SUBJECT: Course Modifications – SDSM&T

South Dakota School of Mines and Technology has submitted the following course requests. These have been reviewed by the system Vice President for Academic Affairs. Upon approval, the proposals will move forward to the Executive Director for consideration and be reported on the Interim Actions report for the December Board meeting.

**New Course Requests**
1) ME 265/265L Product Design and Development – Introduction to Systems Engineering / Lab

**Authority to Offer an Existing Common Course**
1) BIOL 333/333L Aquatic Ecology & Watershed Management
2) BIOL 470 Cancer Biology

**Revised Course Request: Common Course**
1) BIOL 470 Cancer Biology
2) CEE 464/465 Civil Engineering Capstone Design I & II
3) PHYS 781 Nuclear and Particle Physics

**Revised Course Request: Unique Course**
1) BIOL 333/333L Aquatic Ecology & Watershed Management
2) BIOL 470 Cancer Biology

**RECOMMENDED ACTION**

Approve and move forward to the Executive Director.
SOUTH DAKOTA BOARD OF REGENTS  
New Course Request

SDSM&T  Mechanical Engineering  Dr. Demitris Kouris  09/24/2015
Institution  Division/Department  Institutional Approval Signature  Date

Section 1. Course Title and Description

If the course contains a lecture and laboratory component, identify both the lecture and laboratory numbers (xxx and xxxL) and credit hours associated with each. Provide the complete description as it will appear in the system common or unique database, including pre-requisites, co-requisites, and registration restrictions.

Prefix & No.  Course Title  Credits
ME 265/265L  Product Design and Development – Introduction to Systems Engineering / Lab  (2-2) 4

Course Description including prerequisites and co-requisites, and registration restrictions:

Course Description:
The course presents useful tools and structured methodologies that support the product development practice and provides a brief introduction to selected systems engineering topics. In addition, it attempts to develop in the students the necessary skills and attitudes required for successful product development in today’s competitive marketplace. The cornerstone is a semester-long project in which small teams of students plan, conceive, design, and prototype a simple physical product. Each student brings his/her own background to the team effort, and must learn to synthesize his/her perspective with those of the other students in the group.

Prerequisites: ME 110/110L, ME 125L, CSC 170 and sophomore standing or permission of instructor
Co-requisites: ME 265L
Registration Restrictions: Mechanical Engineering undergraduate students only

Section 2. Review of Course

Will this be a common or unique course? (select the appropriate option below)

X  This course will be a unique course. (Go to Section 3.)

This course will be a common course. (Complete below, then go to Section 3.)

Indicate universities that are proposing this common course:
BHSU DSU NSU SDSMT SDSU USD

Course Form #5  Updated AAC 03/2007
Section 3. Other Course Information

1. Are there instructional staffing impacts?

   No. Replacement of ___________________________ which is (prefix, number, name of course, credits) being deleted. Effective date of deletion: ________________________________

   X No, schedule management. Explain:

   Mechanical Engineering undergraduate students currently have two different options for a four-credit sophomore-level design course. They can take ME 264 Electromechanical Systems Product Development and Design (2-0) and ME 264L Electromechanical Systems Product Development and Design Lab (0-2), or they can take ME 269/269L Energy Systems Product Development and Design/Lab (2-2). The proposed course will provide an additional alternative that places more emphasis on developing systems thinking skills in the students.

   Yes. Specify:

2. Existing program in which course will be offered: B.S. in Mechanical Engineering

3. Proposed instructional method: ME 265: R- lecture; ME 265L: L- laboratory

   (may be found at http://www.sdbor.edu/services/academics/AAC/guidelines.htm )

   Provide a brief justification: Concepts will be taught using a lecture format. The lab time will be used to practice those concepts in active learning activities and to apply them in the semester-long project.

4. Proposed primary delivery: (001) Face to Face

   (may be found at http://www.sdbor.edu/services/academics/AAC/guidelines.htm )

5. Term in which change will be effective: Fall 2016

6. Can this course be repeated for additional credit?

   Yes, total credit limit: __________ X No.

7. Will the grade for this course be limited to S/U (pass/fail)? Yes X No

8. Will section enrollments be capped?

   Yes, maximum per section 30 students

   No

9. Will this course be equated (i.e. considered the same course for degree completion) with any other unique or common course in the course database?

