If prerequisites, include the rationale for the prerequisites.

19. Co requisites: N/A
   If co requisites, include the rationale for the co requisites.

20. Does this course include combined lecture and lab components? Yes ☐ No ☑
   If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course: Maggie Vanderberg, Ph.D

22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review “see description” and “see impacts” for “Classes Starting/Ending Outside Regular Term” under the heading “Forms” http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Courses-Maintenance/.
   Do you anticipate this course will be scheduled outside the regular term? Yes ☐ No ☑

Answer 22-23 for UCC/ECCC only:

23. Is this course being proposed for Liberal Studies designation? Yes ☐ No ☐
   If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation? Yes ☐ No ☐
   If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 11/4/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) Date

Chair of college curriculum committee Date

Dean of college Date

For Committee use only:

UCC/UGC Approval Date

Effective Fall 2013
## UCC/UGC Approval

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## EXTENDED CAMPUSES

### Reviewed by Curriculum Process Associate

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### Approvals:

#### Academic Unit Head

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#### Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning)

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#### Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning)

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#### Faculty Chair of Extended Campuses Curriculum Committee (Yuma, Yavapai, or Personalized Learning)

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#### Chief Academic Officer; Extended Campuses (or Designee)

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**CS 567 – Advanced Software Assurance**

Effective Fall 2013
Spring 2013 Course Syllabus
Department of Electrical Engineering and Computer Science • College of Engineering, Forestry and Natural Sciences • Northern Arizona University

General Information
• Meeting Times: MW/F 11:30 AM – 12:20 PM
• Location: Engineering Building 69, Room 235
• Credit Hours: 3
• Grading: Letter
• Prerequisites: CS 249 with a grade of C better
• Instructor: Maggie Hamill, Ph.D
• Contact Information: Margaret.Hamill(at)nau.edu
• Office: Engineering Building 69, Room 212
• Office Hours: TBD
• Final Exam: Wednesday May 8th 10:00 AM – 12:00 PM

Course Description
This course covers the theory and implementation of using a planned and systematic set of activities to ensure that software processes and products conform to requirements, standards, and procedures. A special emphasis is placed on the safety of software.

Learning Outcomes
• Understand software assurance terminology and general approaches to system safety.
• Understand how software is considered within the context of system safety.
• Understand various software development process and software classification schemes.
• Learn to identify safety critical software, as well as other safety issues within a software/system.
• Learn how to incorporate appropriate safety and software development methodologies, techniques, and design features.
• Learn to identify hazards and eliminate, mitigate, warn, or proceduralize control of issues through analysis techniques.
• Understand how software safety is addressed in project planning, management and control activities and how is implemented throughout the development life cycle.
• Understand how software assurance and safety effort can be scoped and tailored into a reasonable and manageable task.
• Become knowledgeable in current research advances in software assurance
• Obtain a deeper level of understanding of software assurance used in practice so that one could teach about current software assurance practices
• Identify, analyze, and select assurance practices that are relevant for a specific software development or acquisition project

Course Structure and Evaluation Method
For the majority of the semester, Mondays and Wednesdays will consist of lectures on the theoretical components of software assurance. Fridays are reserved for covering practical aspects, which will often be based on the presentation of group assignments.

This class is co-convening with CS467 "Contemporary developments" - the theoretical knowledge presented will be the same in both classes. However, the graduate nature of CS567 will be reflected in an overall higher workload, along with higher requirements on the quality of submitted work.

Effective Fall 2013
General Course Outline:

I. Introduction
II. Software Assurance and System Safety Overview
III. Software Development Overview
IV. Software Safety Analysis Techniques
   o Hazard Analysis
   o Failure Modes and Effects Analysis (FMEA)
   o Software Fault Tree Analysis (SFTA)
V. Software Safety Analyses and Assurance Techniques during Development
   o Analysis Techniques during the Software Requirements Phase
   o Analysis Techniques during the Software Design Phase
   o Analysis Techniques during the Software Implementation Phase
   o Analysis Techniques during the Software Testing Phase
VI. Scoping, Tailoring, and Applying the Software Safety and Assurance Effort

The following are examples of journal articles the students will read and discuss in class:


Grade Make-up:

Homework/Exercises/Presentations (50% of final grade):
There will be individual as well as team assignments where you implement the techniques discussed in lecture. Many of these of assignments will require you (or your group) to present your answers and/or results to the class. Each graduate student is expected to take on a leadership for his or her group. Additionally, all graduate students will be required to research and present at least two papers in the area of software assurance and/or software safety. These presentations must include a literature review as well as an assignment for the rest of the class, which shall be developed by the graduate students to help ensure the student audience understands the information presented. Also, on some assignments there will be additional problems and/or questions for graduate students only to ensure they have a deeper understanding of the content. Finally, all graduate students will submit a report identifying, analyzing and then selecting software assurance practices to be applied to a software application of their choice.

Class Participation (10% of final grade):
To some degree, all of you have some experience developing software. I expect you to contribute to the class by participating in discussions during lecture and during group work presentations.
Participant points will be assessed periodically throughout the semester. Failing to show up for class when it is your turn to present will result in negative participation points. It should be noted that my expectations for the participation of graduate students is certainly higher than for undergraduates.

**Exams (40% of final grade):**
In this course, there will be two exams: a midterm and final. You must take both to pass the class. It should be noted, that similar to homework assignments, the tests will contain additional questions for graduate students (although no additional time will be given).

**Grading scale:** 90% = A, 80% = B, 70% = C, 60% = D, below 60% = F

**Course Policies**

**Attendance Policy:**
You are responsible for all material covered during the lectures whether you attend or not. If you must miss a class, be sure to get the notes from another student. Further, in the beginning of the semester groups will be formed and each student will be assigned specific days where they will present the group work. If you fail to show up when you are supposed to present you will not only receive a zero for the assignment, but you will also be docked point for class participation.

**Late Policy**
Work late will not be accepted unless prior arrangements were made in advance. If you miss (or know that you will miss) an exam discuss the matter with me as soon as possible. Makeup exams will only be given if cleared with me in advance or if a documented excuse is presented.

**Plagiarism and Cheating**
Copying or any other form of academic dishonesty will result in an immediate failure in the course in addition to recommendation of other penalties. In the event of cheating, both the receiver(s) and the giver(s) will be treated the same way.

**University Policies**
There are a number of university policies that govern your education and safety that all students should be aware of. These are:

- Safe Environmental Policy
- Students With Disabilities
- Institutional Review Board
- Academic Integrity
- Medical Insurance Coverage For Students
- Accommodation of Religious Observance and Practice
- Classroom Management
- Evacuation Policies

You will find a complete description of each policy here:
http://www4.nau.edu/avpaa/UCCPolicy/plcystmt.html

Effective Fall 2013
Please attach proposed Syllabus in approved university format.

1. Course subject and number: **CS 467**
   2. Units: **3**
   See upper and lower division undergraduate course definitions.

3. College: **CEFNS**
   4. Academic Unit: **Electrical Engineering & Computer Science**

5. Student Learning Outcomes of the new course. (Resources & Examples for Developing Course Learning Outcomes)
   - Understand software assurance terminology and general approaches to system safety.
   - Understand how software is considered within the context of system safety.
   - Understand various software development process and software classification schemes.
   - Learn to identify safety critical software, as well as other safety issues within a software/system.
   - Learn how to incorporate appropriate safety and software development methodologies, techniques, and design features.
   - Learn to identify hazards and eliminate, mitigate, warn, or proceduralize control of issues through analysis techniques.
   - Understand how software safety is addressed in project planning, management and control activities and how it can be implemented throughout the development life cycle.
   - Understand how software assurance and safety effort can be scoped and tailored into a reasonable and manageable task.

6. Justification for new course, including how the course contributes to degree program outcomes, or other university requirements / student learning outcomes. (Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes).
   One of the critical abilities computer science students will need in their future careers is the expertise to ensure the software systems developed are high quality. The proposed Software Assurance course covers the theory and implementation of using a planned and systematic set of activities to ensure that software processes and products conform to requirements, standards, and procedures. A special emphasis is placed on the safety of software, but the students learn how to scope and tailor the assurance effort based on project characteristics. Thus, the skills learned will be applicable for all CS-related career paths. This course has been offered earlier as a 499, and has been well received, while also addressing an important need for further depth in the department's upper-level elective offerings.

7. Effective BEGINNING of what term and year? **Fall 2014**
   See effective dates calendar.

Effective Fall 2013
8. Long course title: SOFTWARE ASSURANCE
(max 100 characters including spaces)

9. Short course title: SOFTWARE ASSURANCE
(max. 30 characters including spaces)

10. Catalog course description (max. 60 words, excluding requisites):
This course covers the theory and implementation of using a planned and systematic set of
activities to ensure that software processes and products conform to requirements,
standards, and procedures. A special emphasis is placed on the safety of software.

11. Will this course be part of any plan (major, minor or certificate) or sub plan (emphasis)?
   Yes ☒ No ☐
   If yes, include the appropriate plan proposal.
   The course will apply as CS elective credit for the CSBS and ACS degree plans. No plan
change proposal is necessary.

12. Does this course duplicate content of existing courses? Yes ☐ No ☒
   If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain why
   NAU should establish this course.

13. Will this course impact any other academic unit's enrollment or plan(s)? Yes ☐ No ☒
   If yes, describe the impact. If applicable, include evidence of notification to and/or response from
   each impacted academic unit

14. Grading option: Letter grade ☒ Pass/Fail ☐ Both ☐

15. Co-convened with: CS 567 14a. UGC approval date*: 
   (For example: ESE 450 and ESE 550) See co-convening policy.
   *Must be approved by UGC before UCC submission, and both course syllabi must be presented.

16. Cross-listed with:
   (For example: ES 450 and DIS 450) See cross listing policy.
   Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

17. May course be repeated for additional units? Yes ☐ No ☒
   16a. If yes, maximum units allowed? 
   16b. If yes, may course be repeated for additional units in the same term? Yes ☐ No ☒

18. Prerequisites: CS 249
   If prerequisites, include the rationale for the prerequisites.

19. Co requisites: N/A
   If co requisites, include the rationale for the co requisites.

Effective Fall 2013
20. Does this course include combined lecture and lab components? No ☒
   If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course: Maggie Vanderberg, Ph.D

22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review “see description” and “see impacts” for “Classes Starting/Ending Outside Regular Term” under the heading “Forms” http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/. Do you anticipate this course will be scheduled outside the regular term? No ☒

Answer 22-23 for UCC/ECCC only:

23. Is this course being proposed for Liberal Studies designation? No ☒
   If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation? No ☒
   If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 1/30/2014
Reviewed by Curriculum Process Associate

Approvals:

David K Scott 3/4/2014
Department Chair/Unit Head (if appropriate)

Chair of college curriculum committee

Dean of college

For Committee use only:

UCC/UGC Approval Date

Approved as submitted: No ☒

Approved as modified: No ☒

Effective Fall 2013
21. Names of the current faculty qualified to teach this course: Maggie Vanderberg, Ph.D

22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review "see description" and "see impacts" for "Classes Starting/Ending Outside Regular Term" under the heading "Forms" http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/. Do you anticipate this course will be scheduled outside the regular term? Yes [ ] No [ x ]

Answer 22-23 for UCC/ECCC only:

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   If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation? Yes [ ] No [ x ]
   If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 11/4/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) Date
[Signature]
12/9/13

Chair of college curriculum committee Date
[Signature]
12/9/13

Dean of college Date

For Committee use only:

UCC/UGC Approval Date

Approved as submitted: Yes [ ] No [ x ]

Approved as modified: Yes [ ] No [ x ]

EXTENDED CAMPUSES
Effective Fall 2013
General Information
- Meeting Times: M/W/F 11:30 AM - 12:20 PM
- Location: Engineering Building 69, Room 235
- Credit Hours: 3
- Grading: Letter
- Prerequisites: CS 249 with a grade of C better
- Instructor: Maggie Hamill, Ph.D
- Contact Information: Margaret.Hamill(at)nau.edu
- Office: Engineering Building 69, Room 212
- Office Hours: TBD
- Final Exam: Wednesday May 8th 10:00 AM - 12:00 PM

Course Description
This course covers the theory and implementation of using a planned and systematic set of activities to ensure that software processes and products conform to requirements, standards, and procedures. A special emphasis is placed on the safety of software.

Learning Outcomes
- Understand software assurance terminology and general approaches to system safety.
- Understand how software is considered within the context of system safety.
- Understand various software development process and software classification schemes.
- Learn to identify safety critical software, as well as other safety issues within a software/system.
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- Understand how software safety is addressed in project planning, management and control activities and how it can be implemented throughout the development life cycle.
- Understand how software assurance and safety effort can be scoped and tailored into a reasonable and manageable task.

Course Structure and Evaluation Method
For the majority of the semester, Mondays and Wednesdays will consist of lectures on the theoretical components of software assurance. Fridays are reserved for covering practical aspects, which will often be based on the presentation of group assignments.

This class is co-convening with CS567 “Contemporary developments” - the theoretical knowledge presented will be the same in both classes. However, the graduate nature of CS567 will be reflected in an overall higher workload, along with higher requirements on the quality of submitted work.
General Course Outline

I. Introduction
II. Software Assurance and System Safety Overview
III. Software Development Process Overview
IV. Software Safety Analysis Techniques
   o Hazard Analysis
   o Failure Modes and Effects Analysis (FMEA)
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   o Analysis Techniques during the Software Requirements Phase
   o Analysis Techniques during the Software Design Phase
   o Analysis Techniques during the Software Implementation Phase
   o Analysis Techniques during the Software Testing Phase
VI. Scoping, Tailoring, and Applying the Software Safety and Assurance Effort

Grade Make-up

Homework/Exercises/Presentations (50% of final grade):
There will be individual as well as team assignments where you implement the techniques discussed in lecture. Many of these of assignments will require you (or your group) to present your answers and/or results to the class.

