

**MINUTES**  
**Faculty Senate Executive Committee**  
**Monday, December 3, 2007 3:30 pm**  
**503 Hale Library**

Present: Adams, Bontrager, Carroll, Cauble, Fairchild, Gehrt, Guzek, Hosni, Kearns, Knapp, McCulloh, North, Smith, Spikes

Absent: Arck, DeLuccie, Miller, Piper, Turnley

Visitors: Betty Stevens, John Allard, David Stewart

1. President Frank Spikes called the meeting to order at 3:30 p.m.
2. The October 29, 2007 minutes were approved.
3. Division of Continuing Education Issues - Betty Stevens, John Allard, David Stewart  
President Spikes introduced representatives from the Division of Continuing Education (DCE), Betty Stevens, John Allard, and David Stewart to update Senate in a couple of areas.

1. iSIS Planning

Betty Stevens indicated that DCE staff has been involved in the planning for iSIS since the beginning of the LASER project. John Allard reviewed DCE involvement in iSIS. DEC staff identified well over 100 requirements to discuss with the LASER team and most of these have been met. DCE staff members are continuing to meet with various departments such as the Registrar's office staff to determine new processes as iSIS is implemented. He indicated that iSIS integration for DCE will work very well. They will be delaying Graduate School integration for one year so will continue business as usual in this area. If a student is degree seeking they will go through the regular registration process. There was a discussion about the 9-hour limit for non-degree seeking students in certificate programs. Senator Guzek inquired about the grading of non-standard classes and Senator Gehrt replied that all classes will be graded electronically.

2. Course and Program Development for International Distance Education

David Stewart discussed international distance education initiatives. There were some agreements at some levels that the university would be working with persons in Turkey. They were interested in general business and bachelor degree completion and possible future areas such as masters programs in engineering. He began to collaborate with departments and faculty to focus on general business and interdisciplinary studies and discovered there were nine courses that needed to be developed online to offer these programs. He then went to specific departments to explore online course development. As he went to various departments and faculty he received a tremendous response of support but lack of resources was an issue. The effort in Turkey was not successful as the negotiated agreement broke down with one primary reason being price of K-State courses. In going through this process there were lessons learned on how to approach these future opportunities. One observation from Stewart is that these programs will take a long time to develop. Senator Hosni commented that there was a perception at the time that DCE did not take into consideration the faculty load and thanked them for explaining their efforts. Stewart had concerns about faculty capacity from the very beginning. Stevens indicated DCE does not plan to find their own faculty but rather each department must identify faculty to meet the distance education needs of their own department. Stewart indicated that key players need to be brought together early in the process. Also, a program should not just focus on one country but rather programs to be offered more widely. There needs to be basic marketing research. President-elect Fairchild suggested that we should focus on potential programs that utilize the strengths at K-State. Stewart said we need to look at our strengths, the marketing research information, then identify current connections, then build relationships, then finally the program. Senator Carroll suggested that faculty need to be re-tooled to better teach to an online international audience. President Spikes requested that DCE assist Faculty Senate in urging the administration to develop a strategic plan to address international online programs.

Senator Guzek suggested that FSCOUP or some group begin strategic planning in this area. Past President Adams indicated that the draft Strategic Plan addresses this in a non-specific way. President Spikes suggested that he discuss this matter with the provost and with the strategic planning group. He said it was important to start

a conversation on campus regarding this topic. He also suggested that this topic be included in the DCE working group that he participates in. The committee agreed with his recommendations.

4. Academic Calendar 2008-2013- **Attachment 4-page 44**

President Spikes discussed the Academic Calendar. There has been no response from senators to have a meeting to further discuss the calendar in a small group. Any request to the Board of Regents to modify the number of required class days would be a long process. He also mentioned that the calendar needs to go to the Board for approval in January. Senator Hosni moved to place the Academic Calendar on the December agenda for approval. The motion was seconded. Senator Cauble understood that the calendar committee was going to review suggestions and possibly submit changes back to the Senate. President-elect Fairchild suggested that President Spikes needs to find out what happens if the proposed calendar is defeated. Senator McCulloh commented that the instructions that the Faculty Senate have given the calendar committee have somewhat tied the committee's hands in modifying the calendar. President Spikes would like to continue to have conversations about the calendar with Faculty Senate and the Registrar as a condition of approval for this proposed calendar. President Fairchild suggested that either the Calendar Committee be expanded to a broader, more representative membership or Faculty Senate needs to be more involved in the process. Motion carried.

5. Reports from Standing Committees and Student Senate

A. Academic Affairs Committee – Doris Carroll

1. Course and curriculum changes - Pages 4- 40; includes **Attachments 1 and 2**
2. Academic Fresh Start and Forgiveness Policies – Second reading and vote – **Attachment 3-page 41**

B. Faculty Affairs Committee – Betsy Cauble

1. Update on Graduate Student Grievance Procedure Proposed Handbook Changes  
Senator Cauble announced they are still negotiating with the Graduate School on where this policy should reside.
2. Update on University Handbook change, Appendix G – GGB Policy and Hearing Procedures  
Senator Cauble announced that one of the committee members suggested including an appeal process for extension of the appeal filing deadline. The committee will continue to research and review this possibility before the policy comes forward to Faculty Senate for a vote. President-elect Adams recommended including an implementation date in the policy. The committee is also reviewing persons with at least a .10 administrative appointment, per President-elect Adams, and considering how that may be addressed within the policy.
3. Update on University Handbook change, Section D40 - Consulting days  
Senator Cauble distributed a proposed revised policy regarding consulting days. Senator Cauble moved to place the University Handbook change to Section D40 – Consulting Days on the December Faculty Senate agenda for vote. Motion carried.
4. Senator Cauble announced that the committee will be discussing administrative reviews.
5. Senator Cauble indicated that the Regents Council of Business Officers is discussing the retirement health insurance bridge program for possible system-wide implementation. Also, there is interest in elimination of the health insurance waiting period for Regents institutions.

C. Faculty Senate Committee on University Planning – Roger Adams

Past President Adams announced that the committee sponsored an IT forum last week with about 60 participants. The notes from the meeting will be distributed. President Spikes thanked him and Senator Michael North for taking the lead on this successful forum.

D. Faculty Senate Committee on Technology – Michael North

Senator North will request that Lynn Carlin, Interim Vice Provost for Information Technology, and James Lyall, Associate Vice Provost for Information Technology Services, attend the January 15 Faculty Senate meeting. He reported that the only topic they have been dealing with is the k-state.edu and ksu.edu domain names and how search engines find and report information from these domains. Dale Askey will meet with James Lyall and Lynn Carlin about this topic. The e-mail task force and IT task force continue to meet.

- E. Report from Student Senate – Nick Piper – no report
- 6. Announcements
  - A. Presidential announcements
    - 1. President Spikes reminded the committee that Dr. Holland’s evaluation is on-going and comments may be made through December 7.
    - 2. He announced that the recent grievance panel has upheld the evaluation of the grievant.
  - B. Faculty Senate Leadership Council
    - 1. President Spikes discussed the recent meeting with President’s Staff regarding the Olathe Campus. He reported the next meeting will include Lynn Carlin regarding IT issues.
    - 2. President Spikes reported that he spoke with the Targeted Excellence Committee.
  - C. Kansas Board of Regents
- 7. Old Business - none
- 8. New Business - none
- 9. For the Good of the University
  - 1. Senator Kearns announced that the General Education task force will have open meetings next week.
  - 2. Senator McCulloh announced that he started Phased Retirement this semester so Senator Clark will represent the Arts & Sciences caucus next semester on the Executive Committee.
  - 3. Past President Adams announced that Robert Sawyer, an internationally recognized, award winning author, will keynote the opening of the library’s Science Fiction, Fantasy, and Horror Collection tomorrow.
- 10. The meeting was adjourned at 5:45 p.m.

Submitted by:  
Jennifer Gehrt

# ACADEMIC AFFAIRS

## 1. Course and Curriculum Changes

### A. Undergraduate Education

1. Senator Carroll moved to place on the December Faculty Senate agenda for approval the following course and curriculum changes as approved by the College of Agriculture on October 8, 2007:

#### **COURSE CHANGES**

##### *Animal Sciences and Industry*

Changes to:

ASI 395 Advanced Meat Evaluation

Add:

ASI 333 Equine Enterprise Management

##### *Horticulture, Forestry and Recreation Resources*

Changes to:

HORT 275 ~~Concepts of Horticultural Design I~~

HORT 508 Landscape Maintenance

HORT 510 Horticultural Design II

HORT 515 ~~Turf Management~~ Basic Turfgrass Culture

HORT 517 Golf Course and Sports Turf Operations

HORT 551 ~~Landscape Contracting and Construction~~ The Business of Landscape Contracting

HORT 555 ~~Landscape Irrigation: Design and Contracting~~ The Fundamentals of Landscape Irrigation Design

HORT 582 Foundations of Horticultural Pest Management

Add:

HORT 325 Introduction to Organic Farming

HORT 360 Public Horticulture

HORT 516 Intensive Culture of Golf and Sports Turf

HORT 552 Horticultural Landscape Construction

HORT 583 Survey of Horticultural Ornamental and Food Crop Pests

HORT 587 Turfgrass Diseases and Their Management

HORT 588 Turfgrass Weeds and Their Management

HORT 589 Turfgrass Insects and Their Management

Drop:

HORT 519 Turfgrass Pest Management

##### *Plant Pathology*

Changes to:

PLPTH 575 ~~Special~~ Topics in Plant Pathology

Add:

PLPTH 576 Special Topics in Plant Pathology

PLPTH 583 Survey of Horticultural Ornamental and Food Crop Pests

PLPTH 587 Turfgrass Diseases and Their Management

#### **CURRICULUM CHANGES**

##### **(Attachment 1)**

Motion carried.

2. Senator Carroll moved to place on the December Faculty Senate agenda for approval the following course and curriculum changes as approved by the College of Human Ecology on October 8, 2007:

### **COURSE CHANGES**

*School of Family Studies and Human Services*

Changes to:

FSHS 585 Professional Seminar in ~~Family Life Education~~ FSHS

*Department of Hotel, Restaurant, Institution Management and Dietetics*

Changes to:

HRIMD 120 Introduction to ~~Survey of~~ the Hospitality Industry

HRIMD 221 Topics in Hospitality

HRIMD 463 Convention Services and Event Management

Add:

HRIMD 443 Food Writing

### **CURRICULUM CHANGES**

*Department of Apparel, Textiles, and Interior Design*

- Changes to the Bachelor of Science in Apparel and Textiles: Add STAT 325 as a course option under General studies courses. (See page 3 of white sheets for rationale)

*Department of Hotel, Restaurant, Institution Management and Dietetics*

- Changes to the Bachelor of Science in Hotel and Restaurant Management: Replace ENGL 516 with ENGL 517 under general requirements. Under Professional Studies, HRIMD 120 has increased one credit hour thus increasing Professional Studies from 37 to 38 credit hours. Under Professional Electives, delete HRIMD 425 and HRIMD 665, and increase the credit hours in HRIMD 463 from 2 to 3 thus changing professional electives from 15 hours to 14 hours. Total credit hours for graduation have not changed. (See pages 5-7 of white sheets for more detail).

Motion carried.

3. Senator Carroll moved to place on the December Faculty Senate agenda for approval the following course and curriculum changes as approved by the College of Technology & Aviation on October 16, 2007:

### **COURSE CHANGES**

Changes to:

AVM 315 Advanced Avionics

Add:

PPIL 251 Private Pilot Helicopter Ground School

PPIL 252 Private Pilot Helicopter Flight Lab

PPIL 281 Instrument Helicopter Pilot Ground School

PPIL 282 Instrument Helicopter Pilot Flight Lab

PPIL 291 Commercial Pilot Helicopter Ground School

PPIL 292 Commercial Pilot Helicopter Flight Lab

PPIL 351 Flight Instructor Helicopter Ground School

PPIL 352 Flight Instructor Helicopter Flight Lab

AVM 242 Navigational Aids and Communication Systems for Avionics

COT 020 University Honors Program

COT 189 Introduction to University Honors Program

Drop:  
PPIL 310 Aircraft Certification

### **CURRICULUM CHANGES**

- Changes to the Associate of Technology in Engineering Technology, Mechanical Engineering Technology Option: Replace CMST 101 with CMST 110. Delete ETA 020. Total hours required for graduation have changed from 67 to 68.
- Changes to the Associate of Technology in Engineering Technology, Electronic and Computer Engineering Technology Option: Replace CMST 101 with CMST 110. Delete ETA 020. Total hours required for graduation have changed from 67 to 68.

Motion carried.

