## CFC Meeting Agenda

## November 8, 2017, 3:30 in the Vogel Room, Memorial Union

Rick Barker Michael Averett<br>Karen Camarda<br>Gloria Dye<br>Karen Garrison<br>Linzi Gibson<br>Kristen Grimmer<br>Danielle Head<br>Rik Hine

Alex Klales<br>Rodrigo Mercader<br>Linsey Moddelmog<br>Kara Kendall-Morwick<br>Tony Naylor<br>Michael O’Brien<br>Holly O’Neill<br>Leslie Reynard<br>RaLynn Schmalzried

Jason Shaw
Cherry Steffen
Brian Thomas
Jennifer Wagner
Ye Wang
Kerry Wynn
Corey Zwikstra
I. Call to Order
II. Calendar and Grade Submission Discussion with guest Steve Grenus, Registrar, and Bruce Mactavish, Associate Dean, College of Arts and Sciences
III. *Approval of CFC Minutes, October 4, 2017
IV. Division Reports
A. *Approval of Natural Sciences and Math Minutes, October 20, 2017
V. Committee Reports
A. *Approval of Curriculum Sub-Committee Minutes, September 15-October 16, 2017
VI. New Business
A. *New Program- Applied Statistics
B. *New Minor- Computer Information Sciences with Concentration in Digital Forensics
C. *New Minor -Computer Information Sciences
D. *Change- Bachelor of Arts in Religious Studies
E. *Change- Bachelor of Arts in Computer Information Sciences
F. *Change- Bachelor of Science in Computer Information Sciences
G. *Change- Bachelor of Science in Computer Information Sciences with Emphasis in Digital Forensics
H. *Change- Bachelor of Science in Molecular Biology and Biotechnology
VII. Discussion
A. Best practices for SIR-II
VIII. Announcements
A. Faculty Governance Documents
IX. Adjournment
*See attachment
Upcoming Dates:

Next General Faculty Meeting: Thursday, January 25, 2018 at 3:00 pm in Henderson 100 Next CFC Meeting: Wednesday, November 29, 2017 at 3:30 pm in the Vogel Room

## CFC Meeting Minutes

## October 4, 2017, 3:30 in the Vogel Room, Memorial Union

Rick Barker
Michael Averett
Karen Camarda
Gloria Dye
Danielle Head
Linzi Gibson
Kristen Grimmer
Rik Hine

Alex Klales<br>Rodrigo Mercader<br>Linsey Moddelmog<br>Kara Kendall-Morwick<br>Tony Naylor<br>Michael O’Brien<br>Holly O’Neill<br>Leslie Reynard

RaLynn Schmalzried Jason Shaw Jennifer Wagner Cherry Steffen Ye Wang Kerry Wynn Corey Zwikstra
I. Call to Order at 3:32
II. September 6, 2017 Minutes Approved
III. Division Reports - None
A. Natural Science and Math Minutes, September 15, 2017 Approved
B. Humanities Minutes, September 6-22, 2017 Approved
C. Social Sciences Meeting Minutes, September 25, 2017 Approved
IV. Committee Reports
A. Professional Development Sub-Committee Meeting Minutes, September 25, 2017 Approved