Class Participation (10% of final grade):
To some degree, all of you have some experience developing software. I expect you to contribute to the class by participating in discussions during lecture and during group work presentations. Participant points will be assessed periodically throughout the semester. Failing to show up for class when it is your turn to present will result in negative participation points.

Exams (40% of final grade):
In this course, there will be two exams: a midterm and final. You must take both to pass the class.

Grading scale:
90% = A, 80% = B, 70% = C, 60% = D, below 60% = F

Course Policies

Attendance Policy:
You are responsible for all material covered during the lectures whether you attend or not. If you must miss a class, be sure to get the notes from another student. Further, in the beginning of the semester groups will be formed and each student will be assigned specific days where they will present the group work. If you fail to show up when you are supposed to present you will not only receive a zero for the assignment, but you will also be docked points for class participation.

Effective Fall 2013
Late Policy
Work late will not be accepted unless prior arrangements were made in advance. If you miss (or know that you will miss) an exam discuss the matter with me as soon as possible. Makeup exams will only be given if cleared with me in advance or if a documented excuse is presented.

Plagiarism and Cheating
Copying or any other form of academic dishonesty will result in an immediate failure in the course in addition to recommendation of other penalties. In the event of cheating, both the receiver(s) and the giver(s) will be treated the same way.

University Policies
There are a number of university policies that govern your education and safety that all students should be aware of. These are:
- Safe Environmental Policy
- Students With Disabilities
- Institutional Review Board
- Academic Integrity
- Academic Contact Hour Policy
- Sensitive Course Materials

You will find a complete description of each policy here:
http://www4.nau.edu/avpaa/UCCPolicy/plcystmt.html

Effective Fall 2013
CS 467 – Software Assurance
Spring 2013 Course Syllabus
Department of Electrical Engineering and Computer Science • College of Engineering, Forestry and Natural Sciences • Northern Arizona University

General Information
- **Meeting Times:** M/W/F 11:30 AM – 12:20 PM
- **Location:** Engineering Building 69, Room 235
- **Credit Hours:** 3
- **Grading:** Letter
- **Prerequisites:** CS 249 with a grade of C better
- **Instructor:** Maggie Hamill, Ph.D
- **Contact Information:** Margaret.Hamill(at)nau.edu
- **Office:** Engineering Building 69, Room 212
- **Office Hours:** TBD
- **Final Exam:** Wednesday May 8th 10:00 AM – 12:00 PM

Course Description
This course covers the theory and implementation of using a planned and systematic set of activities to ensure that software processes and products conform to requirements, standards, and procedures. A special emphasis is placed on the safety of software.

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- Understand software assurance terminology and general approaches to system safety.
- Understand how software is considered within the context of system safety.
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Course Structure and Evaluation Method
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This class is co-convening with CS567 “Contemporary developments” - the theoretical knowledge presented will be the same in both classes. However, the graduate nature of CS567 will be reflected in an overall higher workload, along with higher requirements on the quality of submitted work.

Effective Fall 2013
General Course Outline

I. Introduction
II. Software Assurance and System Safety Overview
III. Software Development Process Overview
IV. Software Safety Analysis Techniques
   o Hazard Analysis
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   o Analysis Techniques during the Software Implementation Phase
   o Analysis Techniques during the Software Testing Phase
VI. Scoping, Tailoring, and Applying the Software Safety and Assurance Effort

Grade Make-up

Homework/Exercises/Presentations (50% of final grade):
There will be individual as well as team assignments where you implement the techniques discussed in lecture. Many of these of assignments will require you (or your group) to present your answers and/or results to the class.

Class Participation (10% of final grade):
To some degree, all of you have some experience developing software. I expect you to contribute to the class by participating in discussions during lecture and during group work presentations. Participant points will be assessed periodically throughout the semester. Failing to show up for class when it is your turn to present will result in negative participation points.

Exams (40% of final grade):
In this course, there will be two exams: a midterm and final. You must take both to pass the class.

Grading scale:
90%=A, 80%=B, 70%=C, 60%=D, below 60%=F

Course Policies

Attendance Policy:
You are responsible for all material covered during the lectures whether you attend or not. If you must miss a class, be sure to get the notes from another student. Further, in the beginning of the semester groups will be formed and each student will be assigned specific days where they will present the group work. If you fail to show up when you are supposed to present you will not only receive a zero for the assignment, but you will also be docked points for class participation.

Effective Fall 2013
Late Policy
Work late will not be accepted unless prior arrangements were made in advance. If you miss (or know that you will miss) an exam discuss the matter with me as soon as possible. Makeup exams will only be given if cleared with me in advance or if a documented excuse is presented.

Plagiarism and Cheating
Copying or any other form of academic dishonesty will result in an immediate failure in the course in addition to recommendation of other penalties. In the event of cheating, both the receiver(s) and the giver(s) will be treated the same way.

University Policies
There are a number of university policies that govern your education and safety that all students should be aware of. These are:
- Safe Environmental Policy
- Students With Disabilities
- Institutional Review Board
- Academic Integrity
- Academic Contact Hour Policy
- Sensitive Course Materials

You will find a complete description of each policy here:
http://www4.nau.edu/avpaa/UCCPolicy/plcystmt.html

Effective Fall 2013
Submission Summary
Justification for MAT-S Program revisions

The CSTL has two M.A. degrees---MA Teaching (Science with Certification) and MA (Science Teaching). Both programs share some common coursework although the students in these programs have different needs. MAT-S is a graduate teacher certification program built for people who hold a degree in a science content area who have decided to get their teacher certification and teach. The MA Science Teaching students already have their teacher certification and most are working teachers in schools. The CSTL has found, based on feedback from students and faculty that mixing these two populations of students in the same classes does not meet their needs. MAT-S students need a focus on how to teach and MA ST students need to focus on further development of their teaching and content knowledge and skills. For this reason, we are requesting to revive the Secondary Science Methods I and II courses (SCI 560 and 561) for the MAT-S program, which will allow students in MAT-S to have 2 teaching methods courses and will allow our MA ST students to have 2 advanced science education courses (SCI 610, 611). The students from both programs will continue to share the SCI 612 and 613 courses. This revision will allow students in these two programs to receive the appropriate content and skills instruction they need. These changes will also allow the Center to maximize limited faculty resources and engage its graduate students in dialogue with each other about science assessment and the Next Generation Science Standards in the shared courses (SCI 612, 613).

The TSM 596 course is justified because all teacher certification students, undergraduate or graduate, take a student teaching course (TSM 495C or 595) the final semester in the program. The TSM 596 course is a support course for student teachers. This course provides them with a venue to analyze their progress in the student teaching experience with a group of peers and an experienced faculty member. In this course they reflect on their teaching performance and what their students are learning. Without this support course, student teaching is a solitary experience, completed in isolation from their NAU peers and (often) familiar professors.
Please attach proposed Syllabus in approved university format.

1. Course subject and number: TSM 596
   See upper and lower division undergraduate course definitions.

2. Units: 1

3. College: CEFNS

4. Academic Unit: CSTL

5. Student Learning Outcomes of the new course: (Resources & Examples for Developing Course Learning Outcomes)
   1. Reflect on teaching practices including the creation of a classroom environment based on respect and rapport that fosters a positive climate for learning, equity, and excellence.
   2. Review and evaluate personal performance in order to improve teaching practices through reflection.
   3. Develop and nurture current professional knowledge of the teaching/learning process.
   4. Provide evidence of student learning through the design and implementation of instruction that makes use of effective communication techniques, is based on student prior knowledge, actively engages students in the learning process, incorporates the use of technology and provides timely high-quality feedback.
   5. Reflect on the roles and responsibilities and adhere to legal and ethical requirements of the profession.
   6. Provide evidence of meeting the Arizona Professional Teaching Standards by taking the AEPA Secondary Professional Knowledge exam.

6. Justification for new course, including how the course contributes to degree program outcomes, or other university requirements / student learning outcomes. (Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes).
   This new course is part of the reorganization of the MAT-S program. The program serves preservice secondary science teachers.

7. Effective BEGINNING of what term and year? Fall 2014
   See effective dates calendar.

8. Long course title: APPRENTICE TEACHING SEMINAR
   (max 100 characters including spaces)

9. Short course title: APPRENTICE TEACHING SEMINAR
   (max. 30 characters including spaces)

Effective Fall 2013
10. Catalog course description (max. 60 words, excluding requisites):
Students reflect on their apprentice teaching experiences and examine contemporary critical
issues in education. A teaching portfolio is produced as a synthesis of the MAT-S program.
This course contains signature assessments that must be successfully completed.

11. Will this course be part of any plan (major, minor or certificate) or sub plan (emphasis)?
   Yes ☒  No ☐
   If yes, include the appropriate plan proposal.

12. Does this course duplicate content of existing courses?  Yes ☐  No ☒
    If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain
    why NAU should establish this course.

13. Will this course impact any other academic unit’s enrollment or plan(s)?  Yes ☐  No ☒
    If yes, describe the impact. If applicable, include evidence of notification to and/or response from
    each impacted academic unit.

14. Grading option:  Letter grade ☒  Pass/Fail ☐  Both ☐

15. Co-convened with:  
   14a. UGC approval date*:  
   (For example: ESE 450 and ESE 550)  See co-convening policy.
   *Must be approved by UGC before UCC submission, and both course syllabi must be presented.

16. Cross-listed with:
   (For example: ES 450 and DIS 450)  See cross listing policy.
   Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

17. May course be repeated for additional units?  Yes ☐  No ☒
   16a. If yes, maximum units allowed?  
   16b. If yes, may course be repeated for additional units in the same term?

18. Prerequisites:  
   If prerequisites, include the rationale for the prerequisites.

19. Co requisites:  TSM 595
   If co requisites, include the rationale for the co requisites.

20. Does this course include combined lecture and lab components?  Yes ☐  No ☒
    If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course:  Ron Gray, Sharon Cardenas,
    Pradeep Dass

Effective Fall 2013
22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review “see description” and “see impacts” for “Classes Starting/Ending Outside Regular Term” under the heading “Forms” http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/. Do you anticipate this course will be scheduled outside the regular term? Yes ☐ No ☐

Answer 22-23 for UCC/ECCC only:

23. Is this course being proposed for Liberal Studies designation? Yes ☐ No ☐
   If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation? Yes ☐ No ☐
   If yes, include a Diversity proposal and syllabus with this proposal.

---

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 2/4/2014
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) Date
Chair of college curriculum committee Date
Dean of college Date

For Committee use only:

UCC/UGC Approval Date

Approved as submitted: Yes ☐ No ☐
Approved as modified: Yes ☐ No ☐

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EXTENDED CAMPUSES

Effective Fall 2013
22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review "see description" and "see impacts" for "Classes Starting/Ending Outside Regular Term" under the heading "Forms":
http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/.
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**Answer 22-23 for UCC/ECCC only:**

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24. Is this course being proposed for Diversity designation? Yes ☐ No ☐
   If yes, include a Diversity proposal and syllabus with this proposal.

---

**FLAGSTAFF MOUNTAIN CAMPUS**

<table>
<thead>
<tr>
<th>Scott Galland</th>
<th>1/8/2014</th>
</tr>
</thead>
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**Chair of college curriculum committee**

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Approved as submitted: Yes ☐ No ☐

Approved as modified: Yes ☐ No ☐

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   Yes  No  
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   Yes  No  
   If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland  1/8/2014  
Reviewed by Curriculum Process Associate  Date

Approvals:

Department Chair/Unit Head (if appropriate)  Date  
Chair of college curriculum committee  Date  
Dean of college  Date  

For Committee use only:

UCC/UGC Approval  Date

Approved as submitted:  Yes  No  
Approved as modified:  Yes  No  

EXTENDED CAMPUS

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<table>
<thead>
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<tr>
<td>Chief Academic Officer; Extended Campuses (or Designee)</td>
<td></td>
</tr>
</tbody>
</table>

Approved as submitted: [Yes] [No]

Approved as modified: [Yes] [No]
Education Unit Vision: To develop educational leaders who create tomorrow’s opportunities.

Education Unit Mission: To prepare competent and committed professionals who will make positive differences for children, young adults, and others in schools.

TSM 596: Apprentice Teaching Seminar
1 credit hour

General Information:
- Instructor’s Name:
- Office address:
- Office Hours:
- Email:
- Phone:
- CSTL Phone: 523-7160

Course Co-requisites: Enrollment in TSM 595.

Course Description: Students reflect on their apprentice teaching experiences and examine contemporary critical issues in education. A teaching portfolio is produced as a synthesis of the MATS program. This course contains signature assessments that must be successfully completed.

Student Learning Expectations/Outcomes for this Course: Students will be able to:
1. Reflect on teaching practices including the creation of a classroom environment based on respect and rapport that fosters a positive climate for learning, equity, and excellence.
2. Review and evaluate personal performance in order to improve teaching practices through reflection.
3. Develop and nurture current professional knowledge of the teaching/learning process.
4. Provide evidence of student learning through the design and implementation of instruction that makes use of effective communication techniques, is based on student prior knowledge, actively engages students in the learning process, incorporates the use of technology and provides timely high-quality feedback.
5. Reflect on the roles and responsibilities and adhere to legal and ethical requirements of the profession.
6. Provide evidence of meeting the Arizona Professional Teaching Standards by taking the AEPA Secondary Professional Knowledge exam.