4. Senator Carroll moved to place on the December Faculty Senate agenda for approval the following curriculum changes as approved by the College of Education on October 23, 2007:

### **CURRICULUM CHANGES**

*Department of Secondary Education*

Degree Name Change:

FROM: Bachelor of Science

TO: Bachelor of Science in Education

*Department of Elementary Education*

Degree Name Change:

From: Bachelor of Science in ~~Elementary~~ Education

To: Bachelor of Science in Education

Rationale: The College of Education would like to unify the degree name for both Elementary and Secondary to better describe their program.

Effective Date: Fall 2008

Motion carried.

- B. Graduate Education – Senator Carroll moved to place on the December Faculty Senate agenda approval of the following curriculum change approved by the Graduate Council on September 4, 2007:

### **New Certificate Program**

Interdisciplinary Graduate Certificate in Stem Cell Biotechnology (**Attachment 2**)

Motion carried.

- C. General Education

1. The following courses have been approved by the UGE Council for continued UGE status:  
(Informational item only)

ASI 303 History & Attitudes of Animal Use

ASI 330 Horse as a Window to the World

ART 100 Two Dimensional Design

ECON 110 Principles of Macroeconomics

ECON 536 Comparative Economics  
ENGL 220 Fiction into Film  
ENGL 231 Medieval and Renaissance  
ENGL 234 Modern English  
ENGL 440 Themes in Literature  
FREN 514 Contemporary France  
FREN 520 Introduction to French Literature I  
FSHS 670 Working With Parents  
GEOG 221 Environmental Geography I  
GEOG 500 Geography of the United States  
GEOL 102 Earth Through Time  
GEOL 125 Natural Disasters  
MUSIC 100 Music Fundamentals  
MUSIC 245 Introduction to American Music  
PHYS 451 Principles of Contemporary Physics  
POLSC 301 Introduction to Political Thought  
SOCIO 363 Global Problems  
SOCWK 510 Social Welfare as a Social Institution  
SPCH 311 Business and Professional Speaking  
SPCH 526 Persuasion

D. Academic Fresh Start and Forgiveness Policy – **Attachment 3, page 41**

Senator Carroll moved to place the Academic Fresh Start and Forgiveness Policy on the December Faculty Senate agenda for a second reading and vote.

Senator Carroll indicated they have received no additional information from anyone except that the financial aid office has no problems with the proposal.

Motion carried.

**ATTACHMENT 1**

College of Agriculture Curriculum Proposals – October 8, 2007

Animal Sciences and Industry

Business Option

FROM: **BUSINESS & ECONOMICS**

**(Required)**

ACCTG 231 Accounting Business Operations

ACCTG 241 Accounting Investments & Finance

**Select 6 Courses**

Agricultural Economics - Any course numbered 202 or higher except 490

Accounting – Any course

Family Studies – FSHS 105

Finance – Any course

Management – Any course

Marketing – Any course

TO: **BUSINESS & ECONOMICS**

**(Required)**

ACCTG 231 Accounting Business Operations

ACCTG 241 Accounting Investments & Finance

**Select 6 Courses**

Agricultural Economics - Any course numbered 202 or higher except 490

Accounting – Any course

Economics – Any course 500-level and above

Family Studies – FSHS 105

Finance – Any course

Management – Any course

Marketing – Any course

RATIONALE: 500-level economics courses are worthwhile choices for the “Business and Economics” section.

IMPACT: We do not anticipate a significant impact on the Economics Department.

EFFECTIVE DATE: Fall 2008



Science/Pre-Vet Option

**FROM: Physics/Math/Statistics Requirement**

(Minimum 6 hours)

Select From:

PHYS 113, 114

MATH 205, 210, 211, 220, 221, 222

STAT 325, 340, 350, 351

**TO: Physics/Math/Statistics Requirement**

(Minimum 6 hours)

Select From:

PHYS 113, 114

MATH 100, 205, 210, 211, 220, 221, 222

STAT 325, 340, 350, 351

**RATIONALE:** Science/Pre-Vet Option students who choose to complete the Science/Pre-Vet option, but are not planning on going to Vet School would be allowed to use *MATH 100, College Algebra*, to meet the 6 hours of math requirements of the option. All of our other options require *MATH 100*, but also require only 3 additional hours of Math/Statistics/Computers.

**IMPACT:** No impact on other departments

**EFFECTIVE DATE:** Fall 2008

Bioscience/Biotechnology, Business, Communications, Production/Management, and Science/Pre-Vet Options

**FROM:** Currently we allow students majoring in Animal Sciences and Industry within the Bioscience/Biotechnology, Business, Communications, Production/Management, and Science/Pre-Vet Options to have the option of taking *FDSCI 302, Introduction to Food Science*, as one of their Ag elective courses outside of Animal Science.

**TO:** We are proposing that the same set of students have the option of also taking *FDSCI 305, Fundamentals of Food Processing*, or *FDSCI 690, Principles of HACCP* as one of their Ag elective courses.

**RATIONALE:** Courses in this area are intended to provide breadth to a student's curriculum. We currently allow only *FDSCI 302* to meet this requirement. *FDSCI 305* and *FDSCI 690* would be equally beneficial to our students.

**IMPACT:** We anticipate this will have little impact on the Food Science and Industry program.

**EFFECTIVE DATE:** Fall 2008

Production/Management Option

FROM: **BUSINESS & ECONOMICS**

(Required)

- ACCTG 231 Accounting Business Operations
- ACCTG 241 Accounting Investments & Finance
- OR
- AGEC 308 Farm and Ranch Management

**Select 4 Courses**

- Agricultural Economics - Any course numbered 202 or higher except 490
- Accounting - Any course
- Family Studies - FSHS 105
- Finance - Any course
- Management - Any course
- Marketing - Any course

**ANIMAL SCIENCE**

(Required)

- |         |                            |   |
|---------|----------------------------|---|
| ASI 105 | Animal Science Lab         | 1 |
| ASI 106 | Dairy/Poultry Lab          | 1 |
| ASI 318 | Fundamentals of Nutrition  | 3 |
| ASI 320 | Principles of Feeding      | 3 |
| ASI 400 | Farm Animal Repro          | 4 |
| ASI 510 | Animal Breeding Principles | 3 |
| ASI 580 | Senior Seminar             | 1 |

**Select 1 Course**

- |         |                        |   |
|---------|------------------------|---|
| ASI 350 | Meat Science           | 3 |
| ASI 361 | Meat Animal Processing | 2 |
| ASI 601 | Phys of Lactation      | 3 |

**Select 1 Course**

- |           |                       |   |
|-----------|-----------------------|---|
| ASI 315   | Livestock & Meat Eval | 3 |
| ASI 405   | Fund Milk Processing  | 3 |
| ASI 640   | Poultry Product Tech  | 3 |
| FDSCI 607 | Food Microbiology     | 4 |

**Select 3 Courses**

- |         |                            |   |
|---------|----------------------------|---|
| ASI 515 | Beef Science               | 3 |
| ASI 521 | Horse Science              | 3 |
| ASI 524 | Sheep Science              | 3 |
| ASI 535 | Swine Science              | 3 |
| ASI 621 | Dairy Science              | 3 |
| ASI 645 | Poultry Management         | 3 |
| ASI 655 | Behavior of Domestic Anmls | 3 |

TO: **BUSINESS & ECONOMICS**

(Required)

- ACCTG 231 Accounting Business Operations
- ACCTG 241 Accounting Investments & Finance
- OR
- AGEC 308 Farm and Ranch Management

**Select 4 Courses**

- Agricultural Economics - Any course numbered 202 or higher except 490
- Accounting - Any course
- Economics - Any course 500-level and above
- Family Studies - FSHS 105

Finance – Any course  
 Management – Any course  
 Marketing – Any course

**ANIMAL SCIENCE**

**(Required)**

ASI 105	Animal Science Lab	1
ASI 106	Dairy/Poultry Lab	1
ASI 318	Fundamentals of Nutrition	3
ASI 320	Principles of Feeding	3
ASI 400	Farm Animal Repro	4
ASI 510	Animal Breeding Principles	3
ASI 580	Senior Seminar	1

**Select 1 Course**

ASI 350	Meat Science	3
ASI 361	Meat Animal Processing	2
ASI 601	Phys of Lactation	3

**Select 1 Course**

ASI 315	Livestock & Meat Eval	3
ASI 405	Fund Milk Processing	3
ASI 640	Poultry Product Tech	3
FDSCI 607	Food Microbiology	4

**Select 3 Courses**

ASI 515	Beef Science	3
ASI 521	Horse Science	3
ASI 524	Sheep Science	3
ASI 535	Swine Science	3
ASI 621	Dairy Science	3
ASI 645	Poultry Management	3

\*Only one of the courses below can be used to fulfill the above requirement\*

<u>ASI 520</u>	<u>Comp/Lab Anml Mngt</u>	<u>3</u>
<u>ASI 655</u>	<u>Behavior of Domestic Anmls</u>	<u>3</u>

**RATIONALE:** Several of our students change options from the Science/Pre-Vet option to the Production/Management option after their first three years. Most of these students have taken ASI 520, Companion and Lab Animal Management. They would like to use it in this option. This change would require these students to take at least two of our production courses. 500-level economics courses are worthwhile choices for the “Business and Economics” section

**IMPACT:** We do not anticipate a significant impact on the Economics Department.

**EFFECTIVE DATE:** Fall 2008

Grain Science and Industry

Baking Science and Management - Cereal Chemistry Option

**FROM:**

Required courses:

CHM 210 Chemistry I	4 hrs
and	
CHM 230 Chemistry II	4 hrs

**TO:**

Required courses:

CHM 210 Chemistry I	4 hrs
and	
CHM 230 Chemistry II	4 hrs

or		
CHEM 220 Chem Prin I	5 hrs	
and		
CHEM 250 Chem Prin II	5 hrs	
GRSC 101 Intro to GRSC	3 hrs	
STAT 320 Elem of Statistics	3 hrs	
or		
STAT 340 Biometrics I	3 hrs	
BIOCH 521 General Biochemistry	3 hrs	
or		
BIOCH 265 Biochemistry	5 hrs	
FDSCI 501 Food Chemistry	3 hrs	
or		
FDSCI 305 Fund Food Processing	3 hrs	
ATM 540 Food Engin Tech	3 hrs	
ASI 318 Fund of Nutrition	3 hrs	
or		
HN 132 Basic Nutrition	3 hrs	
or		
HN 400 Human Nutrition	3 hrs	
GRSC 630 Mgmt. Apps	3 hrs	

<u>GRSC 150 Prin. of Milling</u>	<u>3 hrs</u>
<u>STAT 325 Statistics</u>	<u>3 hrs</u>

BIOCH 521 General Biochemistry	3 hrs
and	
<u>BIOCH 522 General Biochem Lab</u>	<u>2 hrs</u>
FDSCI 501 Food Chemistry	3 hrs

<u>GRSC 540 Eng. Apps in Food</u>	<u>3 hrs</u>
<u>GRSC 541 Eng. Apps in Food Lab</u>	<u>1 hrs</u>

HN 132 Basic Nutrition	3 hrs
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Add new category:	
<u>Specialization Electives (select 4 hours)</u>	
<u>GRSC 610 Elec./Grain Proc</u>	<u>3 hrs</u>
<u>GRSC 500 Milling Science I</u>	<u>4 hrs</u>
<u>GRSC 745 Fund. Bioprocessing</u>	<u>3 hrs</u>
<u>GRSC 720 Extrusion Proc. Fd. &amp; Fd.</u>	<u>4 hrs</u>
<u>EDLST 212 Intro to Lead concepts</u>	<u>3 hrs</u>
<u>FDSCI 690 HACCP</u>	<u>2 hrs</u>
<u>GRSC 712 Vib. Spect. Anal</u>	<u>1 hrs</u>
<u>GRSC 713 Cont. Chromotographic Anal.</u>	<u>1 hrs</u>

Free Electives	8 hrs
Total hours required	128 hrs

Free Electives	<u>6 hrs</u>
Total hours required	128 hrs

RATIONALE: The above changes are being made to allow students in the Cereal Chemistry option as much flexibility as possible to prepare for careers in the baking of food industries while still gaining a foundation of the newer technologies prevalent in the industry.

CHM 220/250 are being dropped as an alternates and CHM 210/230 will be used for this option.

GRSC 150 will replace GRSC 101 for this option. GRSC150 is more appropriate for students in this option.

GRSC 630 Management Applications will be dropped to make room for addition hours of specialization electives.

ATM 540 is no longer offered and will be replaced with GRSC540. GRSC 541 will be added.

BIOCH 265 is being dropped as an alternate and BIOCH 521 and BIOCH 522 will be required for this option.

ASI 318 and HN 132 are being dropped as alternates and HN400 will be required for this option.

For Cereal Chemistry majors the suggested and Specialization electives are more clearly defined and their scope has been broadened to introduce students to additional, most current topics in the Grain industry.

IMPACT: No major impact outside of department.

