Missouri State University
CURRICULAR PROPOSAL
NEW COURSE (or new REGULAR SECTION of an existing variable content course)

Department: Biology

Date: October 25, 2011

Check one: X New COURSE ___ New REGULAR (i.e. permanent) SECTION of an existing variable content course. If a new regular section of an existing variable topics course, to what existing course is it to be attached: __________

PROPOSED CATALOG DESCRIPTION

BIO 505 Human Nature

Prerequisites: BIO 235 or BMS 230 or BMS 231; and PSY 121. A survey of current biological research on the behavioral, psychological, and cognitive dimensions of human biology. This course emphasizes the evolution and function of human social behaviors and value systems, but also addresses the genetics of human psychological diversity, the genetics of human-ape divergence, and the neurobiology of human cognition. May be taught concurrently with BIO 605. Cannot receive credit for both BIO 505 and BIO 605. 3(3-0) F.

PURPOSE OF COURSE

This course will provide a biological perspective on what it means to be human. Students will reflect on how our biological heritage guides and constrains human values, human perceptions, and the conduct of human affairs. The course will target biology students with a particular interest in human biology, such as pre-health students, as well as students interested in evolutionary biology. It is hoped that this course will also attract students from the humanities (especially anthropology, sociology, psychology, and philosophy) and encourage them to explore more extensively the biological foundations upon which their disciplines rest.

RELATIONSHIP TO OTHER DEPARTMENTS

Some of the topics to be covered in this course are introduced briefly as minor components of existing MSU courses, including ANT 365 (human variation), PSY 336 (ethology), PSY 521 (physiological psychology), and PSY 525 (motivation and emotion). These existing courses are taught at a level that requires little or no background in biology, and none of these courses has as its central focus any of the major topics to be covered in the proposed new course. Because of the cross-discipline interest in human nature, the existence of this course may encourage more students in the humanities to minor in Biology.

DEPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty. Attach New Course Resource Information form (FS 300a/05) and forward three typed, originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If the course needs to go through more than one council/committee forward one additional form for each additional council/committee marked.

X College Council

(All new course proposals numbered 100-599 must go through College Council first. After approval, College Council will forward appropriate number of copies to the next committee/council or directly to the Faculty Senate if no further committee approval is needed.)

Professional Education Committee

(Considers all new courses affecting BS and MS in Education and Educational Specialist degrees)

Committee on General Education and Intercollegiate Programs

(Considers all general education and multi-college new course proposals)

Graduate Council

(Considers all 600-, 700-, and 800-level new courses)

*If the course needs to go through more than one council/committee, forward one additional form for each additional council/committee marked.

Signature: [Signature]
Department Head

(Routing on Reverse Side)  FS New Course - 9/10/2010

Date: 10-25-11
NEW COURSE RESOURCE INFORMATION

Department: Biology
Date: October 25, 2011

Course Number and Title: BIO 505 Human Nature

Anticipated Average Enrollment: 15
Maximum Enrollment Limit: 45 (combined with BIO 605)

Faculty Load Assignment: 3
Equate Hours

1. Is another course being deleted? If so, give course number and title.
   No

2. What will this course require in the way of:
   - Additional library holdings? None
   - Additional computer resources? None
   - Additional or remodeled facilities? None
   - Additional equipment or supplies? None
   - Additional travel funds? None
   - Additional faculty—general vs specialized? None
   - Other additional expenses? None

3. If additional faculty are not required, how will faculty be made available to teach this course?
   Two existing courses with relatively low enrollment (BIO 540/650 and BIO 560/659) will be taught less frequently.

   List names of current faculty qualified to teach this course:
   John Heywood

4. What is the anticipated source of students for this course? (If from within the department, will students be taking this course in addition to or in place of other courses? If from outside the department, which courses in other departments would most likely be affected?)
   It is anticipated that most of the students in this course will be Biology majors and minors. For these students, this course will be taken to satisfy the elective requirements in BIO. It is anticipated that the enrollment impact of this course will be spread across many BIO courses that are commonly taken to satisfy BIO elective requirements, and that the impact will therefore not be high for any one BIO course. This course should attract mostly pre-health students with interests in human biology, and students interested in evolutionary biology.

5. Other comments:
Missouri State University
CURRICULAR PROPOSAL
NEW COURSE (or new REGULAR SECTION of an existing variable content course)

Department ___________________________ Date ________________________

Check one: X New COURSE _____New REGULAR (i.e. permanent) SECTION of an existing variable content course. If a new regular section of an existing variable topics course, to what existing course is it to be attached? ________________

PROPOSED CATALOG DESCRIPTION

BIO 605 Human Nature

Recommended prerequisites: general biology with evolution; genetics; college algebra; introductory psychology. A survey of current biological research on the behavioral, psychological, and cognitive dimensions of human biology. This course emphasizes the evolution and function of human social behavior and value systems, but also addresses the genetics of human psychological diversity, the genetics of human-ape divergence, and the neurobiology of human cognition. May be taught concurrently with BIO 505. Cannot receive credit for both BIO 505 and BIO 605. 3(3-0) F.

PURPOSE OF COURSE

This course will provide a biological perspective on what it means to be human. Students will reflect on how our biological heritage guides and constrains human values, human perceptions, and the conduct of human affairs. The course will target biology graduate students with a particular interest in human biology, such as those preparing for professional health schools, as well as those interested in evolutionary biology.

RELATIONSHIP TO OTHER DEPARTMENTS

There are no existing MSU graduate courses that address the evolution and genetics of human behavior. PSY 622 (physiological psychology) provides a general introduction to human neurological architecture and function that assumes no background in biology.

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_____ Professional Education Committee (Considers all new courses affecting BS and MS in Education and Educational Specialist degrees)

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_____ Graduate Council (Considers all 600-, 700-, and 800-level new courses)

*If the course needs to go through more than one council/committee, forward one additional form for each additional council/committee marked.

Signature ___________________________ Date ________________________

Department Head

(Routing on Reverse Side) FS New Course - 9/10/2010
NEW COURSE RESOURCE INFORMATION

Department Biology Date October 25, 2011

Course Number and Title BIO 605 Human Nature

Anticipated Average Enrollment 3 Maximum Enrollment Limit 45 (combined with BIO 505)

Faculty Load Assignment 3 Equated Hours

1 Is another course being deleted? If so, give course number and title.

No

2 What will this course require in the way of:

   Additional library holdings? None

   Additional computer resources? None

   Additional or remodeled facilities? None

   Additional equipment or supplies? None

   Additional travel funds? None

   Additional faculty—general vs specialized? None

   Other additional expenses? None

3 If additional faculty are not required, how will faculty be made available to teach this course?

   Two existing courses with relatively low enrollment (BIO 540/650 and BIO 560/659) will be taught less frequently.

