Missouri State University
Curricular Proposal Course Change or Deletion

Department Computer Science **Date** 10/5/2011

Check one: This is a change to X **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.)
CSC 335 Database System Concepts Prerequisite: CSC 121 or CSC 125 or CSC 131. A study of modern database systems and their underlying concepts. Core topics include the relational model, SQL, database design theory, query processing, file structures, transactions, and concurrency. Programming projects provide practical experience in developing GUI database applications. 3(3-0) F	**CSC 335 Database System Concepts** Prerequisite: CSC 121 or CSC 125 or CSC 131. A study of modern database systems and their underlying concepts. Core topics include the relational model, SQL, database design theory, query processing, file structures, transactions, and concurrency. Programming projects provide practical experience in developing GUI database applications. 3(3-0) ~~F~~ S

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
More closely suits typical student progress through CS required courses.

How Did You Determine the Need For This Change or Deletion?
Analysis of student enrollment patterns.

COMPLETE NEW CATALOG INFORMATION (typed)

CSC 335 Database System Concepts

Prerequisite: CSC 121 or CSC 125 or CSC 131. A study of modern database systems and their underlying concepts. Core topics include the relational model, SQL, database design theory, query processing, file structures, transactions, and concurrency. Programming projects provide practical experience in developing GUI database applications. 3(3-0) S

__X__ 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** (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 Kenneth Vollmar **Date** 10/6/11
Department Head

(Routing on Reverse Side)

Missouri State University
Curricular Proposal Course Change or Deletion

Department Computer Science **Date** 10/5/2011

Check one: This is a change to X 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.)
CSC 365 Internet Programming Prerequisite: CSC 121 or CSC 125 or CSC 131. An introduction to paradigms and languages used in Internet and World Wide Web programming. These include modern tools for client-side and server-side programming and dynamic Web page generation. Advanced topics, such as security and XML, will be covered as time allows. 3(3-0) S	CSC 365 Internet Programming Prerequisite: CSC 121 or CSC 125 or CSC 131. An introduction to paradigms and languages used in Internet and World Wide Web programming. These include modern tools for client-side and server-side programming and dynamic Web page generation. Advanced topics, such as security and XML, will be covered as time allows. 3(3-0) ~~S~~ F

What is changing? Check all boxes that apply.

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

Reason for Proposed Change or Deletion
More closely suits typical student progress through CS required courses.

How Did You Determine the Need For This Change or Deletion?
Analysis of student enrollment patterns

COMPLETE NEW CATALOG INFORMATION (typed)

CSC 365 Internet Programming
Prerequisite: CSC 121 or CSC 125 or CSC 131. An introduction to paradigms and languages used in Internet and World Wide Web programming. These include modern tools for client-side and server-side programming and dynamic Web page generation. Advanced topics, such as security and XML, will be covered as time allows. 3(3-0) F

__X__ 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	(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 Kenneth Vollmar Date 10/6/11
Department Head

(Routing on Reverse Side)

Missouri State University
Curricular Proposal Course Change or Deletion

Department Computer Science **Date** 10/5/2011

Check one: This is a change to X **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.)
CSC 450 Introduction to Software Engineering Prerequisite: CSC 325. Principles, techniques and tools used to effect the orderly production of medium and large scale computer programs will be studied. These techniques will be applied to programming projects with students working in teams and managing all phases of a programming project. 3(3-0) F,S	**CSC 450 Introduction to Software Engineering** Prerequisite: CSC 325. Principles, techniques and tools used to effect the orderly production of medium and large scale computer programs will be studied. These techniques will be applied to programming projects with students working in teams and managing all phases of a programming project. 3(3-0) F,S

What is changing? Check all boxes that apply.

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

Reason for Proposed Change or Deletion
Enrollment levels only justify one offering per year.

How Did You Determine the Need For This Change or Deletion?
Analysis of student enrollment patterns.

COMPLETE NEW CATALOG INFORMATION (typed)

CSC 450 Introduction to Software Engineering
Prerequisite: CSC 325. Principles, techniques and tools used to effect the orderly production of medium and large scale computer programs will be studied. These techniques will be applied to programming projects with students working in teams and managing all phases of a programming project. 3(3-0) F

__X__ 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** (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 Kenneth Volkman **Date** 10/6/11
Department Head

(Routing on Reverse Side)

Missouri State University
Curricular Proposal Course Change or Deletion

Department Computer Science **Date** 10/5/2011

Check one: This is a change to X **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.)
CSC 567 Wireless Networks Prerequisite: CSC 465. An introduction to the fundamental theory, concepts and techniques of wireless communication, wireless networks, network architecture, and wireless applications. Students will gain an understanding of the significance that wireless systems and user mobility have on the construction and handling of a data or telecommunications network. Topics include wireless and ad hoc networks, enabling technologies, multiplexing, protocol design, network security, and quality of service. May be taught concurrently with CSC 667. Students cannot receive credit for both CSC 567 and CSC 667. 3(3-0) S	**CSC 567 Wireless Networks** Prerequisite: ~~CSC 465~~ **CSC 565**. An introduction to the fundamental theory, concepts and techniques of wireless communication, wireless networks, network architecture, and wireless applications. Students will gain an understanding of the significance that wireless systems and user mobility have on the construction and handling of a data or telecommunications network. Topics include wireless and ad hoc networks, enabling technologies, multiplexing, protocol design, network security, and quality of service. May be taught concurrently with CSC 667. Students cannot receive credit for both CSC 567 and CSC 667. 3(3-0) S

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
Correct typo in prerequisite.
How Did You Determine the Need For This Change or Deletion?
No such course as CSC 465.

COMPLETE NEW CATALOG INFORMATION (typed)

CSC 567 Wireless Networks
Prerequisite: CSC 565. An introduction to the fundamental theory, concepts and techniques of wireless communication, wireless networks, network architecture, and wireless applications. Students will gain an understanding of the significance that wireless systems and user mobility have on the construction and handling of a data or telecommunications network. Topics include wireless and ad hoc networks, enabling technologies, multiplexing, protocol design, network security, and quality of service. May be taught concurrently with CSC 667. Students cannot receive credit for both CSC 567 and CSC 667. 3(3-0) S

X 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**	(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 Kenneth Vollmar **Date** 10/6/11
Department Head

(Routing on Reverse Side)

Missouri State University
Curricular Proposal Program Change or Deletion

Department Geography, Geology, and Planning **Date** September 16, 2011

Title of Program Affected Earth Science Education--Bachelor of Science in Education

Major X 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.)
See Attachment A.	See Attachment B.

What is changing? Check all boxes that apply.

___ Title change
_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
___ Other_____

REASON FOR PROPOSED CHANGE

1. Change "CHM 160(4), 170(3), 175(2)" to "CHM 160(4), 161(1), 170(3), 171(1)." Reason: Chemistry Department has changed their General Chemistry sequence.

COMPLETE NEW CATALOG INFORMATION (Typed)

See Attachment C.

Total Hours no change

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**	(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 _____ **Date** _____
Department Head

(Routing on Reverse Side)

Attachment A—Present Catalog Description

Earth Science Education
Bachelor of Science in Education
(Certifiable grades 9-12)

A. General Education Requirements - see General Education Program and Requirements section of catalog
The following required courses can be used to meet both General Education and Major Requirements: BIO 102(4); MTH 138(5), or MTH 135(3) and MTH 181(3), or MTH 261(5) or MTH 287(3); AST 115(4) or CHM 105(5) or GLG 110(4) or GRY 135(4) or PHY 100(4)

B. Major Requirements
   1. Core (25 hours): GLG 110(4), 314(4), 318(3), 412(4); GRY 135(4), 348(3), 351(3)
   2. Major Electives (3 hours): Select 3 additional hours from any GLG course numbered 171 or above in consultation with advisor
   3. Related Requirements (10-13 hours): AST 115(4); MTH 138(5), or MTH 135(3) and 181(3) or MTH 261(5) or MTH 287(3); SCI 505(3)
   4. Complete one of the following options:
      a. **Categorical Science** (13 hours): BIO 102(4); CHM 105(5); PHY 100(4)
      b. **Unified Science** (25 hours): BIO 121(4), 122(4); CHM 160(4), 170(3), 175(2); PHY 123(4), 124(4)

C. Professional Education Courses (37 hours): SCI 214(1), 314(3), 414(3), 493(6), 494(6) and see Teacher Certification, Teacher Education Program and Secondary Education Requirements section of catalog

D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

E. In order to meet Missouri state teacher certification requirements, candidates for the Bachelor of Science in Education degree are required to meet the following grade point average requirements: at least a 2.50 GPA on all coursework attempted at all colleges attended; at least a 2.50 GPA in the certificate subject area (major field of study) which includes all courses listed under B; at least a 2.50 GPA in any additional certificate subject area; at least a 2.50 GPA in the professional education courses; and no grade lower than a "C" in all professional education courses. All GPA requirements include both Missouri State and transfer grades.