1. Evaluation Discussion - Do we need a fourth category?
2. Office hours - Data collection
V. Discussion
A. Updated SIR-II Statistics
3. Put together best practices based, surveying the faculty members who regularly get $80 \%+$ response rates
a. Bribery!
4. Is there a gender difference? Not a Washburn.
5. Incentives: Students can't see grades until completing evaluation, or will get early access to their grade
6. Interpreting scores can be difficult (one person's " 2 " is not the same as another's); interpret in comparison to national means
7. Course Outcomes score consistently lower than other categories. Why?
B. Additional per credit hour cost for online classes
8. Can we appeal online fee for students who are required to take a class for the major when the class is not available in person?
9. Online Fee - $\$ 82 /$ credit hour
10. Where is this money going? If we get rid of the fee, where do we get that money? Is something else going to be cut because of eliminating the online fee?
11. Students go elsewhere for some courses because it's cheaper. Can we track this?
12. Don't have as much of a problem with some students who want to take online classes for the convenience.
13. Same issue came up at the student advisory board.
14. Could be a benefit because it's a disincentive to take online classes with they're offered in-person, but an appeals process might be a good idea.
C. Faculty Participation
15. How does a division do business?
a. Electronic vs. in-person meetings
b. Divisions used to meet once a month, largely for committee reports
16. How do you represent your division if you don't regularly meet?
17. As a new faculty member, some feel as though they're not as informed about their divisions, CFC, etc.
18. Can there be a flow chart of committees and the function/responsibilities of those committees?
19. Some of this can be discussed in division meetings
20. Creative and Performing Arts met monthly, the growth of the division made it difficult to make quorum. Online response rates end up higher than in-person meetings.
21. Departments need to find a time with no classes (dead period) so department members are available to meet. There's often a desire to meet, but it can be difficult to find time with all of the other meetings that take place.
22. Dead periods are helpful for students as well.
D. Updates
23. First Strategic Planning Round Table was today, and there will be four more in October. Register in advance!
24. Demand for active learning classrooms has increased. Priority will be given to those who have undergone CTEL training.
25. They will send out emails about the different types of classrooms to get faculty opinions.
26. Is there any collaboration with Student Services? Are the classrooms adapted for students with disabilities?
a. Often the classrooms are more flexible.
E. Future Meetings
27. FITECH
28. Campus-wide emails are overwhelming!
29. Challenges of active learning classrooms for students with disabilities - CTEL

## VI. Announcements

## VII. Adjournment at 4:42 pm

Next General Faculty Meeting: Thursday, October 19, 2017 at 3:30 pm in Henderson 100
Next CFC Meeting: November 8, 2017 at 3:30 in the Vogel Room
Strategic Round Table Discussions (please register): Monday, October 9, 2017 at 4:30 pm in BTC.

## Natural Science Division (NSD) Minutes for Friday, October 20, 2017.

I. Called to order at 2:00 pm by Division Chair Jennifer Wagner.
II. Minutes of the previous NSD meeting (09/15/17) were approved via email as circulated.
III. Committee Reports -

Faculty Senate - the consensual and familial relationship policy is progressing.
Faculty Senate - Faculty Affairs Committee is prepareing to discuss the following from the Faculty Handbook Committee:

- Faculty Definitions: the Handbook committee just finished their work on the adjunct and visiting faculty definitions with more definitions to follow.
- Faculty Workload: the Handbook committee will start work on this agenda item.
- Work Outside of the University: the Handbook committee is currently working on this agenda item. Current discussion includes attempts to define consulting and what the process for approval of outside employment will be for 9 and 10 month, and 12 month faculty. Gaspar Porta will chair a group from NSD to prepare a response to this issue.
IV. Old Business - none.
V. New Business -
A. The following Physics Changes were approved by the division.
i. Course Change: PS126 Physical Science for Elementary Education
ii. New Course: PS131 Biological Physics for the Health and Life Sciences
iii. New Course: PS132 Biological Physics for the Health and Life Sciences Laboratory
B. The following Chemistry Change was approved by the division.
i. Course Change: CH 393 Internship
C. The following Math Changes were approved by the division.
i. New Course: MA 131 Topics in Trigonometry and Introduction to Calculus
ii. New Course: MA 204 Number Theory and Discrete Math for Middle School and Secondary Teachers
iii. New Course: MA 230 Mathematics for Middle and Secondary Teachers
iv. New Course: MA 320 Mathematics for Middle School Teachers
v. Program change: B.S. in Mathematics
vi. Program Change: B.A. in Mathematics
D. The proposed change to the degree Requirements for the Bachelor of Science Degree was approved by the division. The change to 120 hours for the degree and the title of the concentration of minimum 20 of the 30 hours within the division from calling it a minor.
IX. Discussion Items -
A. Annual Evaluation Form Categories
B. Office Hours
X. Announcements - Apeiron will be April 20,2018.

Barry Goldwater Scholarship applications due by end of October
Any wanting to help with the Women in Science day on October 31, contact Susan Bjerke. The meeting was adjourned at 2:57 pm.
Minutes respectfully submitted by Rick Barker, Secretary
There was an interesting and informative presentation by Matt Arterburn about "Cytogenetic
Analysis of Karyotypically Unstable Perennial Wheat Amphiploids."

