PART I – NEW ACADEMIC PROGRAMS AND PROGRAM CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

1. Request to change the requirements for the Bachelor of Science degree in Food Science in the Department of Food Science and Human Nutrition.

The concentrations in the Bachelor of Science degree in Food Science are noted on the student’s academic record when the requirements for the degree have been completed.

   a. Under the heading Requirements for the Bachelor of Science Degree in Food Science make the following changes:

   (1) In item 3. a delete the following course:

   FSC 410 Sensory Analysis and Consumer Research 3

   Add the following courses:

   FSC 310 Sensory Analysis and Consumer Research 3
   FSC 442 Hazard Analysis Critical Control Point Training and Certification 1

   (2) In item 3. a change the total credits from ‘53’ to ‘54’.

   (3) Change item 3. b to the following:

   One of the following courses (3 credits):
   FSC 430 Food Processing: Fruits and Vegetables 3
   FSC 431 Food Processing: Cereals 3

   (4) Reletter item 3. c to item 3. d.

   (5) Add the following item 3. c:

   One of the following courses (3 credits):
   FSC 432 Food Processing: Dairy Foods 3
   FCS 433 Food Processing: Muscle Foods 3

   (6) In item 3. d under the Food Technology concentration change the note following the list of courses to the following:

   Courses selected to meet this requirement may not be used to fulfill requirement 3. b or 3. c above.

Effective Fall 2017.

2. Request to delete the curriculum and degree requirements for the Minor in Nutritional Sciences in the Department of Food Science and Human Nutrition. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request at its October 6, 2016 meeting. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Spring 2016. No students are to be readmitted to the program effective Spring 2016. Effective Spring 2020, coding for the program will be discontinued and the program will no longer be available in the Department of Food Science and Nutrition. Students who have not met the requirements for the Minor in Nutritional Sciences through the Department of Food Science and Human Nutrition prior to Spring 2020 will have to change their minor.
COLLEGE OF ENGINEERING

1. Request to change the requirements in the Bachelor of Science degree in Chemical Engineering in the Department of Chemical Engineering and Materials Science.

The concentrations in the Bachelor of Science degree in Chemical Engineering are noted on the student’s academic record when the requirements for the degree have been completed.

a. Under the heading Requirements for the Bachelor of Science Degree in Chemical Engineering make the following changes:

(1) In item 1., paragraph three, add the following statement:

The alternative track requirement for Integrative Studies in Biological Sciences in Chemical Engineering is Biological Science 161.

(2) In item 3. e. Technical Electives, replace the requirement with the following:

Students must complete at least 6 credits in courses selected from a list of approved technical electives available from the Department of Chemical Engineering and Materials Science. Technical elective courses must include at least 3 credits of engineering topics, denoted with an ‘e’ next to the course number on the CHE technical elective list.

NOTE: BMB 462 is taken to fulfill requirement 3. b. and will count as a technical elective credit in item 3. e., not as an engineering ‘e’ topics course.

(3) In the Concentrations in Chemical Engineering make the following changes:

(a) In the introductory text NOTE, add the following statement:

For any concentration, up to 3 credits of Independent Study (CHE 490) related to the subject area may be applied with approval of the Department of Chemical Engineering and Materials Science.

(b) Under the heading Biochemical Engineering replace the requirements with the following:

To earn a Bachelor of Science degree in Chemical Engineering with a biochemical engineering concentration, students must complete requirements 1., 2., 3. a., and 3. d. above and the following:

Both of the following courses (6 credits):
CHE 481 Biochemical Engineering 3
MMG 301 Introductory Microbiology 3

One of the following tracks:

Track 1 (12 or 13 credits):
The following course (4 credits):
BMB 401 Comprehensive Biochemistry 4

Three of the following courses (8 or 9 credits):
BMB 805 Protein Structure, Design, and Mechanism 3
BMB 829 Methods of Macromolecular Analysis and Synthesis 2
CHE 882 Advanced Biochemical Engineering 3
CHE 883 Multidisciplinary Bioprocessing Laboratory 3
MMG 409 Eukaryotic Cell Biology 3
MMG 421 Prokaryotic Cell Physiology 3
MMG 431 Microbial Genetics 3

Track 2 (11 or 12 credits):

Both of the following courses (6 credits):
BMB 461 Advanced Biochemistry I 3
BMB 462 Advanced Biochemistry II 3

Two of the following courses (5 or 6 credits):
BMB 805 Protein Structure, Design, and Mechanism 3
BMB 829 Methods of Macromolecular Analysis and Synthesis 2
CHE 882 Advanced Biochemical Engineering 3
CHE 883 Multidisciplinary Bioprocessing Laboratory 3
MMG 409 Eukaryotic Cell Biology 3
MMG 421 Prokaryotic Cell Physiology 3
MMG 431 Microbial Genetics 3

(c) Under the heading Bioenergy rename the concentration to Bioenergy and Bioproducts and replace the requirements with the following:

NOTE: No new students are to be admitted to the Bioenergy concentration effective Fall 2017. No students are to be readmitted to the concentration effective Fall 2017. Effective Fall 2022, coding for the Bioenergy concentration will be discontinued and the concentration will no longer be available. Students who have not met the requirements for the concentration prior to Fall 2022 will have to change their concentration. Effective Fall 2017, students pursuing the Bioenergy and Bioproducts concentration will follow the requirements noted below.

