TRANSMITTAL for UNDERGRADUATE PROGRAMS:
Changes or Proposals

I. INFORMATION:

1. Program Title: Pre-Engineering
2. Department(s): Physics
3. College(s): CAS
4. Proposal prepared by: Jim Madsen Date: 10/2/14
5. Check all that apply
   - [ ] New program
   - [ ] Existing program
   - [ ] Change in course name
   - [ ] Change in number of credits
   - [x] Change in major
   - [ ] Change in minor
   - [ ] Change in course content
   - [ ] Change in emphasis/option

6. Other Programs/Departments Consulted (Requires letters of comment from all Departments or Programs substantially affected):
   a.)
   b.)
   c.)
   d.)

7. Catalog year (and semester) of Implementation:
   Semester: Fall 2014
   Year: 2014

8. Have all courses in this program been approved? Yes [x] No

9. Attach Request Narrative
   Include in narrative on attached pages a rationale for the requested changes or creation of program.
   Include clarification concerning any courses that have not yet been approved. If requesting a
   program change also include a listing of course array for both the current and proposed program?

10. UNIT APPROVALS: Requires signatures of all Department Chairs and Deans whose programs will
    be substantially affected by the changes or proposal. Signature lines for the affected Departments and
    Colleges (noted in “6” above), are on the addendum to this form. These signatures should be obtained
    prior to review by all other shared governance levels.

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Department Curriculum Committee Chair (optional)</td>
<td>10/2/14</td>
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<tr>
<td>Department/Program Chair</td>
<td>Jim Madsen</td>
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<tr>
<td>College Curriculum Committee Chair</td>
<td>10/2/14</td>
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<td>Dean of College</td>
<td>10/2/14</td>
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<tr>
<td>University Curriculum Cmtt. Chair</td>
<td>Alex Turner 10/24/14</td>
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<td>Academic Policy &amp; Program Cmtt. Chair</td>
<td>11/2/14</td>
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<td>Faculty Senate Chair</td>
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<td>Provost / Vice Chancellor</td>
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<td>Chancellor</td>
<td>11/2/14</td>
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*NOTE: The master copy of this transmittal & accompanying documents must be filed in the Provost’s office upon final approval. The Provost’s office will notify all appropriate administrative offices [Registrar, Dean(s), Department Chair(s)] of approvals & necessary actions to implement changes.

Revised December 2012
Proposed Change:

Update the Pre-Engineering program so that the new calculus-based introductory physics courses PHYS 131 and 132 are listed. The previous courses they replaced PHYS 161/166 and PHYS 162/166 will still be accepted.

**Physics Pre-Engineering**

**Current Program:** Physics Core Requirements: 26 cr. hrs.
The prerequisite courses for all courses required in the physics major must be passed with a grade of C or better
PHYS 161 Calculus-Based Physics I 4 cr.
PHYS 166 Calculus-Based Physics Laboratory I 1 cr.
PHYS 162 Calculus-Based Physics II 4 cr.
PHYS 167 Calculus-Based Physics Laboratory II 1 cr.
PHYS 204 Intermediate Physics Laboratory 1 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 485 Seminar (writing intensive) 1 cr.

**Requested Change:** Physics Core Requirements: 26 cr. hrs.
The prerequisite courses for all courses required in the physics major must be passed with a grade of C or better
PHYS 131 Calculus-Based Physics I 5 cr.
PHYS 132 Calculus-Based Physics II 5 cr.
PHYS 204 Intermediate Physics Laboratory 1 cr.
PHYS 264 Modern Physics 4 cr.
PHYS 301 Advanced Physics Laboratory I (writing intensive) 3 cr.
PHYS 302 Advanced Physics Laboratory II (writing intensive) 3 cr.
PHYS 311 Electronics: Circuits and Devices 4 cr.
PHYS 485 Seminar (writing intensive) 1 cr.

**Rationale:**

We need to update the program to reflect the changes made to the introductory physics courses approved last year that replaced PHYS 161/166 and PHYS 162/166.