

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: 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.

- 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 *A Mathis*
Department Head

Date 10-25-11

(Routing on Reverse Side)

FS New Course - 9/10/2010

NEW COURSE RESOURCE INFORMATIONDepartment BiologyDate October 25, 2011Course Number and Title BIO 505 Human NatureAnticipated Average Enrollment 15 Maximum Enrollment Limit 45 (combined with BIO 605)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 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

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Department Biology

Date October 25, 2011

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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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- 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 10-25-11

(Routing on Reverse Side)

FS New Course - 9/10/2010

NEW COURSE RESOURCE INFORMATIONDepartment BiologyDate October 25, 2011Course Number and Title BIO 605 Human NatureAnticipated 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:

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):

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

IX Basic bibliography:

- Abrahams, B.S., and D.H. Geschwind. 2008. Advances in autism genetics: On the threshold of a new neurobiology. *Nature Reviews Genetics* 9:341-355.
- Akey, J.M. 2009. Constructing genomic maps of positive selection in humans: Where do we go from here? *Genome Research* 19:711-722.
- Barash, D.P. 2003. *The Survival Game: How Game Theory Explains the Biology of Cooperation and Competition*.
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- Bouchard, Thomas J., Jr., and Matt McGue. 2003. Genetic and Environmental Influences on Human Psychological Differences. *Journal of Neurobiology* 54: 4-45.
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- Burt, A., and R. Trivers. 2008. *Genes in Conflict: The Biology of Selfish Genetic Elements*. Harvard University Press.
- Buss, D.M. (ed.). 2005. *The Handbook of Evolutionary Psychology*. John Wiley and sons.
- Buss, D.M. 2011. *Evolutionary psychology: The new science of the mind* (4th ed.). Prentice-Hall.
- Carroll, S.B. 2003. Genetics and the making of *Homo sapiens*. *Nature* 422:849-857.
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- Churchland, P.M. *The Engine of Reason, the Seat of the Soul: A Philosophical Journey into the Brain*. MIT Press, Cambridge.
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- Dixon, A., and M. Anderson. 2001. Sexual selection and the comparative anatomy of reproduction in monkeys, apes, and human beings. *Annual Review of Sex Research* 12:121-144.
- Frank, S. A. 1998. *Foundations of Social Evolution*. Princeton University Press.

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- Hauser, M.D. 2006. *Moral Minds: How Nature Designed our Universal Sense of Right and Wrong*. Harper Collins.
- Hill, S.R., and Walsh, C.A. 2005. Molecular insights into human brain evolution. *Nature* 437:64-67.
- Kenrick, D.T. 2011. *Sex, Murder and the Meaning of Life: A Psychologist Investigates How Evolution, Cognition, and Complexity are Revolutionizing Our View of Human Nature*.
- Lehrer, J. 2009. *How We Decide*. Mariner Books – Houghton Mifflin Harcourt.
- O'Donovan, M.C., N.J. Craddock, and M.J. Owen. 2009. Genetics of psychosis; insights from views across the genome. *Human Genetics* 126:3-12.
- Pinker, S. 1997. *How the Mind Works*. W.W. Norton.
- Pinker, S. 2002. *The Blank Slate: The Modern Denial of Human Nature*. Penguin Group.
- Ridley, M. 1997. *The Origins of Virtue: Human Instincts and the Evolution of Cooperation*.
- Ruse, M. (ed.). 2009. *Philosophy after Darwin*. Princeton University Press.
- Sabeti, P.C., et al. 2006. Positive natural selection in the human lineage. *Science* 312:1614-1620.
- Searle, J.R. 2001. Free will as a problem of neurobiology. *Philosophy* 76:491-514.
- Sigmund, K. 1993. *Games of life: Explorations in ecology, evolution, and behavior*. Oxford University Press.
- The Chimpanzee Sequencing and Analysis Consortium. 2005. Initial sequence of the chimpanzee genome and comparison with the human genome. *Nature* 437:69-87.
- Wilson, E.O. 1975. *Sociobiology: The New Synthesis*. Harvard University Press.

Professional Journals:

Behavioral and Brain Sciences
Brain, Behavior and Evolution
Cognitive Science
Evolution and Human Behavior
Evolutionary Anthropology
Evolutionary Psychology
Frontiers in Evolutionary Neuroscience
Genes, Brain and Behavior
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: 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.

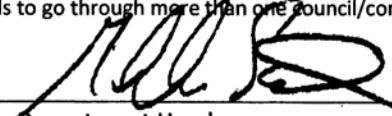
RELATIONSHIP TO OTHER DEPARTMENTS

This new course will only affect chemistry majors.

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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)

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Signature 
Department Head

Date 10/31/2011

(Routing on Reverse Side)

FS New Course - 9/10/2010

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:

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

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.)
<p>CHM 160 General Chemistry I</p> <p>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 "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</p>	<p>CHM 160 General Chemistry I</p> <p>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 "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</p>

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

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.