Attachment B—Revised Catalog Description

Earth Science Education
Bachelor of Science in Education
(Certifiable grades 9-12)

A. General Education Requirements - see General Education Program and Requirements section of catalog
The following required courses can be used to meet both General Education and Major Requirements: BIO 102(4); MTH 138(5), or MTH 135(3) and MTH 181(3), or MTH 261(5) or MTH 287(3); AST 115(4) or CHM 105(5) or GLG 110(4) or GRY 135(4) or PHY 100(4)

B. Major Requirements
   1. Core (25 hours): GLG 110(4), 314(4), 318(3), 412(4); GRY 135(4), 348(3), 351(3)
   2. Major Electives (3 hours): Select 3 additional hours from any GLG course numbered 171 or above in consultation with advisor
   3. Related Requirements (10-13 hours): AST 115(4); MTH 138(5), or MTH 135(3) and 181(3) or MTH 261(5) or MTH 287(3); SCI 505(3)
   4. Complete one of the following options:
      a. **Categorical Science** (13 hours): BIO 102(4); CHM 105(5); PHY 100(4)
      b. **Unified Science** (25 hours): BIO 121(4), 122(4); CHM 160(4), **161(1),** 170(3), 175~~1~~(~~2~~1); PHY 123(4), 124(4)

C. Professional Education Courses (37 hours): SCI 214(1), 314(3), 414(3), 493(6), 494(6) and see Teacher Certification, Teacher Education Program and Secondary Education Requirements section of catalog

D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

E. In order to meet Missouri state teacher certification requirements, candidates for the Bachelor of Science in Education degree are required to meet the following grade point average requirements: at least a 2.50 GPA on all coursework attempted at all colleges attended; at least a 2.50 GPA in the certificate subject area (major field of study) which includes all courses listed under B; at least a 2.50 GPA in any additional certificate subject area;

at least a 2.50 GPA in the professional education courses; and no grade lower than a "C" in all professional education courses. All GPA requirements include both Missouri State and transfer grades.

Attachment C—Complete New Catalog Description

Earth Science Education
Bachelor of Science in Education
(Certifiable grades 9-12)

A. General Education Requirements - see General Education Program and Requirements section of catalog
The following required courses can be used to meet both General Education and Major Requirements: BIO 102(4); MTH 138(5), or MTH 135(3) and MTH 181(3), or MTH 261(5) or MTH 287(3); AST 115(4) or CHM 105(5) or GLG 110(4) or GRY 135(4) or PHY 100(4)

B. Major Requirements
   1. Core (25 hours): GLG 110(4), 314(4), 318(3), 412(4); GRY 135(4), 348(3), 351(3)
   2. Major Electives (3 hours): Select 3 additional hours from any GLG course numbered 171 or above in consultation with advisor
   3. Related Requirements (10-13 hours): AST 115(4); MTH 138(5), or MTH 135(3) and 181(3) or MTH 261(5) or MTH 287(3); SCI 505(3)
   4. Complete one of the following options:
      a. **Categorical Science** (13 hours): BIO 102(4); CHM 105(5); PHY 100(4)
      b. **Unified Science** (25 hours): BIO 121(4), 122(4); CHM 160(4), 161(1), 170(3), 171(1); PHY 123(4), 124(4)

C. Professional Education Courses (37 hours): SCI 214(1), 314(3), 414(3), 493(6), 494(6) and see Teacher Certification, Teacher Education Program and Secondary Education Requirements section of catalog

D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

E. In order to meet Missouri state teacher certification requirements, candidates for the Bachelor of Science in Education degree are required to meet the following grade point average requirements: at least a 2.50 GPA on all coursework attempted at all colleges attended; at least a 2.50 GPA in the certificate subject area (major field of study) which includes all courses listed under B; at least a 2.50 GPA in any additional certificate subject area; at least a 2.50 GPA in the professional education courses; and no grade lower than a "C" in all professional education courses. All GPA requirements include both Missouri State and transfer grades.

Missouri State University
Curricular Proposal Program Change or Deletion

Department Geography, Geology, and Planning **Date** September 16, 2011

Title of Program Affected Geology (Comprehensive) Bachelor of Science

Major___ Comprehensive Major__X__ 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.)
See Attachment A.	See Attachment B.

What is changing? Check all boxes that apply.

___ Title change
__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
___ Other_____

REASON FOR PROPOSED CHANGE

1. Change "CHM 160(4), 170(3), 175(2)" to "CHM 160(4), 161(1), 170(3), 171(1)." Reason: Chemistry Department has changed their General Chemistry sequence.

COMPLETE NEW CATALOG INFORMATION (Typed)

See Attachment C.

Total Hours 79-87

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** (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_____ **Date**_____
Department Head

(Routing on Reverse Side)

Attachment A—Present Catalog Description

Geology (Comprehensive)
Bachelor of Science
This degree program is designed for those who wish to seek admission to graduate school in geology or related fields.

A. General Education Requirements - see General Education Program and Requirements section of catalog
B. Major Requirements (79-87 hours)
   1. GLG 110(4) or both GLG 171(4) and GLG 172(1); GLG 314(4), 332(4), 333(4), 340(4), 358(3), 412(4), 413(6) or equivalent Field Geology course, 570(4)
   2. GLG 415(4) or 580(3) or GRY 348(3)
   3. GLG 572(3) or 573(3) or 590(3)
   4. Select a minimum of 9 additional hours of GLG courses numbered 318 or higher, but not to include more than 4 hours of GLG 360
   5. Related Requirements (27-33 hours): GRY 363(4); CHM 160(4), 170(3), 175(2); MTH 261(5) and 280(5), or MTH 287(3) and 288(3); PHY 123(4) and 124(4), or PHY 203(5) and 204(5)
C. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Attachment B—Revised Catalog Description

Geology (Comprehensive)
Bachelor of Science
This degree program is designed for those who wish to seek admission to graduate school in geology or related fields.

A. General Education Requirements - see General Education Program and Requirements section of catalog
B. Major Requirements (79-87 hours)
   1. GLG 110(4) or both GLG 171(4) and GLG 172(1); GLG 314(4), 332(4), 333(4), 340(4), 358(3), 412(4), 413(6) or ~~equivalent Field Geology course, 570(4)~~
   2. GLG 415(4) or 580(3) or GRY 348(3)
   3. GLG 572(3) or 573(3) or 590(3)
   4. Select a minimum of 9 additional hours of GLG courses numbered 318 or higher, but not to include more than 4 hours of GLG 360
   5. Related Requirements (27-33 hours): GRY 363(4); CHM 160(4), **161(1),** 170(3), 175~~1~~(~~2~~1); MTH 261(5) and 280(5), or MTH 287(3) and 288(3); PHY 123(4) and 124(4), or PHY 203(5) and 204(5)
C. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Attachment C—Complete New Catalog Description

Geology (Comprehensive)
Bachelor of Science
This degree program is designed for those who wish to seek admission to graduate school in geology or related fields.

D. General Education Requirements - see General Education Program and Requirements section of catalog
E. Major Requirements (79-87 hours)
   1. GLG 110(4) or both GLG 171(4) and GLG 172(1); GLG 314(4), 332(4), 333(4), 340(4), 358(3), 412(4), 413(6) or equivalent Field Geology course, 570(4)
   2. GLG 415(4) or 580(3) or GRY 348(3)
   3. GLG 572(3) or 573(3) or 590(3)
   4. Select a minimum of 9 additional hours of GLG courses numbered 318 or higher, but not to include more than 4 hours of GLG 360
   5. Related Requirements (27-33 hours): GRY 363(4); CHM 160(4), 161(1), 170(3), 171(1); MTH 261(5) and 280(5), or MTH 287(3) and 288(3); PHY 123(4) and 124(4), or PHY 203(5) and 204(5)

F. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Missouri State University
Curricular Proposal Program Change or Deletion

Department Geography, Geology, and Planning **Date** September 16, 2011

Title of Program Affected Geology (Non-Comprehensive) Bachelor of Science

Major X 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.)
See Attachment A.	See Attachment B.

What is changing? Check all boxes that apply.

___ Title change
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
___ Other_____

REASON FOR PROPOSED CHANGE

1. Require both Structural Geology (GLG 340) and Stratigraphy (GLG 570), instead of one or the other. Reason: Missouri Geologists Registration Board has proposed requiring both Structural Geology and Stratigraphy for professional registration. GGP Advisory Board recommends requiring both for all majors in Geology.
2. List MTH 138 or 181 as explicit requirement. Reason: The pre-requisite for GLG 340 is MTH 138 or 181, so listing this as a requirement for the major will avoid a "hidden requirement."
3. Change "CHM 170(3), 175(2)" to "CHM 161(1), 170(3), 171(1)." Reason: Chemistry Department has changed their General Chemistry sequence.
4. Reduce total hours of major electives from 11 to 7. Reason: Compensate for adding the second 4-hour geology course (Structural Geology or Stratigraphy).

COMPLETE NEW CATALOG INFORMATION (Typed)

See Attachment C.

Total Hours 49-54

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**	(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_____ **Date**_____
Department Head

(Routing on Reverse Side)

Attachment A—Present Catalog Description

Geology (Non-Comprehensive)
Bachelor of Science

A. General Education Requirements - see General Education Program and Requirements section of catalog
B. Major Requirements (46-49 hours)
   1. GLG 110(4) or both 171(4) and 172(1); GLG 314(4), 332(4), 333(4), 358(3)
   2. GLG 340(4) or 570(4)
   3. GLG 412(4) or 413(6) or equivalent field geology course
   4. CHM 160(4)
   5. GRY 363(4)
   6. Complete 11 hours selected from:
      a. CHM 170(3), 175(2)
      b. GLG courses numbered 318 or higher, but not to include more than 4 hours of GLG 360
      c. GRY 348(3)
C. Minor Required (or second major)
D. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Attachment B—Revised Catalog Description

Geology (Non-Comprehensive)
Bachelor of Science

E. General Education Requirements - see General Education Program and Requirements section of catalog
F. Major Requirements (~~46~~**49**-~~49~~**54** hours)
   1. GLG 110(4) or both 171(4) and 172(1); GLG 314(4), 332(4), 333(4), **340(4),** 358(3)**, 570(4)**
   ~~2. GLG 340(4) or 570(4)~~
   ~~3~~**2**. GLG 412(4) or 413(6) or equivalent field geology course
   ~~4~~**3**. CHM 160(4)
   4. MTH 138(5) or 181(3)
   5. GRY 363(4)
   6. Complete ~~11~~ **7** hours selected from:
      a. CHM **161(1),** 170(3), ~~175(2)~~**171(1)**
      b. GLG courses numbered 318 or higher, but not to include more than 4 hours of GLG 360
      c. GRY 348(3)
G. Minor Required (or second major)
H. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Attachment C—Complete New Catalog Description

Geology (Non-Comprehensive)
Bachelor of Science

I. General Education Requirements - see General Education Program and Requirements section of catalog
J. Major Requirements (49-54 hours)
   1. GLG 110(4) or both 171(4) and 172(1); GLG 314(4), 332(4), 333(4), 340(4), 358(3), 570(4)
   2. GLG 412(4) or 413(6) or equivalent field geology course
   3. CHM 160(4)
   4. MTH 138(5) or 181(3)
   5. GRY 363(4)
   6. Complete 7 hours selected from:
      a. CHM 161(1), 170(3), 171(1)
      b. GLG courses numbered 318 or higher, but not to include more than 4 hours of GLG 360
      c. GRY 348(3)
K. Minor Required (or second major)

L. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Missouri State University
Curricular Proposal Program Change or Deletion

Department Geography, Geology, and Planning **Date** September 16, 2011

Title of Program Affected Planning (Comprehensive) Bachelor of Science

Major___ Comprehensive Major__X__ 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.)
See Attachment A.	See Attachment B.