   Yes X No

   If yes, indicate the course(s) to which it will be equated. ME 264/264L or ME 269/269L

Course Form #5          Updated AAC 03/2007
10. Is this prefix already approved for your university?  

   X  Yes  No  

   If no, provide a brief justification:  

---

**Section 4. To be completed by Academic Affairs**

1. University department code:  MME

2. Proposed CIP code:  14.1901

   Is this a new CIP code for this university?  Yes  No
NEW COURSE REQUEST
Supporting Justification for On-Campus Review

1. Provide specific reasons for the proposal of this course and explain how the changes enhance the curriculum.

   Mechanical Engineering undergraduate students currently have two different options for a required four-credit sophomore-level design course. They can take ME 264 Electromechanical Systems Product Development and Design (2-0) and ME 264L Electromechanical Systems Product Development and Design Lab (0-2), or they can take ME 269/269L Energy Systems Product Development and Design/Lab (2-2). The proposed course will provide an additional alternative that places more emphasis on developing systems thinking skills in the students. Career paths for Mechanical Engineers are diverse and having an understanding of fundamental systems engineering and systems architecture concepts is very important for some of them.

2. Note whether this course is:  
   ___ X ___ Required  
   ______ Elective

   Students are required to take this course or ME 264/264L or ME 269/269L.

3. In addition to the major/program in which this course is offered, what other majors/programs will be affected by this course?

   None.

4. If this will be a dual listed course, indicate how the distinction between the two levels will be made.

   Not applicable.

5. Desired section size  
   30

6. Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).

   Dr. Karim H. Muci-Kuchler, Professor of Mechanical Engineering; PhD Engineering Mechanics

7. Note whether adequate facilities are available and list any special equipment that will be needed for the course.

   Adequate facilities are available.

8. Note whether adequate library and media support are available for the course.

   Adequate library and media support are available.

9. Will the new course duplicate courses currently being offered on this campus?
Yes    X   No

If yes, provide justification.

10. If this course may be offered for variable credit, explain how the amount of credit at each offering is to be determined.

    Not applicable.

11. Add any additional comments that will aid in the evaluation of this request.
1. Provide the complete description as it appears in the system common course database including prerequisites.

<table>
<thead>
<tr>
<th>Prefix &amp; No.</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 333/333L</td>
<td>Aquatic Ecology &amp; Watershed Management</td>
<td>(4-0) 4</td>
</tr>
</tbody>
</table>

Course Description:
This course will provide a detailed introduction to aquatic ecology and the field of watershed management. Selected topics include watershed ecology, ecosystem services, nonpoint source pollution, aquatic invasive species, and watershed planning, monitoring, and protection.

Lab: Lab to accompany BIOL 333.

2. Universities currently offering this course:

_____ BHSU  _____ DSU  X NSU  _____ SDSMT  _____ SDSU  _____ USD

3. FTE Implication

_____ No. Replacement of (prefix, number, name of course, credits), which is being deleted (Attach deletion form). Effective Date of Deletion: ________________

X _____ No. Schedule Management, explain: Existing faculty can teach this ________________

_____ Yes. Specify: ________________

4. Existing program in which course will be offered: Applied Biological Sciences BS

5. CIP code for the common course 26.1304

6. Proposed Instructional Method by this university: R- Lecture  L- Laboratory
7. Proposed delivery method by this university: 001 (Face to Face)

8. University Dept. Code  MCHEM

9. Authority to offer effective beginning in what term? Fall 2016

10. Section Restriction: 30

Permission from NSU to offer BIO 333/L

Richard,
NSU has no problem with Mines offering BIOL 333/L.
Thanks,

Tom Hawley

On Apr 21, 2015, at 9:55 AM, Sinden, Richard R. <Richard.Sinden@sdsmt.edu> wrote:

I do have to attach permission from you that you allow us to teach this.
If you can give me a statement that you approve us offering this. That will get this moving.

Actually I think we need to use the unique course form.
Do we need an additional form to convert it from unique to common? Done this once, but I don’t remember.