Standards addressed in this course:
- InTASC Model Core Teaching Standards addressed in this course:
  - 1(a)-1(f), 2(a)-2(o), 3(a)-3(r), 4(a)-4(r), 5(a)-5(s), 6(a)-6(v), 7(a)-7(q), 8(a)-8(s), 9(a)-9(o), 10(a)-10(l)
- National Council of Teachers of Mathematics Standards addressed in this course:
  - 3.4, 6.1, 7.1-7.6, 8.1-8.4, 8.7-8.9, 16.2, 16.3

Effective Fall 2013
- National Science Teacher Association Pre-service Teaching Standards addressed in this course:
  - 1a-1b, 2b – 2c, 3a – 3c, 5a-5c)
- www.nsta.org/pd/ncate/docs/2012NSTAPreserviceScienceStandards.pdf
- International Society for Technology in Education (ISTE®) National Educational Technology Standards (NETS)
  - 1d, 2a-2d, 3a-3c, 4a-4c, and 5a

Course Structure/Approach: This course is structured to meet with students in Flagstaff and students attending outside of Flagstaff through a synchronous class and webinar in Blackboard. Data collection, small group discussion, reflection, and writing assignments will be included.

Textbook and Required Materials:
- NAU Student Teaching Handbook.
- Useful references include:


Course Outline:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1-12</td>
<td>Weekly discussions and reflections on classroom practices.</td>
</tr>
<tr>
<td></td>
<td>Analysis of classroom data.</td>
</tr>
<tr>
<td></td>
<td>Take the AEPA Secondary Professional Knowledge exam.</td>
</tr>
<tr>
<td></td>
<td>Creation and review of draft segments of the final portfolio.</td>
</tr>
<tr>
<td>Week 13-15</td>
<td>Portfolio submission, feedback, and evaluation.</td>
</tr>
</tbody>
</table>

Assessment of Student Learning Outcomes:
*Signature assessments that must be successfully completed in order to earn an Institutional Recommendation for certification.

<table>
<thead>
<tr>
<th>Major Course Assessments:</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Class Attendance and Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Seminar Assignments To Support Signature Assessment (CWS) For Student Teaching:</td>
<td>25%</td>
</tr>
</tbody>
</table>

Effective Fall 2013
week unit of instruction, and will require you to submit the following elements as part of this course (the entire assessment will be due in BbLearn and is a requirement to passing student teaching):

- Signature Assessment Unit Plan Contract
- Signature Assessment Parts 2 & 3: Unit Pre-planning of Instruction & Assessment

**Job Application Portfolio:** You will create a Job Application Portfolio section in your Classroom notebook/portfolio. Additional explanations on each assignment will be given in class and submitted in Bb Learn.

- Cover Letter For Employment
- Resume
- *Academic Summary Record, Documentation of Professional and Subject-Matter Knowledge exams.

**Supporting Portfolio Assignments:** Other assignments will be completed for your final portfolio. These assignments will vary semester-by-semester and will be based on class needs, trends and changes to professional teaching requirements and topical issues. All elements of these assignments must meet passing score of at least a “C”. Examples of supporting portfolio assignments may include the following:

- Philosophy of Teaching paper
- Philosophy and Rationale for Classroom Management Plan
- Introduction to CWS: Classroom Context paper
- Teaching Schedule & Contact Information
- Lesson Plans
- Self Reflection on Teaching
- Self and/or Peer evaluation of daily assignments or teaching experiences
- Professional Development Plan
- Documentation & Rationale of Professional Development Activities

**CWS Teaching Video & Reflection:** You will submit an edited video that is a compilation of clips that show exemplary lessons that you teach during your CWS. You must show students using technology, provide evidence of varied instructional strategies, and show student engagement and your communication to students during lessons. You will need to have, in advance, video release authorization in order to meet legal requirements to video students in your class. Ask your mentor teacher to be the videographer for your lesson. In addition, you will analyze your strengths and weaknesses demonstrated in your video lesson and write a reflection. Specific details will be given in class.

**Grading System:**

<table>
<thead>
<tr>
<th>% of Points</th>
<th>Grade</th>
<th>Quality of Work</th>
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</thead>
<tbody>
<tr>
<td>90 - 100</td>
<td>A</td>
<td><strong>Exemplary:</strong> All aspects of the work are complete and well above the minimum level specified. Well written and free of typographical and grammatical errors. Application of concepts presented in class. Evidence of careful thought and reflection. Reflective application of assignment to future teaching and learning.</td>
</tr>
<tr>
<td>80 - 89</td>
<td>B</td>
<td><strong>Well done:</strong> Two or more of the above elements missing or of lesser quality.</td>
</tr>
<tr>
<td>70 - 79</td>
<td>C</td>
<td><strong>Acceptable:</strong> The task was completed at the minimum level specified. Most aspects of the assignment indicated a focus on task completion as opposed to careful reflection, analysis, and/or application.</td>
</tr>
<tr>
<td>60 - 69</td>
<td>D</td>
<td><strong>Not acceptable:</strong> Several aspects of the assignment are missing or completed at a sub-standard level.</td>
</tr>
<tr>
<td>Below 60</td>
<td>F</td>
<td><strong>Failing:</strong> Assignment not completed.</td>
</tr>
</tbody>
</table>

**Course Policies:**

- **Attendance and Participation:** Regular attendance and active participation at all class sessions is required and will greatly enhance the student’s ability to be successful. Regular attendance is expected with no more than 2 unexcused absences from class for the semester. Preparation includes, but is not limited to, coming to class prepared with the required assignments completed.

Effective Fall 2013
and engaging in thoughtful and reflective class discussion and activities. Violation of the attendance and participation policy can result in a grade reduction or failing the course.

- **Written Assignments**: All assignments completed outside of class must be typed and be professional in appearance. Writing errors, such as spelling, punctuation, grammatical errors, etc., will be taken into consideration and may lower the grade. Students are permitted and encouraged to proofread each other's assignments.

- **Teaching Video Assignment**: Video assignment needs to be formatted as .mov file and uploaded for the class with the written reflection.

- **Statement on plagiarism and cheating**: Plagiarism is considered as a willful act when a person knowingly uses the work of others and attempts to present it as his/her own. This academic dishonesty will not be permitted. Appropriate measures, as stated in the NAU Student Handbook, will be applied.

**NORTHERN ARIZONA UNIVERSITY POLICY STATEMENTS**

http://jan.ucc.nau.edu/academicadmin/plcystmt.html

Effective Fall 2013
### Proposal for Course Change/Reactivation

**University of Northern Arizona**

**UCC/UGC/ECCC**

**Proposal for Course Change/Reactivation**

[FAST TRACK] (Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)

If the changes included in this proposal are significant, attach copies of original and proposed syllabi in approved university format.

1. Course subject and number: SCI 560
2. Units: 3

See upper and lower division undergraduate course definitions.

3. College: CEFNS
4. Academic Unit: CSTL

---

#### Current Student Learning Outcomes of the course.

1. Articulate the current goals and visions of secondary science instruction and defend personal decisions related to selection of curriculum emphases (including balance of content and process), instructional activities, and methods of student assessment.
2. State a philosophy of science teaching and outline instructional and assessment strategies that align with such a philosophy.
3. Gain practice in the writing and enactment of science lessons that translate developmentally appropriate content to students using inquiry based instructional strategies.
4. Create a learning portfolio that will link what you have learned in your content major and your liberal studies program as it relates to the teaching of science in the secondary schools.

Show the proposed changes in this column (if applicable). Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted. *(Resources & Examples for Developing Course Learning Outcomes)*

1. Articulate the current goals and visions of secondary science instruction and defend personal decisions related to selection of curriculum emphases (including balance of content and process), instructional activities, and methods of student assessment.
2. State a philosophy of science teaching and outline instructional and assessment strategies that align with such a philosophy.
3. Gain practice in the writing and enactment of science lessons that translate developmentally appropriate content to students using inquiry based instructional strategies.
4. Create a learning portfolio that will link what you have learned in your content major and your liberal studies program as it relates to the teaching of science in the secondary schools.

**A. Demonstrate understanding of various learning theories by discussing the relationship between lesson plan elements and predicted effect on student learning.**

**B. Effectively utilize specific instructional strategies for providing meaningful**
6. **Current title, description and units.** Cut and paste, in its entirety, from the current on-line academic catalog* http://catalog.nau.edu/Catalog/.

   **SCI 560 SECONDARY SCIENCE METHODS (3)**
   Description: Development, application, and evaluation of skills for effective secondary science teaching, including instructional methods, lesson development, and application of teaching standards. Co-convenes with SCI 460C. Contains an assessment that must be successfully completed in order to student teach. Letter grade only. 
   Prerequisite: Admission to Teacher Education program.

   **Units: 3**

   Prerequisite or Co requisite: ECI 522
   Co requisite: SCI 508

   *if there has been a previously approved UCC/UGC/ECCC change since the last catalog year, please copy the approved text from the proposal form into this field.

7. Justification for course change.

   **SCI560 and SCI 561 are being reinstated as core courses in the redesigned MAT-S program.**

8. **Effective BEGINNING of what term and year?**
   See effective dates calendar.
   **Fall 2014**

**IN THE FOLLOWING SECTION, COMPLETE ONLY WHAT IS CHANGING**

<table>
<thead>
<tr>
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<th>PROPOSED</th>
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<tr>
<td>Current course subject and number:</td>
<td>Proposed course subject and number:</td>
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Effective Fall 2013
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<thead>
<tr>
<th>Current number of units:</th>
<th>Proposed number of units:</th>
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<tr>
<td>Current short course title:</td>
<td>Proposed short course title (max 30 characters):</td>
</tr>
<tr>
<td>SECONDARY SCIENCE METHODS</td>
<td>SCIENCE METHODS I</td>
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<tr>
<td>Current long course title:</td>
<td>Proposed long course title (max 100 characters):</td>
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<tr>
<td>SECONDARY SCIENCE METHODS</td>
<td>SCIENCE METHODS I</td>
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<tr>
<td>Current grading option:</td>
<td>Proposed grading option:</td>
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<td>letter grade [ ] pass/fail [ ] or both [ ]</td>
<td>letter grade [ ] pass/fail [ ] or both [ ]</td>
</tr>
<tr>
<td>Current repeat for additional units:</td>
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<tr>
<td>Current max number of units:</td>
<td>Proposed max number of units:</td>
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<tr>
<td>Current prerequisite:</td>
<td>Proposed prerequisite (include rationale in the justification):</td>
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<tr>
<td>ECI 522</td>
<td>NONE</td>
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<tr>
<td>Current co-requisite:</td>
<td>Proposed co-requisite (include rationale in the justification):</td>
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<tr>
<td>ECI 522, SCI 508</td>
<td>SCI 508</td>
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<td>SCI 460C</td>
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<tr>
<td>Current cross list with:</td>
<td>Proposed cross list with:</td>
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9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes ☒ No ☐
   If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

MAT-S

10. Is there a related plan or sub plan change proposal being submitted? Yes ☒ No ☐
    If no, explain.

11. Does this course include combined lecture and lab components? Yes ☐ No ☒
    If yes, include the units specific to each component in the course description above.

Answer 12-15 for UCC/ECCC only:

12. Is this course an approved Liberal Studies or Diversity course? Yes ☐ No ☒
    If yes, select all that apply. Liberal Studies ☐ Diversity ☐ Both ☐

13. Do you want to remove the Liberal Studies or Diversity designation? Yes ☐ No ☒
    If yes, select all that apply. Liberal Studies ☐ Diversity ☐ Both ☐

14. Is this course listed in the Course Equivalency Guide? Yes ☐ No ☒

15. Is this course a Shared Unique Numbering (SUN) course? Yes ☐ No ☒

Effective Fall 2013
### FLAGSTAFF MOUNTAIN CAMPUS

**Scott Galland**

Reviewed by Curriculum Process Associate

**Approvers:**

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Approved as submitted:  
Yes [ ]  No [ ]

Approved as modified:   
Yes [ ]  No [ ]

### EXTENDED CAMPUSES

Reviewed by Curriculum Process Associate

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Effective Fall 2013
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**MAT-S**

10. Is there a related plan or sub plan change proposal being submitted? Yes ☒ No ☐
    If no, explain.

11. Does this course include combined lecture and lab components? Yes ☐ No ☒
    If yes, include the units specific to each component in the course description above.

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15. Is this course a Shared Unique Numbering (SUN) course? Yes ☐ No ☒

---

**FLAGSTAFF MOUNTAIN CAMPUS**

Scott Galland 12/12/2013

Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) 01/07/14

Chair of college curriculum committee Date

Dean of college Date

For Committee use only:

Effective Fall 2013
Vision Statement
We develop educational leaders who create tomorrow's opportunities.

Mission Statement
Our mission is to prepare competent professionals who will make positive differences for children, young adults, and others in schools.

SCI 560 – Secondary Science Methods I
Fall 2014 Course Syllabus
Center for Science Teaching and Learning • College of Engineering, Forestry and Natural Sciences • Northern Arizona University

General Information
- Meeting Times: T/Th 1:00PM – 2:20 PM
- Location: CHEM 123
- Credit Hours: 3
- Grading: Letter
- Prerequisites: None
- Instructor:
- Contact Information:
- Office:
- Office Hours:

Course Description
Development, application, and evaluation of skills for effective secondary science teaching, including instructional methods, lesson development, and application of teaching standards. Contains an assessment that must be successfully completed in order to student teach.

Learning Outcomes. As a result of this course, students will be able to:
A. Demonstrate understanding of various learning theories by discussing the relationship between lesson plan elements and predicted effect on student learning.
B. Effectively utilize specific instructional strategies for providing meaningful experiences for your students.
C. Design meaningful lesson plans focused on student learning experiences.
D. Present and defend beliefs about science teaching and learning based on the understandings of the course.
E. Design instruction that motivates interest in science by being culturally sensitive and developmentally appropriate.
F. Effectively integrate technology into your lessons.
G. Practice professional patterns of communication including writing at a Master's level.