To earn a Bachelor of Science degree in Chemical Engineering with a bioenergy and bioproducts concentration, students must complete requirements 1., 2., 3. a., 3. b., and 3. d. above and the following:

All of the following courses (9 credits):
CHE 468 Biomass Conversion Engineering 3
CHE 481 Biochemical Engineering 3
CSS 467 Bioenergy Feedstock Production 3
One of the following courses (3 credits):
BE 469 Sustainable Bioenergy Systems 3
BE 869 Life Cycle Assessment for Bioenergy and Bioproduct Systems 3

One of the following courses (3 credits):
AFRE 829 Economics of Environmental Resources 3
CHE 882 Advanced Biochemical Engineering 3
CHE 883 Multidisciplinary Bioprocessing Laboratory 3
FOR 466 Natural Resource Policy 3
MC 450 International Environmental Law and Policy 3

(d) Under the heading Biomedical Engineering replace the requirements with the following:

To earn a Bachelor of Science degree in Chemical Engineering with a biomedical engineering concentration, students must complete requirements 1., 2., 3. a., 3. b., and 3. d. above and the following:

All of the following courses (10 credits):
CHE 481 Biochemical Engineering 3
MMG 409 Eukaryotic Cell Biology 3
PSL 431 Human Physiology I 4
One of the following courses (3 credits):
CHE 883 Multidisciplinary Bioprocessing Laboratory 3
ME 494 Biofluid Mechanics and Heat Transfer 3
MSE 425 Biomaterials and Biocompatibility 3
One of the following courses not taken above (3 or 4 credits):
BMB 471 Advanced Biochemistry Laboratory 3
CHE 883 Multidisciplinary Bioprocessing Laboratory 3
IBIO 341 Fundamental Genetics 4
ME 494 Biofluid Mechanics and Heat Transfer 3
MSE 425 Biomaterials and Biocompatibility 3

(e) Under the heading Environmental delete the following courses from the elective listing:

CE 485 Landfill Design 3
CSUS 200 Introduction to Sustainability 3
ZOL 446 Environmental Issues and Public Policy 3

Add the following course to the elective listing:

CE 485 Landfill Design 3
2. Request to delete the curriculum and degree requirements for the Bachelor of Science degree in Electrical and Computer Engineering in the Department of Electrical and Computer Engineering. The University Committee on Undergraduate Education (UCUE) provided consultative commentary to the Provost after considering this request at its meeting on October 6, 2016. The Provost made the determination to discontinue the program after considering the consultative commentary from the University Committee on Undergraduate Education.

No new students are to be admitted to the program effective Summer 2015. No students are to be readmitted to the program effective Summer 2015. Effective Fall 2016, coding for the program will be discontinued and the program will no longer be available in the Department of Electrical and Computer Engineering. Students who have not met the requirements for the Bachelor of Science degree in Electrical and Computer Engineering through the Department of Electrical and Computer Engineering prior to Fall 2016 will have to change their major.

**COLLEGE OF HUMAN MEDICINE**

1. Request to change the requirements for the Minor in Global Public Health and Epidemiology in the Department of Epidemiology and Biostatistics.

   a. Under the heading Requirements for the Minor in Global Public Health and Epidemiology replace the entire entry with the following:

   1. All of the following courses (16 credits):
      
      | Course | Title | Credits |
      |--------|-------|---------|
      | EPI 200 | A Multidisciplinary Approach to Problems in Global Public Health and Epidemiology | 3 |
      | EPI 280 | Applied Analytic Methods in Health Studies I | 3 |
      | EPI 380 | Applied Analytic Methods in Health Studies II | 3 |
      | EPI 390 | Disease in Society: Introduction to Epidemiology and Public Health | 4 |
      | HM 101 | Introduction to Public Health | 3 |

   Effective Summer 2017.

**LYMAN BRIGGS COLLEGE**

1. Request to change the Graduation Requirements for Lyman Briggs College leading to the Bachelor of Science Degree in Lyman Briggs College.

   a. Under the heading Requirements for Bachelor of Science Degree in Lyman Briggs College make the following changes:

   (1) In item 1., change paragraph two to ‘Students who are enrolled in Lyman Briggs College…’.

   (2) In item 1., change paragraph five to the following:

   The University's Tier II writing requirement for the Major and Coordinate Majors in Lyman Briggs College is met by completing Lyman Briggs College 492 and one of the following courses: Lyman Briggs College 321A, 321B, 322A, 322B, 323A, 323B, 324A, 324B, 325A, 325B, 326A, 326B, 327A, 327B. Those courses are referenced in items 3. a. (5) and 3. a. (6) below.

   (3) In item 3. a. (4) delete items (d) and (e) and reletter respectively.
(4) Replace item 3. a. (5) with the following:

**History, Philosophy and Sociology of Science**: A total of 11 or 12 credits from the courses in groups (a), (b), and (c) below:

(a) One of the following courses: Lyman Briggs 133; Writing, Rhetoric and American Cultures 101.
(b) One of the following courses: Lyman Briggs 321A, 322A, 323A, 324A, 325A, 326A, 327A.
(c) One of the following courses: Lyman Briggs 321B, 322B, 323B, 324B, 325B, 326B, 327B.

(5) In item 3. b. under **Coordinate Majors** (3) College of Natural Science delete:

Diagnostic Molecular Science

Effective Fall 2017.