What is changing? Check all boxes that apply.

___ Title change
_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
___ Other_____

REASON FOR PROPOSED CHANGE

1) Require SOC 302 specifically, rather than as one of six courses that can satisfy the statistics requirement. Reason: Over the years, we have observed that students taking SOC 302 are better prepared to succeed in PLN 367 as opposed to students who have taken any of the other statistics courses. We have now made SOC 302 the sole statistics pre-requisite for PLN 367.
2) Move PLN 572(4) into "core" required for all planning majors. Reason: Current curriculum guidelines for planning accreditation recommend a planning practicum course for all planning majors to ensure synthesis of knowledge and application to planning practice. Our PLN 572(4) (Community Planning Practicum) is currently required in the Community and Regional Planning option but optional in the Tourism Planning and Development option. The proposed change will move this course into the required core for the major, regardless of option.
3) In Tourism Planning and Development option, move PLN 574 from required to optional. Reason: Equalize number of hours between the two options.

COMPLETE NEW CATALOG INFORMATION (Typed)

See Attachment C.

Total Hours 70

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**	(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_____ **Date**_____
Department Head

(Routing on Reverse Side)

Attachment A—Present Catalog Description

Planning (Comprehensive)
Bachelor of Science

A. General Education Requirements - see General Education Program and Requirements section of catalog
B. Major Requirements (69-70 hours)
   1. PLN 100(3) or GRY 100(3) or GRY 108(3); PLN 271(3), 367(3), 372(3), 400(3), 570(3), 571(3), 576(4), 599(3); GRY 142(4) or GLG 110(4); GRY 321(3), 322(3), 363(4); ECO 155(3), SOC 150(3); MTH 340(3) or one of: AGR 330(3), PSY 200(3), QBA 237(3), REC 328(3), SOC 302(3)
   2. Complete one of the following options:
      a. **Community and Regional Planning** (19 hours)
         1. PLN 572(4); PLS 351(3); SOC 305(3)
         2. Select an additional 9 hours from the following (at least 5 hours to be selected from GRY, GEO, or PLN courses): PLN 505(3), 573(3), 574(3), 596(1-3), 597(1-5), 599(1-3); FIN 266(3); GRY 301(3), 310(3), 320(3), 348(3), 351(3), 360(3), 410(3), 470(2), 510(3), 525(3), 545(3); GEO 551(3), 561(3), 566(3), 568(3); PLS 255(3), 354(3); ECO 450(3); HRA 340(3); HST 515(3)
      b. **Tourism Planning and Development** (18 hours)
         1. GRY 310(3), 410(3), 510(3); HRA 340(3); PLN 574(3)
         2. Select an additional 3 hours from the following: PLN 505(3), 572(4), 573(3), 596(1-3), 597(1-5), 599(1-3); GRY 320(3), 328(3), 348(3), 351(3), 360(3), 470(2), 525(3), 545(3); GEO 551(3), 561(3), 566(3), 568(3); REC 152(3), 390(3), 422(3); HRA 410(3); ECO 540(3); HST 515(3)
C. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

~~Attachment B—Revised Catalog Description~~

Planning (Comprehensive)
Bachelor of Science

D. General Education Requirements - see General Education Program and Requirements section of catalog
E. Major Requirements (~~69~~-70 hours)
   1. PLN 100(3) or GRY 100(3) or GRY 108(3); PLN 271(3), 367(3), 372(3), 400(3), 570(3), 571(3), **572(4),** 576(4), 599(3); GRY 142(4) or GLG 110(4); GRY 321(3), 322(3), 363(4); ECO 155(3), SOC 150(3)~~; MTH 340(3) or one of: AGR 330(3), PSY 200(3), QBA 237(3), REC 328(3), SOC~~ , 302(3)
   2. Complete one of the following options:
      a. **Community and Regional Planning** (19~~5~~ hours)
         1. ~~PLN 572(4);~~ PLS 351(3); SOC 305(3)
         2. Select an additional 9 hours from the following (at least 5 hours to be selected from GRY, GEO, or PLN courses): PLN 505(3), 573(3), 574(3), 596(1-3), 597(1-5), 599(1-3); FIN 266(3); GRY 301(3), 310(3), 320(3), 348(3), 351(3), 360(3), 410(3), 470(2), 510(3), 525(3), 545(3); GEO 551(3), 561(3), 566(3), 568(3); PLS 255(3), 354(3); ECO 450(3); HRA 340(3); HST 515(3)
      b. **Tourism Planning and Development** (18~~5~~ hours)
         1. GRY 310(3), 410(3), 510(3); HRA 340(3)~~; PLN 574(3)~~
         2. Select an additional 3 hours from the following: PLN 505(3), ~~572(4),~~ 573(3), **574(3),** 596(1-3), 597(1-5), 599(1-3); GRY 320(3), 328(3), 348(3), 351(3), 360(3), 470(2), 525(3), 545(3); GEO 551(3), 561(3), 566(3), 568(3); REC 152(3), 390(3), 422(3); HRA 410(3); ECO 540(3); HST 515(3)
F. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

Attachment C—Complete New Catalog Description

Planning (Comprehensive)
Bachelor of Science

G. General Education Requirements - see General Education Program and Requirements section of catalog
H. Major Requirements (70 hours)
   1. PLN 100(3) or GRY 100(3) or GRY 108(3); PLN 271(3), 367(3), 372(3), 400(3), 570(3), 571(3), 572(4), 576(4), 599(3); GRY 142(4) or GLG 110(4); GRY 321(3), 322(3), 363(4); ECO 155(3), SOC 150(3), 302(3)
   2. Complete one of the following options:
      a. **Community and Regional Planning** (15 hours)
         1. PLS 351(3); SOC 305(3)
         2. Select an additional 9 hours from the following (at least 5 hours to be selected from GRY, GEO, or PLN courses): PLN 505(3), 573(3), 574(3), 596(1-3), 597(1-5), 599(1-3); FIN 266(3); GRY 301(3), 310(3), 320(3), 348(3), 351(3), 360(3), 410(3), 470(2), 510(3), 525(3), 545(3); GEO 551(3), 561(3), 566(3), 568(3); PLS 255(3), 354(3); ECO 450(3); HRA 340(3); HST 515(3)
      b. **Tourism Planning and Development** (15 hours)
         1. GRY 310(3), 410(3), 510(3); HRA 340(3)
         2. Select an additional 3 hours from the following: PLN 505(3), 573(3), 574(3), 596(1-3), 597(1-5), 599(1-3); GRY 320(3), 328(3), 348(3), 351(3), 360(3), 470(2), 525(3), 545(3); GEO 551(3), 561(3), 566(3), 568(3); REC 152(3), 390(3), 422(3); HRA 410(3); ECO 540(3); HST 515(3)
I. General Baccalaureate Degree Requirements - see General Baccalaureate Degree Requirements section of catalog

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

Department Geography, Geology, & Planning **Date** September 23, 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

GLG 574 Petroleum Geology
Prerequisite: GLG 314; recommended prerequisites: GLG 333 and GLG 570. Origin of hydrocarbons in sedimentary successions; petroleum systems; sequence stratigraphic concepts; basin analysis; petroleum exploration techniques, including well log and seismic interpretation; techniques for resource exploitation and an introduction to petroleum production. Taught concurrently with GLG 674. Cannot receive credit for both GLG 574 and GLG 674. 3(2-2) S

PURPOSE OF COURSE

To introduce advanced undergraduate students in the B.S. program in Geology to petroleum systems, one of the principal applications of geology in the resources sector of the world economy, and to provide training in advanced techniques and conceptual models, such as sample description, sequence stratigraphy, seismic exploration, well-log interpretation, and basin analysis. Through reading of the textbook, articles, lectures, exercises, and homework, the student will be able to integrate principles from various sub-disciplines, including stratigraphy, geochemistry, hydrogeology, and structural geology as they are applied to the exploration and economic exploitation of fossil fuel resources.

RELATIONSHIP TO OTHER DEPARTMENTS

No direct relationship to any other department. The clientele for this course will be almost exclusively undergraduate majors and minors in geology. The companion graduate-level course (GLG 674) will serve graduate students in the M.S. program in Geospatial Sciences in Geography and Geology and graduate students in the MNAS with Geology as one of their fields of concentration.

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_____ **Date**_____
Department Head

(Routing on Reverse Side)

NEW COURSE RESOURCE INFORMATION

Department Geography, Geology and Planning Date 9/12/2011

Course Number and Title GLG 574/674 Petroleum Geology 3(2-2)

Anticipated Average Enrollment 10-20 Maximum Enrollment Limit 25

Faculty Load Assignment 4 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

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

This course was piloted in Spring 2009 under the variable-topics course number GLG 597 (Selected Topics in Geology), so faculty workload has already been allocated for this course. This was accomplished primarily by teaching larger sections of GLG 171 which freed up faculty teaching time for this course.