Participating Members: Linzi Gibson (Chair), Corey Zwikstra, Leslie Reynard, Danielle Head, Rodrigo Mercader, Kerry Wynn, Holly O’Neill, Cherry Steffen

Following email distribution of CFC approval requests and solicitation of electronic feedback, the CFC-CC voted to approve the following:

Program Change Request
Bachelor of Arts in Religious Studies
Curriculum Committee of College Faculty Council (CFC-CC)
Electronic Meeting Minutes: September 20, 2017

Participating Members: Linzi Gibson (Chair), Corey Zwikstra, Leslie Reynard, Danielle Head, Rodrigo Mercader, Kerry Wynn, Holly O'Neill, Cherry Steffen

Following email distribution of CFC approval requests and solicitation of electronic feedback, the CFC-CC voted to approve the following:

## New Program Review

Minor in Computer Information Science
Minor in Computer Information Science with Emphasis in Digital Forensics
Applied Statistics

## Course changes

CM 339 CIS Research
MA 340 ANOVA Design of Experiments
MA 341 Nonparametric Tests/Quality Control
MA 342 Statistical Computing
BI 343 Human Genetics

Curriculum Committee of College Faculty Council (CFC-CC)
Electronic Meeting Minutes: October 2, 2017
Participating Members: Linzi Gibson (Chair), Corey Zwikstra, Leslie Reynard, Danielle Head, Rodrigo Mercader, Kerry Wynn, Holly O'Neill, Cherry Steffen

Following email distribution of CFC approval requests and solicitation of electronic feedback, the CFC-CC voted to approve the following:

Program Change Requests
Bachelor of Science in Molecular Biology and Biotechnology

Participating Members: Linzi Gibson (Chair), Corey Zwikstra, Leslie Reynard, Danielle Head, Rodrigo Mercader, Kerry Wynn, Holly O'Neill, Cherry Steffen

Following email distribution of CFC approval requests and solicitation of electronic feedback, the CFC-CC voted to approve the following:

Course Changes in Psychology
PY 385 From Classroom to Career
PY 612 Scientific Writing
PY 631 Psychological Assessment of Adults Practicum
Curriculum Committee of College Faculty Council (CFC-CC)
Electronic Meeting Minutes: October 11, 2017

Participating Members: Linzi Gibson (Chair), Corey Zwikstra, Leslie Reynard, Danielle Head, Rodrigo Mercader, Kerry Wynn, Holly O'Neill, Cherry Steffen

Following email distribution of CFC approval requests and solicitation of electronic feedback, the CFC-CC voted to approve the following:

## Course Changes

AN 335 Applied Anthropology
Curriculum Committee of College Faculty Council (CFC-CC)
Electronic Meeting Minutes: October 16, 2017
Participating Members: Linzi Gibson (Chair), Corey Zwikstra, Leslie Reynard, Danielle Head, Rodrigo Mercader, Kerry Wynn, Holly O’Neill, Cherry Steffen

Following email distribution of CFC approval requests and solicitation of electronic feedback, the CFC-CC voted to approve the following:

Course Changes
PH 202 Hist of Mod Western Phil
PH 201 Hist of Ancient Western Phil

# COLLEGE OF ARTS AND SCIENCES NEW PROGRAM REVIEW FORM 



1. Title of Program.

Applied Statistics
2. Rationale for offering this program.

Applied or research statisticians are in high demand by business, industry and government. Our actuarial science track is focused on preparing students to become actuaries, and to pursue the Society of Actuaries (SOA) or Casualty Actuary Society (CAS) exam series to gain credentialing as associates or fellow of the respective societies. The new Applied Statistics tracks overlaps heavily with the actuarial science track, featuring three new courses in place of MA 343 Applied Statistics, MA 384 Theory of Interest, and MA 385 Actuarial Mathematics. These three new courses, MA 340 ANOVA/Design of Experiments, MA 341 Nonparametric Tests/Quality Control and MA 342 Statistical Computing have already been proposed in the CAS online proposal system. The statistical applications contained in these courses, especially the computing course, will make successful students highly marketable for any positions requiring a strong statistics background. The new program also provides a nice option for students in the actuarial science track who opt not to pursue the SOA/CAS professional exam series.
3. Exact proposed catalog description.

Mathematics â€" Applied Statistics specialization
STUDENT LEARNING OUTCOMES
1.Students will demonstrate the ability to solve a variety of problems in mathematics including calculus, probability and statistics, and linear algebra.
2.Students will demonstrate the ability to write mathematically, using proofs and/or statistical analysis, and to solve challenging problems both pure and applied.
3.Students will demonstrate the ability to communicate mathematical and statistical results both
orally and in writing.
4.Students will demonstrate the ability to identify and utilize the appropriate practices and tools, including the use of technology, to solve mathematics problems and perform statistical modeling and analysis of data.