Standards addressed in this course:
1. National Science Teacher Association Standards addressed in this course:
   o 2b, 4a, 5a, 5b, 5d, 5e, 5f, 8a
   o http://www.nap.edu/openbook.php?record_id=4962 replace url
2. Arizona Professional Teaching Standards addressed in this course:
   o 1.1, 1.4-13; 7.1b, 7.4-5; 8.1-4, 8.7-9

Effective Fall 2013
3. National Board for Professional Teaching Standards (NBPTS) standards addressed in this course (for advanced education students
  o V, VI, VII, VIII
  o http://www.nbpts.org/userfiles/File/aya_science_standards.pdf

Course Structure and Evaluation Method
This course is taught in 2 1.5-hour blocks each week. The course uses a variety of instructional methods, including group discussions, reflective writings and reactions to class work and readings, participation in sample lessons modeling a variety of instructional models and strategies, the creation and presentation of lesson/unit plans to peers, and the participation in and evaluation of lessons presented by others.

General Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Readings &amp; Reflections</td>
</tr>
<tr>
<td>2-3</td>
<td>Learning theory</td>
<td>Readings &amp; Reflections</td>
</tr>
<tr>
<td>4-6</td>
<td>Instructional strategies; Big ideas in science; Microteaching</td>
<td>Microteaching</td>
</tr>
<tr>
<td>7-10</td>
<td>Inquiry instruction; Technology in support of inquiry</td>
<td>Technology presentation</td>
</tr>
<tr>
<td>11-15</td>
<td>Classroom discourse; Whole class discussions; Effective groupwork</td>
<td>Whole class discussion analysis</td>
</tr>
<tr>
<td>16</td>
<td>Finals week</td>
<td>Theoretical perspectives paper</td>
</tr>
</tbody>
</table>

Grade Make-up

| Participation: Students are expected to attend every class and engage in class activities. Frequently, in-class activities will include individual and group written work. This grade is holistic and will be based on attendance, preparation, and willingness to engage in in-class activities as evidenced by these informal assignments. You must be present to receive credit for these written assignments. Points will be deducted on a pro-rated basis for not attending and not participating in these informal assessments. | 25% |
| Microteaching: Students are expected to perform a microteach of an instructional strategy. | 10% |
| Technology in Support of Inquiry Inservice: You and a group will be asked to prepare a teacher inservice on a specific use of technology in the science classroom. | 25% |
| Whole Class Discussion Analysis: Students will produce and analyze pre/post videos focusing on effective whole class discussions. | 20% |
| Theoretical Perspectives of Science Education: Draft and final version. | 20% |

Grading scale: 90%=A, 80%=B, 70%=C, 60%=D, below 60%=F

Effective Fall 2013
Key Assessments: (MAT-S, CMOST students only)
The theoretical perspectives paper is a key assessment of the course. Key assessments are required as part of our NCATE accreditation and state accreditation of our teacher education programs. Because of these requirements, in order to pass this course, you must pass each criterion identified in the scoring rubric for each key assessment. Passing marks on each criterion is a threshold that must be met prior to receiving a course grade. If you do not earn a passing score on each criteria of each signature assessment, regardless of your total points in the course, you will receive an F. Once you have successfully passed the key assessments, the course instructor will calculate your total course grade. The course grade will be calculated using the initial score you received on the key assessments. If you do not pass the key assessments, you will receive a failing grade in this course and may be administratively withdrawn from any courses for which this course is a pre-requisite, including TSM/ECI 595C (Apprentice Teaching) and TSM 596C (Apprentice Teaching Seminar). You will have to repeat this course in order to progress in the Teacher Education Program.

If you have questions about this policy, please feel free to discuss it with the Associate Administrator for Academic Programs for the Center for Science Teaching and Learning, Sharon Cardenas, at 523-7430 or sharon.cardenas@nau.edu.

Course Policies

Attendance Policy:
You are responsible for all material covered during the lectures whether you attend or not. If you must miss a class, be sure to get the notes from another student. If you fail to show up when you are supposed to present you will not only receive a zero for the assignment, but you will also be docked points for class participation.

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Plagiarism and Cheating
Copying or any other form of academic dishonesty will result in an immediate failure in the course in addition to recommendation of other penalties. In the event of cheating, both the receiver(s) and the giver(s) will be treated the same way.

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There are a number of university policies that govern your education and safety that all students should be aware of. These are:
- Safe Environmental Policy
- Students With Disabilities
- Institutional Review Board
- Academic Integrity
- Academic Contact Hour Policy
- Sensitive Course Materials

You will find a complete description of each policy here:
http://www4.nau.edu/avpaa/UCCPolicy/plcystmt.html

Effective Fall 2013
If the changes included in this proposal are significant, attach copies of original and proposed syllabi in approved university format.

1. Course subject and number: **SCI 561**
2. Units: **3**

See upper and lower division undergraduate course definitions.

3. College: **CEFNS**
4. Academic Unit: **CSTL**

---

5. Current Student Learning Outcomes of the course:

1. Future science teachers will become familiar with common laboratory techniques and procedures that they will be expected to perform in the middle/secondary classroom.
2. Students will become proficient at planning, organizing and collecting materials, setting up, and presenting laboratory techniques in order to involve students in laboratory investigations.
3. Students will learn laboratory safety to provide a safe learning environment for all students.
4. Students will develop a resource book. This notebook should include class handouts, student reflections and written descriptions of potential student learning opportunities. Each student will be required to describe how laboratory techniques might be used by the classroom teacher to increase student understanding of scientific concepts.

---

Show the proposed changes in this column (if applicable). Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted. (Resources & Examples for Developing Course Learning Outcomes)

1. Future science teachers will become familiar with common laboratory techniques and procedures that they will be expected to perform in the middle/secondary classroom.
2. Students will become proficient at planning, organizing and collecting materials, setting up, and presenting laboratory techniques in order to involve students in laboratory investigations.
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---

A. Identify and utilize big (core) ideas in science.
B. Write a lucid rationale for teaching

---

Effective Fall 2013
selected science content that makes a case for its age-appropriateness, its value to society, and its meaning for students.

C. Design effective instructional units.
D. Recognize characteristics of and employing strategies for teaching science as inquiry.
E. Integrate understandings of how science works into your lessons.
F. Practice professional patterns of communication including writing at a Master’s level.

<table>
<thead>
<tr>
<th>6. Current title, description and units. Cut and paste, in its entirety, from the current on-line academic catalog*</th>
<th>Show the proposed changes in this column <strong>Bold</strong> the proposed changes in this column to differentiate from what is not changing, and <strong>Bold</strong> with strikethrough what is being deleted.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SCI 561 SECONDARY SCIENCE TECHNIQUES (3)</strong> Description: Development and use of science lab techniques to promote student understanding of science and scientific inquiry. Co-convenes with SCI 461. This course contains an assessment that must be successfully completed in order to register for student teaching. Letter grade only. Prerequisite: Admission to Teacher Education program. Units: 3 Prerequisite or Co requisite: ECI 522, SCI 508</td>
<td><strong>SCI 561 SECONDARY SCIENCE METHODS II TECHNIQUES (3)</strong> Description: Development and use of science lab techniques to promote student understanding of science and scientific inquiry. <strong>Co-convenes with SCI 461.</strong> This course contains an assessment that must be successfully completed in order to register for student teaching. Letter grade only. <strong>Prerequisite:</strong> Admission to Teacher Education program. Units: 3 Prerequisite or Co requisite: ECI 522, SCI 508</td>
</tr>
</tbody>
</table>

*if there has been a previously approved UCC/UGC/ECCC change since the last catalog year, please copy the approved text from the proposal form into this field.

7. Justification for course change.
**SCI560 and SCI 561 are being reinstated as core courses in the redesigned MAT-S program.**

8. Effective BEGINNING of what term and year? **Fall 2014**

**See effective dates calendar.**

**IN THE FOLLOWING SECTION, COMPLETE ONLY WHAT IS CHANGING**

<table>
<thead>
<tr>
<th>CURRENT</th>
<th>PROPOSED</th>
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<tbody>
<tr>
<td>Current course subject and number:</td>
<td>Proposed course subject and number:</td>
</tr>
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Effective Fall 2013
<table>
<thead>
<tr>
<th>Current number of units:</th>
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<tr>
<td>Current short course title:</td>
<td>Proposed short course title (max 30 characters):</td>
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<tr>
<td>SECONDARY SCIENCE TECHNIQUES</td>
<td>SCIENCE METHODS II</td>
</tr>
<tr>
<td>Current long course title:</td>
<td>Proposed long course title (max 100 characters):</td>
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<tr>
<td>SECONDARY SCIENCE TECHNIQUES</td>
<td>SCIENCE METHODS II</td>
</tr>
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<td>Proposed grading option:</td>
</tr>
<tr>
<td>letter grade ☐ pass/fail ☐ or both ☐</td>
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</tr>
<tr>
<td>Current repeat for additional units:</td>
<td>Proposed repeat for additional units:</td>
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<tr>
<td>Current max number of units:</td>
<td>Proposed max number of units:</td>
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<td>Proposed prerequisite (include rationale in the justification):</td>
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<td>ECI 522, SCI 508</td>
<td>SCI 508</td>
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<tr>
<td>Current co-requisite:</td>
<td>Proposed co-requisite (include rationale in the justification):</td>
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<td>ECI 522, SCI 508</td>
<td>SCI 508</td>
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<tr>
<td>Current co-convene with:</td>
<td>Proposed co-convene with:</td>
</tr>
<tr>
<td>SCI 461</td>
<td>NONE</td>
</tr>
<tr>
<td>Current cross list with:</td>
<td>Proposed cross list with:</td>
</tr>
</tbody>
</table>

9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes ☒ No ☐
   If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

MAT-S

10. Is there a related plan or sub plan change proposal being submitted? Yes ☒ No ☐
    If no, explain.

11. Does this course include combined lecture and lab components? Yes ☐ No ☒
    If yes, include the units specific to each component in the course description above.

**Answer 12-15 for UCC/ECCC only:**

12. Is this course an approved Liberal Studies or Diversity course? Yes ☐ No ☒
    If yes, select all that apply. Liberal Studies ☐ Diversity ☐ Both ☐

13. Do you want to remove the Liberal Studies or Diversity designation? Yes ☐ No ☒
    If yes, select all that apply. Liberal Studies ☐ Diversity ☐ Both ☐

14. Is this course listed in the **Course Equivalency Guide**? Yes ☐ No ☒

15. Is this course a **Shared Unique Numbering (SUN)** course? Yes ☐ No ☒

Effective Fall 2013
FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland
Reviewed by Curriculum Process Associate
Date

Approvals:

Department Chair/Unit Head (if appropriate)
Date

Chair of college curriculum committee
Date

Dean of college
Date

For Committee use only:

UCC/UGC Approval
Date

Approved as submitted: Yes ☐ No ☐

Approved as modified: Yes ☐ No ☐

EXTENDED CAMPUSES

Reviewed by Curriculum Process Associate
Date

Approvals:

Academic Unit Head
Date

Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning)
Date

Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning)
Date

Faculty Chair of Extended Campuses Curriculum Committee (Yuma, Yavapai, or Personalized Learning)
Date

Chief Academic Officer; Extended Campuses (or Designee)
Date

Effective Fall 2013
9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes ☑ No ☐
   If yes, describe the impact. If applicable, include evidence of notification to and/or response
   from each impacted academic unit.

MAT-S

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    If no, explain.

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    If yes, select all that apply. Liberal Studies ☐ Diversity ☐ Both ☐

14. Is this course listed in the Course Equivalency Guide? Yes ☑ No ☐

15. Is this course a Shared Unique Numbering (SUN) course? Yes ☐ No ☑

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 12/12/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) 01/07/14
Date

Chair of college curriculum committee Date

Dean of college Date

For Committee use only:

Effective Fall 2013
Vision Statement
We develop educational leaders who create tomorrow’s opportunities.

Mission Statement
Our mission is to prepare competent professionals who will make positive differences for children, young adults, and others in schools.

SCI 561 – Secondary Science Methods II
Spring 2015 Course Syllabus
Center for Science Teaching and Learning • College of Engineering, Forestry and Natural Sciences • Northern Arizona University

General Information
• Meeting Times: T/Th 1:00PM – 2:20 PM
• Location: CHEM 123
• Credit Hours: 3
• Grading: Letter
• Prerequisites: None
• Instructor:
• Contact Information:
• Office:
• Office Hours:

Course Description
Development of pedagogical content knowledge in grades 6-12 science instruction: curriculum design, study of the next generation science standards, and teaching science as inquiry. Contains an assessment that must be successfully completed in order to student teach.

Learning Outcomes. As a result of this course, students will be able to:
G. Identify and utilize big (core) ideas in science.
H. Write a lucid rationale for teaching selected science content that makes a case for its age-appropriateness, its value to society, and its meaning for students.
I. Design effective instructional units.
J. Recognize characteristics of and employing strategies for teaching science as inquiry.
K. Integrate understandings of how science works into your lessons.
L. Practice professional patterns of communication including writing at a Master’s level.

Standards addressed in this course:
1. National Science Teacher Association Standards addressed in this course:
   o 2b, 4a, 5a, 5b, 5d, 5e, 5f, 8a
   o http://www.nap.edu/openbook.php?record_id=4962 replace url
2. Arizona Professional Teaching Standards addressed in this course:
   o 1.1, 1.4-13; 7.1b, 7.4-5; 8.1-4, 8.7-9
   o http://www.ade.state.az.us/certification/downloads/Teacherstandards.pdf
3. National Board for Professional Teaching Standards (NBPTS) standards addressed in this course (for advanced education students
   o V, VI, VII, VIII
   o http://www.nbpts.org/userfiles/File/aya_science_standards.pdf

Effective Fall 2013
Course Structure and Evaluation Method
This course is taught in 2 1.5-hour blocks each week. The course uses a variety of instructional methods, including group discussions, reflective writings and reactions to class work and readings, participation in sample lessons modeling a variety of instructional models and strategies, the creation and presentation of lesson/unit plans to peers, and the participation in and evaluation of lessons presented by others.