**COLLEGE OF NATURAL SCIENCE**

1. Request to change the requirements for the Bachelor of Science degree in Biological Science-Interdepartmental in the College of Natural Science. The Teacher Education Council (TEC) will consider this request at its November 7, 2016 meeting.

   a. Under the heading **Requirements for the Bachelor of Science Degree in Biological Science-Interdepartmental** make the following changes in item 3.:

   (1) In item 3. a. delete the following courses:

   ZOL 341 Fundamental Genetics      4
   ZOL 355 Ecology                   3
   ZOL 355L Ecology Laboratory (W)   1
   ZOL 445 Evolution (W)             3

   Add the following courses:

   IBIO 341 Fundamental Genetics      4
   IBIO 355 Ecology                   3
   IBIO 355L Ecology Laboratory (W)   1
   IBIO 445 Evolution (W)             3

   (2) In item 3. c. delete the following course:

   CEM 186H Honors Chemistry Laboratory II  2

   Add the following item (4):

   LB 171 Principles of Chemistry I     4
   LB 171L Introductory Chemistry Laboratory I  1
   LB 172 Principles of Chemistry II    3
   LB 172L Principles of Chemistry II-Reactivity Laboratory  1

   (3) Replace item 3. d. with the following:

   One course from each of the following groups (6 to 8 credits):

   (1) MTH 124 Survey of Calculus I     3
   MTH 132 Calculus I                   3
   MTH 152H Honors Calculus I           4
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November 10, 2016

LB  118  Calculus I      4
(2) MTH  126  Survey of Calculus II     3
     MTH  133  Calculus II      4
     MTH  153H  Honors Calculus II     3
     LB  119  Calculus II      4
     STT  201  Statistical Methods     4
     STT  231  Statistics for Scientists      3
     STT  351  Probability and Statistics for Engineering      3
     STT  421  Statistics I      3

(4) Replace item 3. e. with the following:

One of the following pairs of courses (8 to 10 credits):
(1) PHY 183  Physics for Scientists and Engineers I   4
     PHY 184  Physics for Scientists and Engineers II   4
     PHY 191  Physics Laboratory for Scientists, I      1
     PHY 192  Physics Laboratory for Scientists, II     1
(2) PHY 193H  Honors Physics I–Mechanics   4
     PHY 294H  Honors Physics II–Electromagnetism   4
     PHY 191  Physics Laboratory for Scientists, I      1
     PHY 192  Physics Laboratory for Scientists, II     1
(3) PHY 231  Introductory Physics I      3
     PHY 232  Introductory Physics II      3
     PHY 251  Introductory Physics Laboratory I      1
     PHY 252  Introductory Physics Laboratory II      1
(4) LB  273  Physics I      4
     LB  274  Physics II      4

(5) Delete item 3. f.

(6) Reletter item 3. g. to 3. f. and make the following changes to items 3. f. (1) and 3. f. (2):

Delete the following courses:
ZOL  408  Histology   4
ZOL  425  Cells and Development (W)   4

Add the following courses:
IBIO  408  Histology   4
IBIO  425  Cells and Development (W)   4

(7) Reletter item 3. h. to 3. g.

Effective Fall 2017.

2. Request to change the administrative responsibility for the Master of Science degree in Computational Mathematics, Science and Engineering in the Department of Computational Mathematics, Science and Engineering, College of Natural Science to the Department of Computational Mathematics, Science and Engineering, College of Engineering. The College of Engineering will now administer the graduate degree programs in the Department of Computational Mathematics, Science and Engineering. The University Committee on Graduate Studies (UCGS) will consider this request at its November 7, 2016 meeting.

Effective Summer 2017.
3. Request to change the administrative responsibility for the **Doctor of Philosophy** degree in **Computational Mathematics, Science and Engineering** in the Department of Computational Mathematics, Science and Engineering, **College of Natural Science** to the Department of Computational Mathematics, Science and Engineering, **College of Engineering**. The College of Engineering will now administer the graduate degree programs in the Department of Computational Mathematics, Science and Engineering. The University Committee on Graduate Studies (UCGS) will consider this request at its November 7, 2016 meeting. Effective Summer 2017.

4. Request to change the administrative responsibility for the **Graduate Certificate** in **Computational Modeling** in the Department of Computational Mathematics, Science and Engineering, **College of Natural Science** to the Department of Computational Mathematics, Science and Engineering, **College of Engineering**. The College of Engineering will now administer the graduate degree programs in the Department of Computational Mathematics, Science and Engineering. The University Committee on Graduate Studies (UCGS) will consider this request at its November 7, 2016 meeting. Effective Summer 2017.

5. Request to change the administrative responsibility for the **Graduate Certificate** in **High-Performance Computing** in the Department of Computational Mathematics, Science and Engineering, **College of Natural Science** to the Department of Computational Mathematics, Science and Engineering, **College of Engineering**. The College of Engineering will now administer the graduate degree programs in the Department of Computational Mathematics, Science and Engineering. The University Committee on Graduate Studies (UCGS) will consider this request at its November 7, 2016 meeting. Effective Summer 2017.

6. Request to change the requirements for the **Bachelor of Science** degree in **Actuarial Science** in the Department of Mathematics.
   a. Under the heading **Requirements for the Bachelor of Science Degree in Actuarial Science** make the following changes:
      
      (1) In item 3. a. change 'zoo logy' to 'integrative biology'.
      