   List names of current faculty qualified to teach this course:

   John Heywood

4 What is the anticipated source of students for this course? (If from within the department, will students be taking this course in addition to or in place of other courses? If from outside the department, which courses in other departments would most likely be affected?)

   It is anticipated that most of the students in this course will be MS students in the Biology department who are preparing for professional health school, are conducting biomedical research, or are working in the area of evolutionary biology. It is expected that this course will attract mostly undergraduate students (who will enroll in BIO 505). The small enrollment impact of the graduate course is not likely to be concentrated on any particular existing graduate course.

5 Other comments:
PROPOSAL FOR NEW GRADUATE COURSE

Recommended by: 

Department Head

Date

College Dean

Date

Associate Provost and Dean

Date

I Course number and title:

BIO 605 Human Nature

II Proposed catalog description:

Recommended prerequisites: general biology with evolution; genetics; college algebra; introductory psychology. A survey of current biological research on the behavioral, psychological, and cognitive dimensions of human biology. This course emphasizes the evolution and function of human social behaviors and value systems, but also addresses the genetics of human psychological diversity, the genetics of human-ape divergence, and the neurobiology of human cognition. May be taught concurrently with BIO 505. Cannot receive credit for both BIO 505 and BIO 605. 3(3-0) F.

III How does this course strengthen or contribute to the overall graduate curriculum or to a particular graduate program?

Many graduate students in the biological sciences are interested in research with biomedical applications, and thus have a particular interest in human biology. Notably absent from our curriculum is a course that addresses the cognitive and behavioral aspects of human biology at a level that is appropriate for biology students. Furthermore, it is not possible to understand human cognition and behavior without putting it into an evolutionary context, so this course will require students with interests in human health to think deeply about our evolutionary heritage and its consequences for health care and health management. For graduate students interested in evolutionary biology, this course will provide an opportunity to delve deeply into selected topics such as evolutionary game theory and the interaction between biological and cultural evolution. Students will read and write about both primary and secondary literature, and approximately one-third of class meetings will be devoted to seminar-style open discussion. Thus, students will gain important experience in critical reading, writing, and discussion.

IV Objectives of the course:

- Review the literature on the heritability of human psychological and cognitive traits.
- Review the literature comparing the human and chimpanzee genomes.
- Understand basic brain architecture and functional mapping.
- Understand the nature of neural networks and how their operation differs from that of a digital computer.
- Review recent research on the role of emotions in rational thought.
- Understand the mechanisms by which cooperative and altruistic behavior can evolve.
- Introduce evolutionary game theory as a tool for predicting when short-term cooperative vs. selfish behaviors are expected to be expressed.
- Review the literature that documents the role of reciprocity in the evolution of human cooperative behavior.
- Discuss the interaction of biological evolution and cultural evolution in shaping modern social norms.
- Understand the mechanisms by which mating systems evolve.
- Read and discuss primary and secondary literature in which various predictions of evolutionary psychology are tested using data from human subjects.
V  Special projects if any:

Students will be required to write synopses of selected readings and participate in classroom discussions of readings.

VI  Evaluative techniques:

- Frequent short quizzes over lecture material
- Grades assigned to written synopses of selected assigned readings
- Qualitative assessment of participation during class discussions.

VII  What other departments and/or agencies were consulted in the process of creating the course?

- Psychology
- Anthropology
- Philosophy

VIII  Course outline (course content should support specific objectives of course):

<table>
<thead>
<tr>
<th>Topic</th>
<th>Number of class meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>1</td>
</tr>
<tr>
<td>Heritability of psychological and cognitive traits</td>
<td>2</td>
</tr>
<tr>
<td>Human-Chimpanzee genome comparisons</td>
<td>1</td>
</tr>
<tr>
<td>Demonstrations of subjectivity in visual perception</td>
<td>2</td>
</tr>
<tr>
<td>Basic neurophysiology</td>
<td>4</td>
</tr>
<tr>
<td>Brain architecture (anatomy and neural networks)</td>
<td>2</td>
</tr>
<tr>
<td>Confidence and induction</td>
<td>1</td>
</tr>
<tr>
<td>Open discussion of readings on the role of emotions in rationality</td>
<td>3</td>
</tr>
<tr>
<td>Consciousness</td>
<td>2</td>
</tr>
<tr>
<td>Introduction to human sociobiology aka evolutionary psychology</td>
<td>1</td>
</tr>
<tr>
<td>Evolution by natural selection</td>
<td>4</td>
</tr>
<tr>
<td>Evolutionary game theory</td>
<td>4</td>
</tr>
<tr>
<td>Sexual selection and mating system evolution</td>
<td>2</td>
</tr>
<tr>
<td>Human reproductive behavior</td>
<td>2</td>
</tr>
<tr>
<td>Open discussion of readings on the role of reciprocity in human cooperation</td>
<td>3</td>
</tr>
<tr>
<td>Open discussion of experimental studies in evolutionary psychology</td>
<td>9</td>
</tr>
</tbody>
</table>

IX  Basic bibliography:


Churchland, P.M. *The Engine of Reason, the Seat of the Soul: A Philosophical Journey into the Brain*. MIT Press, Cambridge.


Professional Journals:

1. Behavioral and Brain Sciences
2. Brain, Behavior and Evolution
3. Cognitive Science
4. Evolution and Human Behavior
5. Evolutionary Anthropology
6. Evolutionary Psychology
7. Frontiers in Evolutionary Neuroscience
8. Genes, Brain and Behavior
9. Journal of Social, Evolutionary, and Cultural Psychology
Missouri State University
CURRICULAR PROPOSAL
NEW COURSE (or new REGULAR SECTION of an existing variable content course)

Department _______________ Chemistry ___________________________ Date __10/31/2011_____________________

Check one: ___X___ New COURSE ___ New REGULAR (i.e. permanent) SECTION of an existing variable content course. If a new regular section of an existing variable topics course, to what existing course is it to be attached? __________

PROPOSED CATALOG DESCRIPTION

CHM 492 Program Assessment
Prerequisite: senior status chemistry major and permission of department head. Required assessment of undergraduate Comprehensive and Non-comprehensive chemistry majors, who are required to enroll in this course during their final semester and complete a comprehensive assessment exam, as administered by the department. Graded Pass/Not Pass only. 0 F,S

PURPOSE OF COURSE

The chemistry department wishes to continue assessing our graduating majors via administration of a comprehensive assessment examination, typically the chemistry Major Field Achievement Test (MFAT). However, administration of the MFAT is currently strictly coupled to taking CHM498 Chemistry Careers. Students have expressed a strong desire to be able to take CHM498 earlier than their graduating semester to prepare them for the job application process. Therefore the department wishes to decouple this course from completing the MFAT. We are therefore following the model of the Political Science department which has a zero credit course explicitly for administration of a comprehensive assessment exam such as the MFAT.