List names of current faculty qualified to teach this course:

The only faculty member fully qualified to be the primary instructor for this course is Dr. Kevin Evans. Various other members of the existing GGP faculty have specialized expertise relevant to the course are subject matter, and they will be called upon to give guest lectures as appropriate. These include: Rovey (stratigraphy and hydrology), Mickus (geophysics), Gouzie (engineering geology), and Gutierrez (geochemistry).

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?)

Geology undergraduates, Geospatial Sciences M.S., and MNAS students The course is an elective, and the students could be taking the course in addition to their other elective courses. Both the undergraduate geology program and the M.S. program in Geospatial Sciences have seen a significant increase in enrollments over the past 3 years.

5 Other comments:

The Policy Statement and Course Outline from the Spring 2009 offering of this course are attached.

COURSE POLICY STATEMENT – SPRING SEMESTER 2009

GLG 597 – SELECTED TOPICS IN GEOLOGY
Section 301-- PETROLEUM GEOLOGY

DEPARTMENT OF GEOGRAPHY, GEOLOGY, AND PLANNING
Instructor: Kevin R. Evans, Ph.D.

Section 301: TR 3:00-4:15 pm
Credit Hours: 3
Classroom: Temple 335

Evans Office: Temple 369-A
Phone: (417) 836-5590
E-mail: kevinevans@missouristate.edu
Office Hours: MWF 10:00 - 11:00 am or by appointment

Course Description:

GLG 597 Selected Topics in Geology 1-5 D: Prerequisite: permission of instructor. Detailed treatment of various advanced topics in geology which may vary from year to year. Some typical topics: geologic instrumentation, selenology, sedimentology, and crystallography. Since credit and topics vary, the course may be repeated for a total of 6 hours. Various Content Course.

Textbook:

Hyne, N.J., 2001, Nontechnical Guide to Petroleum Geology, Exploration, Drilling, and Production, 2nd Edition: PennWell Corporation, Tulsas, Oklahoma, 598 p. [MSU Bookstore will have books maybe this week, price ~$69.95—it is a good read and keeper]

Bend, S.E., 2007, Petroleum Geology eTextbook: AAPG/Datapages, Tulsa, Oklahoma, CD-ROM. [see chapter handouts—CD available on request]

Other materials including readings and exercises will be handed out episodically.

[New textbook for Spring 2011: Gluyas, J., and Swarbrick, R., 2004, Petroleum Geoscience: Blackwell Publishing, Malden, Mass., 359 p.]

[New lab manual for Spring 2011: Abreu, V., Neal, J.E., Bohacs, K.M. and Kalbas, J.L., 2010, Sequence Stratigraphy of Siliciclastic Systems: Society for Sedimentary Geology (SEPM) Concepts in Sedimentology and Paleontology 9, 226 p.]

Purpose and Goals:

Petroleum geology is the application of geologic principles to the exploration for and production of hydrocarbons and the assessment of energy resources. The discovery, development, and production of petroleum resources are major concerns for our civilization. Transportation systems rely on a steady supply of fuels to function within the socio-economic environment that has developed over the last century; natural gas and oil for heating, lubricants, and plastics are equally important commodities in the modern world. Carbon-neutral alternative energy resources currently cannot meet the needs for fuels and material goods. The role of the petroleum geologist is to provide economically sustainable resources that meet the needs of humanity until alternative means can be developed.

Attendance and Tardiness Policies:

Your success in this course is heavily dependent on regular attendance. Excluding the final examination period, class will meet 33 times during the semester. The university places responsibility for attendance policies in the hands of instructors (Missouri State University Undergraduate Catalog 2008-2009, p. 52; the Graduate Catalog 2008-2009 does not address this issue). Sometimes illnesses or family emergencies crop up, and there is no possible way to avoid being absent. I do not require an excuse note for such occasions, but please let me know in advance if you will not be attending. We may have several in-class exercises and assignments. If you miss classes, it will negatively impact your grade. Let me take this opportunity to urge you to attend regularly.

Tardiness disrupts the class, as does leaving early. It is the instructor's prerogative to allow you to remain in class, if you disrupt it. This class meets at 3:00 pm; please be prepared for class, attend on time, and stay for the full duration.

Drop Policy:

It is your responsibility to understand the University's procedure for dropping a class. If you stop attending this class but do not follow proper procedures for dropping the class, you will receive a failing grade and will also be financially obligated to pay for the class. For information about dropping a class or withdrawing from the university contact the Registration Center at 836-4335.

Academic Dishonesty:

Missouri State University is a community of scholars committed to developing educated persons who accept the responsibility to practice personal and academic integrity. You are responsible for knowing and following the university's student honor code, *Student Academic Integrity Policies and Procedures*, available at http://www.missouristate.edu/provost/22102.htm and also available at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

Classroom Disruption and Cell Phone Use:

The course instructor has original jurisdiction over his/her class and may deny a student who is unduly disruptive the right to attend the class. Students are expected to master the course content in compliance with the syllabus of the course instructor. The student is expected to comply with all reasonable directives of the course instructor. The course instructor may have a student administratively withdrawn from a course upon showing of good cause and with the concurrence of the department head. The appeals process in case of such administrative withdrawal shall be as stated in the academic regulations under "Grade Re-evaluation Based on Performance." More information on the university policy for classroom disruption may be found at the web site: http://www.missouristate.edu/registrar/classdis.html.

The use by students of cell phones, pagers, or similar communication devices during scheduled classes is prohibited. All such devices must be turned off or put in a silent mode and cannot be taken out during class. At the discretion of the instructor, exception to this policy is possible in special circumstances.

Statement of Disability Accommodation:

To request academic accommodations for a disability, contact the Director of Disability Services, Plaster Student Union, Suite 405, (417) 836-4192 or (417) 836-6792 (TTY), http://www.missouristate.edu/disability. Students are required to provide documentation of disability to Disability Services prior to receiving accommodations. Disability Services refers some types of accommodation requests to the Learning Diagnostic Clinic, which also provides diagnostic testing for learning and psychological disabilities. For information about testing, contact the

Director of the Learning Diagnostic Clinic, (417) 836-4787, http://psychology.missouristate.edu/ldc.

Statement of Nondiscrimination:

Missouri State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office for Equity and Diversity, Siceluff Hall 296, (417) 836-4252. Other types of concerns (i.e., concerns of an academic nature) should be discussed directly with your instructor and can also be brought to the attention of your instructor's Department Head.

COURSE DETAILS

Blackboard:

Enroll in this course on Blackboard as soon as possible: GLG597-Sp09-301: Petroleum Geology.

Guest Speaks

We will have a few guest speakers this Spring who will be presenting talks on various aspects of petroleum geology. You will be expected to attend and participate in these events.

Examinations:

Four exams will be given during the semester, including the final examination, which is partly comprehensive. The regularly scheduled exams are worth 100 points each, and these may consist of multiple choice, fill-in-the-blank, short answer, essay, matching questions, and problems. The final exam is worth 200 points, and it will be twice as long because it is essentially a regular exam combined with a comprehensive exam. The scheduled dates for each exam, including the final, are given below. These dates are set and will not change. The material covered on examinations will be taken from classroom lectures, exercises, presentations, reading assignments in the textbook, and supplemental material posted on Blackboard. There are no provisions for make-up exams. There will be no extra credit assignments, but attendance and successful participation on the optional field trips are worth 10 points each.

Optional Field Trips

Field Trip I: AAPG Annual Martin Luther King Field Trip: Stratigraphy and Structure of Southwest Missouri, January 19, departs at 8:00 am sharp from parking lot 4 (just south of Temple Hall): bring a lunch, hammer, hand lens, digital camera, and notebook.

Field Trip II: Petroleum Resources of Western Missouri and Eastern

Provisional Examination Dates:

Exam 1, Tuesday, February 17
Exam 2, Tuesday, March 19
Exam 3, Tuesday, April 21
Final Exam, Tuesday, May 12, 3:30-5:30 pm.

Term Paper, Presentation, Assignments, Activities, and Discussion:

Petroleum geology will engage your ability to evaluate data sets, think three-dimensionally, formulate questions, present and discuss ideas, make presentations, and write effectively. Students will be expected to be prepared (by having read the assigned readings) and participate in discussions. Activities and assignments will be given for in-class work.

A 10-page double-spaced term paper (1 page margins, no cover sheet, at least three references other than textbooks) will be written by each student on a specific topic of interest in the field of tectonics. Students also will prepare a 20-minute presentation on the subject of the term paper. The principal topics will be assessments and review of petroleum potential of basins, including play concepts and petroleum systems. The term paper is due April 28. Student presentations also will begin April 28 over material covered in the term paper.

Grading:

Summary of Points Possible:
There are 750 points possible in this course. The distribution of points is as follows:

(3) Examinations	100 points possible for each (possible total of 300 points)
(1) Term Paper	50 points possible
(1) Presentation	50 points possible
Assignments, activities, and discussion	100 points possible
(1) Final examination (Comprehensive)	200 points possible
TOTAL	700 points

Grading Scale:

630-700 cumulative points	A (≥90%)
560-629 cumulative points	B (≥80% and <90%)
490-559 cumulative points	C (≥70% and <80%)
420-489 cumulative points	D (≥60% and <70%)
<420 cumulative points	F (<60%)

As instructors of this course, we reserve the option of curving grade boundaries downward to adjust for difficult exams, but the boundaries will not be adjusted upward.