      (2) In item 3. f. delete the following course:
      
      MTH 255H Honors Differential Equations 3

      Effective Fall 2016.

7. Request to change the requirements for the **Bachelor of Arts** degree in **Computational Mathematics** in the Department of Mathematics.
   a. Under the heading **Requirements for the Bachelor of Arts Degree in Computational Mathematics** make the following changes:
      
      (1) In item 3. a. (1) change 'zoology' to 'integrative biology'.
      
      (2) In item 3. c. (3) (b) change the credits of 'MTH 317H' from '3' to '4'.
      
      (3) In item 3. d. delete the following course:
      
      MTH 472 Mathematical Logic 3

      Effective Fall 2016.
8. Request to change the requirements for the Bachelor of Science degree in Computational Mathematics in the Department of Mathematics.

   a. Under the heading Requirements for the Bachelor of Science Degree in Computational Mathematics make the following changes:

      (1) In item 3. a. (1) change 'zoology' to 'integrative biology'.

      (2) In item 3. c. (3) (b) change the credits of 'MTH 317H' from '3' to '4'.

      (3) In item 3. d. delete the following course:

          MTH 472 Mathematical Logic 3

   Effective Fall 2016.

9. Request to change the requirements for the Bachelor of Arts degree in Mathematics in the Department of Mathematics. The Teacher Education Council (TEC) will consider this request at its November 7, 2016 meeting.

   a. Under the heading Requirements for the Bachelor of Arts Degree in Mathematics make the following changes:

      (1) In item 3. a. (1) change 'zoology' to 'integrative biology'.

      (2) In item 3. c. (2) change the credits of 'MTH 254H' from '3' to '4'.

      (3) In item 3. c. (3) (b) change the credits of 'MTH 317H' from '3' to '4'.

      (4) In item 3. c. (5) delete 'MTH 424 and MTH 443'.

      (5) In item 3. c. (8) delete 'MTH 255H' in the note following.

   Effective Fall 2016.

10. Request to change the requirements for the Bachelor of Science degree in Mathematics in the Department of Mathematics. The Teacher Education Council (TEC) will consider this request at its November 7, 2016 meeting.

    a. Under the heading Requirements for the Bachelor of Science Degree in Mathematics make the following changes:

       (1) In item 3. a. (1) change 'zoology' to 'integrative biology'.

       (2) In item 3. c. (2) change the credits of 'MTH 254H' from '3' to '4'.

       (3) In item 3. c. (3) (b) change the credits of 'MTH 317H' from '3' to '4'.

       (4) In item 3. c. (5) delete 'MTH 424 and MTH 443'.

       (5) In item 3. c. (8) delete 'MTH 255H' in the note following.

    Effective Fall 2016.
COLLEGE OF NURSING

1. Request to change the requirements for the Master of Science in Nursing degree in Nursing. The University Committee on Graduate Studies (UCGS) will consider this request at its November 10, 2016 meeting.

   a. Under the heading Admission make the following changes:

      (1) Replace sentence one in item 3. with the following:

           Current unrestricted RN license without probationary status in the applicant’s state or country.

Effective Summer 2017.

2. Request to change the requirements for the Doctor of Nursing Practice degree in Nursing Practice. The University Committee on Graduate Studies (UCGS) will consider this request at its November 10, 2016 meeting.

   a. Under the heading Admission make the following changes:

      (1) Replace item 5. with the following:

           Evidence of an unrestricted RN license without probationary status in the applicant’s state or country.

Effective Summer 2017.
PART II - NEW COURSES AND CHANGES

COLLEGE OF AGRICULTURE AND NATURAL RESOURCES

FSC 410  Sensory Analysis and Consumer Research
Fall of every year. 3(2-2)  P: (FSC 211 or HNF 150) and (STT 200 or STT 201 or STT 315 or STT 421 or STT 464)  RB: HNF 300 or FSC 401  R: Open to undergraduate students in the College of Agriculture and Natural Resources or in the Department of Food Science and Human Nutrition.  R: Open to undergraduate students in the Department of Food Science and Human Nutrition.
Discriminative, affective and descriptive methods used to evoke, measure, analyze, and interpret sensory reactions to food characteristics and consumer needs.
SA: HNF 410  SA: FSC 410
Effective Fall 2014  Effective Spring 2017

FSC 421  Food Laws and Regulations
Spring of every year.  Summer of every year. 3(3-0)  P: HNF 150 or HNF 260 or FSC 211 or ABM 100  P: HNF 150 or FSC 211 or ABM 100
Adoption, interpretation, and enforcement of laws and regulations governing food processing and foodservice systems. Impact of regulation on food production, availability, marketing, and safety.
Effective Fall 2014  Effective Fall 2016

FSC 430  Food Processing: Fruits and Vegetables
Fall of every year. 3(2-3)  P: FSC 241  P: FSC 325  R: Not open to freshmen or sophomores.
Fruit and vegetable composition and quality indices. Harvest technology, post-harvest physiology, and preparatory systems. Principles and applications of thermal processing, freezing, and specialized techniques.
SA: FSC 330
Effective Fall 2014  Effective Fall 2017

FSC 431  Food Processing: Cereals
Spring of every year. 3(2-3)  P: FSC 241  P: FSC 325  R: Not open to freshmen or sophomores.
SA: FSC 331
Effective Fall 2014  Effective Fall 2017