General Course Outline

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Readings &amp; Reflections</td>
</tr>
<tr>
<td>2-3</td>
<td>Curriculum theory; Understanding by design; Model-based inquiry</td>
<td>Readings &amp; Reflections</td>
</tr>
<tr>
<td>4-7</td>
<td>Instructional strategies; Big ideas in science; Anchoring events; Scientific modeling</td>
<td>Lesson plans</td>
</tr>
<tr>
<td>8-14</td>
<td>Instructional activity investigation, enactments, and video club</td>
<td>Rehearsals videos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Video club analysis</td>
</tr>
<tr>
<td>15</td>
<td>Complete model-based inquiry unit plan</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Finals week</td>
<td>Final MBI Unit Plan and Lesson Plans</td>
</tr>
</tbody>
</table>

Grade Make-up

**Participation:** Students are expected to attend every class and engage in class activities. Frequently, in-class activities will include individual and group written work. This grade is holistic and will be based on attendance, preparation, and willingness to engage in in-class activities as evidenced by these informal assignments. You must be present to receive credit for these written assignments. Points will be deducted on a pro-rated basis for not attending and not participating in these informal assessments.

**Final MBI unit plan:** This course is dedicated to the gradual design of a unit plan while we examine the backwards design process, relevance of the national and state standards, etc.

**Rehearsals and video club of instructional activities:** Throughout the course you will be asked to rehearse (in class and in an authentic setting) specific instructional activities. Building on this work, we will examine specific ambitious instructional practices that lead to rigorous and equitable teaching. You will be asked to rehearse these practices multiple times during the course and provide video for analysis.

**Lesson Plans:** A total of five lesson plans will be created based on your unit plan. Three lesson plans will focus on the three Instructional activities covered in the course. Two additional lesson plans will be due with your unit plan.

<table>
<thead>
<tr>
<th></th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>Participation</td>
<td>35%</td>
</tr>
<tr>
<td>Final MBI unit plan</td>
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</tr>
<tr>
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<td>20%</td>
</tr>
<tr>
<td>Lesson Plans</td>
<td>10%</td>
</tr>
</tbody>
</table>

Effective Fall 2013
Grading scale:
90%=A, 80%=B, 70%=C, 60%=D, below 60%=F

Key Assessments: (MAT-S, CMOST students only)
The unit plan is a key assessment of the course. Key assessments are required as part of our NCATE accreditation and state accreditation of our teacher education programs. Because of these requirements, in order to pass this course, you must pass each criterion identified in the scoring rubric for each key assessment. Passing marks on each criterion is a threshold that must be met prior to receiving a course grade. If you do not earn a passing score on each criteria of each signature assessment, regardless of your total points in the course, you will receive an F. Once you have successfully passed the key assessments, the course instructor will calculate your total course grade. The course grade will be calculated using the initial score you received on the key assessments. If you do not pass the key assessments, you will receive a failing grade in this course and may be administratively withdrawn from any courses for which this course is a pre-requisite, including TSM/ECI 595C (Apprentice Teaching) and TSM 596C (Apprentice Teaching Seminar). You will have to repeat this course in order to progress in the Teacher Education Program.

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Effective Fall 2013
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Effective Fall 2013
### UCC/UGC/ECCC

Proposal for Plan Change or Plan Deletion

☐ FAST TRACK *(Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)*

If this proposal represents changes to the intent of the plan or its integral components, review by the college dean, graduate dean (for graduate items) and/or the provost may be required prior to college curricular submission.

All Plans with NCATE designation, or plans seeking NCATE designation, must include an NCATE Accreditation Memo of Approval from the NAU NCATE administrator prior to college curricular submission.

UCC proposals must include an updated 8-term plan. UGC proposals must include an updated program of study.

1. College: CEFNS  
2. Academic Unit: CSTL

3. Academic Teaching Science with  
   Plan Name: Certification; MAT (SCICTMAT)  
4. Emphasis: ____________________________

5. Plan proposal:  
   ☑ Plan Change  
   ☐ Emphasis Change  
   ☐ Plan Deletion  
   ☐ Emphasis Deletion

6. Current student learning outcomes of the plan. If structured as plan/emphasis, include for both core and emphasis.

As a teacher preparation program, MAT-S learning outcomes are held to the InTASC national standards:

1. The teacher will understand how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning

Show the proposed changes in this column (if applicable). **Bold** the changes, to differentiate from what is not changing, and change font to **Bold Red** with strikethrough for what is being deleted. *(Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes)*

UNCHANGED

Effective Fall 2013
experiences.

2. The teacher will use understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

3. The teacher will work with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self motivation.

4. The teacher will understand the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content.

5. The teacher will understand how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

6. The teacher will understand and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

7. The teacher will plan instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

8. The teacher will understand and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

9. The teacher will engage in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

10. The teacher will seek appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with
| learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession. |  |
7. Current catalog plan overview and requirements in this column. Cut and paste the Overview and Details tabs, in their entirety, from the current on-line academic catalog: (http://catalog.nau.edu/Catalog/)

Teaching Sciences with Certification; M.A.T.

In addition to University Requirements:

- Complete individual plan requirements.

Candidates in this program are expected to demonstrate content, pedagogical, and professional knowledge and skills needed to teach science (biology, chemistry, general science, earth science, physics) in secondary schools. Practicum fieldwork in secondary schools as well as student teaching in secondary schools is required components of this program, along with graduate-level coursework that is geared toward the career-changing adult.

<table>
<thead>
<tr>
<th>Minimum Units for Completion</th>
<th>36</th>
</tr>
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<tbody>
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</tr>
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<td>Prepares student for Arizona Certification and/or Endorsement.</td>
</tr>
<tr>
<td>Student Teaching/Supervised Teaching</td>
<td>Student Teaching/Supervised Teaching is required.</td>
</tr>
<tr>
<td>Program of Study</td>
<td>View Program of Study</td>
</tr>
</tbody>
</table>

Additional Admission Requirements

Admission requirements over and above admission to NAU are required.

- NAU Graduate Online application required (www.nau.edu/graduateapply) for all programs. Details on admission requirements are included in the online application.
- Undergraduate degree from a regionally accredited institution
- Grade Point Average (GPA) of 3.00 (scale is 4.00 = "A"), or the equivalent.
- Admission to many graduate programs is on a competitive basis, and programs may have higher standards than those established by the Graduate College.

Show the proposed changes in this column. **Bold** the changes, to differentiate from what is not changing, and change font to **Bold Red** with strikethrough for what is being deleted.

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- Admission to many graduate programs is on a competitive basis, and programs may have higher standards than those established by the Graduate College.
- Transcripts

Effective Fall 2013
• Transcripts
• For details on graduate admission policies, please visit http://nau.edu/GradCol/Admissions/Graduate-Admissions-Policy/.
• International applicants have additional admission requirements: http://nau.edu/GradCol/Admissions/International/.

Individual program admission requirements include:
• AEPA or NES subject knowledge exam
• 2 letters of recommendation
• Prerequisites (completed prior to enrolling in the program)
  • Minimum of 24 units of appropriate content-specific coursework in the area of teacher certification with a grade of “C” or better, or a passing score on the Arizona Educator Proficiency Assessment (AEPA) or National Evaluation System (NES) subject-matter knowledge test in the area of certification.
• Resume or Curriculum Vitae
• Personal statement or essay
• Fingerprint clearance card
• List of courses taken in the field
• Program of study signed by applicant and advisor

Master’s Requirements
Take the following 36 units:
Fall semester (10 units):
• SCI 508, SCI 610, SCI 613 (7 units)
• *BME 500 or BME 537 or BME 631 (3 units)
Spring semester (10 units):
• SCI 508, SCI 611, SCI 612 (7 units)
• *BME 500 or BME 537 or BME 631 (3 units)
Fall or Spring semester (10 units):
• TSM 595 and TSM 495C (10 units)
Select two courses from (6-7 units):
• ECI 569 (4 units)
• TSM 618 (3 units) (taken in Fall and Spring semesters - after certification and first-year employment as a teacher)
• TSM 619 (3 units) (taken in Fall and Spring semesters - after certification and second-
• For details on graduate admission policies, please visit http://nau.edu/GradCol/Admissions/Graduate-Admissions-Policy/.
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  • Minimum of 24 units of appropriate content-specific coursework in the area of teacher certification with a grade of “C” or better, or a passing score on the Arizona Educator Proficiency Assessment (AEPA) or National Evaluation System (NES) subject-matter knowledge test in the area of certification.
• Resume or Curriculum Vitae
• Personal statement or essay
• Fingerprint clearance card
• List of courses taken in the field
• Program of study signed by applicant and advisor

Master’s Requirements
Take the following 36 units:
Fall semester (10 13 units):
• SCI 508, SCI 560, SCI 610, SCI 613 (7 units)
• *BME 500 or BME 537 or BME 631 (3 units)
• *500-level or higher AST, BIO, CHM, EES, ENV, FOR, GLG, MAT, PHS, PHY course (3 units)
Spring semester (10 13 units):
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• *500-level or higher AST, BIO, CHM, EES, ENV, FOR, GLG, MAT, PHS, PHY course (3 units)

Effective Fall 2013
year employment as a teacher) *Note: The BME courses may be taken during the Summer semester instead of Fall or Spring semesters.

Be aware that some courses may have prerequisites that you must also take. For prerequisite information click on the course or see your advisor.

Summer semester (3 units)
- *500-level or higher AST, BIO, CHM, EES, ENV, FOR, GLG, MAT, PHS, PHY course (3 units)

Fall or Spring II semester (10 units):
- TSM 595 and TSM 495C 596 (10 units)
- Select two courses from (6-7 units):
  - ECI 569 (4 units)
  - TSM 618 (3 units) (taken in Fall and Spring semesters—after certification and first-year employment as a teacher)
  - TSM 619 (3 units) (taken in Fall and Spring semesters—after certification and second-year employment as a teacher)

*Note: The BME courses and Science Teaching Content electives may be taken during the Summer semester instead of Fall or Spring semesters.

Be aware that some courses may have prerequisites that you must also take. For prerequisite information click on the course or see your advisor.

8. Justification for proposal:
The changes listed above represent a reorganization of the MAT-S program. The program serves pre-service secondary science teachers. Previously, the MAT-S (preservice) and MAST (in-service) programs utilized the same courses. This provides a separate track of core courses for the MAT-S program (SCI 560/561) and removes the induction requirement. It also included the addition of 9 credits of required science content courses.

The program learning outcomes are the nationally recognized InTASC standards for teacher preparation that all teacher professional programs at the university are required to adopt.

9. NCATE designation, if applicable:
- Initial Plan
- Advanced Plan
- Remove Designation


See effective dates calendar.

11. Will this proposal impact other plans, sub plans, or course offerings, etc.? Yes ☒ No ☐

If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit

See attached notifications to/support from: ECI, AST, BIO, BME, CHM, EES, ENV, FOR, GLG, MAT, PHS, PHY

Effective Fall 2013
Answer 12-13 for UCC/ECCC only:

12. A major is differentiated from another major by required course commonality: 24 units of the required credit hours of a major must be unique, (i.e. not common or not dual use as a required element in another major), to that major. Does this plan have 24 units of unique required credit?  
   Yes ☐  No ☐

13. Minor: A planned group of courses from one or more subject matter areas consisting of at least 18 hours and no more than 24 hours. At least 12 hours of the minor must be unique to that minor to differentiate it from other minors. Does this minor have 12 units of unique required credit?  
   Yes ☐  No ☐

Answer 14-15 for UGC only:

14. If this is a non-thesis plan, does it require a minimum of 24 units of formal graded coursework?  
   Yes ☒  No ☐

If no, explain why this proposal should be approved.

15. If this is a thesis plan, does it require a minimum of 18 units of formal graded coursework?  
   Yes ☐  No ☐

If no, explain why this proposal should be approved.

---

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 1/8/2014
Reviewed by Curriculum Process Associate

Approvals:

Department Chair/Unit Head (if appropriate) Date 1/13/14

Chair of college curriculum committee Date 1/13/14

Dean of college Date 1/13/14

For Committee use only:

UCC/UGC Approval Date 2/12/14

Approved as submitted: Yes ☒  No ☐

Approved as modified: Yes ☐  No ☐

Effective Fall 2013
12. A major is differentiated from another major by required course commonality: 24 units of the required credit hours of a major must be unique, (i.e. not common or not dual use as a required element in another major), to that major. Does this plan have 24 units of unique required credit?  
   Yes ☐  No ☐

13. Minor: A planned group of courses from one or more subject matter areas consisting of at least 18 hours and no more than 24 hours. At least 12 hours of the minor must be unique to that minor to differentiate it from other minors. Does this minor have 12 units of unique required credit?  
   Yes ☐  No ☐

**Answer 14-15 for UGC only:**

14. If this is a non-thesis plan, does it require a minimum of 24 units of formal graded coursework?  
   If no, explain why this proposal should be approved.  
   Yes ☒  No ☐

15. If this is a thesis plan, does it require a minimum of 18 units of formal graded coursework?  
   If no, explain why this proposal should be approved.  
   Yes ☐  No ☐

**FLAGSTAFF MOUNTAIN CAMPUS**

Scott Galland  
Reviewed by Curriculum Process Associate  
Approved:  
Department Chair/Unit Head (if appropriate)  
Chair of college curriculum committee  
Dean of college  
For Committee use only:

UCC/UGC Approval  
Approved as submitted:  
Approved as modified:  

**EXTENDED CAMPUSES**

Effective Fall 2013
## EXTENDED CAMPUSES

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<thead>
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<th>Role</th>
<th>Date</th>
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<td>Academic Unit Head</td>
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<tr>
<td>Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning)</td>
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<td>Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning)</td>
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<td>Faculty Chair of Extended Campuses Curriculum Committee (Yuma, Yavapai, or Personalized Learning)</td>
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<tr>
<td>Chief Academic Officer; Extended Campuses (or Designee)</td>
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Approved as submitted: Yes ☐ No ☐

Approved as modified: Yes ☐ No ☐

Effective Fall 2013
Hello
The Center for Science Teaching and Learning is proposing to add some of your courses to their program of study (see below in YELLOW).