EFFECTIVE DATE: Fall 2008

### Baking Science and Management - Production Management Option

FROM:

Required courses:

MATH 220 An Geom Calculus I	4 hrs
BIOCH 265 Int. Organic and Biol Chem	5 hrs
<del>CHM 350 and BIOCH 521</del>	<del>5 hrs</del>
<del>ME 212 Engr Graphics</del>	<del>2 hrs</del>
PHYS 113 Eng Phys I	4 hrs
and	
PHYS 114 Eng Phys II	4 hrs
or	
<del>PHYS 213 Eng Phys I</del>	<del>4 hrs</del>
and	
<del>PHYS 214 Eng Phys II</del>	<del>4 hrs</del>
<del>ASI 318 Fund of Nutrition</del>	<del>3 hrs</del>
or	
HN 132 Basic Nutrition	3 hrs
or	
<del>HN 400 Human Nutrition</del>	<del>3 hrs</del>
<del>STAT 320 Elem of Statistics</del>	<del>3 hrs</del>
or	
<del>STAT 340 Biometrics I</del>	<del>3 hrs</del>

TO:

Required courses:

<u>MATH 205 Gen. Calc and Lin. Alg.</u>	<u>3 hrs</u>
BIOCH 265 Int. Organic and Biol Chem	5 hrs
<del>or</del>	
<u>GRSC 110 Flow Sheets</u>	<u>2 hrs</u>
<u>GRSC 150 Principle of Milling</u>	<u>3 hrs</u>
PHYS 113 Eng Phys I	4 hrs
and	
PHYS 114 Eng Phys II	4 hrs
HN 132 Basic Nutrition	3 hrs
<u>STAT 325 Statistics</u>	<u>3 hrs</u>

FDSCI 501 Food Chemistry	3 hrs
or	
<del>FDSCI 305 Fund Food Processing</del>	<del>3 hrs</del>
<del>ATM 540 Food Engin Tech</del>	<del>3 hrs</del>

FDSCI 501 Food Chemistry	3 hrs
<u>GRSC 540 Eng. Apps in Food</u>	<u>3 hrs</u>
<u>GRSC 541 Eng. Apps in Food Lab</u>	<u>1 hrs</u>

Select 9 hours from the following:

ACCTG 241 Acctg Investment Finance	3 hrs
ACCTG 331 Acctg Processes and Controls	3 hrs
<del>ECON 530 Money and Banking</del>	<del>3 hrs</del>

Business Electives (select 9 hours)

ACCTG 241 Acctg Investment Finance	3 hrs
ACCTG 331 Acctg Processes and Controls	3 hrs
<u>AGEC 500 Production Economics</u>	<u>3 hrs</u>
<u>AGEC 515 Food &amp; Agri. Bus. Mktg.</u>	<u>3 hrs</u>
FINAN 450 Principles of Finance	3 hrs

FINAN 450 Principles of Finance	3 hrs
<del>FINAN 470 Fin Analysis and Valuation</del>	<del>3 hrs</del>
IMSE 501 Industrial Managment	3 hrs
MANGT 300 Intro to TQM	3 hrs
MANGT 530 Industrial & Labor Relations	3 hrs
<del>MANGT 531 Pers. &amp; Human Res. Mgmt.</del>	<del>3 hrs</del>

IMSE 501 Industrial Managment	3 hrs
MANGT 300 Intro to TQM	3 hrs
MANGT 530 Industrial & Labor Relations	3 hrs

or

<del>ECON 523 Human Resource Economics</del>	<del>3 hrs</del>
MKTG 400 Marketing	3 hrs
MKTG 542 Prof Selling and Sales Mangt	3 hrs

MKTG 400 Marketing	3 hrs
MKTG 542 Prof Selling and Sales Mangt	3 hrs

Add new category:

Specialization Electives (select 3 hours)

<u>GRSC 610 Elec./Grain Proc</u>	<u>3 hrs</u>
<u>GRSC 500 Milling Science I</u>	<u>4 hrs</u>
<u>GRSC 745 Fund. Bioprocessing</u>	<u>3 hrs</u>
<u>GRSC 720 Extrusion Proc. Fd. &amp; Fd.</u>	<u>4 hrs</u>
<u>EDLST 212 Intro to Lead concepts</u>	<u>3 hrs</u>
<u>FDSCI 690 HACCP</u>	<u>2 hrs</u>
<u>GRSC 712 Vib. Spect. Anal</u>	<u>1 hrs</u>
<u>GRSC 713 Cont. Chromotographic Anal.</u>	<u>1 hrs</u>

Free Electives	9 hrs
Total hours required	128 hrs

Free Electives	<u>8 hrs</u>
Total hours required	128 hrs

RATIONALE: The above changes are being made to allow students as much flexibility as possible while still integrating courses covering the newest technologies in the food industry. Total number of hours required for graduation has not changed; however 3 hours of specialization electives have been added and total hours of free electives has been reduced from 25 to 17.

GRSC 150, Principles of Milling will provide production managers and baking professionals a more through understanding of the flour and the milling process.

CHM 350 and BIOCH 521 are being dropped as an alternates and BIOCH 265 will be required for this option.

ME 212 will be replaced with GRSC 110, Flow Sheets. GRSC 110 will be more applicable for later GRSC senior level courses and for use in the bakery production layout and design areas.

MATH 210 and alternate MATH 220 will be replaced with MATH 205 General Calculus and Linear Algebra. MATH 205 uses an algebra approach more appropriate for students in this option.

ATM 540 is no longer offered and will be replaced with GRSC540. GRSC 541 will be added.

EDLST 212 Introduction to Leadership Concepts will be added as a Specialization elective choice in response to our industry's repeated requests that BSM students would benefit from additional leadership education.

For all BSM majors the suggested Specialization Electives are more clearly defined and their scope has been broadened to introduce students to additional, most current topics in the Grain industry.

IMPACT: Letters have been written to the departments of Mechanical Engineering and Mathematics advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Feed Science and Management

FROM:		TO:	
Required courses:		Required courses:	
<del>AGEC 220 Grain Livestock Mktg Systems</del>	<del>3 hrs</del>		
<del>CIS 101-104 (or equivalent PC Course)</del>	<del>3 hrs</del>		
<del>MATH 100 College Algebra</del>	<del>3 hrs</del>		
<del>MATH 150 Trigonometry</del>	<del>3 hrs</del>		
MATH 205 Gen. Calc and Lin. Alg.	3 hrs	MATH 205 Gen. Calc and Lin. Alg.	3 hrs
Specialization Electives	8 hrs	Specialization Electives	<u>18 hrs</u>
		<u>Add to list: GRSC 745 Fund Bioprocessing</u>	<u>3 hrs</u>
Total hours required	126 hrs	Total hours required	<u>124 hrs</u>

RATIONALE: The above changes are being made to allow students as much flexibility as possible in the program to prepare for careers in the feed and allied industries, but also having the background for careers in plant management and operations in the biofuels and related industries. Students will still be able to complete the Pre-Vet Professional Requirements to apply for veterinary medicine if they desire.

Many of the students entering the program have already completed enough math to begin with MATH 205 which is a higher level course that remains in the degree program. Additionally, most students come into the program with the necessary computer skills and do not need a PC course.

Currently all students in the program are required to take both AGEC 220 and AGEC 420 which have some similar areas of content. Only one of these classes is needed for the Feed Science students.

The new GRSC 745 course will allow our students the opportunity to add knowledge and skills beneficial to understanding the production of biofuels and their related co-products.

IMPACT: Letters have been written to the affected departments outside of Grain Science advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

## Milling Science and Management - Management Option

FROM:

Required courses:

MATH 220 Anal. Geom. & Calc. I ————— 4 hrs  
BIOCH 265 Intro to Organic Biochemistry ——— 5 hrs

SPCH 311 Bus & Prof. Speaking ————— 3 hrs

Select 9 hours from the following:

ACCTG 331 Acttg Proc. & Cont. 4 hrs  
AGEC 513 Ag Finance 3 hrs  
AGEC 515 Food & Agri. Bus. Mktg. 3 hrs  
AGEC 632 Agri. Bus. Logistics 3 hrs  
~~GENAG 390 Ag Employment~~ ————— 1 hrs  
ENGL 516 Writ. Comm. For the Sciences 3 hrs  
MANGT 390 Bus. Law I 3 hrs  
MANGT 420 Mgmt. Conc. 3 hrs  
MANGT 530 Ind. Labor Relations 3 hrs  
MANGT 531 Pers. & Human Res. Mgmt. 3 hrs  
~~MANGT 630 Labor Relations Law~~ ————— 3 hrs

Free Electives 6 hrs  
Total hours required 129 hrs

TO:

Required courses:

MATH 205 Gen. Calc. and Lin. Alg. 3 hrs  
CHM 350 Gen. Organic Chemistry 3 hrs  
CHM 351 Gen. Organic Chemistry Lab 2 hrs  
GRSC 731 Milling Science II Lab 2 hrs  
GRSC 610 Elec/Grain Proc. Ind. 3 hrs

Specialization Electives (select 11 hours)

ACCTG 331 Acttg Proc. & Cont. 4 hrs  
AGEC 513 Ag Finance 3 hrs  
AGEC 515 Food & Agri. Bus. Mktg. 3 hrs  
AGEC 632 Agri. Bus. Logistics 3 hrs  
ENGL 516 Writ. Comm. For the Sciences 3 hrs  
MANGT 390 Bus. Law I 3 hrs  
MANGT 420 Mgmt. Conc. 3 hrs  
MANGT 530 Ind. Labor Relations 3 hrs  
MANGT 531 Pers. & Human Res. Mgmt. 3 hrs  
SPCH 311 Bus & Prof. Speaking 3 hrs  
GRSC 720 Extrusion Proc. in the Fd & Fd. 4 hrs  
GRSC 745 Fund. of Bioprocessing 3 hrs  
GRSC 712 Vibrational Spect. Analysis 1 hrs  
GRSC 713 Cont. Chromotographic Anal. 1 hrs

Free Electives 3 hrs  
Total hours required 128 hrs

RATIONALE: MATH 220, will be replaced with MATH 205, General Calculus and Linear Algebra. MATH 205 has an algebra approach more appropriate for students in this option.

Replace BIOCH 265 with CHM 350 and CHM 351. This will upgrade the level of organic chemistry to better prepare students for chemistry related functions in the milling process.

GRSC 731 Milling Science II Lab (2) will be required for all milling science graduates. It will allow students to apply principles taught in GRSC 730 to increase technical understanding and meet expectations of industry.

Require all milling science graduates take GRSC 610 Elec/Grain Proc. Ind. Understanding of electrical principles and management is important in both options to safely manage and direct an electrically powered operation system.

Create new common specialization electives category for all options, including the previous elective choices for the management option plus selected grain science courses. With addition of GRSC 720 Extrusion and GRSC 745 Fundamentals of Bioprocessing, these changes strengthen the MSM degree program.



IMPACT: Letters have been written to the affected departments outside of Grain Science advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Milling Science and Management - Operations Option

FROM:  
Required courses:

~~CE 231 Statics A~~ 3 hrs  
~~ENVD 205 Graphics I~~ 2 hrs  
~~ATM 540 Food Engin Tech~~ 3 hrs  
  
~~BIOCH 265 Intro to Organic Biochemistry~~ 5 hrs

TO:  
Required courses:

GRSC 540 Eng. Apps in Food 3 hrs  
GRSC 541 Eng. Apps in Food Lab 1 hrs  
CHM 350 Gen. Organic Chemistry 3 hrs  
CHM 351 Gen. Organic Chemistry Lab 2 hrs  
GRSC 625 Flour and Dough Testing 3 hrs

Add new category:

Specialization Electives (select 7 hours)

ACCTG 331 Acttg Proc. & Cont. 4 hrs  
AGEC 513 Ag Finance 3 hrs  
AGEC 515 Food & Agri. Bus. Mktg. 3 hrs  
AGEC 632 Agri. Bus. Logistics 3 hrs  
ENGL 516 Writ. Comm. For the Sciences 3 hrs  
MANGT 390 Bus. Law I 3 hrs  
MANGT 420 Mgmt. Conc. 3 hrs  
MANGT 530 Ind. Labor Relations 3 hrs  
MANGT 531 Pers. & Human Res. Mgmt. 3 hrs  
SPCH 311 Bus & Prof. Speaking 3 hrs  
GRSC 720 Extrusion Proc. in the Fd & Fd. 4 hrs  
GRSC 745 Fund. of Bioprocessing 3 hrs  
GRSC 712 Vibrational Spect. Analysis 1 hrs  
GRSC 713 Cont. Chromotographic Anal 1 hrs

Free Electives 9 hrs  
Total hours required 129 hrs

Free Electives 3 hrs  
Total hours required 128 hrs

RATIONALE: CNS 231 Statics A and ENVD 205 Graphics I are no longer considered as essential in the skill set for the operations students in the milling science program.