FSC 432  Food Processing: Dairy Foods
Fall of every year.  Spring of every year. 3(2-3)  P: FSC 211 or ANS 201  P: FSC 325  R: Not open to freshmen or sophomores.
Principles for production and processing of safe and wholesome dairy foods. Practical experience in safety and quality assurance systems and in the processing of fluid milk, cultured products, cheese, and frozen desserts.
SA: FSC 332
Effective Fall 2014  Effective Fall 2017

FSC 433  Food Processing: Muscle Foods
Fall of every year.  Spring of every year. 3(2-3)  Interdepartmental with Animal Science.  P: FSC 211 or ANS 201  P: FSC 325  R: Not open to freshmen or sophomores.
Manufacturing practices and principles of fresh, frozen, and cured meats and fish. Processed products from muscle foods. Product formulation and quality control.
SA: FSC 333
Effective Fall 2014  Effective Fall 2017

FSC 442  Hazard Analysis Critical Control Point Training and Certification
Fall of every year.  Spring of every year. 1(1-0)  P: (MMG 301 or concurrently) or (FSC 440 or concurrently)  P: (FSC 325) and (FSC 440 or concurrently)  RB: Advanced course work in food science
Design and implementation of Hazard Analysis Critical Control Point (HACCP) programs for the food industry. Offered second half of semester.
Effective Spring 2015  Effective Fall 2017
COLLEGE OF ENGINEERING

BME 891  Selected Topics in Biomedical Engineering
Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of department.
NEW Special topics in Biomedical Engineering of current importance. Effective Spring 2017

CHE 210  Modeling and Analysis of Transport Phenomena
Fall of every year. Spring of every year. 3(3-0) R: ((MTH 235 or concurrently) or (MTH 255H or concurrently) or (MTH 340 or concurrently) or (MTH 347H or concurrently)) and CHE 201 P: ((MTH 235 or concurrently) or (MTH 340 or concurrently) or (MTH 347H or concurrently) or CHE 201) and CHE 201

CHE 301  Chemical Engineering as a Profession
Fall of every year. Spring of every year. 1(2-0) P: CHE 201 or concurrently P: (CHE 201 or concurrently) and completion of Tier I writing requirement RB: Junior standing in chemical engineering R: Open to juniors or seniors in the Chemical Engineering Major.
Professional aspects of chemical engineering. Communication skills, professionalism and ethics, teamwork skills, contemporary engineering issues, career planning, project management, and industrial processes. Effective Fall 2014 Effective Fall 2017

CMSE 801  Introduction to Computational Modeling
Fall of every year. 3(3-0) RB: One semester of introductory calculus
Introduction to computational modeling using a wide variety of application examples. Algorithmic thinking and model building, data visualization, numerical methods, all implemented as programs. Command line interfaces. Scientific software development techniques including modular programming, testing, and version control. SA: NSC 801 Effective Fall 2014 Effective Summer 2017

CMSE 802  Methods in Computational Modeling
Spring of every year. 3(3-0) RB: (CMSE 801) or equivalent experience
Standard computational modeling methods and tools. Programming and code-management techniques. SA: NSC 802 Effective Fall 2014 Effective Summer 2017

CMSE 820  Mathematical Foundations of Data Science
Spring of every year. 3(3-0) RB: CMSE 802 or equivalent experience in programming and numerical methods. Differential equations at the level of (MTH 235 or MTH 255H or (MTH 340 and MTH 442) or (MTH 347H and MTH 442)). Linear algebra at the level of (MTH 309 or MTH 317H). Probability and statistics at the level of STT 231.
Fundamental mathematical principles of data science that underlie the algorithms, processes, and methods of data-centric thinking, and tools based on these principles. Effective Fall 2014 Effective Summer 2017

CMSE 821  Numerical Methods for Differential Equations
Spring of every year. 3(3-0) RB: CMSE 802 or equivalent experience in programming and numerical methods. Differential equations at the level of (MTH 235 or MTH 255H or (MTH 340 and MTH 442) or (MTH 347H and MTH 442)). Linear algebra at the level of (MTH 309 or MTH 317H)
CMSE 822  Parallel Computing
Fall of every year. 3(3-0) Interdepartmental with Computer Science and Engineering. RB: Calculus at the level of MTH 133. Ability to program proficiently in C/C++, basic understanding of data structures and algorithms (both at the level of CSE 232). Basic linear algebra and differential equations.
Effective Fall 2016 Effective Summer 2017

CMSE 823  Numerical Linear Algebra
Fall of every year. 3(3-0) RB: (CMSE 802) or equivalent experience in programming and numerical methods. Linear algebra at the level of MTH 309 or MTH 317H. Methods in modern numerical linear algebra for solving linear systems, least squares problems, and eigenvalue problems. Efficiency and stability of algorithms in numerical linear algebra.
Effective Fall 2016 Effective Summer 2017

CMSE 890  Selected Topics in Computational Mathematics, Science, and Engineering
Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Approval of department. Topics selected to supplement and enrich existing courses.
Effective Fall 2016 Effective Summer 2017

CMSE 891  Independent Study in Computational Mathematics, Science, and Engineering
Fall of every year. Spring of every year. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department. Topics selected to supplement and enrich existing courses.
Effective Fall 2016 Effective Summer 2017