RELATIONSHIP TO OTHER DEPARTMENTS

This new course will only affect chemistry majors.

DEPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty. Attach New Course Resource Information form (FS 300a/05) and forward three typed, originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If the course needs to go through more than one council/committee forward one additional form for each additional council/committee marked.

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___ Professional Education Committee (Considers all new courses affecting BS and MS in Education and Educational Specialist degrees)

___ Committee on General Education and Intercollegiate Programs (Considers all general education and multi-college new course proposals)

___ Graduate Council (Considers all 600-, 700-, and 800-level new courses)

*If the course needs to go through more than one council/committee, forward one additional form for each additional council/committee marked.

Signature ___________________________ Date __10/31/2011_____________________

(Routing on Reverse Side)  FS New Course - 9/10/2010

Department Head
NEW COURSE RESOURCE INFORMATION

Department: Chemistry
Date: 10/31/2011

Course Number and Title: CHM 492, Program Assessment

Anticipated Average Enrollment: 10-15/semester
Maximum Enrollment Limit: 32

Faculty Load Assignment: portion of one (1) Equated Hours

1. Is another course being deleted? No

2. What will this course require in the way of:
   - Additional library holdings? No
   - Additional computer resources? No
   - Additional or remodeled facilities? No
   - Additional equipment or supplies? No
   - Additional travel funds? No
   - Additional faculty--general vs specialized? No
   - Other additional expenses? No

3. If additional faculty are not required, how will faculty be made available to teach this course? This course will carry a portion of a one hour load for faculty member, who will arrange the acquisition of the exams from the Assessment Division of FCTL, administer the exams, and evaluate the results.

   List names of current faculty qualified to teach this course: All faculty (instructors, Assistant, Associate and Full Professors) are qualified to teach this course.

4. What is the anticipated source of students for this course? (If from within the department, will students be taking this course in addition to or in place of other courses? If from outside the department, which courses in other departments would most likely be affected?)

   This course will be required of all chemistry majors (comprehensive and non-comprehensive)

5. Other comments:
Check one: This is a change to \( \textbf{X} \) an existing COURSE
_____ an existing REGULAR (i.e. permanent) SECTION of a variable content course

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<tr>
<td><strong>CHM 160 General Chemistry I</strong></td>
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</tr>
<tr>
<td>Prerequisite: eligibility for MTH 135 or higher. General Education Course (Natural World). Emphasis on fundamental and theoretical concepts of chemistry. Recommended for all science majors, chemistry majors and minors, and most preprofessional students. Concurrent enrollment in CHM 161 is highly recommended. A grade of &quot;C-&quot; or better is required in this course in order to take CHM 170, CHM 171, or CHM 200. May not be taken Pass/Not Pass. 4(4-0) F,S</td>
<td>Prerequisite: eligibility for MTH 135 138 or higher. General Education Course (Natural World). Emphasis on fundamental and theoretical concepts of chemistry. Recommended for all science majors, chemistry majors and minors, and most preprofessional students. Concurrent enrollment in CHM 161 (General Chemistry I Laboratory) is highly recommended. A grade of &quot;C-&quot; or better is required in this course in order to take CHM 170, CHM 171, or CHM 200. May not be taken Pass/Not Pass. 4(4-0) F,S</td>
</tr>
</tbody>
</table>

What is changing? Check all boxes that apply.

- Course Deletion
- Course Code
- Course Number
- Title
- Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- X Description

Reason for Proposed Change or Deletion

Some students registering for CHM160 did not understand that 161 was the lab course that they should be taking.

Additionally, the change for prerequisite of MTH135 to MTH138 has already been approved but is not in the current catalog, and needs to be included in the course description as well for internal consistency.

How Did You Determine the Need For This Change or Deletion?

This change will clarify information for both advisors and students intending to take CHM160.

COMPLETE NEW CATALOG INFORMATION (typed)

**CHM 160 General Chemistry I**

Prerequisite: eligibility for MTH 138 or higher. General Education Course (Natural World). Emphasis on fundamental and theoretical concepts of chemistry. Recommended for all science majors, chemistry majors and minors, and most preprofessional students. Concurrent enrollment in CHM 161 (General Chemistry I Laboratory) is highly recommended. A grade of "C-" or better is required in this course in order to take CHM 170, CHM 171, or CHM 200. May not be taken Pass/Not Pass. 4(4-0) F,S

___ Check if this is a non-substantive change. Distribution for non-substantive changes of 100- through 500-level courses: two originally-signed copies to Faculty Senate; 600- through 900-level courses: three originally-signed copies to Graduate Council. Graduate Council will give two copies to Faculty Senate after approval.

Substantive Change: Department routes according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty. Forward three originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If proposal needs to go through more than one council/committee, forward one additional form for each additional council/committee marked. See Senate Action 11-93/94 for definitions of substantive/non-substantive changes.

- **X** College Council
- Professional Education Committee
- Committee on General Education and Intercollegiate Programs
- Graduate Council

Signature ____________________________ Date 10/31/2011

(Routing on Reverse Side)
Missouri State University
Curricular Proposal Course Change or Deletion

Department CHM

Date 10/31/2011

Check one: This is a change to ___X__ an existing COURSE
____ an existing REGULAR (i.e. permanent) SECTION of a variable content course

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<tr>
<td>CHM 498 Chemistry Careers</td>
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<td>Prerequisite: senior status chemistry major and permission of department head. Taken during second semester senior year. Successful completion of the chemistry assessment test will be required. Writing scientific resumes and cover letters, discussion of chemistry careers, graduate school, job-hunting resources and professional ethics. Outside speakers from chemistry-related employers will be invited. Interaction with the Career Center will be required. 1(1-0) F,S</td>
<td>Prerequisite: senior status chemistry major and permission of department head. Taken during second semester senior year. Successful completion of the chemistry assessment test will be required. CHM 398 and 60 total hours completed. Writing scientific resumes and cover letters, discussion of chemistry careers, graduate school, job-hunting resources and professional ethics. Outside speakers from chemistry-related employers will be invited. Interaction with the Career Center will be required. 1(1-0) F,S</td>
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What is changing? Check all boxes that apply.

- Course Deletion
- Course Code
- Course Number
- Title
- X Prerequisite
- Credit Hours/Contact Hours
- Periodicity
- X Description

Reason for Proposed Change or Deletion
The department is de-coupling this course from completion of the chemistry assessment test (MFAT), and allowing students to take this course earlier than second semester of their senior year.