Richard R Sinden, Ph.D.
Interim Provost and VP for Academic Affairs
Professor and Head
Department of Chemistry and Applied Biological Sciences

From: Hawley, Tom
Sent: Tuesday, April 21, 2015 7:43 AM
To: Sinden, Richard R.
Cc: Hawley, Tom
Subject: RE: NSU's Curriculum Proposals

Richard,
Since the course has already been approved, you simply need to complete the Authority to Offer Common Course form and submit it to AAC.
Thanks,

Thomas Hawley, PhD
Provost/Vice President for Academic Affairs
Northern State University
Aberdeen, SD 57401
Office Phone: (605) 626-2524
Cell Phone: (605) 270-2531
Email: tom.hawley@northern.edu

Course Form #2
From: Sinden, Richard R.
Sent: Tuesday, April 21, 2015 8:13 AM
To: Hawley, Tom
Subject: RE: NSU's Curriculum Proposals

Tom: As per this previous discussion….

Congratulations on getting BIOL 333/L approved.

I formally request permission to allow this to be taught at SDSM&T.

Richard R Sinden, Ph.D.
Interim Provost and VP for Academic Affairs
Professor and Head
Department of Chemistry and Applied Biological Sciences
South Dakota School of Mines and Technology
1. Provide the complete description as it appears in the system common course database including prerequisites.

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<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL 470</td>
<td>Cancer Biology</td>
<td>(3-0) 3</td>
</tr>
</tbody>
</table>

Course Description:

This course will address the current research directed at understanding the molecular and cellular basis of cancer and explore potential therapeutic targets. Topics covered will emphasize cell cycle regulation and apoptosis, cellular control of proliferation and differentiation, genetic alterations, growth factors and signal transduction, invasion and metastasis, and angiogenesis.

Co-Requisites:

1. None

Pre-Requisites:

1. Take BIOL-425 BIOL-430 BIOL-443 BIOL-475 BIOL-471 or
2. BIOC-430;

University Pre-Requisites:

1. USD-None

2. Universities currently offering this course:

   _____ BHSU  _____ DSU  _____ NSU  _____ SDSMT  _____ SDSU  X  _____ USD

This is currently a unique course. Form 7 is being submitted to request conversion to a common course.

3. FTE Implication

   _____ No.  Replacement of  _____ (prefix, number, name of course, credits), which is being deleted

Course Form #2
Effective Date of Deletion: 

| X | No. | Schedule Management, explain: | A new faculty hire will offer this course as part of teaching responsibilities. |

| | | | |

| | | Yes. Specify: |

| | | |

4. **Existing program in which course will be offered:**

- B.S. Applied Biological Sciences
- B.S. Interdisciplinary Sciences: Pre-Health

5. **CIP code for the common course** 26.0911

6. **Proposed Instructional Method by this university:** R- Lecture

7. **Proposed delivery method by this university:** (001) Face-to-face

8. **University Dept. Code** MCHEM

9. **Authority to offer effective beginning in what term?** Summer 2016

10. **Section Restriction:** 30
Approval from USD:

Richard,

You're right, your initial message got buried; thanks for contacting me again.

No, I have no objection to a qualified faculty member at SDSMT teaching BIOL 470, Cancer Biology. I have no syllabus from our version, as the instructor who taught left several years ago. However, it probably would have been out of date, anyway.

Kaius Helenurm, Chair
Department of Biology
University of South Dakota

On Sep 14, 2015, at 2:55 PM, Sinden, Richard R. wrote:

Still seeking permission to teach BIOL 470 Cancer Biology.

Have not heard from you. My initial email may have come during the hectic early time in the semester and may have gotten lost.

The course was initiated in 2009.
Datatel records shows that this was last taught in 2011
The most recent section offering for BIOL-470 in spring 2012 actually ended up being cancelled.
In Spring 2011 Dr. Alicia Paulson (Alicia.Paulson@usd.edu) was listed as the instructor of record for that course. (I do not see her at USD).

332683    BIOL-470-U015    2009SP
333767    BIOL-470-U015    2009SP
335133    BIOL-470-U015    2010SP
359410    BIOL-470-U015    2011SP
391577    BIOL-470-U015    2012SP
5 records listed

I have a new faculty from IU medical School who does research in cancer biology. I would like him to offer this course.

Hope to hear from you. Thanks.