GLG 597—Section 301—Petroleum Geology
Course Schedule—Spring 2009

Date	Day	Topic and Assignments
Jan 13	T	Introduction to Petroleum Geology / What is Petroleum? Reading Assignment: Bend Chapters 1-2 Assignment: API Adventures in Petroleum web site http://www.adventuresinenergy.org/interactive/main.swf (Worksheet 10 pts.) ALL WORKSHEETS AND HOMEWORK ARE DUE AT BEGINNING OF FOLLOWING CLASS MEETING
Jan 15	R	History of Petroleum and Petroleum Exploration Powerpoint Assignment: "Quest for Oil" PowerPoint Presentation (When you see a word or abbreviation you don't understand, write it down, and ask) Homework: Evenick Chapter 1 Exercises (10 pts.)
Jan 19	M	AAPG Field Trip (Extra credit 10 pts.)
Jan 20	T	Petroleum Source Rocks Reading Assignment: Bend, Chapter 3 Homework: Evenick Chapter 2 Exercises 10 pts.
Jan 22	R	Siliciclastic Reservoir Rocks Reading Assignment: Embry and Klovan, 1971; Hyne, Chapters 1-3; Lab Assignment: Siliciclastic Rocks (Worksheet 10 pts.)
Jan 27	T	Carbonate Reservoir Rocks Reading Assignment: Bend, Chapter 4; Hyne, Chapters 4-6 Lab Assignment: Carbonate Rocks (Worksheet 10 pts.)
Jan 29	R	Sedimentary Basins Reading Assignment: Hyne, Chapters 7-9
Feb 3	T	Structural Traps and Seals
Feb 5	R	Stratigraphic and Combination Traps Reading Assignment: Magoon et al. 1988
Feb 10	T	Petroleum Systems
Feb 12	R	Exam 1 (100 pts.) Movie "Chinatown" Homework: Evenick, Chapter 2 Exercises (10 pts.)
Feb 17	T	Introduction to Well Logs I Homework: Evenick, Chapter 3 Exercises (10 pts.)
Feb 19	R	Introduction to Well Logs II Homework: Evenick, Chapter 4 Exercises (10 pts.) Web Assignment: Virtual Oil Well http://www.earthscienceworld.org/games/VirtualOilWell/content/page1.htm
Feb 24	T	Geophysical Methods I (Gravity and Magnetism) Homework: Evenick, Chapter 5 Exercises (10 pts.)

Feb 26	R	Geophysical Methods II (Seismic) Homework: Evenick, Chapter 6 Exercises (10 pts.)
Mar 3	T	Sequence Stratigraphy I Homework: Evenick, Chapter 7 Exercises (10 pts.)
Mar 5	R	Sequence Stratigraphy II Homework: Evenick, Chapter 8 Exercises (10 pts.)
Mar 10	T	Exercises in Exploration I (Cross-sections and Facies) Web Assignment: Sequence Stratigraphy Interpretation (10 pts.)
Mar 12	R	Exercises in Exploration II (Structural contour and isopach thickness maps)
Mar 17	T	[GSA SC Meeting—Dallas]
Mar 19	R	Exam II; Movie "There Will Be Blood"
Mar 23-27		SPRING BREAK
Mar 31	T	Guest speaker (date provisional) Assignment: Term paper and presentation topics
Apr 2	R	[GSA NC Meeting—Rockford]
Apr 7		Drilling technology Homework: Evenick, Chapter 11 Exercises (10 pts.)
~~Apr 9~~		~~Secondary and tertiary recovery methods~~
Apr 14		Production Geology
Apr 16		Guest speaker—Jim Kendall, Vice President–Geoscience, Compass Resources Corporation
Apr 21		Unconventional resources
Apr 23		Exam III; Movie "Giant"
Apr 25-26		Petroleum Geology Field Trip (Extra credit 20 pts.); oil production in Vernon County, Missouri (tour) and El Dorado, Kansas (Butler County Historical Museum) with rock stops
Apr 28	T	Presentations [TERM PAPER DUE 50 pts.—PRESENTATIONS 50 pts.] Presenters: 1-3.
Apr 30	R	Presentations -- Presenters: 4-6.
May 5	T	Presentations -- Presenters: 7-9.
May 7	R	Presentations -- Presenters: 10-12.
May 12	T	FINAL EXAM 3:30-5:30 pm

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

Department Geography, Geology, & Planning **Date** September 23, 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

GLG 674 Petroleum Geology
Recommended prerequisites: GLG 314, GLG 333 and GLG 570. Origin of hydrocarbons in sedimentary successions; petroleum systems; sequence stratigraphic concepts; basin analysis; petroleum exploration techniques, including well log and seismic interpretation; techniques for resource exploitation and an introduction to petroleum production. Taught concurrently with GLG 574. Cannot receive credit for both GLG 674 and GLG 574. 3(2-2) S

PURPOSE OF COURSE

To introduce graduate students in the M.S. program in Geospatial Sciences in Geography and Geology petroleum systems, one of the principal applications of geology in the resources sector of the world economy, and to provide training in advanced techniques and conceptual models, such as sample description, sequence stratigraphy, seismic exploration, well-log interpretation, and basin analysis. Through reading of the textbook, articles, lectures, exercises, and homework, the student will be able to integrate principles from various sub-disciplines, including stratigraphy, geochemistry, hydrogeology, and structural geology as they are applied to the exploration and economic exploitation of fossil fuel resources.

RELATIONSHIP TO OTHER DEPARTMENTS

No direct relationship to any other department. The clientele for this course will be almost exclusively graduate students in the M.S. program in Geospatial Sciences in Geography and Geology and graduate students in the MNAS with Geology as one of their fields of concentration. The companion undergraduate-level course (GLG 574) will serve undergraduate majors and minors in geology.

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** *As a courtesy, for information only	(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 Facult 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)
__X__ **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)

NEW COURSE RESOURCE INFORMATION

Department Geography, Geology and Planning Date 9/19/2011

Course Number and Title GLG 574/674 Petroleum Geology 3(2-2)

Anticipated Average Enrollment 10-20 Maximum Enrollment Limit 25

Faculty Load Assignment 4 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

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

This course was piloted in Spring 2009 under the variable-topics course number GLG 597 (Selected Topics in Geology), so faculty workload has already been allocated for this course. This was accomplished primarily by teaching a smaller number of larger sections of GLG 171, which freed up faculty teaching time for this course.

List names of current faculty qualified to teach this course:

The only faculty member fully qualified to be the primary instructor for this course is Dr. Kevin Evans. Various other members of the existing GGP faculty have specialized expertise relevant to the course subject matter, and they will be called upon to give guest lectures as appropriate. These include: Rovey (stratigraphy and hydrology), Mickus (geophysics), Gouzie (engineering geology), and Gutierrez (geochemistry).

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?)

Geology undergraduates, Geospatial Sciences M.S., and MNAS students The course is an elective, and the students could be taking the course in addition to their other elective courses. Both the undergraduate geology program and the M.S. program in Geospatial Sciences have seen a significant increase in enrollments over the past 3 years.

5 Other comments:

The Policy Statement and Course Syllabus from the Spring 2009 offering of this course are attached.

COURSE POLICY STATEMENT – SPRING SEMESTER 2009

GLG 597 – SELECTED TOPICS IN GEOLOGY
Section 301-- PETROLEUM GEOLOGY

DEPARTMENT OF GEOGRAPHY, GEOLOGY, AND PLANNING
Instructor: Kevin R. Evans, Ph.D.

Section 301: TR 3:00-4:15 pm
Credit Hours: 3
Classroom: Temple 335

Evans Office: Temple 369-A
Phone: (417) 836-5590
E-mail: kevinevans@missouristate.edu
Office Hours: MWF 10:00 - 11:00 am or by appointment

Course Description:

GLG 597 Selected Topics in Geology 1-5 D: Prerequisite: permission of instructor. Detailed treatment of various advanced topics in geology which may vary from year to year. Some typical topics: geologic instrumentation, selenology, sedimentology, and crystallography. Since credit and topics vary, the course may be repeated for a total of 6 hours. Various Content Course.

Textbook:

Hyne, N.J., 2001, Nontechnical Guide to Petroleum Geology, Exploration, Drilling, and Production, 2nd Edition: PennWell Corporation, Tulsa, Oklahoma, 598 p. [MSU Bookstore will have books maybe this week, price ~$69.95—it is a good read and keeper]

Bend, S.E., 2007, Petroleum Geology eTextbook: AAPG/Datapages, Tulsa, Oklahoma, CD-ROM. [see chapter handouts—CD available on request]

Other materials including readings and exercises will be handed out episodically.

Purpose and Goals:

Petroleum geology is the application of geologic principles to the exploration for and production of hydrocarbons and the assessment of energy resources. The discovery, development, and production of petroleum resources are major concerns for our civilization. Transportation systems rely on a steady supply of fuels to function within the socio-economic environment that has developed over the last century; natural gas and oil for heating, lubricants, and plastics are equally important commodities in the modern world. Carbon-neutral alternative energy resources currently cannot meet the needs for fuels and material goods. The role of the petroleum geologist is to provide economically sustainable resources that meet the needs of humanity until alternative means can be developed.

Attendance and Tardiness Policies:

Your success in this course is heavily dependent on regular attendance. Excluding the final examination period, class will meet 33 times during the semester. The university places responsibility for attendance policies in the hands of instructors (Missouri State University Undergraduate Catalog 2008-2009, p. 52; the Graduate Catalog 2008-2009 does not address this issue). Sometimes illnesses or family emergencies crop up, and there is no possible way to avoid being absent. I do not require an excuse note for such occasions, but please let me know in advance if you will not be attending. We may have several in-class exercises and assignments. If you miss classes, it will negatively impact your grade. Let me take this opportunity to urge you to attend regularly.

Tardiness disrupts the class, as does leaving early. It is the instructor's prerogative to allow you to remain in class, if you disrupt it. This class meets at 3:00 pm; please be prepared for class, attend on time, and stay for the full duration.

Drop Policy:

It is your responsibility to understand the University's procedure for dropping a class. If you stop attending this class but do not follow proper procedures for dropping the class, you will receive a failing grade and will also be financially obligated to pay for the class. For information about dropping a class or withdrawing from the university contact the Registration Center at 836-4335.