How Did You Determine the Need For This Change or Deletion?
Recent graduating students have expressed a strong desire to have this course available earlier. But the department still wishes to administer the MFAT. We are therefore removing its requirement from CHM498 and developing a new, zero-credit course (CHM492) which will now administer the MFAT (see related documentation).

COMPLETE NEW CATALOG INFORMATION (typed)

CHM 498 Chemistry Careers

Prerequisite: CHM 398 and 60 total hours completed. Writing scientific resumes and cover letters, discussion of chemistry careers, graduate school, job-hunting resources and professional ethics. Outside speakers from chemistry-related employers will be invited. Interaction with the Career Center will be required. 1(1-0) F,S

Check if this is a non-substantive change. Distribution for non-substantive changes of 100- through 500-level courses: two originally-signed copies to Faculty Senate; 600- through 900-level courses: three originally-signed copies to Graduate Council. Graduate Council will give two copies to Faculty Senate after approval.

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- X__ College Council
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Professional Education Committee
  (Considers all substantive course changes for Professional Education courses and Teaching Methods courses.)

Committee on General Education
  and Intercollegiate Programs
  (Considers all substantive course changes for General Education and Intercollegiate Program proposals.)

Graduate Council
  (Considers all 600-900 level course changes.)

Signature

Department Head

Date 10/31/2011

(Routing on Reverse Side)

FS Course Change - 9/10/2018
Missouri State University  
Curricular Proposal Course Change or Deletion  

Department: CHM  
Date: 10/31/2011

Check one: This is a change to ___ an existing COURSE  
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CHM 533 Advanced Analytical Methods
Prerequisite: "C" or better in CHM 302. Principles and techniques of modern instrumental methods used in chemical analysis, with emphasis on the fundamental physical and chemical theories and principles. Topics covered include atomic and molecular spectroscopy, electrochemistry, mass spectrometry, and separations. May be taught concurrently with CHM 633. Cannot receive credit for both CHM 533 and CHM 633. 4(3-3), F

What is changing? Check all boxes that apply.
- X Course Deletion  
- Course Code  
- Course Number  
- Title  
- Prerequisite  
- Credit Hours/Contact Hours  
- Periodicity  
- Description  

Reason for Proposed Change or Deletion:
This course is no longer taught, and the material has been incorporated into other courses (CHM502/602). Materials for deleting CHM633 have been included as a courtesy.

How Did You Determine the Need For This Change or Deletion?
This course is no longer taught, and the material has been incorporated into other courses (CHM502/602)

COMPLETE NEW CATALOG INFORMATION (typed)

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(Considers all substantive course changes for General Education and Intercollegiate Program proposals.)

Graduate Council
(Considers all 600-900 level course changes.)

Signature: [Signature]  
Department Head: [Department Head]  
(Routing on Reverse Side)  
Date: 10/31/2011  

FS Course Change - 9/10/2010
Missouri State University  
Curricular Proposal Course Change or Deletion  

Department: CHM  
Date: 10/31/2011

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What is changing? Check all boxes that apply.  
X Course Deletion  
☐ Course Code  
☐ Course Number  
☐ Title  
☐ Prerequisite  
☐ Credit Hours/Contact Hours  
☐ Periodicity  
☐ Description  

Reason for Proposed Change or Deletion:  
This course is no longer taught, and the material has been incorporated into other courses (CHM502/602)

How Did You Determine the Need For This Change or Deletion?  
This course is no longer taught, and the material has been incorporated into other courses (CHM502/602)

COMPLETE NEW CATALOG INFORMATION (typed)

☐ Check if this is a non-substantive change. Distribution for non-substantive changes of 100- through 500-level courses: two originally-signed copies to Faculty Senate; 600- through 900-level courses: three originally-signed copies to Graduate Council. Graduate Council will give two copies to Faculty Senate after approval.

Substantive Change: Department routes according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty. Forward three originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If proposal needs to go through more than one council/committee, forward one additional form for each additional council/committee marked. See Senate Action 11-93/94 for definitions of substantive/non-substantive changes.

☐ College Council  
(All substantive course changes numbered 100-599 must go through College Council first. After approval, College Council will forward appropriate number of copies to the next committee/council or directly to the Faculty Senate if no further committee approval is needed. The last level of committee/council will forward two originally signed copies to the Faculty Senate.)

☐ Professional Education Committee  
(Considers all substantive course changes for Professional Education courses and Teaching Methods courses.)

☐ Committee on General Education and Intercollegiate Programs  
(Considers all substantive course changes for General Education and Intercollegiate Program proposals.)

☐ Graduate Council  
(Considers all 600-900 level course changes.)

Signature: [Signature]  
Department Head: [Department Head]  
Date: 10/31/2011  
(Routing on Reverse Side)
Missouri State University
Curricular Proposal Course Change or Deletion

Department __Chemistry_________________________ Date __10/28/2011_________________________

Check one: This is a change to ___an existing COURSE

X___ an existing REGULAR (i.e. permanent) SECTION of a variable content course

<table>
<thead>
<tr>
<th>Present Catalog Description</th>
<th>Revised Catalog Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Cut and paste from web catalog or use most recent description.)</td>
<td>(Cut and paste description again, strikethrough all deletions, and insert and bold new information.)</td>
</tr>
<tr>
<td>CHM 702 Advanced Techniques in Chemical Analysis</td>
<td>CHM 702 Advanced Techniques in Chemical Analysis Advanced Topics in Analytical Chemistry</td>
</tr>
<tr>
<td>Prerequisite: CHM 602 or CHM 633. Advanced topics in modern instrumental analysis, Instrumentation, and methods, including data acquisition methods, data manipulation and analysis, and electronics. 3(3-0), SD</td>
<td>Prerequisite: CHM 602 or CHM 633. Advanced topics in modern instrumental analysis, Instrumentation, and methods, including data acquisition methods, data manipulation and analysis, and electronics. An advanced topic in analytical chemistry will be addressed via faculty lectures and student projects. Examples of proposed topics include: electroanalytical methods, nanotechnology, forensic chemistry and data acquisition methods. Variable content course. May be repeated to a total of 6 hours with differing topics. 3(3-0), SD</td>
</tr>
</tbody>
</table>

What is changing? Check all boxes that apply.

☐Course Deletion  ☐Course Code  ☐Course Number  ☐X Title  ☐X Prerequisite

☐Credit Hours/Contact Hours  ☐Periodicity  ☐X Description

Reason for Proposed Change or Deletion
Content of course has changed due to new instructors. Prerequisite is changing as CHM 633 course is being deleted.

How Did You Determine the Need For This Change or Deletion?
Internal discussions amongst faculty that teach the course.

