## Curriculum Proposal

**MATH 19-20 #39**

<table>
<thead>
<tr>
<th>Packet Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 <strong>Summary</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 MATH 2210 Discrete Mathematics (4 credits); prerequisite change</td>
</tr>
</tbody>
</table>

| 1.7 Signatures |
BSU Curriculum Forms

Form 1

Curriculum Modification Summary

College: Business, Mathematics and Sciences
Department: Mathematics and Computer Science
Proposer: Dr. Co Livingston
Proposer’s position: Professor of Mathematics
Describe the modification(s) you propose, and how it (/they) will work to students’ advantage. (This description and explanation will be included in Curriculum Report packets forwarded to the Faculty Senate.):

This is a prerequisite change only for MATH 2210 Discrete Mathematics.

The current prerequisite is CS 1309 or Math 1470 or higher or three years of high school mathematics (including two years of algebra) and an appropriate score on the Mathematics Placement Test.
The proposed prerequisite is CS 2321 or Math 2471 or instructor permission.

The purpose in increasing the prerequisite is to improve student success in this course.

Modifications proposed (specify number of each):
  ___1___Course Modification(s) (form 2)
  _____New Course(s) (form 3)
  _____Course Drop(s) (form 4)
  _____Program Modification(s) (form 5)
  _____New Program(s) (form 6)
  _____Program Drop(s) (form 7)
The modifications affect (check):
  ____Liberal Education
  ____Undergraduate Curriculum
  ____Graduate Curriculum
  ____Teacher Licensure Program(s) (Math only)
BSU Curriculum Forms

Form 2
Updated 9.19.15

Course Modification Form

Current Course Number(s): MATH 2210
   Undergraduate:  
   Graduate:
Proposed Course Number(s), if different:  
   Undergraduate:  
   Graduate:

Current Course Title: Discrete Mathematics
Proposed Course Title, if different:

Current Course Description:  Symbolic logic, number concepts, mathematical induction, set theory, relations and functions, graphs, trees, recurrence relations, and complexity of algorithms.
Proposed Course Description, if different:

Current Credits: 4
Proposed Credits, if different:

Current Prerequisite(s):
   Undergraduate:  CS 1309 or Math 1470 or higher or three years of high school mathematics (including two years of algebra) and an appropriate score on the Mathematics Placement Test.
   Graduate:
Proposed Prerequisite(s), if different:
   Undergraduate:  CS 2321 or Math 2471 or instructor permission.
   Graduate:

1) Reason(s) for change(s): The current prerequisites are adequate for very strong students but many students are being advised to take this class before they have sufficient mastery of the background material. We are increasing the prerequisite to improve the success rate in the course.

2) May this modified course replace the current course for students remaining in the old curriculum? Yes ☑ No _____ If not, please drop the current course and submit a new course form for the modification.
3) Do these modifications change any of the following? For all Yes answers, please provide updated information on the next page.

- Student Learning Outcomes  Yes _____  No __x___
- Major Content Areas  Yes _____  No __x___
- Projected Maximum Class Size (Cap)  Yes _____  No __x___

4) Current Course fee(s) per student: $

for:

Proposed Course fee(s) per student, if different: $

for:

5) Service Areas:

This course is a requirement or an elective in the programs/areas listed below. To locate where this course appears please search the online catalog, as follows:

- a) go to http://www.bemidjistate.edu/academics/catalog/ and choose the most recent catalog(s),
- b) click on “Areas of Study, and Course Descriptions,”
- c) click on “PDF of Entire Catalog” in upper right,
- d) press Ctrl F, and enter the prefix and number of the course(s) from this form.

Non-licensure programs:
- Computer Information Systems, B.S. major-(ok prereq in program)
- Chemistry, B.S. major Chemistry emphasis-(ok prereq in program)
- Computer Science, B.S. major (ok prereq in program)
- Mathematics, B.S. major Actuarial emphasis (ok prereq in program)
- Mathematics, B.S. major Applied emphasis (ok prereq in program)
- Mathematics, B.S. major General emphasis (ok prereq in program)
- Mathematics minor (ok prereq in program)

Teacher Licensure programs:
- Mathematics Education, B.S. major (Teacher Licensure) (ok prereq in program)

Liberal Education:

This course is a prerequisite for:
- CS 3528 (ok MATH 2210 in pgms)
- CS 4267 (ok not in any pgms)
- MATH 3260 (ok Math 2210 in pgms)
- MATH 3310 (ok Math 2210 in pgms)
- MATH 3440 (ok Math 2210 in pgms)
- MATH 3560 (ok Math 2210 in pgms)
- MATH 4240 (ok Math 2210 in pgms)
- MATH 4410 (ok Math 2210 in pgms)
- MATH 4470 (ok Math 2210 in pgms)
The above “service area” programs/departments were notified of this modification on 1.13.2020 & 2.14.2020 (date) by email (mail, email, or phone).