## Courses

Calculus (MA 151, 152, 253), Linear Algebra (MA 301), ANOVA/Design of Experiments (MA 340), Nonparametric/Quality Control (MA 341), Statistical Computing (MA 342), Mathematical Statistics I (MA 344), Mathematical Statistics II (MA 345), Regression Analysis (MA 346), Stochastic Processes (MA 347), Time Series Analysis (MA 348), Introduction to Structured Programming (CM 111), Contemporary Programming Methods (CM 245), Data Structures and Algorithmic Analysis (CM 307), Data Mining (CM 332), and Database Management Systems (CM 336).

Both BA and BS options are possible. Other requirements for the program are those for the BA or BS degrees. MA 340, 341, and 342 are new courses.
4. List and financial implications.

Both Drs. Mosier and Shaw will teach the new courses; based on frequency of offering, we will need to find instruction for one section of MA 140 Statistics each semester. With current adjunct costs of $\$ 1,860$ per three-credit course (for those possessing a Master's degree), this amounts to \$3,720 per year.
5. Are any other departments affected by this new program?

Y
The MA 343 Applied Statistics course will eventually be replaced by a selection of one of MA 340, 341 or 346 . CIS students are impacted by this, for those in a CIS track where MA 343 is an option/requirement. We plan to offer MA 343 in SP18 and SP19 to assuage these concerns. Our other tracks in Mathematics \& Statistics are also affected by this change involving MA 343, which will be addressed with the appropriate program changes. The five proposed CIS courses for Applied Statistics are already regularly offered by CIS.

## COLLEGE OF ARTS AND SCIENCES NEW PROGRAM REVIEW FORM



1. Title of Program.
Minor in Computer Information Science with Concentration in Digital Forensics
2. Rationale for offering this program.
We believe that a minor with a concentration in digital forensics will attract Criminal Justice
majors who wish to add this skill set to their bachelor's degree.
3. Exact proposed catalog description.

The Minor in Computer Information Science with Concentration in Digital Forensics will give a student valuable computer skills including those used in digital forensics investigations. The minor will consist of 15 hours of Computer Information Science coursework, including at least six upper division hours. The courses must include CM203 Digital Forensics I and CM303 Digital Forensics II. Other courses may be selected to match the particular interest of the student.
4. List and financial implications.

None
5. Are any other departments affected by this new program?

N

## COLLEGE OF ARTS AND SCIENCES NEW PROGRAM REVIEW FORM



1. Title of Program.
Minor in Computer Information Sciences
2. Rationale for offering this program.

This is really a change, but the minor was not in the system. We are changing the number of hours required for the minor in CIS from 21 to 15 . This will make it have the same number of hours as our new Minor in CIS with a Concentration in Digital Forensics.
3. Exact proposed catalog description.

Minor programs in Computer Information Science are individually designed by the student in consultation with a departmental advisor and subject to departmental approval. A minor will consist of 15 hours of Computer Information Science coursework, including at least six upper division hours. Courses may be broadly selected or may concentrate in an area of particular interest.
4. List and financial implications.

None
5. Are any other departments affected by this new program?

N

# COLLEGE OF ARTS AND SCIENCES PROGRAM CHANGE FORM 



Program: Bachelor of Arts in Religious Studies

1. Reason for this program change?

The proposed changes to the religious studies major reflect changes within the Department of Philosophy and within the discipline of religious studies and the academy more generally. The Department has historically had only one professor of religious studies. The previous incumbent, Barry Crawford, retired after the 2016-2017 academic year, and the new program administrator, Chris Jones, believes that the program needs to be updated in line with the contemporary discipline of religious studies and with student expectations for humanities majors.
To start with the latter point, the program at present is too large- 55 credit hours, nearly all of it required coursework. At a public university without a religious affiliation, very few students are interested in majoring in religious studies by itself. At present, there are only five active majors, and no one has graduated with a BA in religious studies from Washburn University since 2012. In order to grow the major and thereby fill upper division religious studies courses, we need to be able to attract students who are interested in double majoring. Consequently, we have proposed reducing the major's footprint to 31 credit hours and building more flexibility in terms of the courses students can take. This number ( 31 credit hours) is the same number that is required of our approved Philosophy BA anyway. At the same time, we have not sacrificed competency within the discipline of religious studies because we have brought more focus to the major (see below).
The major, as it previously existed, included required coursework in anthropology, sociology, history, and ethics-fields that may enhance work in religious studies but are in no way intrinsic to it. Religious studies in the 21st century is an academic discipline in its own right, with its own distinct theories and methodologies. It has been characterized most especially of late by serious reflection on whether Western bias is innate in its constitutive terminology (e.g., "religion," "ritual," "sacred") and whether scholars should adopt a humanistic/philological/interpretive framework or a social scientific/explanatory framework. The new program focuses on preparing students in these areas.
2. Complete revised description.