Academic Dishonesty:

Missouri State University is a community of scholars committed to developing educated persons who accept the responsibility to practice personal and academic integrity. You are responsible for knowing and following the university's student honor code, *Student Academic Integrity Policies and Procedures*, available at http://www.missouristate.edu/provost/22102.htm and also available at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

Classroom Disruption and Cell Phone Use:

The course instructor has original jurisdiction over his/her class and may deny a student who is unduly disruptive the right to attend the class. Students are expected to master the course content in compliance with the syllabus of the course instructor. The student is expected to comply with all reasonable directives of the course instructor. The course instructor may have a student administratively withdrawn from a course upon showing of good cause and with the concurrence of the department head. The appeals process in case of such administrative withdrawal shall be as stated in the academic regulations under "Grade Re-evaluation Based on Performance." More information on the university policy for classroom disruption may be found at the web site: http://www.missouristate.edu/registrar/classdis.html.

The use by students of cell phones, pagers, or similar communication devices during scheduled classes is prohibited. All such devices must be turned off or put in a silent mode and cannot be taken out during class. At the discretion of the instructor, exception to this policy is possible in special circumstances.

Statement of Disability Accommodation:

To request academic accommodations for a disability, contact the Director of Disability Services, Plaster Student Union, Suite 405, (417) 836-4192 or (417) 836-6792 (TTY), http://www.missouristate.edu/disability. Students are required to provide documentation of disability to Disability Services prior to receiving accommodations. Disability Services refers some types of accommodation requests to the Learning Diagnostic Clinic, which also provides diagnostic testing for learning and psychological disabilities. For information about testing, contact the Director of the Learning Diagnostic Clinic, (417) 836-4787, http://psychology.missouristate.edu/ldc.

Statement of Nondiscrimination:

Missouri State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office for Equity and Diversity, Siceluff Hall 296, (417) 836-4252. Other types of concerns (i.e., concerns of an academic nature) should be discussed directly with your instructor and can also be brought to the attention of your instructor's Department Head.

COURSE DETAILS

Blackboard:

Enroll in this course on Blackboard as soon as possible: GLG597-Sp09-301: Petroleum Geology.

Guest Speaks

We will have a few guest speakers this Spring who will be presenting talks on various aspects of petroleum geology. You will be expected to attend and participate in these events.

Examinations:

Four exams will be given during the semester, including the final examination, which is partly comprehensive. The regularly scheduled exams are worth 100 points each, and these may consist of multiple choice, fill-in-the-blank, short answer, essay, matching questions, and problems. The final exam is worth 200 points, and it will be twice as long because it is essentially a regular exam combined with a comprehensive exam. The scheduled dates for each exam, including the final, are given below. These dates are set and will not change. The material covered on examinations will be taken from classroom lectures, exercises, presentations, reading assignments in the textbook, and supplemental material posted on Blackboard. There are no provisions for make-up exams. There will be no extra credit assignments, but attendance and successful participation on the optional field trips are worth 10 points each.

Optional Field Trips

Field Trip I: AAPG Annual Martin Luther King Field Trip: Stratigraphy and Structure of Southwest Missouri, January 19, departs at 8:00 am sharp from parking lot 4 (just south of Temple Hall): bring a lunch, hammer, handlens, digital camera, and notebook.

~~Field Trip II: Petroleum Resources of Western Missouri and Eastern~~

Provisional Examination Dates:

Exam 1, Tuesday, February 17
Exam 2, Tuesday, March 19
Exam 3, Tuesday, April 21
Final Exam, Tuesday, May 12, 3:30-5:30 pm.

Term Paper, Presentation, Assignments, Activities, and Discussion:

Petroleum geology will engage your ability to evaluate data sets, think three-dimensionally, formulate questions, present and discuss ideas, make presentations, and write effectively. Students will be expected to be prepared (by having read the assigned readings) and participate in discussions. Activities and assignments will be given for in-class work.

An 10-page double-spaced term paper (1 page margins, no cover sheet, at least three references other than textbooks) will be written by each student on a specific topic of interest in the field of tectonics. Students also will prepare a 20-minute presentation on the subject of the term paper. The principal topics will be assessments and review of petroleum potentional of basins, including play concepts and petroleum systems. The term paper is due April 28. Student presentations also will begin April 28 over material covered in the term paper.

Grading:

Summary of Points Possible:
There are 750 points possible in this course. The distribution of points is as follows:

(3) Examinations	100 points possible for each (for a possible total of 300 points)
(1) Term Paper	50 points possible
(1) Presentation	50 points possible
Assignments, activities, and discussion	100 points possible
(1) Final examination (Comprehensive)	200 points possible
TOTAL	700 points

Grading Scale:

630-700 cumulative points	A (≥90%)
560-629 cumulative points	B (≥80% and <90%)
490-559 cumulative points	C (≥70% and <80%)
420-489 cumulative points	D (≥60% and <70%)
< 420 cumulative points	F (<60%)

As instructors of this course, we reserve the option of curving grade boundaries downward to adjust for difficult exams, but the boundaries will not be adjusted upward.

GLG 597—Section 301—Petroleum Geology
Course Syllabus—Spring 2009

Date	Day	Topic and Assignments
Jan 13	T	Introduction to Petroleum Geology / What is Petroleum? Reading Assignment: Bend Chapters 1-2 Assignment: API Adventures in Petroleum web site http://www.adventuresinenergy.org/interactive/main.swf (Worksheet 10 pts.) ALL WORKSHEETS AND HOMEWORK ARE DUE AT BEGINNING OF FOLLOWING CLASS MEETING
Jan 15	R	History of Petroleum and Petroleum Exploration Powerpoint Assignment: "Quest for Oil" PowerPoint Presentation (When you see a word or abbreviation you don't understand, write it down, and ask) Homework: Evenick Chapter 1 Exercises (10 pts.)
Jan 19	M	AAPG Field Trip (Extra credit 10 pts.)
Jan 20	T	Petroleum Source Rocks Reading Assignment: Bend, Chapter 3 Homework: Evenick Chapter 2 Exercises 10 pts.
Jan 22	R	Siliciclastic Reservoir Rocks Reading Assignment: Embry and Klovan, 1971; Hyne, Chapters 1-3; Lab Assignment: Siliciclastic Rocks (Worksheet 10 pts.)
Jan 27	T	Carbonate Reservoir Rocks Reading Assignment: Bend, Chapter 4; Hyne, Chapters 4-6 Lab Assignment: Carbonate Rocks (Worksheet 10 pts.)
Jan 29	R	Sedimentary Basins Reading Assignment: Hyne, Chapters 7-9
Feb 3	T	Structural Traps and Seals
Feb 5	R	Stratigraphic and Combination Traps Reading Assignment: Magoon et al. 1988
Feb 10	T	Petroleum Systems
Feb 12	R	Exam 1 (100 pts.) Movie "Chinatown" Homework: Evenick, Chapter 2 Exercises (10 pts.)
Feb 17	T	Introduction to Well Logs I Homework: Evenick, Chapter 3 Exercises (10 pts.)
Feb 19	R	Introduction to Well Logs II Homework: Evenick, Chapter 4 Exercises (10 pts.) Web Assignment: Virtual Oil Well http://www.earthscienceworld.org/games/VirtualOilWell/content/page1.htm
Feb 24	T	Geophysical Methods I (Gravity and Magnetism) Homework: Evenick, Chapter 5 Exercises (10 pts.)

Feb 26	R	Geophysical Methods II (Seismic) Homework: Evenick, Chapter 6 Exercises (10 pts.)
Mar 3	T	Sequence Stratigraphy I Homework: Evenick, Chapter 7 Exercises (10 pts.)
Mar 5	R	Sequence Stratigraphy II Homework: Evenick, Chapter 8 Exercises (10 pts.)
Mar 10	T	Exercises in Exploration I (Cross-sections and Facies) Web Assignment: Sequence Stratigraphy Interpretation (10 pts.)
Mar 12	R	Exercises in Exploration II (Structural contour and isopach thickness maps)
Mar 17	T	[GSA SC Meeting—Dallas]
Mar 19	R	Exam II; Movie "There Will Be Blood"
Mar 23-27		SPRING BREAK
Mar 31	T	Guest speaker (date provisional) Assignment: Term paper and presentation topics
Apr 2	R	[GSA NC Meeting—Rockford]
Apr 7		Drilling technology Homework: Evenick, Chapter 11 Exercises (10 pts.)
~~Apr 9~~		~~Secondary and tertiary recovery methods~~
Apr 14		Production Geology
Apr 16		Guest speaker—Jim Kendall, Vice President–Geoscience, Compass Resources Corporation
Apr 21		Unconventional resources
Apr 23		Exam III; Movie "Giant"
Apr 25-26		Petroleum Geology Field Trip (Extra credit 20 pts.); oil production in Vernon County, Missouri (tour) and El Dorado, Kansas (Butler County Historical Museum) with rock stops
Apr 28	T	Presentations [TERM PAPER DUE 50 pts.—PRESENTATIONS 50 pts.] Presenters: 1-3.
Apr 30	R	Presentations -- Presenters: 4-6.
May 5	T	Presentations -- Presenters: 7-9.
May 7	R	Presentations -- Presenters: 10-12.
May 12	T	FINAL EXAM 3:30-5:30 pm

BASIC BIBLIOGRAPHY – PETROLEUM GEOLOGY

General Readings on Petroleum Geology

Bend, S.E., 2007, Petroleum Geology eTextbook: AAPG/Datapages, Tulsa, Oklahoma, CD-ROM.

Gluyas, J., and Swarbrick, R., 2004, Petroleum Geoscience: Blackwell Publishing, Malden, Mass., 359 p.