Business Administration
Chemistry
Professional Education

Please check one of the items below:

_____ No comments were received from other programs or departments within one week of the notification.

___x____ Comments were received within one week of the notification, and are attached.

From Keith Marek, Chemistry chair, Jan. 13, 2020
Co,

I have no problem with this curriculum change...and that’s a good point about Linear...I’ll bring it up to the others in the department.

KAM

From Young Son, Business chair, Jan. 15, 2020 (responses from all CIS related faculty)

Good afternoon!
As you can see below, there is no concern about this change. Thank you! Have a good one!

Young

From: Alabsi, Hamdan Z <Hamdan.Alabsi@bemidjistate.edu>
Subject: RE: Curriculum CIS

I agree. Thank you!

Best,
Hamdan

From: Leif, Douglas <Douglas.Leif@bemidjistate.edu>
Subject: RE: Curriculum CIS

Very good...thank you!

Douglas Leif, CCP
From: Wood, Kari <Kari.Wood@bemidjistate.edu>
Subject: RE: Curriculum CIS

I have no concerns.

From: "Son, Young Seob" <YoungSeob.Son@bemidjistate.edu>
Date: 1/13/20 9:27 AM (GMT-06:00)
To: "Leif, Douglas" <Douglas.Leif@bemidjistate.edu>, "Wood, Kari" <Kari.Wood@bemidjistate.edu>, "Tarmizi, Halbana" <Halbana.Tarmizi@bemidjistate.edu>, "Alabsi, Hamdan Z" <Hamdan.Alabsi@bemidjistate.edu>
Subject: FW: Curriculum CIS

Hello everyone,

Could you look at the proposal for Discrete Math? If you have any concerns, please let me know. Thank you! Have a good one!

Young

--------------------------------------------------------------------------------------------------------------------

From: Coggins, Porter E <Porter.Coggins@bemidjistate.edu>
Sent: Friday, February 14, 2020 8:41 AM
To: Livingston, Colleen <Colleen.Livingston@bemidjistate.edu>; BSU-Catalog <catalog@bemidjistate.edu>
Subject: RE: Math curriculum - okay needed

howdy!

hi co, i approve!

sincerely,

porter

veteran, united states army (for those curious about my email protocol)

"If a man does not keep pace with his companions, perhaps it is because he hears a different drummer. Let him step to the music which he hears, however measured or far away" - Henry David Thoreau
"Give me your tired, your poor, Your huddled masses yearning to breathe free, The wretched refuse of your teeming shore. Send these, the homeless, tempest-tost to me, I lift my lamp beside the golden door!" - Emma Lazarus

Porter E. Coggins III, Ph.D.
Professor and Chair, Department of Professional Education
Bemidji State University
1500 Birchmont Dr NE #35
Bemidji, MN 56601
Tel: 218.755.2720
porter.coggins@bemidjistate.edu
Veteran, United States Army

From: Livingston, Colleen <Colleen.Livingston@bemidjistate.edu>
Sent: Friday, February 14, 2020 8:35 AM
To: BSU-Catalog <catalog@bemidjistate.edu>; Coggins, Porter E <Porter.Coggins@bemidjistate.edu>; Livingston, Colleen <Colleen.Livingston@bemidjistate.edu>
Subject: Math curriculum - okay needed

Porter,

I’ve attached a curriculum proposal to increase the prerequisites on Discrete Math from precalculus to calculus (or similar CS prereqs). We had this all okayed through math weeks ago but I didn’t ask for Professional Ed’s okay because I didn’t think I needed it because math ed is housed in our department. But it turns out that we do need your okay. The rule is that you have to reply within a week but feel free to take less time. You could hit “reply all” to this message (so Robin Gullickson gets it) and say “Professional Ed approves this prerequisite change to Discrete Math.” Or you can write any other response that accurately conveys your opinion.

Three hours to Union Cookies!

Dr. Co Livingston      |  Professor of Mathematics      |  Bemidji State University #27
Bemidji, MN 56601      |  Office: Sattgast 207-L        |  218-755-2843
BSU Curriculum Forms

Form 8
Updated: 09.18.15

Signatures

Co Livingston / Professor of Mathematics / 01.24.2020
Proposer / Title / Date

Marty Wolf / Mathematics and Computer Science / 01.24.2020
Chair or Director / Department or Program / Date
Note: "All departmental recommendations [on curriculum] must be reviewed and approved by the department's faculty."--IFO/MnSCU Master Agreement 2009-2011, 20.A.3 (p. 80).

At this point, packet goes to Records Office/Curriculum Coordinator to be logged in to the Curriculum Proposal Progress Grid.

Marilyn Yoder / Business, Mathematics and Sciences / 01.24.2020
Dean / College / Date

Note: If proposal is sent back to the Proposer, please notify the Curriculum Coordinator. If approved, packet goes to Academic Affairs Office.