The requirements for the major in Religious Studies consist of the following:

- RG 101 (3): Introduction to Religion
- RG 102 (3): World Religions
- PH 201 (3): History of Ancient Western Philosophy
- PH 202 (3): History of Modern Western Philosophy
- RG 331 (3): Understanding Religion
- RG 398 (1): Senior Thesis Research
- RG 399 (3): Senior Thesis
- Twelve (12) additional credits
o At least six must be RG courses
o At least nine must be upper division
o External courses require advisor's prior approval

3. Describe the nature of the proposed change.

The proposed required courses focus on learning theories and methods associated with religious studies, while the additional courses allow students the flexibility to specialize in areas of their choosing, areas in which they will ultimately have to produce a senior thesis. RG 101 introduces students to religious studies as an academic discipline, inviting both engagement with and reflection upon constitutive terminology and the interpretation/explanation dilemma (as above). RG 102 exposes students to a wide range of data in the field. PH 201 and 202 are included as a foundation for RG 331, in which students will read a wide range of contemporary theorists of religion and begin to position themselves within the field. Elective coursework within the major can be interdisciplinary and allow the student to specialize. In the senior thesis, the student selects one or more theoretical approaches to religion as an analytical prism for their area of focus.
4. Do you currently have the equipment and facilities to teach the classes within the proposed change.

Yes
5. Does this change affect any other departments? Y

We have removed required courses from two departments (Sociology/Anthropology and History). This may in theory affect enrollment in these courses (SO 318, AN 313, HI 100, 101, 102), though religious studies is a small enough program to render the impact negligible. Religious studies majors will still be able to take up to six hours outside of the Philosophy Department toward their major, and so some of the aforementioned courses may still count toward their major anyway.

# COLLEGE OF ARTS AND SCIENCES PROGRAM CHANGE FORM 



Program: Bachelor of Arts in Computer Information Science

1. Reason for this program change?

We are combining our CM467 (2 hrs) and CM468 (1 hr) courses into one course: CM465 CIS Capstone Project ( 3 hrs ). CM468 only meets once in the semester to take an MFT and this was viewed as problematic in the context of the definition of a credit hour. CM467 and CM468 will be deleted once all the changes have been approved.
2. Complete revised description.

Computer Information Sciences Core - 13 hrs
CM111 Intro to Structured Programming (4)
CM231 Computer Organization/Assembler (3)
CM245 Contemp Programming Methods (3)
CM261 Networked Systems I (3)
Computer Information Sciences Required - 21 hrs
CM307 Data Structures \& Algorithmic Analysis (3)
CM322 Operating Systems (3)
Either CM331 Computational Intelligence (3)
or CM332 Data Mining (3)
CM333 Software Engineering (3)
CM336 Database Management Systems (3)
CM361 Network Systems II (3)
CM465 CIS Capstone Project (3)
Approved Elective CM Upper Division Coursework - 6 hrs

These courses should be selected in consultation with a departmental advisor. All 6 hours must be upper division.

Correlated - 30-32 hrs
PH220 Logic (3)
EC200 Princ of Microeconomics (3)
EC201 Princ of Macroeconomics (3)
Either BU342 Organization and Management (3)
or BU346 Organizational Behavior (3)
EN208 Business/Technical Writing (3)
CN150 Public Speaking (3)
Either CN340 Professional Interviewing (3)
or CN341 Persuasive Speaking (3)
Either MA140 Statistics (3)
or MA343 Applied Statistics (3)
Either MA141 Applied Calculus I (3)
or MA151 Calculus I (5)
MA206 Discrete Math - Computing (3)
3. Describe the nature of the proposed change.

