49. Change in Curriculum

**College of Science**

Department of Mathematics
- BS in Mathematics
- BS in Mathematics - 5 Year Fast Track
CHANGE IN CURRICULA
CHANGE IN CURRICULUM

COLLEGE OF SCIENCE
DEPARTMENT OF MATHEMATICS
BS IN MATHEMATICS
BS IN MATHEMATICS - 5 YEAR FAST TRACK
Texas A&M University
Request for a Change in Curriculum

1. Request change for:  
   - Degree Program □ Minor □ Certificate
   Department of Mathematics

2. Request submitted by (Department or Program Name):  
   Program Designation and Name  
   (e.g., B.A. in History, Minor in History, Certificate in European Union):
   Department of Mathematics

3. 
   B. S. in Mathematics  
   □ 5 Year Act track

4. Brief description of change:  
   Changing Note 5 to replace the English Literature Restriction with any 200 level or higher course selection from the Language, Philosophy and Culture core.

5. Rationale for change:  
   Removing the English Literature restriction will allow students more flexibility in course selection for the Language, Philosophy and Culture core requirement.

Use the checkboxes below to make sure that all information is included.

   □ Yes □ No
   b. Current catalog curriculum with handwritten edits attached.  
   □ Yes □ No
   c. Current Howdy degree evaluation with handwritten edits attached.  
   □ Yes □ No

   Please make sure the attached proposed curriculum, catalog and Howdy degree evaluation match.

7. a. Will degree program hours change (increase/decrease) due to the proposed curriculum changes?  
   □ Yes □ No
   b. If yes, degree program hours will change from: _______ to: _______
   c. If yes, is the Texas Higher Education Coordinating Board form attached?  
   □ Yes □ No

8. If proposed changes affect other unit(s), are letters of support attached?  
   □ Yes □ No

IMPORTANT NOTE: Curriculum changes submitted through the approval process and fully approved by February (December-UCC/GC, January-Faculty Senate, February-President) will be effective in the next academic year. Changes requiring approval beyond the University should complete the internal approval process early in the fall semester whenever possible in order to ensure timely implementation.

Approval recommended by:
Dr. Paulo Lima-Filho  
Department Head or Program Chair (Type Name & Sign)  
11/21/14

Dean of College  
12-1-14

Chair, College Review Committee  
11/21/14
### Bachelor of Science

**SENIOR YEAR**

<table>
<thead>
<tr>
<th>First Semester (Th-P)</th>
<th>Cr</th>
<th>Second Semester (Th-P)</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>MATH elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>MATH elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>CORE elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>CORE elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>Free elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>6</td>
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<tr>
<td>Free elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td>Minor elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
</tr>
<tr>
<td>Minor elective&lt;sup&gt;1&lt;/sup&gt;</td>
<td>3</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>15</td>
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<tr>
<td><strong>Total hours</strong></td>
<td>120</td>
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</tbody>
</table>

**NOTES:**

1. Freshman science students are to be selected from BIOL 111; BIOL 112; CHEM 100/110 or CHEM 104/105; CHEM 104/114; ASTR 111. Any 9 hours of these science courses satisfies the life and physical sciences requirement for the University Core Curriculum.

2. A 15-18 hour minor field of study should be chosen in conference with a departmental advisor.

3. None of the 12 hours of elective courses are to be from any 400- or 600-level MATH, excluding MATH 401 and MATH 601. The last three hours must be from any 400- or 600-level MATH, excluding MATH 401 and MATH 601, any 400-level STAT, CSCE 210 or higher, any 400-level ISEN, excluding any 450 course in any department without permission of a departmental advisor. Students wishing to be certified must take MATH 403 and MATH 407. Students who plan to attend graduate school are encouraged to take MATH 416, MATH 447, and at least one 600-level course.

4. Select 3 hours of English literature, which fulfills the language, literature, and culture requirement for the University Core Curriculum.

5. Select 4 hours from CSCE 110, CSCE 111, CSCE 112, or CSCE 206.

6. Select 3 hours from COMM 210, COMM 210 or COMM 213, which fulfills the University Core Curriculum.

7. Three hours of elective must be chosen from the approved University Core Curriculum list for social and cultural diversity. These elective hours must be from the approved University Core Curriculum list for elective areas.

8. In addition, 6 hours of courses must be in the area of international and cultural diversity. These may be in addition to other University Core Curriculum courses, or if a course in this category satisfies an area of the Core, it can be used in both requirements. Students desiring teacher certification should consult the requirements for certification before registering for elective.

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"If a grade of D or F is earned in any of the following courses, MATH 151/MATH 171, MATH 152/MATH 172, MATH 221/MATH 251, MATH 223, MATH 235 or MATH 308, the course must be immediately repeated and a grade of C or better earned. The department will allow a total of two D's in upper-level (200-499) courses. If a third D is earned, one of the three courses in which a D was earned must be repeated and a grade of C or better earned."