CMSE 899  Master's Thesis Research
Fall of every year. Spring of every year. Summer of every year. 1 to 6 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open to master's students in the Department of Computational Mathematics, Science, and Engineering. Master's thesis research
Effective Fall 2016 Effective Summer 2017

CMSE 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open to doctoral students in the Department of Computational Mathematics, Science, and Engineering. Doctoral dissertation research. Request the use of the Pass-No Grade (P-N) system.
Effective Fall 2016 Effective Summer 2017

COLLEGE OF HUMAN MEDICINE

EPI 200  A Multi-disciplinary Approach to Problems in Global Public Health and Epidemiology
Fall of every year. 3(3-0) R: Open to undergraduate students in the Global Public Health and Epidemiology Specialization. R: Open to undergraduate students in the Global Public Health and Epidemiology Minor or approval of department. Overview of global health and the role of epidemiology in studying health problems from a multi-disciplinary perspective.
Effective Spring 2013 Effective Fall 2016
EPI 280  Applied Analytic Methods in Health Studies I
Spring of every year. 3(3-0) P: (EPI 200) and (STT 200 or STT 201 or STT 224 or STT 231 or STT 315 or STT 351 or STT 421) R: Open to undergraduate students in the Global Public Health and Epidemiology Minor or approval of department.

NEW  Introduction to conceptual and analytical methods used in Public Health and Epidemiology. Programming, statistical techniques, and interpretation of results with health data.
Effective Spring 2017

EPI 380  Applied Analytic Methods in Health Studies II
Fall of every year. 3(3-0) P: EPI 280 R: Open to undergraduate students in the Global Public Health and Epidemiology Minor or approval of department.

NEW  Topics in conceptual and analytical methods used in Public Health and Epidemiology. Continuation of EPI 280.
Effective Fall 2017

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LYMAN BRIGGS COLLEGE

LB 321A  Science and the Public  (W)  (N)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.

NEW  Interdisciplinary study of the relationship between science and society, public engagement with science and technology, public expressions of scientific knowledge, and science in culture. This course will emphasize scholarship in the arts and humanities.
Effective Fall 2017

LB 321B  Science and the Public  (W)  (N)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.

NEW  Interdisciplinary study of the relationship between science and society, public engagement with science and technology, public expressions of scientific knowledge, and science in culture; emphasis on scholarship in the social sciences.
Effective Fall 2017

LB 322A  Advances in Science and Technology  (W)  (I)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.

NEW  Interdisciplinary study of technology and innovation. This course will emphasize methodologies, scholarship, and theoretical approaches from the arts and humanities.
Effective Fall 2017

LB 322B  Advances in Science and Technology  (W)  (I)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.

NEW  Catalog Course Description: Interdisciplinary study of technology and innovation in relation to science and/or medicine. This course will emphasize scholarship and methodologies from the arts and humanities.
Effective Fall 2017

LB 323A  Science in a Global Context  (W)  (I)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.

NEW  This course will explore scientific practice and relevance in a global context with focus on scholarship from the arts and humanities.
Effective Fall 2017
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LB 323B  Science in a Global Context  (W) (I)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in
the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW  This course will explore scientific practice and relevance in a global context focusing on
scholarship from the social sciences.
Effective Fall 2017

LB 324A  Science and Sex, Gender, Sexuality  (W) (D)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in
the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW  Interdisciplinary study of sex, gender, and sexuality in relation to science and/or medicine.
This course will emphasize scholarship and methodologies from the arts and humanities.
Effective Fall 2017

LB 324B  Science and Sex, Gender, Sexuality  (W) (D)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in
the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW  Interdisciplinary study of sex, gender, and sexuality in relation to science and/or medicine.
This course will emphasize scholarship and methodologies from the social sciences.
Effective Fall 2017

LB 325A  Science and the Environment  (W) (D)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in
the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW  Interdisciplinary humanities course that analyzes how and why humans have transformed
their environments and changes in people’s attitudes about nature and wilderness over
time.
Effective Fall 2017

LB 325B  Science and the Environment  (W) (D)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in
the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW  Interdisciplinary social science of the interrelationship between human systems and
natural systems, including human drivers of environmental impact and solutions to
environmental problems.
Effective Fall 2017

LB 326A  Medicine and Health  (W) (I)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in
the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW  Interdisciplinary study of health and medicine from humanistic perspectives. This course
will emphasize scholarship and methodologies from the arts and humanities.
Effective Fall 2017

LB 326B  Medicine and Health  (W) (I)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in
the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW  Interdisciplinary study of health and medicine from social scientific perspectives. This
course will emphasize scholarship and methodologies from the social sciences.
Effective Fall 2017

LB 327A  Scientific Practice  (W) (N)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in
the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW  The motivations and methodologies of the scientific endeavor, as well as the institutions
that support it. Historical perspectives on the development of scientific practice, ethical
implications of scientific work, and the impact of cultural practices, norms, and identities
on scientific innovation.
Effective Fall 2017
PART II - NEW COURSES AND CHANGES – continued - 15
November 10, 2016

LB 327B  Scientific Practice (W) (N)
On Demand. 4(4-0) P: (LB 133) or completion of Tier I writing requirement R: Open to students in the Lyman Briggs College or in the Science, Technology, Environment and Public Policy Minor.
NEW
Explores the motivations and methodologies of scientific endeavors and the relationships between science and other major human institutions such as religion, politics, government, and the economy.
Effective Fall 2017