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 

Date 10/31/2011

Department Head

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

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.)
<p>CHM 498 Chemistry Careers</p> <p>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</p>	<p>CHM 498 Chemistry Careers</p> <p>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</p>

What is changing? Check all boxes that apply.

- Course Deletion
 Course Code
 Course Number
 Title
 Prerequisite
 Credit Hours/Contact Hours
 Periodicity
 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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(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]

Date 10/31/2011

Department Head

(Routing on Reverse Side)

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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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.)
<p>CHM 533 Advanced Analytical Methods</p> <p>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</p>	

What is changing? Check all boxes that apply.

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?

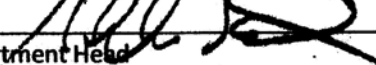
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COMPLETE NEW CATALOG INFORMATION (typed)

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Signature 
 Department Head

Date 10/31/2011

(Routing on Reverse Side)

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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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.)
<p>CHM 633 Advanced Analytical Methods</p> <p>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 533. Cannot receive credit for both CHM 533 and CHM 633. 4(3-3), F</p>	

What is changing? Check all boxes that apply.

- 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)

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Signature 
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

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.)
<p>CHM 702 Advanced Techniques in Chemical Analysis</p> <p>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), SO</p>	<p>CHM 702 Advanced Techniques in Chemical Analysis Advanced Topics in Analytical Chemistry</p> <p>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), SO D</p>

What is changing? Check all boxes that apply.

Course Deletion
 Course Code
 Course Number
 X Title
 X Prerequisite
 Credit Hours/Contact Hours
 X 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), D

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

Signature


Department Head

Date

10/31/2011

(Routing on Reverse Side)

FS Course Change - 9/10/2010

Chemistry (Comprehensive)

Chemistry (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), 452(3), 492 (0), 498(1), 502 (4), 506(3), 507(3), 508(2), 575(3)

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

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.

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)

Graduate Council (Considers all graduate-level program changes)

Signature  Department Head

Date 10/31/11

Missouri State University

Curricular Proposal Program Change or Deletion

Department Chemistry Date 10/31/2011

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

Major Comprehensive Major Option Minor Certificate Certification Academic Rules Other

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.)
<p>Chemistry (Non-Comprehensive) Bachelor of Science</p> <p>A. General Education Requirements - see General Education Program and Requirements section of catalog</p> <p>B. Major Requirements</p> <p>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 <i>*Will also count toward General Education Requirements</i></p> <p>2. Chemistry electives (8-10 hours) from one of the following categories:</p> <p>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)</p> <p>b. For students with a strong interest in environmental chemistry: CHM 460(3), 461(3), 462(2)</p> <p>c. For students with a strong interest in biochemistry or pre-medicine: CHM 452(3), 453(2), 552(3), 553(2)</p> <p>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.</p> <p>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)</p> <p>C. Minor Required (or second major)</p> <p>D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog</p>	<p>Chemistry (Non-Comprehensive) Bachelor of Science</p> <p>A. General Education Requirements - see General Education Program and Requirements section of catalog</p> <p>B. Major Requirements</p> <p>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 <i>*Will also count toward General Education Requirements</i></p> <p>2. Chemistry electives (8-10 hours) from one of the following categories:</p> <p>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)</p> <p>b. For students with a strong interest in environmental chemistry: CHM 460(3), 461(3), 462(2)</p> <p>c. For students with a strong interest in biochemistry or pre-medicine: CHM 452(3), 453(2), 552(3), 553(2)</p> <p>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.</p> <p>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)</p> <p>C. Minor Required (or second major)</p> <p>D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog</p>

What is changing? Check all boxes that apply.

<input type="checkbox"/> Title change	<input type="checkbox"/> From option to program (major)	<input type="checkbox"/> Other _____
<input checked="" type="checkbox"/> Course changes of under 18 hours	<input type="checkbox"/> From program (major) to option	
<input type="checkbox"/> Course changes of 18 hours or more	<input type="checkbox"/> Program or option deletion	

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:

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

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.

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)

Graduate Council

(Considers all graduate-level program changes)

Signature _____



Department Head

Date _____

10/31/2011

(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: 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.

- 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 Vollman*
Department Head

Date 10/31/11

(Routing on Reverse Side)

FS New Course - 9/10/2010

NEW COURSE RESOURCE INFORMATIONDepartment Computer ScienceDate September 15, 2011Course Number and Title CSC 301 Introduction to Video Game DesignAnticipated Average Enrollment 15 (Cross-listed with ART 301 for 15 additional, 30 total) Maximum Enrollment Limit 30Faculty Load Assignment 1 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 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 Vollmar
Department Head

Date 10/31/11

(Routing on Reverse Side)

FS New Course - 9/10/2010

NEW COURSE RESOURCE INFORMATIONDepartment Computer ScienceDate September 15, 2011Course Number and Title CSC 303 Introductory Video Game Development for Designers & ProgrammersAnticipated Average Enrollment 15Maximum Enrollment Limit 30Faculty 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.