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"See page 2 for University Core Curriculum."
### SENIOR YEAR

<table>
<thead>
<tr>
<th>First Semester (Th-P)</th>
<th>Cr</th>
<th>Second Semester (Th-P)</th>
<th>Cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 411 Mathematical Probability</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 414 Mathematical Statistics I</td>
<td>(3-0)</td>
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<td>Core elective</td>
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<tr>
<td>Core elective</td>
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<tr>
<td>Math elective</td>
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</tr>
<tr>
<td>Science elective</td>
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<tr>
<td><strong>total hours</strong></td>
<td><strong>120</strong></td>
<td></td>
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</tbody>
</table>

**NOTES:**
1. Freshman science courses are to be selected from BIOL 111, BIOL 112, CHEM 101/101L or CHEM 204/204L, CHEM 102/102L or CHEM 205/205L, MATH 131/131L, or MATH 132/132L. Any 8 hours of these science courses satisfy the science requirement of the University Core Curriculum.
2. Science electives should be chosen from biology, biochemistry, chemistry, geology, or physics courses after consultation with the student’s advisor. At least 9 hours must be 200-level or above.
3. Three elective hours must be chosen from the approved University Core Curriculum (for creative arts). An additional 3 elective hours must be chosen from the approved University Core Curriculum (for social and behavioral sciences). In addition, 6 hours of courses must be in the area of international and cultural diversity. These may be in addition to other University Core Curriculum courses, or if a course in this category satisfies an area of the Core, it can be used to meet both requirements. Students desiring teacher certification should consult the requirements for certification before registering for electives.
4. Twelve hours must be chosen from any 400- or 500-level MATH (excluding MATH 461, MATH 463 and MATH 465). Students are required to take at least one of the following: MATH 422, MATH 431, MATH 441, MATH 459. Students are encouraged to take MATH 422, MATH 442, or MATH 470. Students who plan to attend graduate school are encouraged to take MATH 442 and at least one 500-level course. Departmental permission is required to take MATH 481 or to enroll in a 600-level MATH course.
5. Select 3 hours from CSCE 366, CSCE 367, or CSCE 368. This satisfies the CSCE College of Engineering and other requirements for the University Core Curriculum.
6. Select 3 hours from COMV 201, COMV 202, or COMV 203, which fulfills the communication requirement for the University Core Curriculum.
7. Select 3 hours from MATH 360/360L, MATH 370/370L, or MATH 380/380L, which fulfills the communication requirement for the University Core Curriculum.

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**Curricula in Physics**

Physics seeks to understand the fundamental workings of nature, from the constituents of matter deep within the nuclei of atoms, to the most distant galaxies of our expanding universe, to everyday phenomena of emergent complexity, self-organization and chaos. The resulting basic physical knowledge provides a firm foundation for innovations and is often the driving force of advanced technology. Lasers, compact disks, global positioning devices, magnetic resonance imaging machines and gigabit storage media were all made possible by key advances in physics.

Physicists have a curiosity that thrives on the challenge of solving problems. Consistent with this, the physics program at Texas A&M strives to teach analytical thinking and quantitative problem-solving skills. This enables students to work productively in physics, in areas closely related to physics, and in a wide variety of areas outside of physics proper. Physicists can be found in almost any discipline that requires complex problem-solving skills. Some engage in cutting-edge research to increase our basic knowledge of the universe. Some apply new-found knowledge to make practical advances in the fields of science, medical science and engineering. Still others use their knowledge to advocate, advise, inform, instruct and administrate as lawyers, consultants, journalists, writers, teachers and managers.
unofficial evaluation

<table>
<thead>
<tr>
<th>Area: Language, Philosophy &amp; Culture (3.000 credits) - Not Met</th>
</tr>
</thead>
<tbody>
<tr>
<td>Met: Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses</td>
</tr>
<tr>
<td>No</td>
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Total Credits and GPA 0.000

unofficial evaluation

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<thead>
<tr>
<th>Area: Creative Arts (3.000 credits) - Not Met</th>
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<tr>
<td>Met: Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses</td>
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<tr>
<td>No</td>
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Total Credits and GPA 0.000

unofficial evaluation

<table>
<thead>
<tr>
<th>Area: Social and Behavioral Sciences (3.000 credits) - Not Met</th>
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<tbody>
<tr>
<td>Met: Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

Total Credits and GPA 0.000

unofficial evaluation

<table>
<thead>
<tr>
<th>Area: Citizenship (12.000 credits) - Not Met</th>
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<tr>
<td>Description: Completion of 4 semesters of Upper-Level ROTC may be substituted for 3 hours of American History and 3 hours of Political Science.</td>
</tr>
<tr>
<td>Met: Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses</td>
</tr>
<tr>
<td>No</td>
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<tr>
<td>No</td>
</tr>
</tbody>
</table>

Total Credits and GPA 0.000

unofficial evaluation
unofficial evaluation

**Area**: Language, Philosophy & Culture (3.000 credits) - Not Met

**Met**  
Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses  
No  
A. Language, Philosophy & Culture  
Select from any course with the [KLPC] attribute.  

Total Credits and GPA 0.000

**unofficial evaluation**

**Area**: Creative Arts (3.000 credits) - Not Met

**Met**  
Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses  
No  
A. Creative Arts Requirement  
Select three hours from any course with the Creative Arts attribute [KCRA].  

Total Credits and GPA 0.000

**unofficial evaluation**

**Area**: Social and Behavioral Sciences (3.000 credits) - Not Met

**Met**  
Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses  
No  
A. Social Science Rqmt 3hrs  
Select from courses with the Social and Behavioral Science attribute [KSOC].  

Total Credits and GPA 0.000

**unofficial evaluation**

**Area**: Citizenship (12.000 credits) - Not Met

**Description**: Completion of 4 semesters of Upper-Level ROTC may be substituted for 3 hours of American History and 3 hours of Political Science.

**Met**  
Condition Rule Subject Attribute Low High Required Required Term Subject Course Title Attribute Credits Courses  
No  
A. American History Rqmt 6hrs  
Select from any course with the [KHS] attribute.  

No  
AND  
B. Political Science Rqmt 6hrs  
Take POLS 206 and POLS 207.  

Total Credits and GPA