ATM 540 is no longer offered and will be replaced with GRSC540. GRSC 541 will be added. Replace BIOCH 265 with CHM 350 and CHM 351. This will upgrade the level of organic chemistry to better prepare students for chemistry related functions in the milling process.

Create new common specialization electives category for all options, including the previous elective choices for the management option plus selected grain science courses. With addition of GRSC 720 Extrusion and GRSC 745 Fundamentals of Bioprocessing, these changes strengthen the MSM degree program.

IMPACT: Letters have been written to the affected departments outside of Grain Science advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Milling Science and Management - Chemistry Option

FROM:

Required courses:

~~CHM 371 Chemical Analysis~~ ————— 4 hrs

~~CHM 551 Organic Chem II Lab~~ ————— 2 hrs

TO:

Required courses:

CHM 350 Gen. Organic Chemistry 3 hrs

CHM 351 Gen. Organic Chemistry Lab 2 hrs

GRSC 610 Elec/Grain Proc. Ind. 3 hrs

GRSC 630 Mgmt. App. Gr. Proc. Ind. 3 hrs

GRSC 730 Milling Science II 2 hrs

GRSC 731 Milling Science II Lab 2 hrs

Add new category:

Specialization Electives (select 3 hours)

ACCTG 331 Acttg Proc. & Cont. 4 hrs

AGEC 513 Ag Finance 3 hrs

AGEC 515 Food & Agri. Bus. Mktg. 3 hrs

AGEC 632 Agri. Bus. Logistics 3 hrs

ENGL 516 Writ. Comm. For the Sciences 3 hrs

MANGT 390 Bus. Law I 3 hrs

MANGT 420 Mgmt. Conc. 3 hrs

MANGT 530 Ind. Labor Relations 3 hrs

MANGT 531 Pers. & Human Res. Mgmt. 3 hrs

SPCH 311 Bus & Prof. Speaking 3 hrs

GRSC 720 Extrusion Proc. in the Fd & Fd. 4 hrs

GRSC 745 Fund. of Bioprocessing 3 hrs

GRSC 712 Vibrational Spect. Analysis 1 hrs

GRSC 713 Cont. Chromotographic Anal 1 hrs

Free Electives 13-14 hrs

Total hours required 129 hrs

Free Electives 3 hrs

Total hours required 128 hrs

RATIONALE:

Chemistry requirements are changed to be consistent with the other two options in the major. All students will now take CHM 350 and 351 as part of the core requirements.

Create new common specialization electives category for all options, including the previous elective choices for the management option plus selected grain science courses. With addition of GRSC 720 Extrusion and GRSC 745 Fundamentals of Bioprocessing, these changes strengthen the MSM degree program.

IMPACT:

Letters have been written to the affected departments outside of Grain Science advising them of the courses being dropped and added.

EFFECTIVE DATE: Fall 2008

Horticulture, Forestry and Recreation Resources

FROM: Horticulture Major with Options in:  
 Fruit/Vegetable Production  
Greenhouse Management  
Nursery Management  
 Landscape Design  
 Landscape and Turf Management  
 Horticultural Therapy  
 Golf Course Management  
 Horticulture Science

TO: Horticulture Major with Options in:  
 Fruit/Vegetable Production  
Greenhouse and Nursery Management  
 Landscape Design  
Landscape Management  
 Horticultural Therapy  
 Golf Course Management  
 Horticultural Science  
Sports Turf Management  
Public Horticulture

RATIONALE: Option name changes more accurately reflect the curriculum. Combining the nursery management and greenhouse management options recognizes the considerable overlap that currently exists and recognizes the fact we can serve our students better within the context of one specialization. Renaming the landscape and turf management option reflects associated changes in the curriculum which will increase focus on landscaping, and the development of the new option in sports turf management with greater focus on turf management. Two new options in sports turf management and public horticulture reflect both changing demands of the horticultural industry for graduates and changing interests of students. Additional more specific rationale statements follow the detailed curriculum changes outlined on the following pages.

IMPACT: All impacted units have been contacted.

EFFECTIVE DATE: Fall 2008

**CURRENT**

**Horticulture Major**  
**Specializations in fruit/vegetable production, greenhouse management, nursery management, landscape design, and landscape and turf management**

**Quantitative sciences .....16-18**  
~~CHM 210 Chemistry~~ ~~1 4~~  
~~Organic chemistry elective~~ ~~3 5~~

MATH 100 College Algebra 3  
 Math/physics/~~comp science~~ elective 3  
 Statistics elective

**Horticulture requirement.....14-18**

HORT 350 Plant Propagation 3  
 HORT 520 Fruit Production 3

**Or**

HORT 560 Vegetable Crop Production 3  
 HORT 190 Pre-Internship in Horticulture 1  
 HORT 590 Horticulture Internship 2 or 5  
~~Pest Management elective~~ ~~2 3~~

Environmental science elective 3

*Fruit/vegetable specialization.....27*

**PROPOSED**

**Horticulture Major**  
**Specializations in fruit/vegetable production, greenhouse and nursery management (combined with new name), landscape design, and landscape management (new name)**

**Quantitative sciences ..... 15**  
CHM 110 General Chemistry 3  
CHM 111 General Chemistry Lab 1  
BIOCH 265 Intro to Organic Chem & Biochem

MATH 100 College Algebra 3  
Math/physics elective 3  
 Statistics elective

**Horticulture requirement .....12-15**

HORT 350 Plant Propagation 3  
 HORT 520 Fruit Production 3

**Or**

HORT 560 Vegetable Crop Prod 3  
 HORT 190 Pre-Internship in Horticulture 1  
 HORT 590 Horticulture Internship 2 or 5  
HORT 599 The Horticultural Professional 0

Environmental science elective 3

*Fruit/vegetable specialization .....28*

AGRON 330	Weed Science	3
ENTOM 612	Insect Pest Diagnosis	2
<b>Or</b>		
ENTOM 620	Insecticides: Properties & Laws	2
HORT 376	Herbaceous Ornamental Plants	3
HORT 560	Vegetable Crop Production	3
HORT 570	Greenhouse Operations Mgmt	3
HORT 575	Nursery/Garden Cntr. Operations	3

Specialization electives from list below (10 cr)

AGRON 375	Soil Fertility	3
HORT 210	Concepts of Floral Design	3
HORT 275	Concepts of Horticulture Design	3
HORT 374	Woody Plant Materials I	3
HORT 375	Woody Plant Materials II	3
HORT 508	Landscape Maintenance	3
HORT 515	Turf Management	3
HORT 585	Arboriculture	3
HORT 706	Turfgrass Science	3
HORT 775	Plant Nutrition Mgmt.	3

Free Electives 4-12

*Greenhouse management specialization* 28-29

HORT 376	Herbaceous Ornamental Plants	3
HORT 377	Plants in the Inter. Environment	3
HORT 570	Greenhouse Operations Mgmt	3
HORT 575	Nursery/Garden Cntr. Operations	3
HORT 625	Floral Crops Prod & Handling	4
Specialization electives: Choose 4 (12-13 crs)		
AGRON 330	Weed Science	3
HORT 210	Concepts of Floral Design	3
HORT 275	Concepts of Horticulture Design	3
HORT 374	Woody Plant Materials I	3
HORT 375	Woody Plant Materials II	3
HORT 508	Landscape Maintenance	3
HORT 515	Turf Management	3
HORT 585	Arboriculture	3
HORT 775	Plant Nutrition/Nutrient Mgmt	3

*Nursery management specialization* 27-28

AGRON 330	Weed Science	3
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AGRON 330	Weed Science	3
HORT 325	Intro to Organic Farming	2

HORT 376	Herbaceous Ornamental Plants	3
HORT 560	Vegetable Crop Prod	3
HORT 570	Greenhouse Operations Mgmt	3
HORT 582	Foundations of Hort Pest Mgt	1
HORT 583	Survey of Horticultural Ornamental	
HORT 600	Herbaceous Landscape Plant Prod	

Specialization electives from list below (10 cr)

AGRON 375	Soil Fertility	3
HORT 210	Concepts of Floral Design	3
HORT 275	Horticultural Design I	3
HORT 374	Woody Plant Materials I	3
<b>OR</b>		
HORT 375	Woody Plant Materials II	3
HORT 508	Landscape Maintenance	2
HORT 515	Basic Turfgrass Culture	2
HORT 550	Landscape Irrigation Systems	3
HORT 575	Nursery/Garden Cntr. Operations	3
HORT 585	Arboriculture	3
HORT 625	Floral Crops Prod & Handling	2

Free Electives 6-11

***Greenhouse and Nursery Management specialization***

HORT 570	Greenhouse Operations Mgmt	3
HORT 575	Nursery/Garden Cntr Ops	3
HORT 582	Foundations of Hort Pest Mgt	1
HORT 583	Survey of Horticultural Ornamental and Food Crop Pests	1
HORT 600	Herbaceous Landscape Plant Prod	
HORT 625	Floral Crops Prod and Handling	2

Specialization electives from list below (9 cr)

HORT 374	Woody Plant Materials I	
HORT 375	Woody Plant Materials II	
HORT 376	Herbaceous Ornamental Plants	3
HORT 377	Plants Interior Environment	3

Specialization electives from list below (11 cr)

AGRON 330	Weed Science	3
HORT 210	Concepts Floral Design	3
HORT 275	Horticultural Design I	3
HORT 508	Landscape Maintenance	
HORT 515	Basic Turfgrass Culture	2
HORT 595	Landscape Irrigation Systems	3
HORT 585	Arboriculture	3

Any other Horticulture course

HORT 374	Woody Plant Materials I	3
HORT 375	Woody Plant Materials II	3
HORT 570	Greenhouse Operations Mgmt	3
HORT 575	Nursery/Garden Cntr. Operations	3
Specialization electives: Choose 4 (12-13 cr)		
HORT 275	Concepts of Horticulture Design	3
HORT 376	Herbaceous Ornamental Plants	3
HORT 508	Landscape Maintenance	3
HORT 515	Turf Management	3
HORT 550	Landscape Irrigation Systems	3
HORT 585	Arboriculture	3
HORT 625	Floral Crops Prod & Handling	4
HORT 775	Plant Nutrition/Nutrient Mgmt	3

*Landscape design specialization.....31*

HORT 275	Concepts of Horticulture Design	4
HORT 374	Woody Plant Materials I	3
HORT 375	Woody Plant Materials II	3
HORT 376	Herbaceous Ornamental Plants	3
HORT 508	Landscape Maintenance	3
HORT 510	Horticulture Design	3
HORT 551	Landscape Contracts & Constr	3

Design elective \_\_\_\_\_ 3

Specialization electives from list below (6 cr)

HORT 515	Turf Management	3
HORT 545	Computer Applications in Design	

HORT 580	Advanced Horticulture Design	3
HORT 585	Arboriculture	3

Free Electives 5-12

*Landscape and turf management specialization.....27*

AGRON 375	Soil Fertility	3
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**Or**

HORT 706	Turfgrass Science	3
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*Landscape design specialization ..... 29*

HORT 275	<u>Horticultural Design I</u>	<u>3</u>
HORT 374	Woody Plant Materials I	3
HORT 375	Woody Plant Materials II	3
HORT 376	Herbaceous Ornamental Plants	3
HORT 508	Landscape Maintenance	<u>2</u>
HORT 510	<u>Horticultural Design II</u>	<u>2</u>
HORT 551	<u>The Business of Landscape Contracting</u>	<u>1</u>
HORT 552	<u>Horticultural Landscape Constr</u>	<u>1</u>
HORT 515	<u>Basic Turfgrass Culture</u>	<u>2</u>
HORT 582	<u>Foundations of Hort Pest Mgt</u>	<u>1</u>
<u>Pest management elective from list below (2 cr)</u>		
HORT 583	<u>Survey of Horticultural Ornamental and Food Crop Pests</u>	<u>1</u>
HORT 587	<u>Turfgrass Diseases &amp; Mgt</u>	
HORT 588	<u>Turfgrass Weeds &amp; Mgt</u>	
HORT 589	<u>Turfgrass Insects &amp; Mgt</u>	

Specialization electives from list below (6 cr)

HORT 545	Computer Applications in Design	
HORT 550	<u>Landscape Irrigation Systems</u>	<u>3</u>
HORT 555	<u>Fund of Landscape Irrig Design</u>	<u>2</u>
HORT 580	Advanced Horticulture Design	3
HORT 585	Arboriculture	3
HORT 600	<u>Herbaceous Landscape Plant Prod</u>	

Free Electives 7-14

*Landscape management specialization..... 27*

AGRON 375	Soil Fertility	3
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**Or**

