MATH 464 [CAPS] 3</p> <p><u>STAT 447</u> 3</p> <p>Electives<sup>21</sup> 96</p> <hr/> <p><b>Footnotes</b></p> <p><sup>†</sup> Actuarial Science Option students should take ECONS 101, 102.</p> <p><sup>21</sup> Suggested elective courses for students pursuing Actuarial Science Option include ACCTG 230 and 231, ECONS 101 and 102, FIN 325 and 350, and MATH 448, which provide additional background for actuarial exams. Note: A minor in Business Administration is required to take FIN 325 and 350.</p> <p><sup>3</sup> Mathematics Options: Required option courses include: 1) Actuarial Science— MATH 416, 423, and 443; 2) Applied Math— a) MATH 364 and two of MATH 325, 416, 448, 453, 456, or 466; or b) CPT S 122, MATH 364, 448, and one of MATH 416, 440, or 466; or c) three of MATH 340, 415, 440, 448, and 486; 3) Theoretical Math— Three of MATH 302, 325, 403, 415, 441, or 453.</p>	
<p><b>Mathematics and Statistics</b> Revise Bachelor of Science in Mathematics schedule of studies to break out in Actuarial Science, Applied, and Theoretical Options into individual schedules of studies; revise graduation requirements for Bachelor of Science in Mathematics – Applied Option</p>	<p><b>Mathematics – Applied Option (120 Hours)</b></p> <p>[See Actuarial Science for description – will be recorded here in catalog].</p> <p><b>First Year</b></p> <p><b><i>First Term</i></b> <b><i>Hours</i></b></p> <p>Biological Sciences [BSCI] with lab 4</p> <p>Creative &amp; Professional Arts [ARTS] 3</p> <p>ENGLISH 101 [WRTG] 3</p> <p>MATH 171 [QUAN] 4</p> <p><b><i>Second Term</i></b> <b><i>Hours</i></b></p> <p>CPT S 121 4</p> <p>HISTORY 105 [ROOT] 3</p> <p>MATH 172 <u>or</u> 182 4</p> <p>MATH 220 <u>or</u> 230 2 <u>or</u> 3</p>	8-17

Social Sciences [SSCI] <sup>+</sup>	3
<b>Second Year</b>	
<b>First Term</b>	
	<b>Hours</b>
Humanities [HUM]	3
MATH 273 or 283	2
MATH 301	3
PHYSICS 201 [PSCI]	4
Foreign Language, if <del>necessary</del> <u>needed</u> , or Electives <sup>2</sup>	4
<b>Second Term</b>	
	<b>Hours</b>
Creative & Professional Arts [ARTS], Humanities [HUM], or Social Sciences [SSCI] <sup>+</sup>	3
MATH 315	3
<u>MATH STAT</u> 360	3
MATH 398	1
Foreign Language, if <del>necessary</del> <u>needed</u> , or Electives <sup>2</sup>	4
Complete Writing Portfolio	
<b>Third Year</b>	
<b>First Term</b>	
	<b>Hours</b>
Diversity [DIVR]	3
MATH 300 [M]	3
MATH 420	3
<u>Applied Mathematics</u> Option Course <sup>31</sup>	3
Electives	3
<b>Second Term</b>	
	<b>Hours</b>
ENGLISH 402 [WRTG] [M]	3
MATH 421 [M]	3
<u>Applied Mathematics</u> Option Course <sup>31</sup>	3
Electives	6
<b>Fourth Year</b>	
<b>First Term</b>	
	<b>Hours</b>
MATH 401 [M]	3
<u>Applied Mathematics</u> Option Course <sup>31</sup>	3
Electives	9
<b>Second Term</b>	
	<b>Hours</b>
MATH 402 [M]	3
MATH 464 [CAPS]	3
<u>Applied Mathematics</u> Option Course or electives <sup>1</sup>	3
Electives	96