Hyne, N.J., 2001, Nontechnical Guide to Petroleum Geology, Exploration, Drilling, and Production, 2nd Edition: PennWell Publishing, Tulsa, Oklahoma, 598 p.

Laudon, R.C., 1995, Principles of Petroleum Geology, Prentice Hall Petroleum Engineering Series, 267 p.

Sample Examination and Description

Swanson, R.G., 1981, Sample Examination Manual: American Association of Petroleum Geologists Methods in Exploration, 118 p.

Carozzi, A.V., 1993, Sedimentary Petrography: Prentice Hall, Englewood Cliffs, New Jersey, 263 p.

Scholle, P.A., and Ulner-Scholle, D.S., 2003, A Color Guide to the Petrography of Carbonate Rocks: Grains, Textures, Porosity, and Diagenesis: American Association of Petroleum Geologists Memoir 77, 474 p.

Tucker, M.E., 1991, Sedimentary Petrology, an Introduction to the Origin of Sedimentary Rocks, 2nd Ed.: Blackwell Scientific Publications, Boston, Massachusetts, 260 p.

Depositional Environments

Reading, H.G., ed., 1986, Sedimentary Environments and Facies, 2nd Ed.: Blackwell Scientific Publications, Boston, Massachusetts, 615 p.

Scholle, P.A., Bebout, D.G., and Moore, C.H., eds., 1983, Carbonate Depositional Systems: American Association of Petroleum Geologists Memoir 33, 708 p.

Scholle, P.A., and Spearing, D., eds., 1982, Sandstone Depositional Systems: American Association of Petroleum Geologists Memoir 31, 410 p.

Wilson, J.L., 1975, Carbonate Facies in Geologic History: Springer-Verlag, Berlin, Germany, 471 p.

Well Log Interpretation

Asquith, G., and Krygowski, D., 2006, Basic Well Log Analysis for Geologists, 2nd Ed.: American Association of Petroleum Geologists Methods in Exploration Series 16, 244 p.

Doveton, J.S., 1994, Geologic Log Interpretation, Reading the Rocks from Wireline Logs: Society for Sedimentary Geology (SEPM), Tulsa, Oklahoma, 169 p.

Evenick, J.C., 2008, Introduction to Well Logs and Subsurface Maps: PennWell Publishing, Tulsa, Oklahoma, 254 p.

Sequence Stratigraphy

Abreu, V., Neal, J.E., Bohacs, K.M. and Kalbas, J.L., eds., 2010, Sequence Stratigraphy of Siliciclastic Systems: Society for Sedimentary Geology (SEPM) Concepts in Sedimentology and Paleontology 9, 226 p.

Catuneanu, O., 2006, Principles of Sequence Stratigraphy: Elsevier, New York, 386 p.

Loucks, R.G., and Sarg, J.F., 1993, Carbonate Sequence Stratigraphy: American Association of Petroleum Geologists Memoir 57, 545 p.

Van Wagoner, J.C., Mitchum, R.M., Campion, K.M., and Rahmanian, V.D., 1990, Siliciclastic Sequence Stratigraphy in Well Logs, Cores, and Outcrops: American Association of Petroleum Geologists Methods in Exploration Series 7, 55 p.

Basin Analysis

Allen, P.A., and Allen, J.R., 2005, Basin Analysis Principles and Applications, 2nd Ed.: Blackwell Publishing, Malden, Massachusetts, 549 p.

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

Department Geography, Geology, & Planning **Date** September 19, 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

GLG 694 Global Tectonics
Recommended Prerequisite: GLG 314. The fundamental basis of plate tectonics. Topics covered include geophysical methods, plate motion theory, fundamental properties of plate boundaries, formation of sedimentary basins and orogenic belts. May be taught concurrently with GLG 594. Cannot receive credit for both GLG 594 and GLG 694. 3(3-0) S

PURPOSE OF COURSE

To introduce graduate students in the M.S. program in Geospatial Sciences in Geography and Geology to the theory of plate tectonics, the fundamental theory of how the Earth works. While the theory is generally accepted by earth scientists, there are still many controversial aspects of the theory. Through reading of the textbook, journal articles, and lectures, the student will be able to understand the general structure of the Earth and how this fits into the plate tectonic theory, how plates move, and how their interaction causes the various geological features (e.g., faults, orogenic belts, sedimentary basins) on the Earth.

RELATIONSHIP TO OTHER DEPARTMENTS

No direct relationship to any other department. The clientele for this course will be almost exclusively graduate students in the M.S. program in Geospatial Sciences in Geography and Geology and graduate students in the MNAS with Geology as one of their fields of concentration. The companion undergraduate-level course (GLG 594) will serve undergraduate majors and minors in geology.

Note—Both this course and its undergraduate equivalent (GLG 594) were originally proposed in Fall 2009. The undergraduate version (GLG 594) was approved by the CNAS College Council and is "on the books" in the current version of the *Undergraduate Catalog*. The Graduate College declined to consider the GLG 694 proposal because the CNAS Dean had neglected to sign the FS-300b form. We understand that, with the addition of a signature line for the Dean on the back of the current version of this (FS-300) form, form FS-300b is no longer required.

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** *As a courtesy, for information only	(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)
X **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)

NEW COURSE RESOURCE INFORMATION

Department Geography, Geology and Planning Date 9/19/11

Course Number and Title GLG 594/694 Global Tectonics 3(3-0)

Anticipated Average Enrollment 10-20 Maximum Enrollment Limit 25

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?

We have already taught this class as GLG 597/697 (Selected Topics in Geology) in Spring 2008, and then a second time in Spring 2010 as GLG 594/697, so faculty workload has already been reallocated for this course. This was done primarily by teaching a smaller number of larger sections of GLG 171, which freed up faculty teaching time.

List names of current faculty qualified to teach this course: Kevin Mickus, Kevin Evans, Tom Plymate, Doug Gouzie

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?)

The clientele for the graduate version of this course will be almost exclusively graduate students in the M.S. program in Geospatial Sciences in Geography and Geology and graduate students in the MNAS with Geology as one of their fields of concentration. The companion undergraduate-level course (GLG 594) will serve undergraduate majors and minors in geology. Both our undergraduate program in geology and our M.S. in Geospatial Sciences have seen a significant increase in enrollments over the last 3 years.

5 Other comments:

The Policy Statement and Course Syllabus for the Spring 2010 offering of this course (as GLG 594 for undergraduates; as GLG 697 for graduate students) are attached, following the FS-300b form.

POLICY STATEMENT

GEOLOGY | **DEPARTMENT OF GEOGRAPHY, GEOLOGY & PLANNING**

GLG 594/GLG 697 – Global Tectonics
MW-2:00-3:15
Temple 331

Dr. Kevin Mickus
Temple 375A

OFFICE HOURS: MW 1:00-2:00, F 2:00-5:00
OFFICE PHONE: 836-6375
Email: kevinmickus@missouristate.edu

Spring 2010

CATALOG DESCRIPTION:

GLG 594, Global Tectonics. 3(3-0) S.
Recommended Prerequisite: GLG 314. The fundamental basis of plate tectonics. Topics covered include geophysical methods, plate motion theory, fundamental properties of plate boundaries, formation of sedimentary basins and orogenic belts.

GLG 697, Selected Topics in Geology.
Prerequisite: permission. Detailed treatment of various advanced topics in geology which may vary from year to year. Some typical topics: geologic instrumentation, selenology, sedimentology, and crystallography. Variable content course. May be repeated for a total of 6 hours. May be taught concurrently with GLG 597. Cannot receive credit for both GLG 597 and GLG 697. 1-5, D

Section 301-- Global Tectonics.
Recommended Prerequisite: GLG 314. The fundamental basis of plate tectonics. Topics covered include geophysical methods, plate motion theory, fundamental properties of plate boundaries, formation of sedimentary basins and orogenic belts.

REQUIRED TEXTBOOK:

Global Tectonics by Keary and Vine, 3rd ed. is required. I recommend that you bring your copy to class because I frequently refer to figures in the text during lecture.

COURSE OBJECTIVES:

Plate tectonics is the fundamental theory of how the Earth works. While the theory is generally accepted by earth scientists, there are still many controversial aspects of the theory. Through reading of the textbook, journal articles, and lectures, the student will be able to understand the general structure of the Earth and how this fits into the plate tectonic theory, how plates move, and how their interaction causes the various geological features (e.g., faults, orogenic belts, sedimentary basins) on the Earth.

COURSE REQUIREMENTS:

DROPPING THE COURSE: It is your responsibility to understand the University's procedure for dropping a class. If you stop attending this class but do not follow proper procedure for dropping the class, you will receive a failing grade and will also be financially obligated to pay for the class. For information about dropping a class or withdrawing from the university, contact the Office of the Registrar at 836-5520.

MAKE-UP POLICY: If you know in advance that you must miss a test for a good reason (i.e. court appearance, trip with an athletic team, etc.) it may be possible for you to take the test in advance (please note: this is not an iron clad guarantee of taking an exam early, you must have a good reason; wanted to leave town a day or two early to extend your thanksgiving vacation is not considered a good reason). In this case, you must see me well in advance (one week) and be prepared to substantiate your reason for missing the scheduled test. There will be **absolutely no make-up tests** given after the fact.

EXTRA CREDIT WORK: There is no extra credit work allowed in this class, please do not ask.

GRADES:

EXAMS: There will be three exams. Two of these exams will be given during regularly scheduled class periods; the fifth will be given during Finals Week. Each of the exams will cover material since the last exam (or beginning of class for exam 1). The exam are worth 100 points each and may consist of multiple choice, fill-in-the-blank, short answer and essay. Exam questions will be based upon material from the lectures, textbook, reading material, homework and any class handouts. There are no makeup exams.