We are combining our CM467 (2 hrs) and CM468 (1 hr) courses into one course: CM465 CIS Capstone Project ( 3 hrs ). CM467 and CM468 will be deleted once all the changes have been approved.
4. Do you currently have the equipment and facilities to teach the classes within the proposed change.

Yes
5. Does this change affect any other departments?

N

# COLLEGE OF ARTS AND SCIENCES PROGRAM CHANGE FORM 



Program: Bachelor of Science in Computer Information Science

1. Reason for this program change?

We are combining our CM467 (2 hrs) and CM468 (1 hr) courses into one course: CM465 CIS Capstone Project ( 3 hrs ). CM468 only meets once in the semester to take an MFT and this was viewed as problematic in the context of the definition of a credit hour. CM467 and CM468 will be deleted once all the changes have been approved.

Also, we are dropping the requirements of MA207 and MA301 in the Math Minor. The student may take these courses or other MA/NSD courses to satisfy the minor.
2. Complete revised description.

Computer Information Sciences Core - 13 hrs
CM111 Intro to Structured Programming (4)
CM231 Computer Organization/Assembler (3)
CM245 Contemp Programming Methods (3)
CM261 Networked Systems I (3)
Computer Information Sciences Required - 21 hrs
CM307 Data Structures \& Algorithmic Analysis (3)
CM322 Operating Systems (3)
Either CM331 Computational Intelligence (3)
or CM332 Data Mining (3)
CM333 Software Engineering (3)
CM336 Database Management Systems (3)

CM361 Network Systems II (3)
CM465 CIS Capstone Project (3)
Approved CM Electives - 12 hrs
These courses should be selected in consultation with a departmental advisor. Minimum of 6 hours must be upper division.

Correlated - 32 hrs
PH220 Logic (3)
EC200 Princ of Microeconomics (3)
EC201 Princ of Macroeconomics (3)
Either BU342 Organization and Management (3)
or BU346 Organizational Behavior (3)
EN208 Business/Technical Writing (3)
CN150 Public Speaking (3)
Either CN340 Professional Interviewing (3)
or CN341 Persuasive Speaking (3)
Either MA140 Statistics (3)
or MA343 Applied Statistics (3)
MA151 Calculus I (5)
MA206 Discrete Math - Computing (3)

## Additional Bachelor of Science Requirements

Students must also meet the Bachelor of Science University Requirements. A 30-hour minor in the Division of Natural Sciences and Mathematics is required and must be approved by the department chairperson. If the minor is in Math, the student must take MA152. At least 20 of these hours must be selected from one discipline. Transfer students must complete at least nine upper division hours in computer information sciences from Washburn University.
3. Describe the nature of the proposed change.

We are combining our CM467 (2 hrs) and CM468 (1 hr) courses into one course: CM465 CIS Capstone Project ( 3 hrs ). CM467 and CM468 will be deleted once all the changes have been approved. Also, we are dropping the requirements of MA207 and MA301 in the Math Minor.
4. Do you currently have the equipment and facilities to teach the classes within the proposed change.

Yes
5. Does this change affect any other departments?

N

# COLLEGE OF ARTS AND SCIENCES PROGRAM CHANGE FORM 



Program: Bachelor of Arts in Computer Information Sciences with Emphasis in Digital Forensics

1. Reason for this program change?

We are combining our CM467 (2 hrs) and CM468 (1 hr) courses into one course: CM465 CIS Capstone Project ( 3 hrs ). CM468 only meets once in the semester to take an MFT and this was viewed as problematic in the context of the definition of a credit hour. CM467 and CM468 will be deleted once all the changes have been approved.
2. Complete revised description.

Computer Information Sciences Core - 16 hrs
CM111 Intro to Structured Programming (4)
CM203 Digital Forensics I (3)
CM231 Computer Organization/Assembler (3)
CM245 Contemporary Programming Methods (3)
CM261 Networked Systems I (3)
Computer Information Sciences Required - 18 hrs
CM303 Digital Forensics II (3)
CM307 Data Structures \& Algorithmic Analysis (3)
CM322 Operating Systems (3)
Either CM331 Computational Intelligence (3)
or CM332 Data Mining (3)
CM361 Network Systems II (3)
CM465 CIS Capstone Project (3)

Approved Elective CM Upper Division Coursework - 6 hrs
Course(s) should be selected in consultation with a departmental advisor. All 6 hours must be upper division.