COMPLETE NEW CATALOG INFORMATION (typed)
CHM 702 Advanced Topics in Analytical Chemistry Prerequisite: CHM 602. An advanced topic in analytical chemistry will be addressed via faculty lectures and student projects. Examples of proposed topics include: electroanalytical methods, nanotechnology, forensic chemistry and data acquisition methods. Variable content course. May be repeated to a total of 6 hours with differing topics. 3(3-0), SD

☐ Check if this is a non-substantive change. Distribution for non-substantive changes of 100- through 500-level courses: two originally-signed copies to Faculty Senate; 600- through 900-level courses: three originally-signed copies to Graduate Council. Graduate Council will give two copies to Faculty Senate after approval.

Substantive Change: Department routes according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty. Forward three originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If proposal needs to go through more than one council/committee, forward one additional form for each additional council/committee marked. See Senate Action 11-93/94 for definitions of substantive/non-substantive changes.

☐ College Council (All substantive course changes numbered 100-599 must go through College Council first. After approval, College Council will forward appropriate number of copies to the next committee/council or directly to the Faculty Senate if no further committee approval is needed. The last level of committee/council will forward two originally signed copies to the Faculty Senate.)

☐ Professional Education Committee (Considers all substantive course changes for Professional Education courses and Teaching Methods courses.)

☐ Committee on General Education and Intercollegiate Programs (Considers all substantive course changes for General Education and Intercollegiate Program proposals.)

☐ Graduate Council (Considers all 600-900 level course changes.)

Signature _________________________________ Department Head _____________________________

(Routing on Reverse Side) Date __10/31/2011_________________________
Title of Program Affected: Accelerated Masters in Chemistry

<table>
<thead>
<tr>
<th>Major</th>
<th>Comprehensive Major</th>
<th>Option X</th>
<th>Minor</th>
<th>Certificate</th>
<th>Certification</th>
<th>Academic Rules</th>
<th>Other</th>
</tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Eligible Missouri State University majors in chemistry may apply for preliminary acceptance into the Master of Science program in Chemistry after admission requirements for the accelerated masters option have been satisfied. If accepted, graduate courses chosen from CHM 633, CHM 642, CHM 675, and CHM 607, may be counted towards both the undergraduate and graduate degrees, with a maximum of 12 credit hours counted towards both the undergraduate and graduate degrees. This option offers an opportunity for chemistry majors with undergraduate laboratory research experience to complete the requirements for the Master of Science degree in Chemistry in two semesters and a summer after attaining the Bachelor's degree, rather than the typical four semesters and a summer. Contact the Department of Chemistry for further information and guidelines.

Eligible Missouri State University majors in chemistry may apply for preliminary acceptance into the Master of Science program in Chemistry after admission requirements for the accelerated masters option have been satisfied. If accepted, graduate courses chosen from CHM 633, 602, CHM 607, CHM 642, CHM 652, and CHM 675, may be counted towards both the undergraduate and graduate degrees, with a maximum of 12 credit hours counted towards both the undergraduate and graduate degrees. This option offers an opportunity for chemistry majors with undergraduate laboratory research experience to complete the requirements for the Master of Science degree in Chemistry in two semesters and a summer after attaining the Bachelor's degree, rather than the typical four semesters and a summer. Contact the Department of Chemistry for further information and guidelines.

What is changing? Check all boxes that apply.

- [X] Course changes of under 18 hours
- [ ] Course changes of 18 hours or more
- [ ] From option to program (major)
- [ ] From program (major) to option
- [ ] Program or option deletion

REASON FOR PROPOSED CHANGE

CHM 633 course is being deleted but is already offered as CHM 602. An external program review suggested adding CHM 652 (Biochemistry II) as a possible accelerated course to be consistent with other programs in the country.

COMPLETE NEW CATALOG INFORMATION (Typed)

Accelerated Master's Degree Option: Eligible Missouri State University majors in chemistry may apply for preliminary acceptance into the Master of Science program in Chemistry after admission requirements for the accelerated masters option have been satisfied. If accepted, graduate courses chosen from CHM 602, CHM 607, CHM 642, CHM 652 and CHM 675, may be counted towards both the undergraduate and graduate degrees, with a maximum of 12 credit hours counted towards both the undergraduate and graduate degrees. This option offers an opportunity for chemistry majors with undergraduate laboratory research experience to complete the requirements for the Master of Science degree in Chemistry in two semesters and a summer after attaining the Bachelor’s degree, rather than the typical four semesters and a summer. Contact the Department of Chemistry for further information and guidelines.

Total Hours up to 12

DEPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty Senate. Forward three typed, originally signed forms to one of the following (please check all that apply and send to first council/committee marked).

- [X] College Council (Send all undergraduate program changes through College Council as first step before forwarding either to PEC, CGEIP, or directly to Faculty Senate)
- [ ] Professional Education Committee (Considers all program changes affecting BS and MS in Education and Educational Specialist degrees)
- [ ] Committee on General Education and Intercollegiate Programs (Considers all general education and multi-college program changes)
- [X] Graduate Council (Considers all graduate-level program changes)

Signature ____________________________
Department Head

Date 10/31/2011

(Routing on Reverse Side)
Curricular Proposal Program Change or Deletion

Department: Chemistry  Date: 10/31/2011

Title of Program Affected: Chemistry (Comprehensive) Bachelor of Science

<table>
<thead>
<tr>
<th>Major</th>
<th>Comprehensive Major</th>
<th>Option</th>
<th>Minor</th>
<th>Certificate</th>
<th>Certification</th>
<th>Academic Rules</th>
<th>Other</th>
</tr>
</thead>
</table>
| Present Catalog Description (Cut and paste from web catalog or use most recent description.)

Chemistry (Comprehensive)
Bachelor of Science
A. General Education Requirements - see General Education Program and Requirements section of catalog
B. Major Requirements
2. Related science and mathematics requirements: MTH 287* and 288(6) or MTH 261* and 280(10) or MTH 261* and 288(8); PHY 123* and 124(8) or PHY 203* and 204(10); Recommended CSC 111(3)*
3. Complete requirements in one of the following options:
   a. Biochemistry: This program is designed for students preparing for a career in medicine or graduate study in biochemistry. Required courses: CHM 399(1-3) or 499(1-3), 453(2), 552(3), 553(2); BIO 121(4)*, 235(4), 320(4) Suggested electives: BIO 310(5). Premedical students should also take courses in anatomy and physiology.
   b. Graduate School: This program is designed for students preparing for graduate study in chemistry. Required courses: CHM 376(2), 499(1-3), 509(2); Select one: CHM 514(3), 542(3), 552(3). Suggested electives: one year foreign language
   c. Industrial: This program is designed for students preparing for industrial positions upon completion of the B.S. degree, but who wish to be prepared for future entry into graduate school. Required courses: CHM 376(2), 509(2), 514 or 542(3), four hours selected from 397(2), 399(1-3), 499(1-3)

*Will also count toward General Education Requirements
C. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Revised Catalog Description (Cut and paste description again, strikethrough all deletions, and insert and bold new information.)