HORT 706	Turfgrass Science	3
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HORT 374	Woody Plant Materials I	3
HORT 375	Woody Plant Materials II	3
HORT 376	Herbaceous Ornamental Plants	3
HORT 508	Landscape Maintenance	3
HORT 515	Turf Management	3
HORT 551	Landscape Contracts & Constr	3
HORT 585	Arboriculture	3
<del>Specialization elective</del> 3		

Free Electives 4-12

**Horticultural Therapy specialization**

**Math/chemical science .....10**

~~CHM 210~~ Chemistry 1-4

MATH 100 College Algebra 3

~~STAT 320~~ Elements of Statistics 3

**Or**

~~STAT 330~~ Elementary Statistics for Social Sciences 3

**Horticulture requirement.....23**

HORT 190 Pre-Internship in Horticulture 1

HORT 201 Principles of Horticulture Science

HORT 350 Plant Propagation 3

HORT 520 Fruit Production 3

**Or**

HORT 560 Vegetable Crop Production 3

Horticulture electives 12

**Horticultural Therapy specialization .....28**

~~HORT 235~~ Intro to the Horticultural Therapy Profession 3

HORT 256 Human Dimensions of Hort. 3

HORT 374 Woody Plant Materials I 3

HORT 376 Herbaceous Ornamental Plants 3

HORT 377 Plants of the Interior Environmnt. 3

HORT 374	Woody Plant Materials I	3
HORT 375	Woody Plant Materials II	3
HORT 376	Herbaceous Ornamental Plants	3
HORT 508	Landscape Maintenance	2
HORT 515	<u>Basic Turfgrass Culture</u>	2
<u>HORT 550</u>	<u>Landscape Irrigation Systems</u>	3
HORT 551	<u>The Business of Landscape Contr</u>	
<u>HORT 552</u>	<u>Horticultural Landscape Constr</u>	1
<u>HORT 582</u>	<u>Foundations of Hort Pest Mgt</u>	1
HORT 585	Arboriculture	3

Pest management elective from list below (2 cr)

HORT 583 Survey of Horticultural Ornamental and Food Crop Pests 1

HORT 587 Turfgrass Diseases & Mgt 1

HORT 588 Turfgrass Weeds & Mgt

HORT 589 Turfgrass Insects & Mgt

Free Electives 7-12

**Horticultural Therapy specialization**

**Math/chemical science..... 10**

CHM 110 General Chemistry 3

CHM 111 General Chemistry Lab 1

MATH 100 College Algebra 3

STAT 325 Intro to Statistics 3

**Horticulture requirement ..... 23**

HORT 190 Pre-Internship in Horticulture 1

HORT 201 Principles of Horticulture Science

HORT 350 Plant Propagation 3

HORT 520 Fruit Production 3

**Or**

HORT 560 Vegetable Crop Production 3

HORT 599 The Horticultural Professional 0

HORT 582 Foundations of Hort Pest Mgt 1

HORT 583 Survey of Horticultural Ornamental and Food Crop Pests 1

Horticulture electives 10

**Horticultural Therapy specialization..... 29**

HORT 256 Human Dimensions of Hort. 3

HORT 374 Woody Plant Materials I 3

HORT 376 Herbaceous Ornamental Plants 3

HORT 377 Plants of the Interior Environmnt.

HORT 525	Horticulture for Special Pop.	3
HORT 530	Horticultural Therapy Case Mgmt	1
HORT 535	Horticultural Therapy Field Tech	
HORT 540	Horticultural Therapy Field Exp	
HORT 570	Greenhouse Operations Mgmt	3

**Human science and service requirements.... 13**

<del>PHIL 365</del>	<del>Medical Ethics</del>	<del>3</del>
PSYCH 505	Abnormal Psychology	3
PSYCH 520	Life Span Personality Dev	
<del>SOCIO 520</del>	<del>Methods of Social Research</del>	<del>4</del>

**Professional electives..... 12**

ANTH 204	Cultural Anthropology	3
<del>ANTH 510</del>	<del>Kinship &amp; Marriage in Cross Cult. Perspective</del>	<del>3</del>
<del>ANTH 511</del>	<del>Cultural Ecology &amp; Economy</del>	<del>3</del>
<del>ANTH 618</del>	<del>Religion in Culture</del>	<del>3</del>

AMETH 160	Intro Am Ethnic Studies	3
<del>ART 560</del>	<del>Art for Exceptional Individual</del>	<del>3</del>
BIOL 330	Public Health Biology	3
<del>BIOL 340</del>	<del>Structure and Function of the Human Body</del>	<del>8</del>
EDSP 500	Introduction to Human Exceptionality	3

FSHS 415	Manual Communication	3
FSHS 506	Middle Childhd. & Adolescence	3
GERON 315	Introduction to Gerontology	3
HIST 534	Social History of Medicine	3
KIN 220	Biobehavioral Bases of Exercise	3
KIN 345	Psychological Dynamics of Physical Activity	

PSYCH 202	Drugs & Behavior	2
PSYCH 280	Psychology of Childhood and Adolescence	3
<del>PSYCH 510</del>	<del>Introduction to Behavior Modification</del>	<del>3</del>
<del>PSYCH 520</del>	<del>Life Span Personal Development</del>	<del>4</del>
SOCIO 432	Comm Organ & Leadership	3
SOCIO 460	Juvenile Delinquency	3
<del>THTRE 665</del>	<del>Drama Therapy with Special</del>	<del>3</del>

HORT 525	Horticulture for Special Pop.	3
HORT 530	Horticultural Therapy Case Mgmt	
HORT 535	Horticultural Therapy Field Tech	
HORT 540	Horticultural Therapy Field Exp	
HORT 570	Greenhouse Operations Mgmt	3
<u>HORT 600</u>	<u>Herbaceous Landscape Plant Prod</u>	
<u>HORT 625</u>	<u>Floral Crops Prod &amp; Handling</u>	<u>2</u>

**Human science and service requirements ... 12**

<u>SOCIO 360</u>	<u>Social Problems</u>	<u>3</u>
PSYCH 505	Abnormal Psychology	3
PSYCH 520	Life Span Personality Dev	
<u>THTRE 665</u>	<u>Drama Therapy with Special Pop.</u>	

**Professional electives ..... 12**

ANTH 204	Cultural Anthropology	3
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AMETH 160	Intro Am Ethnic Studies	3
BIOL 330	Public Health Biology	3
EDSP 500	Introduction to Human Exceptionality	3

<u>FSHS 110</u>	<u>Intro Human Development</u>	<u>3</u>
<u>FSHS 310</u>	<u>Early Childhood</u>	
<u>FSHS 350</u>	<u>Family Relationships &amp; Gender Roles</u>	<u>3</u>
FSHS 415	Manual Communication	3
FSHS 506	Middle Childhood & Adolescence	
GERON 315	Introduction to Gerontology	3
HIST 534	Social History of Medicine	3
KIN 220	Biobehavioral Bases of Exercise	3
KIN 345	Psychological Dynamics of Physical Activity	

<u>MC 180</u>	<u>Fundamentals of Public Relations</u>	
<u>PHIL 365</u>	<u>Medical Ethics</u>	<u>3</u>
PSYCH 202	Drugs & Behavior	2
PSYCH 280	Psychology of Childhood and Adolescence	3
<u>PSYCH 470</u>	<u>Psychobiology</u>	<u>3</u>
<u>PSYCH 535</u>	<u>Social Psychology</u>	<u>3</u>
<u>SOCIO 361</u>	<u>Soc. Of Criminal Justice Systems</u>	
SOCIO 432	Comm Organ & Leadership	3
SOCIO 460	Juvenile Delinquency	3

Populations \_\_\_\_\_ 3

**OR**

~~THRE 674 Drama Therapy with Adolescents~~ \_\_\_\_\_

**OR**

~~THRE 675 Drama Therapy with Older Adults~~ 3

**Golf Course Management Specialization**

**Technical core.....20**

BIOL 198 Principles of Biology 4

~~CHEM 210 Chemistry I~~ 4

Computer science elective 3

MATH 100 College Algebra 3

MATH 205 General Calc & Linear Algebra

Statistics elective 3

**Internship.....6**

HORT 190 Pre-Internship in Horticulture 1

HORT 590 Horticulture Internship 2

(at a golf facility)

HORT 590 Horticulture Internship 3

(at a golf facility)

**Or**

HRIMD 495/  
GENBA 495 Golf Course Internship in  
Business/Hospitality Management

**Turf Management .....39**

GENAG 101 Ag Orientation 1

AGRON 305 Soils 4

AGRON 335 Environmental Quality 3

**Or**

FOR 375 Intro to Natural Resources Mgt 3

AGRON 375 Soil Fertility 3

ATM 653 Water Management and Irrigation

Systems 3

**Or**

HORT 550 Landscape Irrigation Systems 3

HORT 201 Principles of Hort Science 4

HORT 374 Woody Plant Materials I 3

**Or**

HORT 375 Woody Plant Materials II 3

HORT 515 Turf Management 3

HORT 517 Golf Course Operations 3

HORT 706 Turfgrass Science 3

PLPTH 500 Principles of Plant Pathology 3

**Golf Course Management Specialization**

**Technical core ..... 20**

BIOL 198 Principles of Biology 4

CHEM 110 General Chemistry 3

CHEM 111 General Chemistry Lab 1

Computer science elective 3

MATH 100 College Algebra 3

MATH 205 General Calc & Linear Algebra 3

Statistics elective 3

**Internship ..... 6**

HORT 190 Pre-Internship in Horticulture 1

HORT 590 Horticulture Internship 2

(at a golf facility)

HORT 590 Horticulture Internship 3

(at a golf facility)

**Or**

HRIMD 495/  
GENBA 495 Golf Course Internship in  
Business/Hospitality Management

HORT 599 The Horticultural Professional

**Turf Management .....40**

GENAG 101 Ag Orientation 1

AGRON 305 Soils 4

AGRON 335 Environmental Quality 3

**Or**

FOR 375 Intro to Natural Resources Mgt 3

AGRON 375 Soil Fertility 3

ATM 653 Water Management and Irrigation

Systems 3

**Or**

HORT 550 Landscape Irrigation Systems 3

HORT 201 Principles of Hort Science 4

HORT 374 Woody Plant Materials I 3

**Or**

HORT 375 Woody Plant Materials II 3

HORT 515 Basic Turfgrass Culture 2

HORT 516 Intensive Culture of Golf and  
Sports Turf 1

HORT 517 Golf Course and Sports Turf  
Operations 3

HORT 706 Turfgrass Science 3

PLPTH 500 Principles of Plant Pathology 3



		<u>HORT 582</u>	<u>Foundations of Hort Pest Mgt</u>	<u>1</u>
		<u>HORT 587</u>	<u>Turfgrass Diseases &amp; Mgt</u>	<u>1</u>
		<u>HORT 588</u>	<u>Turfgrass Weeds &amp; Mgt</u>	
		<u>HORT 589</u>	<u>Turfgrass Insects &amp; Mgt</u>	
Horticulture elective	3	Horticulture elective		3
<del>Pest management elective</del>	<del>3</del>			
Free electives .....	7-9	Free electives .....		<u>6-8</u>

**RATIONALE:**

**Quantitative sciences:** the change from CHM 210 to CHM 110/111 is due to our recognition that CHM 110/111 offers the knowledge of chemistry necessary for the horticulture major; BIOCHM 265 is required rather than one of two Organic chemistry electives, this change is required since the other elective requires CHM 210; removing computer science elective choices in recognition that the majority of our students come to us with acceptable computer skills

**Horticulture requirement:** the pest management elective has been incorporated into each of the specialization curricula, all hort students will be required to take HORT 582 Foundations of Hort Pest Management and depending on the specialization, also choose 1-3 additional credits from a list of approved courses; the addition of HORT 599 The Horticultural Professional is a new course required of all hort majors, this is a capstone course of a 3-course series (HORT 190, 590, 599) that focuses on the hort industry and serves as a mechanism to collect end-program assessments

**Specializations:** Changes within each specialization reflect changes in existing courses being put forth at this time and the addition of new courses being put forth at this time. Specialization name changes more accurately reflect the curriculum. Combining the nursery management and greenhouse specializations recognizes the considerable overlap and the fact we can serve our students better within the context of one specialization

**IMPACT:** All units who will be impacted by the above changes have been contacted.

**EFFECTIVE DATE:** Fall 2008

**Sports Turf Operations Management (New Option under the Horticulture major)**

**Technical Core ..... 20 hours**

BIOL 198	Principles of Biology	4
CHM 110	General Chemistry	3
CHM 111	General Chemistry Lab	1
Computer Science Elective		3
Math 100	College Algebra	3
Math 205	General Calculus & Linear Algebra	3
Statistics elective		

**Communication and Interpersonal Relations..... 17 hours**

ENGL 100	Expository Writing I	3
ENGL 200	Expository Writing II	3
SPCH 105	Public Speaking 1A	2
Communications Electives		9