Correlated - 33-35 hrs
CJ130 Public and Private Security (3)
CJ415 Forensic Science in Criminal Justice (3)
CN150 Public Speaking (3)
Either CN340 Professional Interviewing (3)
or CN341 Persuasive Speaking (3)
EN208 Business/Technical Writing (3)
Either MA140 Statistics (3)
or MA343 Applied Statistics (3)
Either MA141 Applied Calculus I (3)
or MA151 Calculus I (5)
MA206 Discrete Math - Computing (3)
PH220 Logic (3)
PY100 Basic Concepts in Psychology (3)
PY2XX 200-level Psychology General Ed (3)
3. Describe the nature of the proposed change.

We are combining our CM467 (2 hrs) and CM468 (1 hr) courses into one course: CM465 CIS Capstone Project ( 3 hrs ). CM467 and CM468 will be deleted once all the changes have been approved.
4. Do you currently have the equipment and facilities to teach the classes within the proposed change.

Yes
5. Does this change affect any other departments?

# COLLEGE OF ARTS AND SCIENCES PROGRAM CHANGE FORM 



Program: Bachelor of Science in Molecular Biology and Biotechnology

1. Reason for this program change?

To add a course ( BI 343 ) to the Elective Supportive Courses section. BI 343 is also undergoing a course change, so the approval process should address the BI 343 course change first and then this program change.
2. Complete revised description.

The B.S. degree in Molecular Biology and Biotechnology (MBB) is designed to provide students an opportunity to focus their undergraduate studies in the molecular biosciences in an effort to prepare themselves for either entering the workforce directly as baccalaureate-level research scientists or for entering competitive graduate programs to further their studies. The curriculum is designed to be rich in laboratory experiences through coursework, research and an internship. In addition to 83 credit hours of science courses, MBB majors will be required to take an ethics course to appreciate the interplay between biology and society.

REQUIREMENTS FOR MOLECULAR BIOLOGY AND BIOTECHNOLOGY (MBB) MAJORS MBB majors must take a 34-hour core consisting of:

BI 102 General Cellular Biology (5)
BI 103 General Organismal Biology (5)
BI 234 Introduction to Biotechnology (3)
BI 301 General Microbiology (4)
BI 333 General Genetics (4)
BI 353 Molecular Genetics (3)
BI 354 Molecular Biology Laboratory (3)

BI 390 Biology Seminar (1)
BI 395 Biology Research (3)
BI 440 Biotechnology Internship (3)
Elective Supportive Courses for MBB Majors:
(Students must complete a minimum of 8 additional hours from the following list):
BI 322 Advanced General Botany (4)
BI 325 Microbiology of Human Diseases (5)
BI 328 Plant Anatomy and Physiology (3)
BI 330 Animal Physiology (4)
BI 343 Human Genetics (3) <----------------Add
BI 355 Developmental Biology (5)
BI 357 Histology (4)
BI 362 Immunology (3)
BI 363 Immunology Lab(2)
BI 370 Virology (3)
CH 343 Organic Chemistry Laboratory II (2)
CH 352 Biochemistry II (3)
CH 353 Biochemistry Laboratory II (2)
The following non-biology courses are required of MBB majors:
CH 151/152 Fundamentals of Chemistry (1 year with lab) (10)
CH 340/342 Organic Chemistry I (with lab) (5)
CH 341 Organic Chemistry II (3)
CH 350/351 Biochemistry I (1 semester with lab) (5)
MA 140 Statistics (3)
MA 151 Calculus and Analytic Geometry I (5)
PS 261/262 College Physics (1 year with lab) OR
PS 281/282 General Physics (1 year with lab) (10)
PH 214 Medical Ethics (3)
The Bachelor of Science (B.S.) degree in Molecular Biology and Biotechnology requires a 34-hour BI core, 8 additional BI or CH hours elective hours as listed above, and the above-listed non-biology courses. The above-listed coursework for the B.S. in MBB satisfied the natural sciences minor. The B.S. degree in Molecular Biology and Biotechnology requires 124 credit hours to graduate.
3. Describe the nature of the proposed change.

The nature of this change is minor, involving only the addition of one course, BI 343 Human Genetics (3), to the "Elective Supportive Courses for MBB Majors" section.
4. Do you currently have the equipment and facilities to teach the classes within the proposed change.

Yes
5. Does this change affect any other departments?

N