Chemistry (Comprehensive)
Bachelor of Science
A. General Education Requirements - see General Education Program and Requirements section of catalog
B. Major Requirements
2. Related science and mathematics requirements: MTH 287* and 288(6) or MTH 261* and 280(10) or MTH 261* and 288(8); PHY 123* and 124(8) or PHY 203* and 204(10); Recommended CSC 111(3)*
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*Will also count toward General Education Requirements
C. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

What is changing? Check all boxes that apply.

___ Title change
___ Course changes of under 18 hours
___ Course changes of 18 hours or more
___ From option to program (major)
___ From program (major) to option
___ Program or option deletion
___ Other

REASON FOR PROPOSED CHANGE

The chemistry department wishes to continue assessing our graduating majors via administration of the chemistry Major Field Achievement Test (MFAT). However, administration of the MFAT is currently strictly coupled to taking CHM498 Chemistry Careers. Students have expressed a strong desire to be able to take CHM498 earlier than their graduating semester to prepare them for the job application process. Therefore the department wishes to decouple this course from completing the MFAT. We are therefore following the model of the Political Science department who have developed a zero credit course (CHM492) explicitly for administration of a comprehensive assessment exam such as the MFAT.

CHM533 is no longer taught, and the material has been incorporated into other courses (CHM502/602), which are now part of the major program. No change in hours results. Materials for deleting CHM633 have been included as a courtesy.
Chemistry (Comprehensive)  
Chemistry (Comprehensive)  
Bachelor of Science  
A. General Education Requirements - see General Education Program and Requirements section of catalog  
B. Major Requirements  
2. Related science and mathematics requirements: MTH 287* and 288(6) or MTH 261* and 280(10) or MTH 261* and 288(8); PHY 123* and 124(8) or PHY 203* and 204(10); Recommended CSC 111(3)*  
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*Will also count toward General Education Requirements  
C. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog  

Total Hours __69-87__ 

DEPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty Senate. Forward three typed, originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If the program needs to go through more than one committee/council, forward one additional form for each additional council/committee marked.  

_x_ College Council  

Professional Education Committee  

Committee on General Education and Intercolligate Programs  

Graduate Council  

(Send all undergraduate program changes through College Council as first step before forwarding either to PEC, CGEIP, or directly to Faculty Senate)  

(Considers all program changes affecting BS and MS in Education and Educational Specialist degrees)  

(Considers all general education and multi-college program changes)  

(Considers all graduate-level program changes)  

Signature ___________________________ Date __10/31/11__  

Department Head  

(Routing on Reverse Side)  

FS Program Change - 9/10/2010
Missouri State University
Curricular Proposal Program Change or Deletion

Department __________ Chemisty __________ Date __________ 10/31/2011 __________

Title of Program Affected __________ Chemistry (Non-comprehensive) Bachelor of Science __________

Major _X_ Comprehensive Major __________ Option __________ Minor __________

Present Catalog Description
(Cut and paste from web catalog or use most recent description.) __________

Revised Catalog Description
(Cut and paste description again, strikethrough all deletions, and insert and bold new information.) __________

Chemistry (Non-Comprehensive)
Bachelor of Science
A. General Education Requirements - see General Education Program and Requirements section of catalog 
B. Major Requirements
1. CHM 160(4)*, 161(1)*, 170(3), 171(1), 302(5), 342(5), 343(5), 375(3), 398(1); 505(4) or 506(3) and CHM 507(3) and 508(2); 498(1), 502(4); and one hour from CHM 397, 399 or 499
*Will also count toward General Education Requirements
2. Chemistry electives (8-10 hours) from one of the following categories:
   a. For a basic chemistry program without a specific area of emphasis, at least eight hours from CHM 352(3), 376(2), 399 or 499 (2-3), 460(3), 509(2)
   b. For students with a strong interest in environmental chemistry: CHM 460(3), 461(3), 462(2)
   c. For students with a strong interest in biochemistry or pre-medicine: CHM 452(3), 453(2), 552(3), 553(2)
   d. For a specific area of interest not included in categories a, b, or c: at least nine hours of chemistry courses numbered 300 or above selected in consultation with the student’s academic advisor and approved by the department head.
   3. Related science and mathematics requirements: MTH 261* and 280(10) or MTH 261* and 288(8) or MTH 287* and 288(6); PHY 123* and 124(8) or PHY 203* and 204(10)
C. Minor Required (or second major)
D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Chemistry (Non-Comprehensive)
Bachelor of Science
A. General Education Requirements - see General Education Program and Requirements section of catalog 
B. Major Requirements
1. CHM 160(4)*, 161(1)*, 170(3), 171(1), 302(5), 342(5), 343(5), 375(3), 398(1); 505(4) or 506(3) and CHM 507(3) and 508(2); 492(0), 498(1), 502(4); and one hour from CHM 397, 399 or 499
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   b. For students with a strong interest in environmental chemistry: CHM 460(3), 461(3), 462(2)
   c. For students with a strong interest in biochemistry or pre-medicine: CHM 452(3), 453(2), 552(3), 553(2)
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C. Minor Required (or second major)
D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

What is changing? Check all boxes that apply.
   __________ Title change
   __________ From option to program (major)
   __________ Other __________
   __________ Course changes of under 18 hours
   __________ From program (major) to option
   __________ Program or option deletion
   __________ Course changes of 18 hours or more

REASON FOR PROPOSED CHANGE

The chemistry department wishes to continue assessing our graduating majors via administration of the chemistry Major Field Achievement Test (MFAT). However, administration of the MFAT is currently strictly coupled to taking CHM498 Chemistry Careers. Students have expressed a strong desire to be able to take CHM498 earlier than their graduating semester to prepare them for the job application process. Therefore the department wishes to decouple this course from completing the MFAT. We are therefore following the model of the Political Science department who have developed a zero credit course (CHM492) explicitly for administration of a comprehensive assessment exam such as the MFAT.
Chemistry (Non-Comprehensive)

Bachelor of Science
A. General Education Requirements - see General Education Program and Requirements section of catalog
B. Major Requirements
1. CHM 160(4)*, 161(1)*, 170(3), 171(1), 302(5), 342(5), 343(5), 375(3), 398(1); 505(4) or 506(3) and CHM 507(3) and 508(2); 492(0), 498(1), 502(4); and one hour from CHM 397, 399 or 499
*Will also count toward General Education Requirements
2. Chemistry electives (8-10 hours) from one of the following categories:
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   d. For a specific area of interest not included in categories a, b, or c: at least nine hours of chemistry courses numbered 300 or above selected in consultation with the student’s academic advisor and approved by the department head.
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C. Minor Required (or second major)
D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Total Hours __69-87__

DEPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty Senate. Forward three typed, originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If the program needs to go through more than one committee/council, forward one additional form for each additional council/committee marked.