**Internship..... 6 hours**

HORT 190	Pre-Internship in Horticulture	1
HORT 590	Horticulture Internship	2
HORT 590	Horticulture Internship	3

**Humanities and Social Sciences ..... 14 hours**

ECON 110	Prin. of Macroeconomics	3
ECON 120	Prin. of Microeconomics	3
OR		
AGEC 120	Agric. Econ. And Agric. Bus	3
Humanities and Social Science Elective		3
Foreign Language Elective		3-5

**Business Management ..... 15 hours**

ACCTG 231	Accounting for Business Ops.	3
MANGT 420	Management Concepts	3
MKTG 400	Marketing	3
MANGT 531	Human Resource Management	3
MKTG 630	Sports Marketing	3

**Turf Management..... 47 hours**

GENAG 101	Ag Orientation	1
AGRON 305	Soils	
AGRON 335	Environmental Quality	3
	<b>OR</b>	
FOR 375	Intro. to Natural Resource Management	3
AGRON 375	Soil Fertility	3
ATM 653	Water Mgt. and Irrigation Systems	
	<b>OR</b>	
HORT 550	Landscape Irrigation Systems	3
HORT 201	Principles of Horticultural Science	
HORT 374	Woody Plant Materials I	3
	<b>OR</b>	
HORT 376	Herbaceous Ornamental Plants	3
HORT 515	Basic Turfgrass Culture	2
HORT 516	Intensive Culture of Golf and Sports Turf	1
HORT 517	Golf Course and Sports Turf Operations	3
HORT 706	Turfgrass Science	3
PLPTH 500	Principles of Plant Pathology	3
RRES 690	Parks and Recreation Adm.	4
RRES 489	Program and Event Planning	3
Horticulture Elective		3
HORT 582	Foundations of Horticultural Pest Management	1
HORT 587	Turfgrass Diseases and their Management	1
HORT 588	Turfgrass Weeds and their Management	1
HORT 589	Turfgrass Insects and their Management	1
	<b>Hospitality ..... 4 hours</b>	
HRIMD 220	Environmental Issues in Hosp.	2
HRIMD 340	Contemporary Issues in Controlled Beverages	2

**Free Electives ..... 7 hours**

**Total Credit Hours Required for Graduation 130**

**RATIONALE:**

Sports Turf Operations Management is proposed as a new specialization under the Horticulture major in the Department of Horticulture, Forestry and Recreation Resources. There is a growing demand for professionals in this area and we believe the proposed curriculum is unique and will prepare graduates well for careers in this area. The Sports Turf Operations Management option was prepared with input from the Board of Directors of the Sports Turf Managers Association (STMA). This included comments from sports turf managers overseeing sports turf and related operations for major league baseball, the NFL, and K-12 school districts (see following pages). The national sports turf sales manager for the Toro Corporation is an adjunct faculty in our department, and will be involved in student instruction for 1 to 2 weeks every year.

Modeled after our Golf Course Management program, the Sports Turf Operations Management option places an emphasis on horticulture and turfgrass science, and complements this with course work in communications, business, and hospitality. The STMA members repeatedly emphasized the importance of business and communications and supported the inclusion of some hospitality courses. The importance of work experience prior to graduation is again emphasized with 6 credits of internship required.

In summary, we believe the proposed Sports Turf Operations Management option will be unique in the U.S., much as our current Golf Course Management program is, and will produce graduates well prepared for the challenges of this growing industry.

**IMPACT:**

All impacted units have been contacted.

**EFFECTIVE DATE:**

Fall 2008

**Public Horticulture (new option)**

**Communications ..... 11 hours**

ENGL 100	Expository Writing I	3
ENGL 200	Expository Writing II	3
SPCH 105	Public Speaking 1 A	2
SPCH 311	Business and Professional Spkg.	3

**Humanities and Social Sciences ..... 9 hours**

PSYCH 110	General Psychology	3
SOCIO 211	Intro to Sociology	3
AMETH 160	Intro to American Ethnic Studies	3

**Math/Chemical Sciences ..... 10 hours**

CHM 110	General Chemistry	3
CHM 111	General Chemistry Lab	1
MATH 100	College Algebra	3
	Statistics Elective	3
	Choose from STAT 325 or 350	

**Agric/Biological Sciences ..... 19 hours**

AGRON 305	Soils	4
BIOL 198	Principles of Biology	4
BIOL 551	Taxonomy of Flowering Plants	4
	Entomology Elective	3
GENAG 101	Ag Orientation	1
PLPTH 500	Principles of Plant Pathology	3

**Business ..... 12 hours**

ACCTG 231	Accounting for Bus Operations	3
AGEC 120	Ag Econ & Ag Business	3
<b>OR</b>		
ECON 120	Microeconomics	3
MANGT 420	Management Concepts	3
MANGT 531	Human Resources Management	3

**Horticulture Requirement ..... 13 hours**

HORT 190	Pre-Internship in Horticulture	1
HORT 201	Principles of Horticultural Science	
HORT 350	Plant Propagation	3
HORT 590	Internship	5
	At public garden facilities. One in horticulture, one in education	
HORT 599	The Horticultural Profession	0

**Public Horticulture Specialization .... 31 hours**

HORT 256	Human Dimensions in Hort	3
HORT 275	Horticultural Design I	3
HORT 301	Horticulture Practicum	3
HORT 508	Landscape Maintenance	2
HORT 360	Public Horticulture	3
HORT 570	Greenhouse Operations Mangt.	3
HORT 582	Foundations of Horticulture Pest Management	1
HORT 600	Herbaceous Landscape Plant Prod	
	Plant materials electives (6 cr.)	
HORT 515	Basic Turfgrass Culture	2
HORT 552	Hort Landscape Construction	1
HORT 555	The Fundamentals of Landscape Irrigation Design	2
HORT 585	Arboriculture	3
HORT 625	Floral Crops Production and Handling	2

**Professional electives from list below 12 hours**

EDADL 212	Intro to Leadership Concepts	2
EDCI 704	Extension Organization & Prin	3
EDCI 706	Prin of Teaching Adults in Extension	3
GEOG 300	Geography of Tourism	3
HRIMD 120	Survey of the Hospitality Industry	
HRIMD 230	Issues in Tourism	2
RRES 489	Program & Event Planning	3
MC 120	Principles of Advertising	3
MC 180	Fundamentals of Public Relations	
PSYCH 564	Psychology of Organizations	3
RRES 635	Methods of Environmental Interp	

**Free Electives ..... 13 hours**

**TOTAL CREDITS FOR GRADUATION 130**

**RATIONALE:**

The public horticulture option is intended for students interested in professional careers which promote horticulture and emphasize people and their education and enjoyment of plants. Such careers include director of a botanical garden or park; city or urban horticulturist; extension agent, teacher, educational director, or program coordinator; professional garden writer/editor or publication manager; public garden curator; and plant collections manager. Initial work on developing this specialization was based on recent and current student interest and the fact that very few universities offer this specialization. Additionally, with the continuing development of the K-State Gardens, K-State has the unique opportunity to become a model university garden demonstrating dynamic linkages between the Gardens and an academic unit of the University. While university gardens are not unique, embedding an academic discipline within a university garden is unique. The creation of the Public Horticulture specialization is one step in the Horticulture Divisions plan to establish K-State Gardens as a model university garden.

**IMPACT:**

No impact outside our department.

**EFFECTIVE DATE:**

Fall 2008

**Attachment 2**  
**Graduate Certificate in Stem Cell Biotechnology**  
**As approved by the Graduate Council on October 2, 2007**

**Introduction**

The Midwest Institute for Comparative Stem Cell Biotechnology (the Institute) was created in 2005 based upon emerging research and intellectual property development resulting from the discovery by Kansas State University personnel of a stem cell population in the matrix of the umbilical cord of humans and also domestic and laboratory animals. A website has been created for the institute: <http://www.vet.ksu.edu/research/stemcell/index.htm>

As is apparent from the website, stem cell research, development of related intellectual property and education in stem cell-related biotechnology are the primary goals. Significant progress has been made in research. All components of the pending patent have been licensed. Fees paid, while confidential under the licensing agreement, are the largest licensing fees ever received by the KSU research foundation by a large margin. The third element of the Institute's aims, education, is the subject of the present proposal.

**Learning objectives**

The overarching purpose of the proposed certificate program is to add value to other degrees in the biological and life sciences, specifically including animal sciences, veterinary medicine, biology and biochemistry.

Specific learning objectives are enumerated in the assessment plan.

**Courses**

The core courses in the certificate are:

**AP 711. Stem Cells and Comparative Biomedicine.** (2) II, S. Characteristics of major categories of stem cells. Applicable or potential clinical uses, including their utilization in tissue engineering or targeted delivery of therapeutics.

**AP 850 Stem Cell Techniques.** (2) I, S. Cellular and molecular techniques and techniques on tissue culture. Lecture and laboratory hours to be determined.

**ASI 802. Gametes, Embryos, and Stem Cells in Farm Animals.** (2) I, in odd years. A study of gametes, embryos, pregnancy, and stem cells in farm species including supporting information from laboratory species and humans. Emphasis will be on the regulation of stem cells, gametes, and embryos and on the conceptus-maternal interactions to establish and maintain pregnancy and program conceptus and postnatal development. Two hours lec. a week. Pr.: BIOCH 521.

**ASI 902 Topics in Stem Cell Biotechnology.** (1) A journal club course in stem cell biotechnology in fall semesters. One semester is required. It can be repeated twice for a total of three credits in the stem cell certificate. Students will evaluate the contribution of scientific papers to the field of stem

cell biology, present scientific data, lead discussions of scientific literature, and become familiar with current concepts in the field of stem cell biology and biotechnology.

Elective courses for emphasis in research or entrepreneurship are:

**AP 710 Microanatomy.** Origin, development and microscopic structure of the cells and tissues for the animal body. Three hours lecture and six hours lab/week. Pr: First year standing in college of veterinary medicine. Fall semester.

**AP 995. Problems in Physiology.** (Var.) I, II, S. Special problem-involving techniques utilized in studying the function of various organ systems of the body. Pr.: Consent of instructor.

**ASI 600. Applied Animal Biotechnology.** (2) II. Emphasis will be placed on the current and future of animals in biotechnology related to food production as well as human medicine applications. Rec. Pr.: Senior standing, BIOCH 521 and ASI 500.

**ASI 961. Graduate Problem in Animal Sciences and Industry.** (1-3) I, II, S. In-depth study of a topic supervised by a member of the graduate faculty. Pr.: Permission of supervising faculty member.

**BIOL 510. Developmental Biology.** (3) II. Introduction to the stages and mechanisms of embryonic animal development. Integrated approach that includes classic experimental embryology and the genetic and molecular regulation of invertebrate and vertebrate animal development. Three hours lec. per week. Pr.: BIOL 450.

**BIOL 670. Immunology.** (4) II. Chemical, genetic, and biological properties of the immune response, acquired immunity, and antibody production. Pr.: Two courses in biology; and a course in biochemistry or equiv.

**BIOL 671. Immunology Lab.** (2) II. Laboratory exercises in immunology. Pr.: BIOL 670 or conc. enrollment. Three-hour lab a week plus one hour rec.

**BIOL 705. Eukaryotic Genetics.** (3) I. An integrated exploration of transmission genetics and molecular genetics of eukaryotic organisms. The focus will be on genetic model organisms and their contributions to our understanding of mechanisms of genetic transmission and exchange, mutagenesis, gene expression, and regulation of cell division and development. Modern approaches to genomic analysis will be discussed. Pr.: BIOL 450 and BIOCH 521.

**BIOL 707. Advanced Cell Biology.** (3) I. Selected current topics in cell biology which reflect recent advances in the field. Major topics include membranes and transport, protein sorting, signal transduction, cell adhesion and motility, cell cycle, apoptosis, and specialized cell functions. Pr.: BIOL 541.

**BIOL 886. Confocal, Fluorescence and Light Microscopy.** (3) I, in odd years. An introduction to theories, functions and applications of confocal, fluorescence and light microscopy, and fluorescent

molecules. Lab emphasis on students working on independent research projects requiring microscopy. Two hours of lecture and three hours of lab per week.

**DMP 705. Principles of Veterinary Immunology.** (2) II. Innate and adaptive defense mechanisms in domestic animals. Topics include vaccinology, immunopathology, autoimmunity, immunodeficiency, and immunomodulation. Pr.: BIOCH 521 and BIOL 455

**DMP 850. Immunology of Domestic Animals.** (3) I. This course is designed to introduce graduate students to immune responses of domestic animals to pathogens and parasites. Pr.: BIOL 541.

**DMP 878. Applications of Flow Cytometry.** (1-3) I, II, S. Theory and practical experience in the use of flow cytometry in diagnosis and research. Pr.: Graduate standing.