Richard R Sinden, Ph.D.
Professor and Head
Department of Chemistry and Applied Biological Sciences
South Dakota School of Mines and Technology

From: Sinden, Richard R.
Sent: Monday, August 24, 2015 6:05 PM
To: Helenurm, Kaius
Subject: BIOL 470 Cancer Biology

We were thinking of teaching a course of this title.
Who teaches it? Someone in your Department?
I have a cancer researcher—new faculty and we wanted to develop something like.
Easiest to get your permission and make it a common course.

Course Form #2
Could we get a syllabus from the instructor?
Thanks.

Richard R Sinden, Ph.D.
Professor and Head
Department of Chemistry and Applied Biological Sciences
South Dakota School of Mines and Technology
501 East Saint Joseph Street
Rapid City, SD 57701
Ph. 605 394 1678
Richard.Sinden@SDSMT.edu
SOUTH DAKOTA BOARD OF REGENTS
Revised Course Request: Common Course

This form is to be used to request a substantive change in a common course. Representatives from all institutions offering the common course must participate in developing the proposed revisions to a common course. Signatures from all institutions offering the common course must be included on the final form submitted to AAC.

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<td>Chemistry &amp; Applied Biological Sciences</td>
<td>Dr. Demitris Kouris</td>
<td>09/16/2015</td>
</tr>
<tr>
<td>Institution</td>
<td>Form Initiator</td>
<td>Dean’s Approval Signature</td>
<td></td>
</tr>
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Indicate (X) the universities that offer the common course.

_____ BHSU _____ DSU _____ NSU  X  SDSMT _____ SDSU  X  USD

Section 1. Course Title and Description

If changing from a course that previously had only a lecture or laboratory component to a composite course, identify both the course and laboratory numbers (xxx and xxxL) and credit hours associated with each.

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**Description:**

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**Co-Requisites:**

1. None

**Pre-Requisites:**

1. Take BIOL-425 BIOL-430 BIOL-443 BIOL-475 BIOL-471 or
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**University Pre-Requisites:**

1. USD-None

---

**Section 2. Modification(s) Requested**

Check all revisions that apply and provide detailed information in the Current and Revised fields below. Provide the complete course description as it currently appears in the system common course database. If changing a course that previously had only a lecture or laboratory component to a composite course, identify both the course and laboratory numbers (xxx and xxxL) and credit hours associated with each.

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Section 3. Other Course Information

1. Will this course be equated (considered the same course for degree completion) with any other unique or common course in the course database? _____ Yes _____ X No

   If yes, indicate the course(s) to which it will be equated.

Section 4. To Be Completed by Academic Affairs

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Ph. 605 394 1678
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SDSMT Marc Robinson Form Initiator

Institution Division/Department Institutional Approval Signature Date

Indicate (X) the universities that offer the common course.

_____ BHSU _____ DSU _____ NSU  X  SDSMT  X  SDSU _____ USD

Section 1. Course Title and Description

If changing from a course that previously had only a lecture or laboratory component to a composite course, identify both the course and laboratory numbers (xxx and xxxL) and credit hours associated with each.

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<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CEE 464</td>
<td>Civil Engineering Capstone Design I</td>
<td>1</td>
</tr>
<tr>
<td>CEE 465</td>
<td>Civil Engineering Capstone Design II</td>
<td>2</td>
</tr>
</tbody>
</table>

Course Description as it currently appears in the system common course database:

**CEE 464 Civil Engineering Capstone Design I**

Content will include major engineering design experience integrating fundamental concepts of mathematics, basic science, engineering science, engineering design, communication skills, humanities, and social science.

**CEE 465 Civil Engineering Capstone Design II**

Content will include major engineering design experience integrating fundamental concepts of mathematics, basic science, engineering science, engineering design, communications skills, humanities, and social science.
Section 2. Modification(s) Requested

Check all revisions that apply and provide detailed information in the Current and Revised fields below. Provide the complete course description as it currently appears in the system common course database. If changing a course that previously had only a lecture or laboratory component to a composite course, identify both the course and laboratory numbers (xxx and xxxL) and credit hours associated with each.

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<td>Prerequisites</td>
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<td>Corequisites</td>
<td>to</td>
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<tr>
<td>Registration Restriction</td>
<td>to</td>
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<tr>
<td>X Course deletion</td>
<td>to</td>
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<tr>
<td>Indicate the universities which will be deleting the course:</td>
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<tr>
<td>_____ BHSU _____ DSU _____ NSU X SDSMT _____ SDSU _____ USD</td>
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</table>

Justification for all changes noted above:

Capstone design at SDSMT has transitions from a two semester sequence (CEE 464 and CEE 465) to a one semester (CEE 489) format.
Section 3. Other Course Information

1. Will this course be equated (considered the same course for degree completion) with any other unique or common course in the course database?  

