Curriculum Development Form — Modify an Existing Course

Course Designator, Number, Title and Number of Credits (i.e. ACCT 1800, Business Law, 3 cr)

BIOL 211, Genetics, 4 cr

Date of Proposal: 10/5/2015

Author: Dr. Emily Flynn

Course Contact: Dr. Emily Flynn

Grading Method: ☑ Grade □ Pass/Fail

Scheduling: ☑ Fall □ Spring □ Summer □ Alternate Years □ Variable □ On Demand

Is this proposed course a Liberal Arts and Sciences course? ☑ Yes □ No

If yes, which MnTC area(s) will it fulfill (http://mntc.transfer.org)?

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □

The course is being: ☑ Modified □ Deleted (complete Intention Form and obtain signatures)

Describe the modification and the rationale:

Genetics courses do not require Chemistry as a pre-requisite (e.g., Minnesota State University Mankato). Thus reverts Genetics back to its original pre-requisites.

If yes, which program(s)? — DARS search

Biology A.S.

What impact will this modified course have on other program(s)?
None. Chemistry 120 and 121 are still required, but this would allow more flexibility in students' schedules since Genetics is only offered once per year.

As Faculty Developer, by signing this Modify an Existing Course form, the Curriculum Committee is assured of the following (check marks required):

Prior to Preparing Documentation

☑ Initiation — idea was submitted to Department Chair(s) and Academic Dean/Director for discussion and support

☑ Completed Intention Form

Continue the Curriculum Development Process

☑ COPY of existing CCO was used to make changes

☑ Double-checked:
  • concise 2-3 sentence course description
  • course prefix and number
  • course name
  • lecture/lab credits and hour breakdown
  • prerequisites
  • MnTC goal area — LAS courses

☑ Completed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)

☑ Verified measurable course competencies and learning objectives

☑ Considered potential opportunities and impacts of the change on other programs/programs — DARS Search

☑ Proofread documentation for correct content and proper structure on CCOs based on SCC example

☑ Proofread documentation for grammatical and typographical errors

Faculty Developer Signature: ____________________________  Date: 10-7-15

As Primary Department Chair, by signing this Modify an Existing Course form, the Curriculum Committee is assured of the following (check marks required):

☑ Documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)

☑ Proofread documentation for correct content and proper structure on CCOs based on SCC example

☑ Proofread documentation for grammatical and typographical errors

☑ I support this course □ I do not support this course — please provide reason(s):

Primary Department Chair Signature: ____________________________  Date: 10-14-15

Modify an Existing Course Form — 12/9/14 — Page 1
For LAS (MnTC courses) — As a LAS Department Chair, by signing this Modify an Existing Course form, the Curriculum Committee is assured of the following (check marks required):

☐ LAS course (specifically MnTC courses), documentation through email and department meetings made available for other faculty and programs to provide feedback, includes MnTC Goal Area Cross-walk Template(s)

☐ I support this course □ I do not support this course — please provide reason(s):

☐ I support this course □ I do not support this course — please provide reason(s):

☐ I support this course change □ I do not support this course — please provide reason(s):

☐ I support this course □ I do not support this course — please provide reason(s):

LAS Department Chair Signature 10/14/15 Date

LAS Department Chair Signature 10/4/15 Date

LAS Department Chair Signature 10/14/15 Date

If all 4 LAS Department Chairs do not support the modified course proposal, faculty developer can elevate the proposal to AASC for resolution.

As Academic Dean/Director, by signing this Modify an Existing Course form, the Curriculum Committee is assured of the following (check marks required):

☐ Identified potential opportunities and impacts of the change on other programs/departments — DARS search
☐ Reviewed MnTC Goal Area Cross-walk Template (for LAS MnTC courses only)
☐ MnTC Goal Area is appropriate based on MnSCU guidelines — Transfer Specialist consulted
☐ Verified credentials for faculty teaching the course
☐ Addressed the need for Class Maximum Change Request form
☐ No change in class maximum OR
☐ Change in class maximum — Class Maximum Change Request form completed with all necessary signatures

☐ I support this course □ I do not support this course — please provide reason(s):

Academic Dean/Director Signature 10/15/15 Date

If Academic Dean/Director does not support the modified course proposal, faculty developer can elevate the proposal to AASC for resolution.

Upload this signed form as a PDF to WIDS Shared Document folder — Curriculum Committee.

Following Curriculum Committee support, this form is completed with final signatures.

Curriculum Committee Chair Signature 12/4/15 Date

Vice President of Student and Academic Affairs Signature 12/7/15 Date

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MnTC Goal Area 3 Cross-Walk

Course:
Goal Area: 3 – Natural Sciences

Goal: To improve students' understanding of natural science principles and of the methods of scientific inquiry, i.e., the ways in which scientists investigate natural science phenomena. As a basis for lifelong learning, students need to know the vocabulary of science and to realize that while a set of principles has been developed through the work of previous scientists, ongoing scientific inquiry and new knowledge will bring changes in some of the ways scientists view the world. By studying the problems that engage today's scientists, students learn to appreciate the importance of science in their lives and to understand the value of a scientific perspective. Students should be encouraged to study both the biological and physical sciences.

Students will be able to:
1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

<table>
<thead>
<tr>
<th>MnTC Competency</th>
<th>Course Competencies:</th>
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<tbody>
<tr>
<td>1, 2, 3</td>
<td>Develop an understanding of Mendelian genetics</td>
</tr>
<tr>
<td>1, 2, 3</td>
<td>Describe the processes of mitosis and meiosis</td>
</tr>
<tr>
<td>1, 2, 3, 4</td>
<td>Describe extensions of Mendelian genetics</td>
</tr>
<tr>
<td>1, 2, 3</td>
<td>Explain chromosome mapping in eukaryotes</td>
</tr>
<tr>
<td>1, 2, 3, 4</td>
<td>Identify the sex chromosomes and how they determine sexual characteristics</td>
</tr>
<tr>
<td>1, 2, 3</td>
<td>Describe extranuclear inheritance in chloroplasts and mitochondria</td>
</tr>
<tr>
<td>1, 2, 3</td>
<td>Describe the structure of DNA</td>
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<tr>
<td>1, 2, 3</td>
<td>Explain the process of DNA replication and recombination</td>
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<tr>
<td>1, 2, 3, 4</td>
<td>Describe recombinant DNA technology</td>
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<tr>
<td>1, 2, 3</td>
<td>Describe the process of protein synthesis</td>
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<tr>
<td>1, 3, 4</td>
<td>Describe the role of genetics in cancer formation</td>
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<tr>
<td>1, 2, 3</td>
<td>Demonstrate safe laboratory practices</td>
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</tbody>
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