**MANGT 845 Technology Entrepreneurship and Strategies.** (3)

No pre-requisites other than enrollment in graduate school. This is an evening course taught by Professor Katz and two practitioners in the technology entrepreneurship field.

**GRAD 820. Leadership Practicum.** (3) I, II. Develops the connections between leadership theory and practice. By conducting a practicum project, students demonstrate the ability to apply concepts and ideas from the study of leadership to a practical leadership problem within an organization. Pr.: GRAD 801 and MANGT 845. The practicum will be developed for stem cell certificate students with the theme “Leading an innovation to market”.

**PLPTH 610. Biotechnology.** (3) I. The use of biotechnology and molecular genetic approaches in plant and animal sciences. Emphasis is on the use of molecular techniques for plant and animal improvement. Three hours lec. per week. Pr.: ASI 500. Same as AGRON 610.

### **Requirements**

Students with graduate standing and a 3.0 GPA in a field in the biological sciences or with a cumulative GPA of 3.0 or higher in the DVM curriculum are eligible to enroll. Exceptions are possible upon approval by the coordinator in consultation with the faculty.

Fifteen hours are required:

AP850, ASI802, ASI902 and AP711 are required. ASI 902 may be taken either two or three times.

Any three of the remaining courses qualify for the remaining credit hour requirements. If BIOL707 is taken, BIOL541 may be required as a pre-requisite.

### **Meeting learning objectives**

The core courses (AP711, AP850, ASI802, ASI902) are designed to ensure a benchmark level of knowledge about stem cell biotechnology. Elective courses are intended to allow for: (1) specific advancement toward research competence in the field or (2) commercialization of stem cell and related technology.



Courses in the certificate may be included in graduate programs upon approval of the student's major professor and advisory committee. Inclusion of courses from other institutions and programs may be substituted for credit in the certificate in stem cell biotechnology with the approval of the program director in consultation with associated faculty.

### **Need for the proposed program**

Stem cell biotechnology and regenerative medicine are emerging as central to the future of human and animal medicine and animal production. A supply of new scientists in basic disciplines with orientation to, or specific training in, stem cell biotechnology will be a necessary part of advancing this area of science, especially as political and social issues are untangled. The research and entrepreneurship tracks provided in the program will allow career flexibility that is becoming an ever-greater necessity for students.

It seems evident that, at this stage of the Institute's development, a graduate level certificate is best suited to capitalize upon the on-going research and intellectual property development. Once a certificate program is successfully established and a significant track record has accrued, consideration will be given to proposal of an interdisciplinary degree. However that would be premature at this juncture and in the near future.

The target audience for the proposed certificate includes graduate students in all the biological sciences, specifically including animal science, veterinary medicine, biology and biochemistry. Also some residents in clinical medicine and surgery may find it advantageous to gain increased expertise in the rising field of regenerative medicine. In addition students in the DVM curriculum that have aspirations toward research or corporate careers would find the certificate in stem cell biotechnology valuable.

### **Organization and Administration**

The governing faculty for the certificate in stem cell biotechnology is comprised of the Kansas State University Founding Fellows of the Midwest Institute for Comparative Stem Cell Biology (see website <http://www.vet.ksu.edu/research/stemcell/index.htm>). The program director will be Duane L. Davis.

The administrative home of the certificate program will be the Institute. The governance of the Institute is explained on the website. Briefly, the Institute is situated administratively in the Office of the Vice President for Research. Oversight is provided by a liaison committee comprised of the Vice President for Research, the Dean of the College of Veterinary Medicine, the Dean of the College of Agriculture and the Vice Chancellor for Research of the University of Kansas Medical Center and an Executive Committee described in the website.

An extensive list of scientists and other faculty members are affiliated with the institute and are listed in the website. These individuals provide a ready source of highly qualified advisors to students in the certificate program.

### **Budget**

The budget is anticipated to be nominal in that all of these courses in the program will be taught for other purposes also.

### **Faculty**

The Founding Fellows of the institute at Kansas State University are Dr. Duane Davis, ASI; Dr. Deryl Troyer, AP; Dr. Mark Weiss, AP. These individuals, along with the program director, will supervise the program.

### **Program Director**

The program director will be Dr. Duane L. Davis, Professor of Animal Sciences and Industry.

### **Learning outcomes and assessment**

Learning outcomes and an assessment plan is attached.

### Cover Sheet for Student Learning Outcomes

**Directions:** For each program (e.g., degree, certificate, minor, secondary major, etc.) and level (undergraduate and graduate), please complete separate cover sheets. Feel free to make copies of this sheet if needed. Those graduate programs with an integrated master's and doctoral program may provide one set of cover sheets.

Department / Unit: Midwest Institute for Comparative Stem Cell Biology

Title of Academic Program: Graduate Certificate in Stem Cell Biotechnology

Faculty contact(s) for the list of student learning outcomes for this academic program:

Duane Davis \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Type of Degree (check one):

- Bachelor's       Master's       Ph.D.       Ed.D.  
 U. Certificate       Minor       Secondary major       Associate  
 G. Certificate  
 Joint Degree (list the degree types): \_\_\_\_\_  
 Other: \_\_\_\_\_

#### List of Student Learning Outcomes for this Degree Program

Please provide an attached list of learning outcomes or copy and insert them below.

1. Students completing the Graduate Certificate in Stem Cell Biotechnology will know cellular and molecular qualities that define stem cells; where stem cells may be found; and how stem cells can be isolated.
2. Students completing the Graduate Certificate in Stem Cell Biotechnology will possess the knowledge and skills that allow them to critically evaluate the peer-reviewed literature in stem cell biology.
3. Students completing the Graduate Certificate in Stem Cell Biotechnology will understand the emerging areas of application of stem cells in regenerative medicine and food animal health and production.
4. Students completing the Graduate Certificate in Stem Cell Biotechnology will possess skills in culture of mammalian stem cells.

5. Students completing the Graduate Certificate in Stem Cell Biotechnology will possess the knowledge, skills and social understanding to critically evaluate and articulate the range of ethical issues associated with stem cell biology.

Please check the description(s) that best reflect the information being submitted.

<input type="checkbox"/>	Faculty for The Midwest Institute for Comparative Stem Cell Biology have reviewed and endorse the list of student learning outcomes being submitted.	Date of Endorsement: _____
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\_\_\_\_\_  
Director, Midwest for Comparative Stem Cell Biology  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Dean of the Graduate School's Signature  
(Required for Graduate Degree Programs)

\_\_\_\_\_  
Date

**Template  
Degree Program  
Assessment of Student Learning Plan  
Kansas State University**

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X Check the box if your program's student learning outcomes have been modified since November 2003. If so, please email ([apr@ksu.edu](mailto:apr@ksu.edu)) or attach a hard copy to this document.

**College, Department, and Date**

Colleges: Veterinary Medicine and Agriculture

Department: Anatomy and Physiology; Animal Sciences and Industry

Date: February 23, 2007

**Contact Person(s) for the Assessment Plans**

Dr. Duane Davis

Degree Program

Graduate Certificate in Stem Cell Biotechnology

Assessment of Student Learning Three-Year Plan

**Student learning outcomes:**

- 1. Students completing the Graduate Certificate in Stem Cell Biotechnology will know cellular and molecular qualities that define stem cells; where stem cells may be found; and how stem cells can be isolated.*
- 2. Students completing the Graduate Certificate in Stem Cell Biotechnology will possess the knowledge and skills that allow them to critically evaluate the peer-reviewed literature in stem cell biology.*
- 5. Students completing the Graduate Certificate in Stem Cell Biotechnology will possess the knowledge, skills and social understanding to critically evaluate and articulate the range of ethical issues associated with stem cell biotechnology.*

Relationship to K-State Student Learning Outcomes (insert the program SLOs and check all that apply):

<b>Program SLOs</b>	<b>University-wide SLOs (Graduate Programs)</b>			<i>Program SLO is conceptually different from university SLOs</i>
	<i>Knowledge</i>		<i>Attitudes and Professional Conduct</i>	
<i>1. Know cellular and molecular qualities that define stem cells; where stem cells may be found; and how stem cells can be isolated.</i>				<i>Program SLO is consistent with University SLO.</i>
<i>2. Posses the knowledge and skills that allow them to critically evaluate the peer-reviewed literature in stem cell biology.</i>				<i>Program SLO is consistent with University SLO.</i>
<i>5. Posses the knowledge, skills and social understanding to critically evaluate and articulate the range of ethical issues associated with stem cell biology.</i>			X	<i>Program SLO is consistent with University SLO.</i>

**How will the learning outcomes be assessed? What groups will be included in the assessment?**

<b>Program SLOs</b>	<b>University-wide SLOs (Graduate Programs)</b>			<i>Program SLO is conceptually different from university SLOs</i>
	<i>Knowledge</i>	<i>Skills</i>	<i>Attitudes and Professional Conduct</i>	
<i>1. Know cellular and molecular qualities that define stem cells; where</i>	<i>1. Direct measure— Capstone exam.  2. Indirect measure—</i>			<i>Program SLO is consistent with University SLO.</i>

<i>stem cells may be found; and how stem cells can be isolated.</i>	<i>Career placement of certificate graduates.</i>			
<i>2. Posses the knowledge and skills that allow them to critically evaluate the peer-reviewed literature in stem cell biology.</i>	<i>1. Direct measure—Paper presentations and participation in paper discussions in ASI 902 Topic/Stem Cell Biotechnology.</i>	<i>1. Direct measure— Oral paper presentations and participation in paper discussions in ASI 902 Topic/Stem Cell Biotechnology.</i>		<i>Program SLO is consistent with University SLO.</i>
<i>5. Posses the knowledge, skills and social understanding to critically evaluate and articulate the range of ethical issues associated with stem cell Biotechnology.</i>			<i>1. Direct measure— Attitude survey administered in ASI 902 Topics/Stem Cell Biotechnology</i>	<i>Program SLO is consistent with University SLO.</i>

**When will these outcomes be assessed? When and in what format will the results of the assessment be discussed?**

*1. Students completing the Graduate Certificate in Stem Cell Biotechnology will know cellular and molecular qualities that define stem cells; where stem cells may be found; and how stem cells can be isolated.*

a. Upon completion of the coursework requirements for the Graduate Certificate in Stem Cell Biotechnology, all certificate seeking students will be expected to take a web-based comprehensive capstone exam covering fundamental aspects of stem cell biology (exam will be updated annually to reflect new developments in the field). Results of the exam will be shared with individual students upon completion. It is expected that students completing the Certificate will score 80 % or greater on the capstone exam. It is recommended that Ph.D. students take the exam prior to, or as a part of, their preliminary examinations and, at the discretion of their graduate committee, it could serve as a part of the determination of their readiness to enter candidacy for the Ph. D. degree.

b. Core scientists in teaching courses and conducting research through the Midwest Institute for Comparative Stem Cell Biology will be heavily engaged in training students that ultimately are awarded the Graduate Certificate in Stem Cell Biotechnology. It is expected that these students will secure employment in academia or allied industries in biomedical sciences. Therefore, placement of all graduate and DVM students after completion of their degrees will be tracked to gain indirect evidence

that the Certificate may be adding value to master, doctoral and DVM degrees. Data will be gathered via a web-based survey of graduates administered within 12 months of graduation.

2. *Students completing the Graduate Certificate in Stem Cell Biotechnology will possess the knowledge and skills that allow them to critically evaluate the peer-reviewed literature in stem cell biology.*
  - a. All students completing the Graduate Certificate will be required to enroll in ASI 902 Topics/Stem Cell Biotechnology. A rubric has been developed (attached) to assess student's working knowledge of stem cell biology as well as their oral communication skills in discussing stem cell biology.
3. *Students completing the Graduate Certificate in Stem Cell Biotechnology will understand and have the skills to articulate the emerging areas of application of stem cells in regenerative medicine and food animal health and production.*
4. *Students completing the Graduate Certificate in Stem Cell Biotechnology will possess skills in culture of mammalian stem cells.*
5. *Students completing the Graduate Certificate in Stem Cell Biotechnology will possess the knowledge, skills and social understanding to critically evaluate and articulate the range of ethical issues associated with stem cell biology.*
  - a. All students will complete a survey that evaluates attitudes toward the diversity of ethical views surrounding the use of stem cells in animal research and therapeutics. The ability of students to be tolerant and understanding of diverse views will make them more effective professionals once in the workplace. This web-based survey will be updated annually to include developing concerns and views and will be administered to all students in their first semester of enrollment in ASI 802 and again in their final semester in ASI 902 (coincident with completion of the coursework requirements for the Certificate). Completion of both surveys will be a requirement for successful completion of the Certificate.