   Yes  No  

   If yes, indicate the course(s) to which it will be equated.

Section 4. To Be Completed by Academic Affairs

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Institution

SDSM&T

Division/Department

Physics Department

Date

09/17/2015

Institutional Approval Signature

Dr. Demitris Kouris

SDSM&T

Form Initiator

Dr. Vladimir Sobolev

09/17/2015

Dean’s Approval Signature

Institution

Institutional Approval Signature

Date

Indicate (X) the universities that offer the common course.

BHSU DSU NSU SDSMT SDSU USD

Section 1. Course Title and Description

If changing from a course that previously had only a lecture or laboratory component to a composite course, identify both the course and laboratory numbers (xxx and xxxL) and credit hours associated with each.

Prefix & No. Course Title Credits

PHYS 781 Nuclear and Particle Physics (3-0) 3
Description:

This is a one-semester course in nuclear and elementary particle physics. Nuclear physics topics may include nuclear structure (nuclear form factors, multipole moments, liquid and shell models); nuclear decay; nuclear reactions; and other topics of interest. Elementary particle physics topics may include the role of symmetry in particle physics, Quantum Electrodynamics and Quantum Chromodynamics; the Standard Model of Particle Physics; Strong and Weak interactions; Accelerator and Experimental Particle Physics; and other selected topics beyond the Standard Model.

Co-Requisites:

1. None

Pre-Requisites:

1. Take PHYS-771;

University Pre-Requisites:

1. SDSMT-None
2. SDSU-None
3. USD-None

Section 2. Modification(s) Requested

Check all revisions that apply and provide detailed information in the Current and Revised fields below. Provide the complete course description as it currently appears in the system common course database. If changing a course that previously had only a lecture or laboratory component to a composite course, identify both the course and laboratory numbers (xxx and xxxL) and credit hours associated with each.

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| X | Course Number change from | 781 | to | 761 |
|   |   |   |   |   |
|   | Course Title change from |   | to |   |
|   |   |   |   |   |
|   | Credit Hours change from |   | to |   |
|   |   |   |   |   |
|   | Course content/description change to: |   |   |
Section 3. Other Course Information

1. Will this course be equated (considered the same course for degree completion) with any other unique or common course in the course database? Yes No

If yes, indicate the course(s) to which it will be equated.

Section 4. To Be Completed by Academic Affairs

Current New

Change in University Dept Code to

Change in CIP Code to

From: Sun, Yongchen
Sent: Thursday, September 17, 2015 3:05 PM
To: Sobolev, Vladimir
Cc: Keller, Christina
Subject: Changing call numer of Nuclear and Particle Physics course from Phys 781 to 761

Our graduate school is asking us to create courses which were listed in our program request (the advanced nuclear and the advanced particle physics courses). These courses will play an
important role in our program. The issue is that the course these two would naturally follow has a number greater than those proposed for these (PHYS 781 is the Nuclear and Particle Physics course), PHYS 763 and 765 are the advanced versions of this course. Normally, I would suggest that we renumber the two advanced courses to 783 and 785, but those numbers are already taken by other courses. The easier solution would be to change the number of Nuclear and Particle Physics to 761 (this number was available the last time I checked the course inventory report, and would involve one minor course change, and one minor program change rather than multiple course changes, plus a program change.

Sun
SOUTH DAKOTA BOARD OF REGENTS  
Revised Course Request: Unique Course

This form is to be used to request a substantive change in a unique course.

<table>
<thead>
<tr>
<th>Institution</th>
<th>Division/Department</th>
<th>Institutional Approval Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDSM&amp;T</td>
<td>Chemistry &amp; Applied Biological Sciences</td>
<td>Dr. Demitris Kouris</td>
<td>09/03/2015</td>
</tr>
<tr>
<td>Dr. Richard Sinden</td>
<td>Form Initiator</td>
<td>Dean’s Approval Signature</td>
<td>Date</td>
</tr>
</tbody>
</table>

Section 1. Current Course Title and Description

If changing from a course that previously had only a lecture or laboratory component to a composite course, identify both the course and laboratory numbers (xxx and xxxL) and credit hours associated with each.