___ x ___ College Council
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___ Professional Education Committee
   (Considers all program changes affecting BS and MS in Education and Educational Specialist degrees)

___ Committee on General Education and Intercollegiate Programs
   (Considers all general education and multi-college program changes)

___ Graduate Council
   (Considers all graduate-level program changes)

Signature ___________________________      Date 10/31/2011
Department Head

(Routing on Reverse Side)   FS Program Change - 9/10/2010
Missouri State University
CURRICULAR PROPOSAL
NEW COURSE (or new REGULAR SECTION of an existing variable content course)

Department: Computer Science

Date: September 15, 2011

Check one:  _X_ New COURSE   ____New REGULAR (i.e. permanent) SECTION of an existing variable content course. If a new regular section of an existing variable topics course, to what existing course is it to be attached? 

PROPOSED CATALOG DESCRIPTION

CSC 301  Introduction to Video Game Design
Prerequisites: 30 hours and eligible for Writing II and permission of instructor
An introduction to the main elements of video game design (including setting, story, goals, narrative, mechanics, and level design) and the structure and responsibilities of a game development team. The emphasis will be on game designs that could be implemented by a small team within one year. Students will design a game and create a design document. Identical with ART 301. Cannot receive credit for both ART 301 and CSC 301. Does not count towards a computer science major. 1(1-0) D

PURPOSE OF COURSE

This course is cross-listed with proposed ART 301 and is part of a package that includes ART/CSC 301, ART 302, and CSC 303.

Though suitable as standalone courses, ART/CSC 301 together with ART 302 or CSC 303 form a sequence that prepares students to work on large interdisciplinary game-development projects for credit within their majors.

RELATIONSHIP TO OTHER DEPARTMENTS

Cross-listed with ART 301.

DEPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty. Attach New Course Resource Information form (FS 300a/05) and forward three typed, originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If the course needs to go through more than one council/committee forward one additional form for each additional council/committee marked.

_X_ College Council

(All new course proposals numbered 100-599 must go through College Council first. After approval, College Council will forward appropriate number of copies to the next committee/council or directly to the Faculty Senate if no further committee approval is needed.)

____ Professional Education Committee

(Considers all new courses affecting BS and MS in Education and Educational Specialist degrees)

_X_ Committee on General Education and Intercollegiate Programs

(Considers all general education and multi-college new course proposals)

____ Graduate Council

(Considers all 600-, 700-, and 800-level new courses)

*If the course needs to go through more than one council/committee, forward one additional form for each additional council/committee marked.

Signature: _____________________
Department Head

(Date: 10/31/11)

(Routing on Reverse Side)  FS New Course - 9/10/2010
NEW COURSE RESOURCE INFORMATION

Department: Computer Science
Date: September 15, 2011

Course Number and Title: CSC 301, Introduction to Video Game Design

Anticipated Average Enrollment: 15 (Cross-listed with ART 301 for 15 additional, 30 total)  Maximum Enrollment Limit: 30

Faculty Load Assignment: 1

Equate Hours

1. Is another course being deleted? If so, give course number and title.

No.

2. What will this course require in the way of:

   Additional library holdings? Nothing.
   Additional computer resources? Nothing.
   Additional or remodeled facilities? Nothing.
   Additional equipment or supplies? Nothing.
   Additional travel funds? Nothing.
   Additional faculty--general vs. specialized? See below.
   Other additional expenses? Nothing.

3. If additional faculty are not required, how will faculty be made available to teach this course?

   The CSC department will begin offering CSC 450 only once a year instead of every semester, which will free up three hours in the departmental teaching load. This can “pay” for Eric Shade to teach CSC 301 (and CSC 303) every spring as part of his standard load. No additional faculty are required.

   There may sometimes be graduate students in MNAS/CSC who could teach this course; if so we could make use of them at no additional cost. Further, there may sometimes be industry experts available (for example, from Black Lantern Studios, a Springfield-based game development company) who could provide new perspectives for our students. We may choose to hire them as per-course instructors (at an estimated $800-1000); the ART department would usually pay in this case, but CSC could pay as a last resort if funds are available.

   List names of current faculty qualified to teach this course:

   Eric Shade

4. What is the anticipated source of students for this course? (If from within the department, will students be taking this course in addition to or in place of other courses? If from outside the department, which courses in other departments would most likely be affected?)

   Initially most CSC 301 students will be CSC majors. Students in the cross-listed ART 301 will primarily come from the various departments that participate in the Electronic Arts program. However, if the course becomes popular then it may attract students from any major. No other department offers a course that is even remotely similar, so we will not be taking students away from other programs. All students will take this course in addition to other courses.

5. Other comments:
ART/CSC 301
Introduction to Video Game Design
Proposed Syllabus

Textbook
*The Art of Game Design: A Book of Lenses*
Jesse Schell, Carnegie Mellon University
Morgan Kaufman, 2008
ISBN: 978-0-12-369496-6

Purpose of course
Game design is more art than science. This course introduces the student to all the essential aspects of
game design, provides principles that often lead to successful designs, and explains the structure of a
development team and the logistics and business of game development.

Goals
The student should be able to critically analyze a game, and create a complete game design with
appropriate documentation, including a technical and human-resources budget and a project schedule.

Course Outline
1. Perspectives: player, designer, publisher
2. What players want and expect from a game
3. The structure and roles of a development team
4. Budgets: financial, technical, and human resources
5. The business of games
6. Pitching a game
7. Design documents
   a. Story overview
   b. Design overview
   c. Detailed design document
   d. Technical design overview, including production pipeline
   e. Tutorial, manual, and walkthrough
   f. Art bible
   g. Story bible
   h. Budget and schedule
8. The essence of a game
9. The game world
   a. Setting
   b. Architecture
   c. Story
   d. Characters
   e. Puzzles
   f. Aesthetics
10. Game mechanics
11. The user interface
12. Interest curves
13. Indirect player control
14. Level design principles
15. Puzzles and mini-games
16. Artificial intelligence
17. Game balance
18. Multiplayer games and online communities
19. Playtesting

Coursework
There are four main components: critical analysis of existing games (20%), pitching a game (15%), a detailed game design (50%), and a final presentation (15%).