#### **What is the unit's process for using assessment results to improve student learning?**

The faculty coordinator for ASI 902 in each fall semester offering of the course will be responsible for summarizing assessment data for Certificate graduates from the previous academic year, as well as comprehensive data accumulated from all Certificate graduates (at least three years may be required to accumulate sufficient numbers of Certificate graduates to obtain some measure of reliability of the data). The data will be presented to both core faculty and graduate students sometime during the first four meetings of ASI 902. The data will be discussed (among faculty and students) and where results of assessment point to failure to attain the expected outcome, a corrective course of action will be recommended. This course of action may point to appropriate changes in curriculum and(or) fine tuning of assessment tools.



**ATTACHMENT 3**  
**ACADEMIC FRESH START GPA AND ACADEMIC FORGIVENESS GPA POLICY**  
**CAPP POLICY – APPROVED BY CAPP ON 9-12-07**  
**APPROVED BY ACADEMIC AFFAIRS ON 9-18-07**

**Expanded Rationale Statements for Recommended Changes to Academic Fresh Start Policy**  
**(now includes the additional Academic Forgiveness Policy)**

1. Although the numbers are small, since the Academic Fresh Start policy was initiated it has helped students with retention and persistence to graduation. There have been 140 students granted this option between 1997 and 2006, and the vast majority of these students who have benefited from Academic Fresh Start have graduated.
2. The addition of the Academic Forgiveness policy will minimize academic penalties to students who are subject to extenuating circumstances beyond their control, which have caused drastic changes to their academic performance for one or two consecutive semesters.
3. The resulting action of the Academic Fresh Start and Academic Forgiveness policies does not change grades or the cumulative GPA. The effect of these policies is to provide a second GPA (Academic Fresh Start GPA or Academic Forgiveness GPA) that excludes the effect of a student's atypical performance caused by situations considered by these two policies. This second GPA is therefore a truer expression of a student's academic abilities and performance.
4. The Academic Fresh Start GPA and the Academic Forgiveness GPA would remove the undesirable stigma of a GPA below a student's abilities, and may allow under specified conditions the consideration of the student for university academic honors, scholarships, and professional programs. Some GPA requirements would not be affected, such as graduate school requirements and those leading to teacher licensure.
5. Having a written policy in place will create a consistent guideline to be used across colleges. Students and advisors will be aware that Academic Forgiveness is an option for students for whom extenuating circumstances caused drastic changes to their academic performance.
6. In order to be in line with the current Academic Dismissal Policy (12 hours with 2.2 semester GPA for immediate reinstatement), the proposed semester GPA required to apply for either of the Academic Fresh Start and Academic Forgiveness policies is a 2.2 (whereas the present Academic Fresh Start policy requires a 2.5 GPA).
7. A student may apply only once, and to only one or the other policy, and the process cannot be reversed.
8. Deans or their designees will still have the discretion to approve or not approve an application for Academic Fresh Start or Academic Forgiveness.

# ACADEMIC FRESH START GPA POLICY and ACADEMIC FORGIVENESS GPA POLICY

Approved by CAPP 9-12-07

The **Academic Fresh Start** and *Academic Forgiveness* Policies enable an undergraduate student to neutralize, in part, the grade impact of prior academic performance. **Academic Fresh Start** and *Academic Forgiveness* provide for the computation of an alternative GPA and for the use of that GPA in most academic situations. A student may apply only once, and to only one or the other, and the process cannot be reversed. A student may not apply for either policy until he or she has been reinstated into his or her college.

**I.** Conditions for a readmitted student to be eligible to apply for **Academic Fresh Start** are:

- A) The student was not enrolled in a K-State course for three (3) calendar years prior to readmission.
- B) After readmission, the student earned a K-State GPA of 2.2<sup>1</sup> or higher at the end of the academic session in which the twelfth credit was earned.
- C) Up to 60 consecutive hours<sup>2</sup> of course work and K-State GPA may be restricted from the regular GPA calculation. The beginning point for the **Academic Fresh Start** GPA shall be the first, second, third, fourth, or fifth<sup>3</sup> academic semester of enrollment following the student's initial K-State date of entry. The choice of the starting point is designated by the student at the time of application for **Academic Fresh Start** and hours excluded from the calculation must be consecutive.

**II.** Conditions for a student to be eligible to apply for *Academic Forgiveness* are:

- A) The student experienced one or more extenuating circumstances which caused a drastic change to the student's academic performance in one or two semesters.
- B) After the session(s) affected by the extenuating circumstance, the student earned a K-State GPA of 2.2 or higher at the end of the academic session in which the twelfth credit was earned.
- C) Grades from up to two (2) consecutive semesters may be excluded from the regular cumulative GPA calculation.<sup>4</sup>
- D) The student's dean or designee may request documentation confirming the extenuating circumstances with the application for *Academic Forgiveness*.

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<sup>1</sup> Rationale: This is the GPA standard to which all students are held in the Academic Dismissal Policy.

<sup>2</sup> Rationale: This change will accommodate students who do not take traditional full-time semesters.

<sup>3</sup> Rationale: This change will accommodate students who do not take traditional full-time semesters.

<sup>4</sup> Rationale: It is assumed that the negative impact of the extenuating circumstance(s) will be diminished within two semesters.

**III.** The calculation and reporting of **Academic Fresh Start** or *Academic Forgiveness* GPA and their uses in academic evaluation are:

- A) **Academic Fresh Start** or *Academic Forgiveness* deletes nothing from the student's academic record. Grades earned before the **Academic Fresh Start** or *Academic Forgiveness* will remain on the transcript along with the cumulative GPA for all hours taken.
- B) The transcript will clearly indicate the starting point of the **Academic Fresh Start/Academic Forgiveness** as well as the **Academic Fresh Start/Academic Forgiveness** GPA.
- C) University-wide academic policies based on a cumulative GPA generally will use the **Academic Fresh Start** or *Academic Forgiveness* GPA. However, academic programs are not required to use **Academic Fresh Start** or *Academic Forgiveness* GPAs. Some programs, such as those in the graduate school or those leading to teacher licensure, may use all grades for the calculation of the GPA.
- D) In order for students in the **Academic Fresh Start** or *Academic Forgiveness* program to be eligible for university academic honors, they must complete a minimum of 60 hours in residence, with at least 50 hours in graded courses after the **Academic Fresh Start** or *Academic Forgiveness* begins. Other academic policies will not be affected.

**IV.** Procedures for applying for **Academic Fresh Start** or *Academic Forgiveness* are:

- A) A student applies for **Academic Fresh Start** GPA or *Academic Forgiveness* GPA through the deans or their designees of the college in which the student is enrolled.
- B) A student must apply no later than the academic term prior to the one when the degree will be granted. (Students wishing to apply are encouraged to do so as soon as possible after qualifying).
- C) When applying, the student must indicate the point at which he or she wishes the **Academic Fresh Start** or *Academic Forgiveness* GPA to begin.
  - 1. For readmitted students applying for **Academic Fresh Start**, the choices are: the end of the first, second, third, fourth or fifth semester, following the student's initial K-State date of entry.
  - 2. For students who experienced extenuating circumstances and are applying for *Academic Forgiveness*, the semester(s) will be selected in consultation with the deans or their designees.

## ATTACHMENT 4

### KANSAS STATE UNIVERSITY ACADEMIC CALENDAR Fall 2008 through Summer 2013

<b>Fall Semester</b>	<b>Fall 2008</b>	<b>Fall 2009</b>	<b>Fall 2010</b>	<b>Fall 2011</b>	<b>Fall 2012</b>
First Day of Classes	Aug 25 M	Aug 24 M	Aug 23 M	Aug 22 M	Aug 20 M
University Holiday	Sept 1 M	Sept 7 M	Sept 6 M	Sept 5 M	Sept 3 M
Student Holiday (Fall Break)	Oct 6 M	Oct 5 M	Oct 4 M	Oct 3 M	Oct 1 M
Student Holiday	Nov 26-28 W-F	Nov 25-27 W-F	Nov 24-26 W-F	Nov 23-25 W-F	Nov 21-23 W-F
University Holiday	Nov 27-28 U-F	Nov 26-27 U-F	Nov 25-26 U-F	Nov 24-25 U-F	Nov 22-23 U-F
Last Day of Classes	Dec 12 F	Dec 11 F	Dec 10 F	Dec 9 F	Dec 7 F
Commencement	Dec 12, 13 F, S	Dec 11-12 F, S	Dec 10-11 F, S	Dec 9-10 F, S	Dec 7-8 F, S
First Day of Exams	Dec 15 M	Dec 14 M	Dec 13 M	Dec 12 M	Dec 10 M
Last Day of Exams	Dec 19 F	Dec 18 F	Dec 17 F	Dec 16 F	Dec 14 F
Class Days – Exam Days	75 - 5	75-5	75-5	75-5	75-5
Total Days of week	M-14, T-16, W-15, U-15, F-15	M-14, T-16, W-15, U-15, F-15	M-14, T-16, W-15, U-15, F-15	M-14, T16, W-15, U-15, F-15	M-14, T16, W-15, U-15, F-15
<b>Spring Semester</b>	<b>Spring 2009</b>	<b>Spring 2010</b>	<b>Spring 2011</b>	<b>Spring 2012</b>	<b>Spring 2013</b>
First Day of Classes	Jan 15 U	Jan 14 U	Jan 13 U	Jan 12 U	Jan 17 U
University Holiday	Jan 19 M	Jan 18 M	Jan 17 M	Jan 16	Jan 21 M
Student Holiday (Spring Break)	Mar 16-20 M-F	Mar 15-19 M-F	Mar 21-25 M-F	Mar 19-23 M-F	Mar 18-22 M-F
Last Day of Classes	May 8 F	May 7 F	May 6 F	May 4 F	May 10 F
First Day of Exams	May 11 M	May 10 M	May 9 M	May 7 M	May 13 M
Last Day of Exams	May 15 F	May 14 F	May 13 F	May 11 F	May 17 F
Commencement	May 15, 16 F, S	May 14, 15 F, S	May 13, 14 F, S	May 11, 12 F-S	May 17-18 F, S
Class Days – Exam Days	76 - 5	76-5	76-5	76-5	76-5
Total Days of week	M-14, T-15, W-15, U-16, F-16	M-14, T-15, W-15, U-16, F-16	M-14, T-15, W-15, U-16, F-16	M-14, T-15, W-15, U-16, F-16	M-14, T-15, W-15, U-16, F-16
<b>Summer Semester</b>	<b>Summer 2009</b>	<b>Summer 2010</b>	<b>Summer 2011</b>	<b>Summer 2012</b>	<b>Summer 2013</b>
First Day of 1st 6-wk Class	May 26 T	May 24 M	May 23 M	May 21 M	May 28 T
University Holiday	May 25 M	May 31 M	May 30 M	May 28 M	May 27 M
First Day of 8-wk /1st 4-wk Class	June 8 M	June 7 M	June 6 M	June 4 M	June 10 M
Last Day of 1st 4-wk/6-wk Class	July 2 U	July 2 F	July 1 F	June 29 F	July 5 F
First Day 2nd 4-wk/6-wk Class	July 6 M	July 6 T	July 5 T	July 2 M	July 8 M
University Holiday	July 3 F	July 5 M	July 4 M	July 4 W	July 4 U
Last Day of 8-wk/2nd 4-wk Class	July 31 F	July 30 F	July 29 F	July 27 F	Aug 2 F
Last Day of 2nd 6-wk Class	Aug 14 F	Aug 13 F	Aug 12 F	Aug 10 F	Aug 16 F
Class days:					
8-week class	39	39	39	39	39
1 <sup>st</sup> 6-week class	28	29	29	29	28
2 <sup>nd</sup> 6-week class	30	29	29	29	30
1 <sup>st</sup> 4-week class	19	20	20	20	19
2 <sup>nd</sup> 4-week class	20	19	19	19	20

N – Sunday, M – Monday, T – Tuesday, W – Wednesday, U – Thursday, F- Friday, S – Saturday

<b>Intersession **</b>	<b>F08 – U09</b>	<b>F09-U10</b>	<b>F10-U11</b>	<b>F11-U12</b>	<b>F12-U13</b>
January Intersession	Dec 29 – Jan 14	Dec 28 – Jan 13	Dec 27 – Jan 12	Dec 27 - Jan 11	Dec 27 - Jan 16
May Intersession	May 18 – June 5	May 17 – Jun 4	May 16 - Jun 3	May 14 - Jun 1	May 20 - Jun 7
August Intersession	Aug 3 – Aug 21	Aug 2 – Aug 20	Aug 1 - Aug 19	July 30 - Aug 17	Aug 5 - Aug 21

These dates are subject to any semester changes in beginning and ending dates.

#### LEGEND

Dates not highlighted above have been approved by K-State and the Kansas Board of Regents.

Dates highlighted in grey denote calendar dates that were approved by Academic Calendar Committee, and submitted but not yet approved by Faculty Senate.