COLLEGE OF NATURAL SCIENCE

BS 182H  Honors Organismal and Population Biology
Fall of every year. 3(3-0) Interdepartmental with Integrative Biology and Lyman Briggs and Plant Biology. Not open to students with credit in BS 162 or LB 144. Not open to students with credit in LB 144.
Diversity and basic properties of organisms, with emphasis on genetic principles, ecological interactions, and the evolutionary process. Historical approach to knowledge discovery.
SA: BS 148H, BS 110
Effective Fall 2016 Effective Summer 2017

BS 192H  Honors Organismal and Population Biology Laboratory
Fall of every year. 2(1-3) Interdepartmental with Integrative Biology and Lyman Briggs and Plant Biology. P: BS 182H or concurrently Not open to students with credit in BS 172 or LB 144. Not open to students with credit in LB 144.
Nature and process of organismal biology, including experimental design and statistical methods, hypothesis testing, genetics, ecology, and evolution.
SA: BS 158H, BS 110
Effective Fall 2016 Effective Summer 2017

BLD 830  Concepts in Molecular Biology
Fall of every year. Spring of every year. 2(2-0) Interdepartmental with Pathobiology and Diagnostic Investigation. RB: One course in biochemistry or concurrently.
Techniques and theories of molecular biology, nucleic acid synthesis and isolation, enzymatic digestion and modification, electrophoresis, hybridization, amplification, library construction, and cloning.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 830
Effective Summer 2009 Effective Fall 2016

BLD 842  Managing Biomedical Laboratory Operations
Fall of every year. Spring of every year. 2(2-0) R: Open to graduate students or lifelong graduate students or approval of department.
Integration of the roles of legislative, regulatory, technological and economic factors that influence the practice and management of biomedical laboratory operations.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment. The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 842
Effective Fall 2009 Effective Fall 2016
BLD 844  Topics in Biomedical Laboratory Operations
Spring of every year. 1(1-0) P: BLD 842 R: Open to graduate students or lifelong graduate students or approval of department.
   Current issues relevant to biomedical laboratory operations from an interdisciplinary perspective with an emphasis on efficient laboratory operations.
   Request the use of ET-Extension to postpone grading.
   The work for the course must be completed and the final grade reported within 3 semesters after the end of the semester of enrollment.
SA: MT 844
Effective Summer 2010 Effective Fall 2016

IBIO 101  Exploring Biology
Fall of every year. Spring of every year. 1(1-0) R: Open to freshmen or sophomores in the Department of Integrative Biology or in the Bachelor of Science in Zoology or in the Bachelor of Arts in Zoology. R: Open to freshmen or sophomores in the Department of Integrative Biology or in the Lyman Briggs College or in the Environmental Biology/Zoology Major or in the Bachelor of Science in Zoology or in the Bachelor of Arts in Zoology or in the Lyman Briggs Environmental Biology/Zoology Coordinate Major or in the Lyman Briggs Zoology Coordinate Major.
   Biology as a discipline. Investigation of diverse career options and of skills and background knowledge required to be a modern biologist. Integration of human and technical skills in scientific scholarship and inquiry.
SA: ZOL 101
Effective Fall 2016 Effective Spring 2017

ISB 200  History of Life
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: ((MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 116 or concurrently) or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently)) or designated score on Mathematics Placement test P: ((MTH 101 or concurrently) or (MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 112 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently)) or designated score on Mathematics Placement test
   Life from its origin to the dawn of human history. Living things as both the products of evolutionary processes and as a major force driving evolution and altering the environment of planet earth.
Effective Fall 2014 Effective Summer 2016

ISB 201  Insects, Globalization, and Sustainability
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: ((MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 116 or concurrently) or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently)) or designated score on Mathematics Placement test P: ((MTH 101 or concurrently) or (MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or (STT 201 or concurrently)) or designated score on Mathematics Placement test
   The relationship between insects, human society, and the environment with an emphasis on ecological and evolutionary processes. Critical evaluation of current regional and global environmental problems and how they are effecting the development of a sustainable society.
Effective Fall 2014 Effective Fall 2016
ISB 202 Applications of Environmental and Organismal Biology
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: ((MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 116 or concurrently) or (LB 118 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or designated score on Mathematics Placement test) P: ((MTH 101 or concurrently) or (MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (STT 200 or concurrently) or designated score on Mathematics Placement test)
Historical and recent development of ideas about behavior, ecological, and evolutionary processes. Critical evaluation of the use and misuse of human understanding of nature, emphasizing recent findings.
Effective Fall 2014 Effective Fall 2016

ISB 204 Applications of Biomedical Sciences
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: ((MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 116 or concurrently) or (LB 118 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or designated score on Mathematics Placement test) P: ((MTH 101 or concurrently) or (MTH 103 or concurrently) or (MTH 110 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or designated score on Mathematics Placement test)
Historical and recent development of knowledge about cellular developmental or genetic processes. Critical evaluation of the use and misuse of scientific discoveries in these areas.
Effective Fall 2014 Effective Fall 2016

ISP 203A Understanding Earth: Global Change
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or designated score on Mathematics Placement test) P: (MTH 101 or MTH 103 or MTH 110 or (MTH 112 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or designated score on Mathematics Placement test)
Science as a way of knowing about natural and anthropogenic global change. Implications for societies.
Effective Fall 2014 Effective Fall 2016