WRITING ASSIGNMENTS: Writing assignments will be given on readings handed out in class. Assignments will consist of reviewing the articles and answering specific questions. The writings will be graded based on clarity, spelling, English grammar, analysis of the given article, and originality. The writings will due one week after they are handed out. Assignments turned in one day late will be penalized by 50%, after one week no points will be given for that assignment.

HOMEWORK: This will consist of assignments such as analyzing earthquakes, interpreting magnetic stripe patterns and determining motion on a sphere. Homework will be due one week after they are assigned. Assignments turned in one day late will be penalized by 50%, after one week no points will be given for that assignment. The combination of the homework and writing assignments will be 100 points.

ORAL PRESENTATION/TERM PAPER: An eight-ten page double-spaced term paper (does not include cover sheet, there must be at least 3 journal references) will be written by each student on some regional area of tectonics (e.g., Alpine orogeny, East Africa Rift). Each student will also prepare a 15-20 minute presentation on the subject of the term paper. The term paper is worth 100 points and the presentation is worth 100 points.

GRADING:
There are a total of 600 points from the above assignments. Final grades will be given on the new +/- system: 92.50%-100.00% -- A, 90.00%-92.50% -- A-, 87.50%-89.99% -- B+, 82.50%-87.50% -- B 80.00%-82.50% -- B-, 77.50%-79.99% -- C+, 72.50%-77.50% -- C, 70.00%-72.50% -- C-, 67.50%-69.99% -- D+, 60.00%-67.50% -- D, 0.00%-59.99% -- F
Please keep track of all your grades, so that you can figure out your grade any time you wish. **I will not figure your grade for you during the semester.**

ATTENDANCE POLICY

Attendance will not be used in determining grades. On the first day of class, faculty must provide students with a written statement of the specific attendance policy for that class. The instructor has the responsibility to determine specific attendance policies for each course taught, including the role that attendance plays in calculation of final grades and the extent to which work missed due to non-attendance can be made up. Attendance will be taken but will be counted against or for your grade. **Instructors are not allowed to let students use their lecture notes.**

DISABLED STUDENTS

Students who require assistance during an emergency evacuation must discuss their needs with their professors and Disability Services. If you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. For additional information students should contact the Office of Disability Services, 836-4192 (PSU 405), or Larry Combs, Interim Assistant Director of Public Safety and Transportation at 836-6576. Disability Services refers some types of accommodation requests to the Learning Diagnostic Clinic, which also provides diagnostic testing for learning and psychological disabilities. For information about testing, contact the Director of the Learning Diagnostic Clinic, (417) 836-4787.

EMERGENCY RESPONSE PLAN

For further information on Missouri State University's Emergency Response Plan, please refer to the following web site: http://www.missouristate.edu/safetran/erp.htm

ACADEMIC INTEGRITY

Missouri State University is a community of scholars committed to developing educated persons who accept the responsibility to practice personal and academic integrity. You are responsible for knowing and following the university's student honor code, *Student Academic Integrity Policies and Procedures*, available at www.missouristate.edu/assets/provost/AcademicIntegrityPolicyRev-1-08.pdf and also available at the Reserves Desk in Meyer Library. Any student participating in any form of academic dishonesty will be subject to sanctions as described in this policy.

AFFIRMATIVE ACTION POLICY

Missouri State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to the Office of Equity and Diversity, Siceluff Hall 296, (417) 836-4252. Other types of concerns (i.e., concerns of an academic nature) should be discussed directly with your instructor and can also be brought to the attention of your instructor's Department Head, Dr. Thomas Plymate tomplymate@missouristate.edu .

POLICY ON USE OF CELL PHONES IN CLASSES

As a member of the learning community, each student has a responsibility to other students who are members of the community. When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts the class. Therefore, the Office of the Provost prohibits the use by students of cell phones, pagers, PDAs, or similar communication devices during scheduled classes. All such devices must be turned off or put in a silent (vibrate) mode and ordinarily should not be taken out during class. Given the fact that these same communication devices are an integral part of the University's emergency notification system, an exception to this policy would occur when numerous devices activate simultaneously. When this occurs, students may consult their devices to determine if a university emergency exists. If that is not the case, the devices should be immediately returned to silent mode and put away. Other exceptions to this policy may be granted at the discretion of the instructor.

Sanctions for violation of this policy are determined by the instructor and may include dismissal from the class—see Class Disruption (http://www.missouristate.edu/registrar/classdis.html).

In testing situations, use of cell phones or similar communication devices, or any other electronic or data storage device for other than university emergencies, may lead also to a charge of academic dishonesty and

additional sanctions under the *Student Academic Integrity Policies and Procedures* (http://www.missouristate.edu/assets/provost/AcademicIntegrityPolicyRev-1-08.pdf).

There are two appeal processes available to students. A sanction for class disruption may be appealed using the appeal process stated in the Class Disruption policy; however, a violation that involves a charge of academic dishonesty must be appealed using the process described in the *Student Academic Integrity Policies and Procedures*.

STUDENT RESPONSIBILITIES

Obtaining Notes/Handouts for Missed Lectures: If you miss a lecture, it is your responsibility to obtain notes/handouts from some other class member. Professors are not allowed to distribute copies of their notes to students, or to offer personalized make-up tutorials, so please do not ask.

Seeking Extra Help: It is your responsibility to seek additional help in understanding the course material before irreparable damage is done. I am happy to answer your questions and provide additional help during my office hours or any other mutually convenient time. However, it is your responsibility to prepare for this additional help by thoroughly reading the assigned material and carefully reviewing class notes before going to my office so that you can ask specific questions on the material which has not been understood. If I ask "What don't you understand?" and you answer "Everything", then you have not prepared adequately to take advantage of the additional help.

Class Disruptions: It is easy for an individual to disrupt and disturb a large number of people. Instructors at MSU have authority to suspend or drop any student who disrupts a class. Examples of disruptions include: 1) excessive talking or joking during class; 2) consistently arriving late for class; 3) leaving class early (without notifying the instructor); and 4) rustling of papers, books etc.

PROBLEMS: If you foresee or experience any problems during the course, please come and see me **as early as possible**. I am easy to reach by phone or by e-mail. If you cannot get a hold of me, please contact our secretary at 836-5800. She will be able to find me.

COURSE SYLLABUS
GLG 594/697 – Spring 2010
(subject to change, which will be announced in class)

LECTURE	Approximate number of lectures
Introduction to Course	1
History of Plate Tectonics	2
Mechanisms of Plate Tectonics	1
Continental Drift	1
Geophysics –Seismology	1
Geophysics- Magnetics and Gravity	1
Structure of the Earth	2
Mantle Plumes	1
Archean Tectonics	1
Cratons	1
Continental Rifting	1
EXAM I	
Oceanic Spreading Centers	1
Subduction Zones	1
Island and Back Arcs	1
Transform Boundaries	1
Exotic Terranes	1
Formation of Sedimentary Basins	1
Foreland Basins	1
Orogenic Belts	2
Neotectonics	1
EXAM II	
Africa	1
Antarctica	1
Asia	1
Europe	1
North America	1
North America	1
South America	1
Australia	1
FINAL EXAM	

BASIC BIBLIOGRAPHY – GLOBAL TECTONICS

General Tectonics:

Moores, E., and Twiss, R., 1995, Tectonics, Cambridge Univ. Press.
Cox, A., and Hart, R., 1986, Plate Tectonics - How it Works, Blackwell.

Geophysics and Structure of the Earth:

Lillie, R., 1998, 1998, Whole Earth Geophysics, Prentice Hall.
Fowler, C., 2005, The Solid Earth: An introduction to global geophysics, Cambridge Univ. Press.

History, Plate Mechanisms and Continental Drift:

Hamilton, W., 2007, Driving mechanism and 3-D circulation of plate tectonics, GSA Special Paper 433.
LeGrand, H., 1988, Drifting Continents and Shifting Theories, Cambridge Univ. Press.
Wilson, J. T., 1963, Evidence from islands on the spreading of sea floors, Nature, 197, 536-638.
Wilson, J. T., 1965, A new class of faults and their bearing on continental drift, Nature, 197, 536-638.
McKenzie, D. and Morgan, W., 1969, Evolution of triple junctions, Nature, 224, 125-133.

Mantle Plumes:

Burke, K., and Wilson, J., 1976, Hot spots on the Earth's Surface, J. Geophysical Res.,93, 7690-7708.
Duncan, R.A., and Richards, M., 1991, Hotspots, mantle plumes, flood basalts, and true polar wander, *Rev. Geophys.*, 29, 31-50.

Precambrian Tectonics:

Condie, K., 1994, Archean Crustal Evolution, Elsevier.
Brown, M., and Rushmer, T., 2006, Evolution and Differentiation of the Continental Crust, Elsevier.

Continental Rifting:

Olsen, K., 1995, Continental Rifts: Evolution, Structure, Tectonics, Elsevier.

Mid-Ocean Ridges:

Bott, M., 1982, The Interior of the Earth, its structure, constitution and evolution, Edward Arnold.

Subduction Zones:

Stern, R., 2002, Subduction Zones, Reviews of Geophysics, 40, 1-38.

Transform Boundaries:

Sylvester, A., 1988, Strike-slip faults, GSA Bulletin, 100, 1,666-1,703.

Island Arcs, Orogenic Belts, Exotic Terranes:

McQuarrie, N., 2005, Lithospheric evolution of the Andean fold-thrust belt, Tectonophysics, 399, 15-37.
Hodges, K., 2000, Tectonics of the Himalayas and southern Tibet from two perspectives, GSA Bulletin, 112, 324-350
Huang, C., 2000, Geodynamical processes of Taiwan arc-continent collision and comparison with analogs in Timor, Papua New Guinea, Urals and Corsica, Tectonophysics, 325, 1-21.

Sedimentary Basins:

Allen, P., and Allen, J., Basin Analysis, Blackwell
Naylor, M., and Sinclair, H., 2008, Pro- vs. retro-foreland basins, Basin Research, 20, 285-303.