Texas A&M University
Departmental Request for a Change in Course
Undergraduate ♦ Graduate ♦ Professional
Submit original form and attachments

1. Request submitted by (Department or Program Name): Department of Physics and Astronomy

2. Course prefix, number and complete title of course:
   PHYS 401. Computational Physics

3. Change requested
   Attach a brief supporting statement for changes made to items 3a thru 3d, and 6 below.

   a. Prerequisite(s):
      From: MATH 311, MATH 412, PHYS 302, PHYS 309. Ability to program in a high level language, such as FORTRAN. GPSC 203 can be used to satisfy this requirement.
      To: MATH 311, MATH 412, PHYS 302, PHYS 309. Knowledge of a high level language such as FORTRAN or C. This prerequisite can be obtained by taking CPSC 208 or the equivalent.

   b. Withdrawal (reason):

   c. Cross-list with:

   d. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed description in item 6. Complete item 7 for change in title.

   e. Change in course prefix, number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

4. For informational purposes only, please indicate course number if this course will be stacked:

5. Complete current course title and current catalog course description:
   Computational Physics. Computational techniques in physics applications and research; including numerical interpolation, differentiation and integration, symbolic computation, Monte Carlo methods, vector and matrix operations, graphics, differential equations, variational methods and fast Fourier transforms.

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
   Computational Physics. Introduction to computational and simulational techniques widely used in physics applications and research, including trajectory integration, wave motion analysis, molecular dynamics, Monte Carlo methods, statistical mechanics of spin systems, phase transitions, quantum evolution, bound state problems, and variational methods.

7. a. As currently in course inventory:

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<tr>
<th>Prefix</th>
<th>Course #</th>
<th>Title (excluding punctuation)</th>
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<tbody>
<tr>
<td>PHYS</td>
<td>401</td>
<td>COMPUTATIONAL PHYSICS</td>
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<th>Lect.</th>
<th>Lab</th>
<th>SCH</th>
<th>CIP and Fund Code</th>
<th>Admin. Unit</th>
<th>FICE Code</th>
<th>Level</th>
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   b. Change to:

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Approval recommended by:

Department Head or Program Chair (Type Name & Sign) Date
Chair, College Review Committee Date

Department Head or Program Chair (Type Name & Sign) Date
(if cross-listed course)
Dean of College Date

Submitted to Coordinating Board by:
Chair, GC or UCC Date

Associate Director, Curricular Services Date
Effective Date

Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
Curricular Services – 09/10