<table>
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<th>Prefix &amp; No.</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 333/333L</td>
<td>Aquatic Ecology &amp; Watershed Management</td>
<td>(4-0) 4</td>
</tr>
</tbody>
</table>

Course Description as it currently appears in the system course database:

This course will provide a detailed introduction to aquatic ecology and the field of watershed management. Selected topics include watershed ecology, ecosystem services, nonpoint source pollution, aquatic invasive species, and watershed planning, monitoring, and protection.

Lab: Lab to accompany BIOL 333.

Section 2. Modification(s) Requested

1. This modification will include (check all that apply):

   A change in course description/subject matter content (including pre- and/or co-
   requisites and/or registration restrictions)

   Revised Course Description:

   _____ A change in instructional method
### Move from a unique course to this common course

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</table>

Term change will be effective: Fall 2016

Indicate (X) the universities that offer the common course.

- _____ BHSU
- _____ DSU
- X _____ NSU
- X _____ SDSMT
- _____ SDSU
- _____ USD

Additional minor changes also proposed at this time (enumerate below):

For a list of minor course modifications, see [http://www.sdbor.edu/services/academics/AAC/guidelines.htm](http://www.sdbor.edu/services/academics/AAC/guidelines.htm)

---

### 2. Provide a justification for all of the changes noted.

SDSM&T wishes to teach BIOL 333 & BIOL 333L. This requires it be changed to a common course. Approval has been granted by Provost Tom Hawley from Northern. Approval is attached to the request to teach a common course.

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### Section 3. To be Completed by Academic Affairs

<table>
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<tr>
<td>Change in CIP Code</td>
<td>to</td>
</tr>
</tbody>
</table>
Permission from NSU to offer BIO 333/L

Richard,
NSU has no problem with Mines offering BIOL 333/L.
Thanks,

Tom Hawley

On Apr 21, 2015, at 9:55 AM, Sinden, Richard R. <Richard.Sinden@sdsmt.edu> wrote:

I do have to attach permission from you that you allow us to teach this.
If you can give me a statement that you approve us offering this. That will get this moving.

Actually I think we need to use the unique course form.
Do we need an additional form to convert it from unique to common? Done this once, but I don’t remember.

Richard R Sinden, Ph.D.
Interim Provost and VP for Academic Affairs
Professor and Head
Department of Chemistry and Applied Biological Sciences

From: Hawley, Tom
Sent: Tuesday, April 21, 2015 7:43 AM
To: Sinden, Richard R.
Cc: Hawley, Tom
Subject: RE: NSU's Curriculum Proposals

Richard,
Since the course has already been approved, you simply need to complete the Authority to Offer Common Course form and submit it to AAC.
Thanks,

Thomas Hawley, PhD
Provost/Vice President for Academic Affairs
Northern State University
Aberdeen, SD 57401
Office Phone: (605) 626-2524
Cell Phone: (605) 270-2531
Email: tom.hawley@northern.edu

From: Sinden, Richard R.
Sent: Tuesday, April 21, 2015 8:13 AM
**To:** Hawley, Tom  
**Subject:** RE: NSU's Curriculum Proposals

Tom: As per this previous discussion….

Congratulations on getting BIOL 333/L approved.

I formally request permission to allow this to be taught at SDSM&T.

Richard R Sinden, Ph.D.  
Interim Provost and VP for Academic Affairs  
Professor and Head  
Department of Chemistry and Applied Biological Sciences  
South Dakota School of Mines and Technology
SOUTH DAKOTA BOARD OF REGENTS
Revised Course Request: Unique Course

This form is to be used to request a substantive change in a unique course.

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<tbody>
<tr>
<td>BIOL 470</td>
<td>Cancer Biology</td>
<td>(3-0) 3</td>
</tr>
</tbody>
</table>

Course Description as it currently appears in the system course database:

Description:

This course will address the current research directed at understanding the molecular and cellular basis of cancer and explore potential therapeutic targets. Topics covered will emphasize cell cycle regulation and apoptosis, cellular control of proliferation and differentiation, genetic alterations, growth factors and signal transduction, invasion and metastasis, and angiogenesis.