	<p><b>Footnotes</b></p> <p><sup>1</sup> Actuarial Science Option students should take ECONS 101, 102.</p> <p><sup>2</sup> Suggested elective courses for students pursuing Actuarial Science Option include ACCTG 230 and 231, ECONS 101 and 102, FIN 325 and 350, and MATH 448, which provide additional background for actuarial exams. Note: A minor in Business Administration is required to take FIN 325 and 350.</p> <p><sup>3</sup> <del>Applied Mathematics Required Option: Required option e Courses include: 1) Actuarial Science—MATH 416, 423, and 443; 2) Applied Math— a) MATH 364 and two of MATH 325, 416, 448, 453, 456, or 466; or b) CPT S 122, MATH 364, 448, and one of MATH 416, 440, or 466; or c) three of MATH 340, 415, 440, 448, and 486; 3) Theoretical Math— Three of MATH 302, 325, 403, 415, 441, or 453.</del></p>	
<p><b>Mathematics and Statistics</b>  Revise Bachelor of Science in Mathematics schedule of studies to break out Actuarial Science, Applied, and Theoretical Options into individual schedules of studies; revise graduation requirements for Bachelor of Science in Mathematics – Theoretical Option</p>	<p><b>Mathematics – Theoretical Option (120 Hours)</b></p> <p>[See Actuarial Science for description – will be recorded here in catalog].</p> <p><b>First Year</b></p> <p><i>First Term</i> <span style="float: right;"><i>Hours</i></span></p> <p>Biological Sciences [BSCI] with lab 4</p> <p>Creative &amp; Professional Arts [ARTS] 3</p> <p>ENGLISH 101 [WRTG] 3</p> <p>MATH 171 [QUAN] 4</p> <p><i>Second Term</i> <span style="float: right;"><i>Hours</i></span></p> <p>CPT S 121 4</p> <p>HISTORY 105 [ROOT] 3</p> <p>MATH 172 <u>or</u> 182 4</p> <p>MATH 220 <u>or</u> 230 2 <u>or</u> 3</p> <p>Social Sciences [SSCI]<sup>+</sup> 3</p> <p><b>Second Year</b></p> <p><i>First Term</i> <span style="float: right;"><i>Hours</i></span></p> <p>Humanities [HUM] 3</p> <p>MATH 273 <u>or</u> 283 2</p> <p>MATH 301 3</p> <p>PHYSICS 201 [PSCI] 4</p> <p>Foreign Language, if <del>necessary</del> <u>needed</u>, or Electives<sub>2</sub> 4</p> <p><i>Second Term</i> <span style="float: right;"><i>Hours</i></span></p> <p>Creative &amp; Professional Arts [ARTS], Humanities [HUM], or Social Sciences [SSCI]<sup>1</sup> 3</p> <p>MATH 315 3</p> <p><del>MATH</del> <u>STAT</u> 360 3</p> <p>MATH 398 1</p> <p>Foreign Language, if <del>necessary</del> <u>needed</u>, or Electives<sub>2</sub> 4</p> <p>Complete Writing Portfolio</p>	<p><b>8-17</b></p>

<b>Third Year</b>	
<i>First Term</i>	<i>Hours</i>
Diversity [DIVR]	3
MATH 300 [M]	3
MATH 420	3
<u>Theoretical Mathematics</u> Option Course <sup>31</sup>	3
Electives	3
<i>Second Term</i>	<i>Hours</i>
ENGLISH 402 [WRTG] [M]	3
MATH 421 [M]	3
<u>Theoretical Mathematics</u> Option Course <sup>31</sup>	3
Electives	6
<b>Fourth Year</b>	
<i>First Term</i>	<i>Hours</i>
MATH 401 [M]	3
<u>Theoretical Mathematics</u> Option Course <sup>31</sup>	3
Electives	9
<i>Second Term</i>	<i>Hours</i>
MATH 402 [M]	3
MATH 464 [CAPS]	3
Electives	9

### Footnotes

<sup>1</sup> Actuarial Science Option students should take ECONS 101, 102.

<sup>2</sup> Suggested elective courses for students pursuing Actuarial Science Option include ACCTG 230 and 231, ECONS 101 and 102, FIN 325 and 350, and MATH 448, which provide additional background for actuarial exams. Note: A minor in Business Administration is required to take FIN 325 and 350.

<sup>31</sup> Theoretical Mathematics Required Option: Required option e Courses include: 1) Actuarial Science—MATH 416, 423, and 443; 2) Applied Math— a) MATH 364 and two of MATH 325, 416, 448, 453, 456, or 466; or b) CPT S 122, MATH 364, 448, and one of MATH 416, 440, or 466; or c) three of MATH 340, 415, 440, 448, and 486; 3) Theoretical Math—Three courses from of MATH 302, 325, 403, 415, 441, or 453.