1. Written critical analysis of a game that the student
   a. has played to completion and enjoyed
   b. has played a significant part of but did not finish and/or did not enjoy
2. The pitch
   a. 50-word pitch #1 (read anonymously by instructor and critiqued in class)
   b. 100-word pitch #2 (read anonymously by instructor and critiqued in class)
   c. Two-minute audio pitch emailed to instructor, who responds with audio critique
3. Game design documents
   a. Summary and competitive analysis
   b. Detailed game design document
   c. Technical design overview
   d. Project schedule (for either one or two semesters)
4. “News conference” style in-class presentation, with Q&A
Missouri State University
CURRICULAR PROPOSAL
NEW COURSE (or new REGULAR SECTION of an existing variable content course)

Department: Computer Science

Date: September 15, 2011

Check one: ___ New COURSE  ___ New REGULAR (i.e. permanent) SECTION of an existing variable content course. If a new regular section of an existing variable topics course, to what existing course is it to be attached? ____________

PROPOSED CATALOG DESCRIPTION

CSC 303  Introductory Video Game Development for Designers & Programmers
Prerequisites: ART/CSC 301 and either CSC 232 or MED 290
Hands-on introduction to video game development software, emphasizing level design, placement of art assets, lighting, and scripting. Students may collaborate with ART 302 students to experience industry-typical workflow between designers, artists and programmers. Does not count towards a computer science major. 1(0-2) D

PURPOSE OF COURSE

This course proposal is part of a package that includes ART/CSC 301, ART 302, and CSC 303.

Though suitable as standalone courses, ART/CSC 301 together with ART 302 or CSC 303 form a sequence that prepares students to work on large interdisciplinary game-development projects for credit within their majors.

RELATIONSHIP TO OTHER DEPARTMENTS

None, except for the relationship of the interdisciplinary content described above.

DEPARTMENT: Route according to ART VI, SEC 3B(1-4) of Bylaws of the Faculty. Attach New Course Resource Information form (FS 300a/05) and forward three typed, originally signed forms to one of the following (please check all that apply and send to first council/committee marked). If the course needs to go through more than one council/committee forward one additional form for each additional council/committee marked.

___ College Council

(All new course proposals numbered 100-599 must go through College Council first. After approval, College Council will forward appropriate number of copies to the next committee/ council or directly to the Faculty Senate if no further committee approval is needed.)

___ Professional Education Committee

(Considers all new courses affecting BS and MS in Education and Educational Specialist degrees)

___ Committee on General Education

and Intercollegiate Programs

(Considers all general education and multi-college new course proposals)

___ Graduate Council

(Considers all 600-, 700-, and 800-level new courses)

*If the course needs to go through more than one council/committee, forward one additional form for each additional council/committee marked.

Signature: Kenneth Hallman

Date: 10/31/11

(Note on Reverse Side) FS New Course - 9/10/2010
NEW COURSE RESOURCE INFORMATION

Department Computer Science

Course Number and Title CSC 303 Introductory Video Game Development for Designers & Programmers

Anticipated Average Enrollment 15

Maximum Enrollment Limit 30

Faculty Load Assignment 2 Equated Hours

1 Is another course being deleted? If so, give course number and title.

No.

2 What will this course require in the way of:

   Additional library holdings? Nothing.
   Additional computer resources? Nothing.
   Additional or remodeled facilities? Nothing.
   Additional equipment or supplies? Nothing.
   Additional travel funds? Nothing.
   Additional faculty--general vs specialized? See below.
   Other additional expenses? Nothing.

3 If additional faculty are not required, how will faculty be made available to teach this course?

The CSC department will begin offering CSC 450 only once a year instead of every semester, which will free up three hours in the departmental teaching load. This can “pay” for Eric Shade to teach CSC 303 (and CSC 301) every spring as part of his standard load. No additional faculty are required.

There may sometimes be graduate students in MNAS/CSC who could teach this course; if so we could make use of them at no additional cost. Further, there may sometimes be industry experts available (for example, from Black Lantern Studios, a Springfield-based game development company) who could provide new perspectives for our students. We may choose to hire them as per-course instructors (at an estimated $800-1000); the MED department might pay in this case*, but CSC could also pay if funds are available.

(*) Electronic Arts majors have a mandatory year-long senior project. Those who choose to do a video game will be required to take ART/CSC 301 and CSC 303. Some Electronic Arts majors from MED choose to do game projects as designers, and thus are primary “beneficiaries” of this course, along with CSC majors. In addition, it is expected that once the ART/CSC 301 and CSC 303 courses get firmly established, MED will cross-list with CSC 303 so it becomes CSC/MED 303. At that point MED will have part “ownership” of the course. Thus it is reasonable to expect that MED might pay for a per-course instructor sometimes.

List names of current faculty qualified to teach this course:

Eric Shade

4 What is the anticipated source of students for this course? (If from within the department, will students be taking this course in addition to or in place of other courses? If from outside the department, which courses in other departments would most likely be affected?)

Because of the prerequisites, most students will come from the CSC department or the Electronic Arts program via the Media track. However, any students who meet the prerequisites are welcome. We expect this to be a popular elective. No other department offers a course that is even remotely similar, so we will not be taking students away from other programs. All students will take this course in addition to other courses.

5 Other comments:
CSC 303
Introductory Video Game Development for Designers & Programmers
Proposed Syllabus

Textbook
Mastering Unreal Technology, Volume I
Jason Busby, Zak Parrish, and Jeff Wilson
SAMS Publishing, 2009
ISBN: 978-0672329913

Goal
The goal of the course is to learn the elements of UDK (the Unreal Development Kit) that are necessary for designers and programmers. Artists and sound designers need to use third-party tools to create new assets for inclusion in a game, but designers and programmers work entirely within UDK. This course, being only one credit, is not comprehensive, but introduces all the essential concepts and basic skills.

Laboratories
This assumes that there will be 15 two-hour class meetings during the semester, with one laboratory per meeting. Each laboratory will begin with some brief instruction about the day’s topic, then for the majority of the time students will work hands-on and complete a laboratory assignment over that topic.

1. Introduction to UDK
2. World geometry and brushes
3. Static meshes
4. Materials, part 1
5. Materials, part 2
6. Lighting
7. Terrain
8. Building a complete level
9. Kismet (scripting), part 1
10. Kismet (scripting), part 2
11. Kismet (scripting), part 3
12. Matinee (scripted in-game cinematics)
13. Level optimization
14. Level streaming
15. Final project demonstrations

Coursework
There are 100 points worth of work. Each lab except the last is worth 5 points, for a total of 60 points. Points per lab are awarded based on degree of completion of the assigned tasks. Time is a factor, so students will be advised to prepare for each lab. Students who finish early may gain bonus points by assisting those still working. The remaining 40 points will be a team project that includes all the elements discussed during the semester. The project need not be a game, but it must be a "proof-of-concept" that demonstrates one or more aspects of a game, and it must demonstrate mastery of the material. Of those 40 points, 10 will be for a design document explaining the goals and technical details of the project; the remaining 30 will be for an in-class demonstration during the final class meeting.