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They anticipate enrollments will be approximately 10-15 students so impact should be minimal.
Please let me know if you support their proposal (or not) or if you need any additional information.
Thanks!

Scott Galland
Curriculum Process Associate
Office of Curriculum, Learning Design, and Academic Assessment
928-523-1753
928-699-9147 (cell)
scott.galland@nau.edu

From: Marin Sands Robinson
Sent: Tuesday, December 17, 2013 4:07 PM
To: Stuart S Galland
Subject: RE: MAT-S UGC plan change proposal
This looks fine to me.

Marin
Chemistry and Biochemistry

From: James A Allen
Sent: Tuesday, December 17, 2013 4:18 PM

Effective Fall 2013
To: Stuart S Galland
Subject: RE: MAT-S UGC plan change proposal

Scott,

This looks fine to me. We don’t offer 500-level or higher courses in the summer, typically, but I guess it’s okay to leave things the way they are just in case.

Best wishes,
Jim
James A. Allen, Professor and Executive Director
School of Forestry
College of Engineering, Forestry and Natural Sciences
Northern Arizona University
P.O. Box 15018
Flagstaff, AZ 86011-5018
Office Phone: 928-523-5894
Fax: 928-523-1080
School of Forestry

From: Maribeth Watwood
Sent: Wednesday, December 18, 2013 9:03 AM
To: Stuart S Galland; Stephen Christopher Tegler; Marin Sands Robinson; Paul Umhoefer; James A Allen
Subject: RE: MAT-S UGC plan change proposal

This is fine with us! Happy Holidays to everyone

Maribeth Watwood, PhD
Professor and Chair
Department of Biological Sciences
Northern Arizona University

From: Paul Umhoefer
Sent: Wednesday, December 18, 2013 2:26 PM
To: Maribeth Watwood; Stuart S Galland; Stephen Christopher Tegler; Marin Sands Robinson; James A Allen
Subject: Re: MAT-S UGC plan change proposal

Fine with us in SESES

Paul
Paul Umhoefer
Director and Professor of Geology
School of Earth Sciences & Environmental Sustainability
625 S. Knoles Drive
Flagstaff, AZ. 86011-0001
928-523-1637 (Director office - call first)
928-523-6464 (research office)

From: Stephen Christopher Tegler
Sent: Wednesday, December 18, 2013 4:30 PM
To: Paul Umhoefer; Maribeth Watwood; Stuart S Galland; Marin Sands Robinson; James A Allen
Cc: Stephen Christopher Tegler
Subject: RE: MAT-S UGC plan change proposal

Ok with Physics and Astronomy

Stephen C. Tegler
Professor and Chair, Physics and Astronomy
Northern Arizona University
Box 6010
Flagstaff, AZ 86011
Phone: (928) 523-9382
Fax: (928) 523-1371

Effective Fall 2013
Hi Pam

This is to notify you that the Center for Science Teaching and Learning is proposing to delete ECI 596 as an option from the MAT-S plan requirements (see below in YELLOW).

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Please let me know if you have any questions.

Thanks!

Scott Galland
Curriculum Process Associate
Office of Curriculum, Learning Design, and Academic Assessment
928-523-1753
928-699-9147 (cell)
scott.galland@nau.edu

From: Pamela Jane Powell
Sent: Wednesday, December 18, 2013 10:30 AM
To: Stuart S Galland
Subject: RE: MAT-S UGC plan change proposal

Dear Scott,

Thank you so much. My department is aware of this change, and the course was changed to 3 hours last year to fit into several of our new degree plans/emphases.

Kindest Regards,

Effective Fall 2013
Hi Laura,

The Center for Science Teaching and Learning is proposing a change to the MAT-S. They would like to require two BME courses instead of one. They intend to require BME 500 and leave (BME 537 or BME 631) as options (see below in YELLOW).

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They anticipate enrollment will be approximately 10-15 students.

Please let me know if you support their proposal (or not) or if you need any additional information.

Thanks!

Scott Galland
Curriculum Process Associate
Office of Curriculum, Learning Design, and Academic Assessment
Effective Fall 2013
From: Laura Esthela Sujo-Montes  
Sent: Wednesday, December 18, 2013 11:09 AM  
To: Stuart S Galland  
Cc: Louise Lockard  
Subject: Re: MAT-S UGC plan change proposal  

Hello Scott:

The Bilingual Multicultural Education and the Department of Educational Specialties fully support this proposal.

Thank you.

Laura  

From: Stuart S Galland  
Sent: Monday, December 23, 2013 10:06 AM  
To: Terence Ronald Blows  
Subject: MAT-S UGC plan change proposal  

Hi Terry,

The Center for Science Teaching and Learning is proposing to add some of your courses to the MAT-S (Teaching Sciences with Certification; M.A.T.) program of study (see below in YELLOW).

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Effective Fall 2013
They anticipate enrollments will be approximately 10-15 students so impact should be minimal.

Please let me know if you support their proposal (or not) or if you need any additional information.

Thanks!

Scott Galland
Curriculum Process Associate
Office of Curriculum, Learning Design, and Academic Assessment
928-523-1753
928-699-9147 (cell)
scott.galland@nau.edu

From: Terence Ronald Blows
Sent: Tuesday, January 07, 2014 5:05 PM
To: Stuart S Galland
Subject: FW: MAT-S UGC plan change proposal

Scott:

M&S will support this curriculum change from CSTL.

terry
### Northern Arizona University
Center for Science Teaching and Learning
MAT-S Program of Study

**Student name:**

**Admission date:**

**E-mail:**

**Area of Interest**
- [] Biology
- [] Chemistry
- [] Physics
- [] Earth Science
- [] General Science

**Highest degree held:**

**NAU ID #:**

**Intended completion date:**

**Phone number:**

**Institution/Year received:**

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<td></td>
<td></td>
<td>Structured English Immersion Methods for Secondary School</td>
<td>BME</td>
<td>537 / 631</td>
<td>3</td>
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</table>

Total Science Education Required = 18 hours

**Total = _____/18**

| Science Content | G | | | | | |
| Science Content | G | | | | | |
| Science Content | G | | | | | |

Total Science Credits Required = 9

**Total = _____/9**

Courses should be selected in consultation with advisor.

### Practicum

<table>
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<th>Term</th>
<th>Title</th>
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<th>Course No.</th>
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<td>G</td>
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<td>Apprentice Teaching Seminar</td>
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</tbody>
</table>

Total Practicum Credits Required: 12

**Total credits (39 minimum):**

**Advisor:** ____________________  Center for Science Teaching and Learning

12/4/2013
MEMO

To: Dr. Pradeep Maxwell Dass  
    Ms. Sharon Cardenas

From: Cynthia Conn, PhD, Acting Assistant Vice Provost

Date: 1/28/2014

RE: NCATE accreditation implications of the Teaching Science with Certification proposed program changes

I write in my capacity as the Northern Arizona University Acting Assistant Vice Provost for the Professional Education Programs which is accredited by NCATE. This review is in regards to compliance with NCATE/CAEP accreditation. The Teaching Science with Certification is reviewed through the NCATE/CAEP Specialized Professional Association Program Review process which is accepted by the Arizona Department of Education per the Arizona and NCATE state agreement. Based on the success of the Teaching Science with Certification SPA program review and the unit level or institutional accreditation process, the Arizona Department of Education (ADE) does grant an institutional recommendation for this program. This memo addresses accreditation and state review issues only, and should not be construed as an endorsement of any proposed changes.

Additionally, this verification does not include evaluation of the content related assessments required by the NAU Professional Education Programs. However, there is still several assessment requirements noted in the NCATE/CAEP guidelines and established by the Professional Education Programs that are needed for the unit level or institutional accreditation report.

Accreditation Verification: The proposed program changes for the Teaching Science with Certification are comparable to the previous requirements and maintain documentation of candidate performance regarding institutional, state, and national level standards and criteria required for NAU's NCATE/CAEP accreditation status.

Rationale: Program changes prior to a subsequent review by NCATE/CAEP and ADE need to be either comparable in terms of course replacement/credit hours or increase expectations for students. It appears that these changes should not affect candidates' ability to demonstrate State, NCATE/CAEP or Unit level standards. The proposed changes should not jeopardize NCATE/CAEP accreditation or ADE institutional recommendation.
If this proposal represents changes to the intent of the plan or its integral components, review by the college dean, graduate dean (for graduate items) and/or the provost may be required prior to college curricular submission.

All plans with NCATE designation, or plans seeking NCATE designation, must include an NCATE Accreditation Memo of Approval from the NAU NCATE administrator prior to college curricular submission.

UCC proposals must include an updated 8-term plan.
UGC proposals must include an updated program of study.


3. Academic Plan Name: Graduate Certificate Mathematics Teaching (CMTCT) 4. Emphasis:

5. Plan proposal: □ Plan Change □ Plan Deletion
   □ New Emphasis □ Emphasis Change □ Emphasis Deletion

6. Current student learning outcomes of the plan. If structured as plan/emphasis, include for both core and emphasis.

Show the proposed changes in this column (if applicable). **Bold** the changes, to differentiate from what is not changing, and change font to **Bold Red** with strikethrough for what is being deleted. ([Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes](#)).

Effective Fall 2013
7. Current catalog plan overview and requirements in this column. Cut and paste the Overview and Details tabs, in their entirety, from the current on-line academic catalog: (http://catalog.nau.edu/Catalog/)

**Mathematics Teaching, Graduate Certificate**

In addition to University Requirements:

- Complete individual plan requirements.

Candidates in this program are expected to demonstrate content, pedagogical, and professional knowledge and skills needed to teach mathematics or science (biology, chemistry, general science, earth science, physics) in secondary schools. Practicum fieldwork in secondary schools as well as student teaching in secondary schools are required components of this program, along with graduate-level coursework that is geared toward the career-changing adult.

Please note that you may be able to use some courses to meet more than one requirement. Contact your advisor for details.

<table>
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<tr>
<th>Minimum Units for Completion</th>
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<tr>
<td>Additional Admission Requirements</td>
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<td>Fieldwork Experience/Internship</td>
<td>Required</td>
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<td>Student Teaching/Supervised Teaching</td>
<td>Required</td>
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<tr>
<td>Program of Study</td>
<td>View Program of Study</td>
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</table>

**Additional Admission Requirements**

Admission requirements over and above admission to NAU are required.

**Certificate Requirements**

Take the following 33 units:

- MAT 500, MAT 595, MAT 596 (9 units)
- MAT 608 (2 units)
- MAT 509 or 510 (3 units)
- BME 500 (3 units)
- BME 537 or 631 (3 units)
- TSM 595 (9 units)

Show the proposed changes in this column. **Bold** the changes, to differentiate from what is not changing, and change font to **Bold-Red-with strikethrough** for what is being deleted.

**Mathematics Teaching, Graduate Certificate**

In addition to University Requirements:

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**Certificate Requirements**

Take the following 33 units:

- MAT 500, MAT 595, MAT 596 (9 units)
- MAT 608 (2 units)

Effective Fall 2013
• TSM 496C (1 unit)
• EPS 605 (3 units)

This certificate may be pursued and completed concurrently with a degree program or as a stand-alone certificate. Under both circumstances, federal financial aid can be used for this certificate.

Be aware that some courses may have prerequisites that you must also take. For prerequisite information click on the course or see your advisor.

• MAT 509 or MAT 510 (3 units)
• BME 500 (3 units)
• BME 537 or BME 631 (3 units)
• TSM 595 (9 units)
• TSM 496C (1 unit)
• EPS 605 (3 units)

This certificate may be pursued and completed concurrently with a degree program or as a stand-alone certificate. Under both circumstances, federal financial aid can be used for this certificate.

Be aware that some courses may have prerequisites that you must also take. For prerequisite information click on the course or see your advisor.

8. Justification for proposal:
Enrollment in the program has been very low, far too low to sustain the program.

9. NCATE designation, if applicable:
   □ Initial Plan   □ Advanced Plan   □ Remove Designation

    See effective dates calendar.

11. Will this proposal impact other plans, sub plans, or course offerings, etc.?  Yes ☒  No ☐
    If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit
    See attached notifications.

Answer 12-13 for UCC/ECCC only:

12. A major is differentiated from another major by required course commonality: 24 units of the required credit hours of a major must be unique, (i.e. not common or not dual use as a required element in another major), to that major. Does this plan have 24 units of unique required credit?
   Yes ☐  No ☒

13. Minor: A planned group of courses from one or more subject matter areas consisting of at least 18 hours and no more than 24 hours. At least 12 hours of the minor must be unique to that minor to differentiate it from other minors.
   Effective Fall 2013
Does this minor have 12 units of unique required credit? Yes □ No □

Answer 14-15 for UGC only:

14. If this is a non-thesis plan, does it require a minimum of 24 units of formal graded coursework? Yes □ No □

If no, explain why this proposal should be approved.

15. If this is a thesis plan, does it require a minimum of 18 units of formal graded coursework? Yes □ No □

If no, explain why this proposal should be approved.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 12/2/2013
Reviewed by Curriculum Process Associate Date

Approvals:

[Signature]
Department Chair/Unit Head (if appropriate) Date

Chair of college curriculum committee Date

Dean of college Date

For Committee use only:

UCC/UGC Approval Date

Approved as submitted: Yes □ No □

Approved as modified: Yes □ No □

EXTENDED CAMPUSES

Reviewed by Curriculum Process Associate Date

Approvals:

Academic Unit Head Date
Does this minor have 12 units of unique required credit?  
Yes ☐  No ☐

**Answer 14-15 for UGC only:**

14. If this is a non-thesis plan, does it require a minimum of 24 units of formal graded coursework?  
Yes ☐  No ☐

If no, explain why this proposal should be approved.