Co-Requisites:

1. None

Pre-Requisites:

1. Take BIOL-425 BIOL-430 BIOL-443 BIOL-475 BIOL-471 or
2. BIOC-430;

University Pre-Requisites:

1. USD-None
Section 2. Modification(s) Requested

1. This modification will include (check all that apply):

   - A change in course description/subject matter content (including pre- and/or co-requisites and/or registration restrictions)
     Revised Course Description:

   - A change in instructional method
     Current ___________________________ Revised ___________________________
     May be found at: http://www.sdbor.edu/services/academics/AAC/guidelines.htm

   - Move from a unique course to this common course
     Prefix & No.   Course Title   Credits
     BIOL 470      Cancer Biology  (3-0) 3

     Term change will be effective: ________________________
     academic year/term

     Summer 2016

     Indicate (X) the universities that offer the common course.

     BHSU   DSU   NSU   SDSMT   SDSU   USD

     Additional minor changes also proposed at this time (enumerate below):

     For a list of minor course modifications, see http://www.sdbor.edu/services/academics/AAC/guidelines.htm

2. Provide a justification for all of the changes noted.

   SDSMT wishes to offer BIOL 470 Cancer Biology to support the new major in Applied Biological Sciences. This major has an area of emphasis in Pre Health Professions. The recent acquisition of an Associate Professor from Indiana School of Medicine with an active research program in Cancer Biology (for more than 15 years) provides the expertise to offer this course. Moreover, this will solidify recently initiated interactions with a Rapid City Regional Health Collaboration in the area of cancer biology. This course will prepare ABS majors for careers in medicine of research.
Section 3. To be Completed by Academic Affairs

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</table>
Approval from USD:

Richard,

You're right, your initial message got buried; thanks for contacting me again.

No, I have no objection to a qualified faculty member at SDSMT teaching BIOL 470, Cancer Biology. I have no syllabus from our version, as the instructor who taught left several years ago. However, it probably would have been out of date, anyway.

Kaius Helenurm, Chair
Department of Biology
University of South Dakota

On Sep 14, 2015, at 2:55 PM, Sinden, Richard R. wrote:

Still seeking permission to teach BIOL 470 Cancer Biology.

Have not heard from you. My initial email may have come during the hectic early time in the semester and may have gotten lost.

The course was initiated in 2009.
Datatel records shows that this was last taught in 2011
The most recent section offering for BIOL-470 in spring 2012 actually ended up being cancelled. In Spring 2011 Dr. Alicia Paulson (Alicia.Paulson@usd.edu) was listed as the instructor of record for that course. (I do not see her at USD).

<table>
<thead>
<tr>
<th>Course</th>
<th>Week</th>
<th>Term</th>
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<tbody>
<tr>
<td>332683</td>
<td>BIOL-470-U015</td>
<td>2009SP</td>
</tr>
<tr>
<td>333767</td>
<td>BIOL-470-U015</td>
<td>2009SP</td>
</tr>
<tr>
<td>335133</td>
<td>BIOL-470-U015</td>
<td>2010SP</td>
</tr>
<tr>
<td>359410</td>
<td>BIOL-470-U015</td>
<td>2011SP</td>
</tr>
<tr>
<td><strong>391577</strong></td>
<td><strong>BIOL-470-U015</strong></td>
<td><strong>2012SP</strong></td>
</tr>
</tbody>
</table>

5 records listed

I have a new faculty from IU medical School who does research in cancer biology. I would like him to offer this course.

Hope to hear from you. Thanks.

Richard R Sinden, Ph.D.
Professor and Head
Department of Chemistry and Applied Biological Sciences
South Dakota School of Mines and Technology
From: Sinden, Richard R.
Sent: Monday, August 24, 2015 6:05 PM
To: Helenurm, Kaius
Subject: BIOL 470 Cancer Biology

We were thinking of teaching a course of this title. Who teaches it? Someone in your Department?
I have a cancer researcher – new faculty and we wanted to develop something like. Easiest to get your permission and make it a common course.

Could we get a syllabus from the instructor? Thanks.

Richard R. Sinden, Ph.D.
Professor and Head
Department of Chemistry and Applied Biological Sciences
South Dakota School of Mines and Technology
501 East Saint Joseph Street
Rapid City, SD 57701
Ph. 605 394 1678
Richard.Sinden@SDSMT.edu