November 20, 2014

To: Dean Van Galen, Chancellor
    116 North Hall
    University of Wisconsin-River Falls

From: David P. Rainville, Chair
       Faculty Senate
       University of Wisconsin-River Falls

Re: UWRF Faculty Senate Motion 2014-15/38

At the November 5, 2014 meeting of the University of Wisconsin-River Falls Faculty Senate, motion 2014-15/38 was passed and is effective immediately. The motion is forwarded to you for your action.

A motion from the Academic Programs and Policies Committee (James Zimmerman, Chair) to approve the following program changes (see attached):

   a. Pre-Engineering Major (Physics)
   b. Physics-Dual Degree Major (Physics)
   c. Physics-Liberal Arts Major (Physics)
   d. Physics-Secondary Education (Physics)

Approved

Disapproved

Dean Van Galen, Chancellor

Date 11/25/14
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

- [x] New 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  
   Year: 2014

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

   If "No" which courses have not been approved? 

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.

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<thead>
<tr>
<th>Department Curriculum Committee Chair (optional)</th>
<th>Signature</th>
<th>Date</th>
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<tbody>
<tr>
<td>Department/Program Chair</td>
<td>James Madsen</td>
<td>10/2/14</td>
</tr>
<tr>
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<td>11/7/14</td>
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<tr>
<td>Faculty Senate Chair</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.
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 162/167 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 162/167.
TRANSMITTAL for UNDERGRADUATE PROGRAMS:
Changes or Proposals

I. INFORMATION:
1. Program Title: Physics-Dual Degree
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
   - Change in course name
   - Change in major
   - Change in course content
   - Existing program
   - Change in number of credits
   - Change in minor
   - 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 2013 Year 2014
8. Have all courses in this program been approved? Yes ☑ No
   If “No” which courses have not been approved?
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.

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Revised December 2012
Proposed Change:

Update the Physics Major-Dual Degree 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 162/167 will still be accepted.

**Physics Major-Dual Degree**

**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 162/167.
TRANSMITTAL for UNDERGRADUATE PROGRAMS:
Changes or Proposals

I. INFORMATION:
1. Program Title: Physics-Liberal Arts
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
   ✔ 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 Sp. Year 2014

8. Have all courses in this program been approved? Yes □ No X

   If “No” which courses have not been approved?

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.

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   Signature  Date
   Department Curriculum Committee Chair (optional)________________________ 10/2/14
   Department/Program Chair____________________________________ 10/2/14
   College Curriculum Committee Chair___________________________ 10/2/14
   Dean of College__________________________________________ 10/2/14
   University Curriculum Cmtt. Chair__________________________ 10/24/14
   Academic Policy & Program Cmtt. Chair_________________________ 11/7/14
   Faculty Senate Chair_________________________________________ 11/19/14
   Provost / Vice Chancellor_______________________________ 11/21/14
   Chancellor_____________________________________________ 11/23/14

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Revised December 2012
Proposed Change:

Update the Physics Major-Liberal Arts 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 162/167 will still be accepted.

Physics Major-Liberal Arts

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 162/167.
TRANSMITTAL for UNDERGRADUATE PROGRAMS:
Changes or Proposals

I. INFORMATION:

1. Program Title: Physics-Secondary Education
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    [x] 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 [ ]
   If “No” which courses have not been approved?

9. Attach Request Narrative
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   College Curriculum Committee Chair
   Dean of College
   University Curriculum Cmmt. Chair
   Academic Policy & Program Cmmt. Chair
   Faculty Senate Chair
   Provost / Vice Chancellor
   Chancellor

   Signature Date
   _______________ 10/21/14
   _______________ 10/22/14
   _______________ 10/22/14
   _______________ 10/23/14
   _______________ 10/24/14
   _______________ 11/17/14
   _______________ 11/19/14
   _______________ 11/21/14
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Revised December 2012
Proposed Change:

Update the Physics Major-Secondary Education 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 162/167 will still be accepted.

Physics Major-Secondary Education

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.
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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 162/167.