15. If this is a thesis plan, does it require a minimum of 18 units of formal graded coursework?  
Yes ☐  No ☐

If no, explain why this proposal should be approved.

---

**FLAGSTAFF MOUNTAIN CAMPUS**

Scott Galland  
Reviewed by Curriculum Process Associate  
Date  

**Approvals:**

Department Chair/Unit Head (if appropriate)  
Date  

Chair of college curriculum committee  
Date  

Dean of college  
Date  

For Committee use only:  
Date  

UCC/UGC Approval  
Date

Approved as submitted:  
Yes ☐  No ☐

Approved as modified:  
Yes ☐  No ☐

---

**EXTENDED CAMPUSES**

Reviewed by Curriculum Process Associate  
Date

**Approvals:**

Academic Unit Head  
Date

Effective Fall 2013
<table>
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<td></td>
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</table>

Approved as submitted: [ ] Yes [ ] No

Approved as modified: [ ] Yes [ ] No

Effective Fall 2013
From: Stuart S Galland  
Sent: Thursday, December 05, 2013 11:04 AM  
To: Pradeep Maxwell Dass; Laura Esthela Sujo-Montes; Robert Horn  
Subject: Delete Mathematics Teaching Graduate Certificate

Hi

This is to notify you that the department of Mathematics and Statistics is proposing to delete the Mathematics Teaching GCRT (which includes your courses).

The reason is low enrollment.

Thanks!

Scott Galland  
Curriculum Process Associate  
Office of Curriculum, Learning Design, and Academic Assessment  
928-523-1753  
928-699-9147 (cell)  
scott.galland@nau.edu

From: Laura Esthela Sujo-Montes  
Sent: Thursday, December 05, 2013 1:05 PM  
To: Stuart S Galland  
Cc: Louise Lockard  
Subject: RE: Delete Mathematics Teaching Graduate Certificate

Scott:  
Thank you for the notification. Our courses in that degree are related to the SEI endorsement. I am sorry that they will close the degree but I understand the reasons.

Laura  
Laura E Sujo-Montes, Ph.D.  
Chair, Educational Specialties Department  
Northern Arizona University  
College of Education  
PO Box 5774  
Flagstaff, AZ 86011-5774  
Voice: 928-523-0892  
Fax: 928-523-9284  
Email: laura.sujo-montes@nau.edu

From: Pradeep Maxwell Dass  
Sent: Friday, December 06, 2013 11:35 AM  
To: Stuart S Galland  
Subject: Re: Delete Mathematics Teaching Graduate Certificate

Yes, Scott. The proposal is acceptable to me. However, given the dearth and need of qualified math teachers out in the field, I wish the program could be kept alive and efforts made to recruit qualified students into the program. Thanks for your clarification and help.

Sincerely,  
Max Dass
1. Course subject and number: MAT 603

2. Units: 1

See upper and lower division undergraduate course definitions.

3. College: Engineering, Forestry, and Natural Sciences

4. Academic Unit: Mathematics and Statistics

5. Student Learning Outcomes of the new course. (Resources & Examples for Developing Course Learning Outcomes)

Through successful completion and defense of the M.S. in Mathematics Education Final Portfolio and oral exam, students will demonstrate an in-depth understanding of mathematics and of the theories related to pedagogy and learning.

6. Justification for new course, including how the course contributes to degree program outcomes, or other university requirements / student learning outcomes. (Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes).

The M.S. in Mathematics Education has recently adopted a Final Portfolio as part of the comprehensive oral exam. Creating the portfolio requires a significant amount of work and effort on the part of the student and faculty advising the student. Creation of this course reflects the amount of time and effort faculty expect students to put into the project and allows students to work on the Final Portfolio as part of their coursework.

7. Effective BEGINNING of what term and year? Fall 2014

See effective dates calendar.

8. Long course title: CAPSTONE COURSE: COMPREHENSIVE EXAM AND PORTFOLIO

(max 100 characters including spaces)

9. Short course title: CAPSTONE COURSE

(max. 30 characters including spaces)

10. Catalog course description (max. 60 words, excluding requisites):

Individualized directed writing and oral defense of capstone comprehensive exam and portfolio. Prerequisite: Approval of the Final Portfolio and Oral Exam request/Instructor Consent.

11. Will this course be part of any plan (major, minor or certificate) or sub plan (emphasis)?

Effective Fall 2013
If yes, include the appropriate plan proposal.

Mathematics Education; M.S.

12. Does this course duplicate content of existing courses? Yes ☐ No ✗
If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain why NAU should establish this course.

13. Will this course impact any other academic unit's enrollment or plan(s)? Yes ☐ No ✗
If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

14. Grading option: Letter grade ☐ Pass/Fail ✗ Both ☐

15. Co-convened with: 14a. UGC approval date*:
(For example: ESE 450 and ESE 550) See co-convening policy.
*Must be approved by UGC before UCC submission, and both course syllabi must be presented.

16. Cross-listed with: 16a. If yes, maximum units allowed? No repeats
(For example: ES 450 and DIS 450) See cross listing policy.
Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

17. May course be repeated for additional units?
16a. If yes, maximum units allowed? No repeats
16b. If yes, may course be repeated for additional units in the same term? Yes ☐ No ✗

Admission to the Mathematics
Education; M.S.

18. Prerequisites: If prerequisites, include the rationale for the prerequisites.
This course is only intended to support students completing the final portfolio and comprehensive exam for the M.S. in Mathematics Education. Requiring students to acquire approval of the final portfolio and oral exam ensures that the student is ready to complete this stage of the program.

19. Co-requisites:
If co-requisites, include the rationale for the co-requisites.

20. Does this course include combined lecture and lab components? Yes ☐ No ✗
If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course: Dr. Brian Beaudrie, Dr. April Brown Judd, Dr. Terry Crites, Dr.

Effective Fall 2013
22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review “see description” and “see impacts” for “Classes Starting/Ending Outside Regular Term” under the heading “Forms” http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Courses-Maintenance/.

Do you anticipate this course will be scheduled outside the regular term? Yes ☐ No ☒

**Answer 22-23 for UCC/ECCC only:**

23. Is this course being proposed for Liberal Studies designation? Yes ☐ No ☐
   If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation? Yes ☐ No ☐
   If yes, include a Diversity proposal and syllabus with this proposal.

---

**FLAGSTAFF MOUNTAIN CAMPUS**

<table>
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<tr>
<th>Scott Galland</th>
<th>1/30/2014</th>
</tr>
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<tr>
<th>UCC/UGC Approval</th>
<th>Date</th>
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</table>

Approved as submitted: Yes ☐ No ☒

Effective Fall 2013
21. Names of the current faculty qualified to teach this course: Hovermill

22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review "see description" and "see impacts" for "Classes Starting/Ending Outside Regular Term" under the heading "Forms" http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/.

Do you anticipate this course will be scheduled outside the regular term? Yes [ ] No [x]

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FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 1/30/2014
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) 3/04/14
Date

Chair of college curriculum committee Date

Dean of college Date

For Committee use only:

UCC/UGC Approval Date

Effective Fall 2013
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Do you anticipate this course will be scheduled outside the regular term? Yes ☐ No ☒

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**FLAGSTAFF MOUNTAIN CAMPUS**

Scott Galland
Reviewed by Curriculum Process Associate

Approved:

Department Chair/Unit Head (if appropriate)

[Signature]

Date: 12/9/13

Chair of college curriculum committee

[Signature]

Date: 12/9/13

Dean of college

[Signature]

Date: 2/12/14

For Committee use only:

UCC/UGC Approval

[Signature]

Date: 2/12/14

Approved as submitted: Yes ☐ No ☐

Approved as modified: Yes ☐ No ☐

Effective Fall 2013
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- [ ] Yes
- [ ] No

**Approved as modified:**
- [ ] Yes
- [ ] No

Effective Fall 2013
College of Engineering, Forestry & Natural Sciences
Department of Mathematics & Statistics
MAT 603 Capstone Course: Comprehensive Exam and Portfolio
Syllabus

Course: MAT 603: Curriculum in Mathematics Education
Semester Offered: every Fall and Spring semester
Clock and credit hours: 15+ clock hours, 1 credit hour
Instructor's Name: April Brown Judd
Instructor's Office Address and Phone Number: Adel Mathematics Building room 172
Instructor's Office Hours: TBD
Course Prerequisites: Approval of the Final Portfolio and Oral Exam request.

Course Description: Individualized directed writing and oral defense of capstone comprehensive exam and portfolio.

Student Learning Expectations/Outcomes for this Course
Through successful completion and defense of the M.S. in Mathematics Education Final Portfolio and oral exam, students will demonstrate an in-depth understanding of mathematics and of the theories related to pedagogy and learning.

Course structure/approach
The M.S. Mathematics Education Final Portfolio will consist of a unique (not submitted as part of a previous course) body of work that documents and analyzes the ways in which a student applies key ideas from at least the two selected non-Connections courses to the student’s instructional practices. The student will work with comprehensive exam committee members to complete and receive feedback on the portfolio before scheduling the oral exam.

The Final Portfolio and Comprehensive Examination Committee shall consist of 3 members. Where possible, the committee membership should be restricted to those faculty members from whom the student has completed or is in the process of completing coursework in their program. The Chair of the Committee shall be the student’s assigned graduate advisor (and instructor of this course) or a committee member designated by the advisor should he/she not be a member of the Committee. The M.S. Mathematics Education Final Portfolio and Comprehensive Oral Examination Approval Form should be submitted by the graduate student and his/her advisor prior to enrollment in the course in order to leave adequate time to complete the portfolio and study for the oral comprehensive exam.

A near-final draft of the M.S. Mathematics Education Final Portfolio must be submitted to the two appropriate members of the committee at least 6 weeks before the scheduled M.S. Mathematics Education Comprehensive Oral Exam date. M.S. Mathematics Education faculty will notify the candidate within at least 4 weeks of the scheduled exam date to determine if the candidate is prepared to successfully demonstrate evidence of program ideas to practice or whether the candidate should spend more time working on the Portfolio and should reschedule the Comprehensive Oral Exam. The Comprehensive Oral Exam may not occur until all committee members deem the Portfolio ready for defense.

Students should consult the Final Portfolio & Oral Exam Description for further details on how to complete the portfolio and study for their comprehensive exam.

Effective Fall 2013
Textbook and required materials
M.S. Mathematics Education Final Portfolio & Oral Exam Description

Recommended optional materials/references (attach reading list)
Readings from professional journals as required by content chosen for the Final Portfolio and comprehensive oral exam.

Course outline
Part One - Approval of Portfolio Project Plans - A brief description of which courses the student has selected for the Portfolio project, why the courses have been chosen, and how the courses will demonstrate evidence of application to practice shall be completed at the bottom of this form. Prior to facilitating the Portfolio project in the classroom, candidates are STRONGLY ENCOURAGED to submit lesson and/or unit sequence, as well as data collection and analysis plans to the committee members to ensure that the application of program ideas to instructional practices are properly demonstrated via this Portfolio project.

Part Two - Analysis and Reflection of Project Data - A near-final draft of the M.S. Mathematics Education Final Portfolio must be submitted to the two appropriate members of the committee at least 6 weeks before the scheduled M.S. Mathematics Education Comprehensive Oral Exam date. Furthermore, an ‘interview’ must be scheduled with the Content Connections course instructor/committee member to further insure that candidates appear to be sufficiently prepared for mathematics content component of the Comprehensive Oral Exam. M.S. Mathematics Education faculty will discuss student preparedness and notify the candidate within at least 4 weeks of the scheduled exam date to determine if the candidate appears to be prepared to be able to be successfully pass their Portfolio defense and Comprehensive Oral Exam or whether the candidate should spend more time working on the Portfolio and/or mathematics content and must reschedule the Comprehensive Oral Exam date.

Part Three - Portfolio Defense and Oral Examination - The Comprehensive Oral Exam may not occur until all committee members deem the student ready for defense. At the end of the Comprehensive Oral Exam a discussion of the Committee members shall occur, with a vote taken following the discussion. The committee members may vote to pass or fail. If a two-thirds majority is not obtained to pass, then the candidate fails the examination. The oral exam on the same set of course work may be retaken after a period of one month has passed. Should the candidate fail the comprehensive exam a second time, then enrollment in the program will be terminated. The Chair of the Oral Committee will promptly convey the result (pass/fail) of the exam to the Chair of the Graduate Operations Committee.

Assessment of Student Learning Outcomes
Students will be assessed on their progress completing the M.S. Mathematics Education Final Portfolio. M.S. Mathematics Education faculty will notify the candidate at least 4 weeks before the scheduled exam date to determine if the candidate is prepared to successfully demonstrate evidence of program ideas or whether the candidate should spend more time working on the Portfolio and should reschedule the Comprehensive Oral Exam.

Grading System
Grades will be awarded as Pass/Fail.

Course policy
Attendance policy – This policy may vary from instructor to instructor.
Make-up policy – This policy may vary from instructor to instructor.
University policies – Students are responsible for the following policies: Safe Environment, Students with Disabilities,

Effective Fall 2013
Institutional Review Board, Academic Integrity, and Academic Contact Hour. A copy of these policies may be downloaded from the web site: http://www4.nau.edu/avpaa/UCCPolicy/plcystmt.html.

NCATE Unit Standards

Pedagogical Content Knowledge
- Candidates in advanced teacher programs for teachers demonstrate an in-depth understanding of the content of their field and of the theories related to pedagogy and learning.
- Advanced teacher candidates are able to select and use a broad range of instructional strategies and technologies that promote student learning and are clearly able to explain the choices they make in their practice.

Professional and Pedagogical Content Knowledge
- Candidates in advanced programs reflect on their practice and are able to identify their strengths and areas of needed improvement.
- They are aware of current research and policies related to schooling, teaching, learning, and best practices.
- They are able to analyze educational research and policies and can explain the implications for their own practice and profession.