ISP 203B Understanding Earth: Natural Hazards and the Environment
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or designated score on Mathematics Placement test) P: (MTH 101 or MTH 103 or MTH 110 or (MTH 112 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or designated score on Mathematics Placement test)
Science as a way of knowing about natural hazards, as well as natural and anthropogenic environmental change. Implications for societies.
Effective Fall 2014 Effective Fall 2016
ISP 205   Visions of the Universe  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or (STT 201 or concurrently)) or designated score on Mathematics Placement test  
P: (MTH 101 or MTH 103 or MTH 110 or (MTH 112 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or (STT 201 or concurrently)) or designated score on Mathematics Placement test  
Effective Fall 2014  Effective Fall 2016

ISP 209   The Mystery of the Physical World  
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or STT 201) or designated score on Mathematics Placement test  
P: (MTH 101 or MTH 103 or MTH 110 or (MTH 112 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or (STT 201 or concurrently)) or designated score on Mathematics Placement test  
Laws of physics through demonstrations and analyses of every day phenomena. Optics, mechanical systems and electromagnetic phenomena.  
Effective Fall 2014  Effective Fall 2016

ISP 215   The Science of Sound  
Fall of every year. Spring of every year. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or STT 201) or designated score on Mathematics Placement test  
P: (MTH 101 or MTH 103 or MTH 110 or (MTH 112 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or (STT 201 or concurrently)) or designated score on Mathematics Placement test  
The science of speech, communication, musical instruments, room acoustics, and analogue and digital audio. Integrating the physical, physiological, and psychological principles involved.  
Effective Fall 2014  Effective Fall 2016

ISP 217   Water and the Environment  
Fall of every year. Spring of every year. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or STT 201)) or designated score on Mathematics Placement test  
P: (MTH 101 or MTH 103 or MTH 110 or (MTH 112 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or (STT 201 or concurrently)) or designated score on Mathematics Placement test  
Application of the scientific method to identification and solution of environmental problems related to water.  
Effective Fall 2014  Effective Fall 2016

ISP 220   Quarks, Spacetime, and the Big Bang  
Spring of odd years. 3(3-0) P: (MTH 103 or MTH 110 or MTH 116 or (LB 118 or concurrently) or (MTH 112 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or (STT 201 or concurrently)) or designated score on Mathematics Placement test  
P: (MTH 101 or MTH 103 or MTH 110 or (MTH 112 or concurrently) or (MTH 116 or concurrently) or (MTH 124 or concurrently) or (MTH 132 or concurrently) or (MTH 201 or concurrently) or (STT 200 or concurrently) or (STT 201 or concurrently)) or designated score on Mathematics Placement test  
Elementary particle physics and the Big Bang for non-scientists. A survey of particles and forces in the early universe as it is recreated at high energy particle colliders in laboratories around the world.  
Effective Fall 2014  Effective Spring 2017
MMG 404  Human Genetics
Fall of every year. 3(3-0) P: ZOL 341 P: IBIO 341
Effective Spring 2014 Effective Fall 2016

NEU 230  Basic Concepts in Neuroscience
Spring of every year. 3(3-0) P: Completion of Tier I Writing Requirement RB: ((PSY 101) or some background coursework (at the university or high school level) in psychology) and (BS 161 or BS 181H or LB 145)
NEW Fundamental neuroscience concepts and material for students considering neuroscience as their major.
Effective Spring 2017

PHY 959  Special Topics in High-Energy Physics
On Demand. 2(2-0) A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 12 credits in all enrollments for this course. RB: PHY 951 R: Open to graduate students in the Department of Physics and Astronomy or approval of department.
Topics in high-energy physics.
Effective Fall 2014 Effective Spring 2017

COLLEGE OF VETERINARY MEDICINE

VM 513  Ethical and Animal Welfare Issues in the Veterinary Profession
Fall of every year, Spring of every year. 2(1-2) R: Open to graduate-professional students in the College of Veterinary Medicine.
Identifying and communicating ethical challenges and animal welfare issues in the veterinary profession.
Effective Fall 2007 Effective Spring 2017

VM 514  Comparative Lifestage Nutrition
Fall of every year, Spring of every year. 1(1-0) R: Open to graduate-professional students in the College of Veterinary Medicine.
Effective Spring 2008 Effective Fall 2017

VM 817  Pre-Harvest Food Safety
Livestock Pre-Harvest Food Safety
Spring of every year. 3 credits. RB: Enrollment in graduate program in related field. R: Open to master's students in the Food Safety Major or approval of college.
Principles for improvement of pre-harvest food safety. Emphasis on microbial, chemical, and toxic hazards. Strategies to reduce pre-harvest risks in many food production species.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2 semesters after the end of the semester of enrollment.
Effective Fall 2014 Effective Spring 2017
VM 836  Food Safety Issues by Commodity
Spring of every year. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments
for this course. R: Open to graduate students in the College of Veterinary Medicine or approval of
department.

NEW  Food Safety issues specific to different commodity groups or segments of food industry
will be included. Topics available will include: meat safety, dairy safety, beverage safety,
pet food/animal feed safety, ingredient safety, food waste recovery, and other topics as
available.
Request the use of ET-Extension to postpone grading.
The work for the course must be completed and the final grade reported within 2
semesters after the end of the semester of enrollment.
Effective Spring 2017