Student Learning
- Candidates in advanced programs have a thorough understanding of the major concepts and theories related to assessing student learning and regularly apply these to their practice.
- They analyze student, classroom and school performance data and make data-driven decisions about strategies for teaching and learning so that all students can learn.

NBPT Standards

Knowledge of Mathematics
- Accomplished mathematics teachers have a deep and broad knowledge of the concepts, principles, techniques, and reasoning methods of mathematics, and they use this knowledge to inform curricular goals and shaping their instruction and assessment.
- Accomplished teachers understand significant connections among mathematical ideas and the applications of these ideas to problem solving in mathematics, in other disciplines, and in the world outside of school.

Knowledge of Students
- Accomplished teachers use their knowledge of human development and individual students to guide their planning and instructional decisions.
- Accomplished teachers understand the impact of prior mathematical knowledge, home life, cultural background, individual learning differences, student attitudes and aspirations, and community expectations and values on students and their mathematics learning.

Knowledge of the Practice of Teaching
- Accomplished mathematics teachers use their knowledge of pedagogy along with their knowledge of mathematics and student learning to inform curricular decisions; select, design, and develop instructional strategies and assessment plans; and choose materials and resources for mathematics instruction.
- Accomplished mathematics teachers stimulate and facilitate student learning by using a wide range of practices.

Learning Environment

Effective Fall 2013
Accomplished mathematics teachers create environments in which students are active learners, show willingness to take intellectual risks, develop self-confidence, and value mathematics. This environment fosters student learning of mathematics.

Ways of Thinking Mathematically
- Accomplished mathematics teachers develop their own and their students’ abilities to reason and think mathematically – to investigate and explore patterns, to discover structures and establish mathematical relationships, to formulate and solve problems, to justify and communicate conclusions, and to question and extend those conclusions.

Assessment
- Accomplished mathematics teachers integrate a range of assessment methods into their instruction to promote the learning of all students by designing, selecting, and ethically employing assessments that align with education goals.
- Accomplished mathematics teachers provide opportunities for students to reflect on their strengths and weaknesses in order to revise, support, and extend their individual performance.

Reflection and Growth
To improve practice, accomplished mathematics teachers regularly reflect on what they teach, how they teach, and how their teaching impacts student learning.
UCC/UGC/ECCC
Proposal for Plan Change or Plan Deletion

FAST TRACK  (Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)

If this proposal represents changes to the intent of the plan or its integral components, review by the college dean, graduate dean (for graduate items) and/or the provost may be required prior to college curricular submission.

All Plans with NCATE designation, or plans seeking NCATE designation, must include an NCATE Accreditation Memo of Approval from the NAU NCATE administrator prior to college curricular submission.

UCC proposals must include an updated 8-term plan.
UGC proposals must include an updated program of study.


3. Academic  M.S. Mathematics Education
   Plan Name: (MATEDMS)  4. Emphasis: 

5. Plan proposal:  \(x\) Plan Change
   - New Emphasis
   - Emphasis Change
   - Emphasis Deletion
   - Plan Deletion

6. Current student learning outcomes of the plan. If structured as plan/emphasis, include for both core and emphasis.

   The M.S. in Mathematics Education has been developed around core standard statements from the National Board for Professional Teaching and Unit level standards for Advanced Programs at NAU. These standards guide the development of this program and serve as program learning outcomes.

   NCATE Unit Standards
   Content Knowledge
   - Candidates in advanced programs have an in-

Show the proposed changes in this column (if applicable). Bold the changes, to differentiate from what is not changing, and change font to Bold Red with strikethrough for what is being deleted. (Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes).

The M.S. in Mathematics Education has been developed around core standard statements from the National Board for Professional Teaching and Unit level standards for Advanced Programs at NAU. These standards guide the development of this program and serve as program learning outcomes.

Effective Fall 2013
Pedagogical Content Knowledge
- Candidates in advanced teacher programs for teachers demonstrate an in-depth understanding of the content of their field and of the theories related to pedagogy and learning.
- Advanced teacher candidates are able to select and use a broad range of instructional strategies and technologies that promote student learning and are clearly able to explain the choices they make in their practice.

Professional and Pedagogical Content Knowledge
- Candidates in advanced programs reflect on their practice and are able to identify their strengths and areas of needed improvement.
- They engage in professional activities.
- They have a thorough understanding of the school, family, and community contexts in which they work, and they collaborate with the professional community to create meaningful learning experiences for all students.
- They are aware of current research and policies related to schooling, teaching, learning, and best practices.
- They are able to analyze educational research and policies and can explain the implications for their own practice and profession.

Student Learning
- Candidates in advanced programs have a thorough understanding of the major concepts and theories related to assessing student learning and regularly apply these to their practice.
- They analyze student, classroom and school performance data and make data-driven decisions about strategies for teaching and learning so that all students can learn.
- They are aware of and utilize school and community resources to support student learning.

Professional Dispositions
- Candidates are familiar with the professional dispositions delineated in professional, state and institutional standards.

NCATE Unit Standards
Content Knowledge
- Candidates in advanced programs have an in-depth knowledge of the content they teach.

Pedagogical Content Knowledge
- Candidates in advanced teacher programs for teachers demonstrate an in-depth understanding of the content of their field and of the theories related to pedagogy and learning.
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- They analyze student, classroom and school performance data and make data-driven decisions about strategies for teaching and learning so that all students can learn.
- They are aware of and utilize school and community resources to support student learning.
- Candidates demonstrate classroom behaviors that are consistent with the ideal of fairness and the belief that all students can learn.
- Their work with students, families, communities and colleagues reflects these professional dispositions.

**NBPT Standards**

**Commitment to Mathematics Learning of All Students**
- Accomplished mathematics teachers acknowledge and value the individuality and worth of each student, believe that every student can learn and use mathematics, and are dedicated to their success.
- Accomplished mathematics teachers are committed to the fair and equitable treatment of all students – especially in their learning of mathematics.

**Knowledge of Mathematics, Students and Teaching...**

**Knowledge of Mathematics**
- Accomplished mathematics teachers have a deep and broad knowledge of the concepts, principles, techniques, and reasoning methods of mathematics, and they use this knowledge to inform curricular goals and shaper their instruction and assessment.
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The Teaching of Mathematics...
Learning Environment
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- Accomplished mathematics teachers provide opportunities for students to reflect on their strengths and weaknesses in order to revise, support, and extend their individual performance.

Professional Development and Outreach...
Reflection and Growth
- To improve practice, accomplished mathematics teachers regularly reflect on and community expectations and values on students and their mathematics learning.

Knowledge of the Practice of Teaching
- Accomplished mathematics teachers use their knowledge of pedagogy along with their knowledge of mathematics and student learning to inform curricular decisions; select, design, and develop instructional strategies and assessment plans; and choose materials and resources for mathematics instruction.
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what they teach, how they teach, and how their teaching impacts student learning.
- Accomplished teachers keep abreast of changes and learn new mathematics and mathematical pedagogy, continually improving their knowledge and practice.

**Families and Communities**
- Accomplished mathematics teachers collaborate with families and communities to support student engagement in learning mathematics.
- Accomplished mathematics teachers help various communities, within and outside the school building, understand the role of mathematics and mathematics instruction in today’s world.

**Professional Community**
- Accomplished mathematics teachers continually collaborate with other teachers and education professionals to strengthen the school’s mathematics program, promote program quality and continuity across grade levels and courses, and improve knowledge and practice in the field of mathematics education.

**Reflection and Growth**
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7. Current catalog plan overview and requirements in this column. Cut and paste the Overview and Details tabs, in their entirety, from the current on-line academic catalog: (http://catalog.nau.edu/Catalog/)

Overview

In addition to University Requirements:

- Complete individual plan requirements.

Minimum Units for Completion  36
Additional Admission Requirements
Comprehensive Exam is required.

Additional Admission Requirements

Admission requirements over and above admission to NAU are required.

- NAU Graduate Online application required (www.nau.edu/graduateapply) for all programs. Details on admission requirements are included in the online application.
- Undergraduate degree from a regionally accredited institution
- Grade Point Average (GPA) of 3.00 (scale is 4.00 = "A"), or the equivalent.
- Admission to many graduate programs is on a competitive basis, and programs may have higher standards than those established by the Graduate College.
- Transcripts
- For details on graduate admission policies, please visit http://nau.edu/GradCol/Admissions/Graduate-Admissions-Policy/.
- International applicants have additional admission requirements: http://nau.edu/GradCol/Admissions/International/.

Individual program admission requirements include:

- 3 letters of recommendation
- Personal statement or essay

Show the proposed changes in this column. **Bold** the changes, to differentiate from what is not changing, and change font to **Bold-Red** with strikethrough for what is being deleted.

Overview

In addition to University Requirements:

- Complete individual plan requirements.

Minimum Units for Completion  36-37
Additional Admission Requirements
Comprehensive Exam and Portfolio are required.

Additional Admission Requirements

Admission requirements over and above admission to NAU are required.

- NAU Graduate Online application required (www.nau.edu/graduateapply) for all programs. Details on admission requirements are included in the online application.
- Undergraduate degree from a regionally accredited institution
- Grade Point Average (GPA) of 3.00 (scale is 4.00 = "A"), or the equivalent.
- Admission to many graduate programs is on a competitive basis, and programs may have higher standards than those established by the Graduate College.
- Transcripts
- For details on graduate admission policies, please visit http://nau.edu/GradCol/Admissions/Graduate-Admissions-Policy/.
- International applicants have additional admission requirements: http://nau.edu/GradCol/Admissions/International/.

Individual program admission requirements include:
Prerequisites (completed prior to enrolling in the program)

- Must have completed at least 23 hours of undergraduate mathematics and statistics coursework at the level of calculus and above with a grade of C or better, and have at least a 3.0 grade point average in these courses.
- These 23 credit hours cannot include the teaching methods courses (such as MAT 301, 302, 401, 402) and must include:
  - Calculus II (MAT 137)
  - Applied Statistics (STA 270)
  - Foundations of Mathematics (MAT 320W)
  - at least 9 hours of upper division proof-based coursework (including MAT 320W)
- It is highly recommended that the 23 credit hours include Modern Geometry (MAT 365), Abstract Algebra (MAT 411) and Introduction to Analysis (MAT 431) since these topics will be expanded upon in MAT 505, MAT 504, and MAT 506, respectively.

- List of courses taken in the field with titles/authors of textbooks used

Master's Requirements

Take the following 36 units:

Five mathematics content courses:
- MAT 502, MAT 504, MAT 505, MAT 506, MAT 507 (15 units)

Seven mathematics education courses:
- MAT 500, MAT 501, MAT 508, MAT 509, MAT 510, MAT 600, MAT 602 (21 units)

Perform satisfactorily on a final oral exam conducted by your advisory committee.

3 letters of recommendation
- Personal statement or essay

Prerequisites (completed prior to enrolling in the program)

- Must have completed at least 23 hours of undergraduate mathematics and statistics coursework at the level of calculus and above with a grade of C or better, and have at least a 3.0 grade point average in these courses.
- These 23 credit hours cannot include the teaching methods courses (such as MAT 301, 302, 401, 402) and must include:
  - Calculus II (MAT 137)
  - Applied Statistics (STA 270)
  - Foundations of Mathematics (MAT 320W)
  - at least 9 hours of upper division proof-based coursework (including MAT 320W)
- It is highly recommended that the 23 credit hours include Modern Geometry (MAT 365), Abstract Algebra (MAT 411) and Introduction to Analysis (MAT 431) since these topics will be expanded upon in MAT 505, MAT 504, and MAT 506, respectively.

- List of courses taken in the field with titles/authors of textbooks used

Master's Requirements

Take the following 37 units:

Five mathematics content courses:
- MAT 502, MAT 504, MAT 505, MAT 506, MAT 507 (15 units)

Eight Seven mathematics education courses:
- MAT 500, MAT 501, MAT 508, MAT 509, MAT 510, MAT 600, MAT 602, MAT 603 (22 units)

Effective Fall 2013
Be aware that some courses may have prerequisites that you must also take. For prerequisite information click on the course or see your advisor.

Perform satisfactorily on a final oral exam conducted by your advisory committee.

Be aware that some courses may have prerequisites that you must also take. For prerequisite information click on the course or see your advisor.

8. Justification for proposal:
As we are having our first graduates in the program, we are becoming aware that the Portfolio and Comprehensive Exam require at least 15+ hours of student time and significant faculty time too. This proposed addition of 1 credit hour MAT 603 recognizes this time.

9. NCATE designation, if applicable:
   
   □ Initial Plan        □ Advanced Plan        □ Remove Designation

    See effective dates calendar.

11. Will this proposal impact other plans, sub plans, or course offerings, etc.?   Yes ☐  No x
    If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit

**Answer 12-13 for UCC/ECCC only:**

12. A major is differentiated from another major by required course commonality: 24 units of the required credit hours of a major must be unique, (i.e. not common or not dual use as a required element in another major), to that major. Does this plan have 24 units of unique required credit?  
    Yes ☐  No ☐

13. Minor: A planned group of courses from one or more subject matter areas consisting of at least 18 hours and no more than 24 hours. At least 12 hours of the minor must be unique to that minor to differentiate it from other minors. Does this minor have 12 units of unique required credit?  
    Yes ☐  No ☐

**Answer 14-15 for UGC only:**

14. If this is a non-thesis plan, does it require a minimum of 24 units of formal graded coursework?  
    If no, explain why this proposal should be approved.  
    Yes ☑  No ☐

15. If this is a thesis plan, does it require a minimum of 18 units of formal graded coursework?  
    If no, explain why this proposal should be approved.  
    Yes ☐  No ☐

Effective Fall 2013
FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 12/10/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) Date

Chair of college curriculum committee Date

Dean of college Date

For Committee use only:

UCC/UGC Approval Date

Approved as submitted: Yes □ No □

Approved as modified: Yes □ No □

EXTENDED CAMPUSES

Reviewed by Curriculum Process Associate Date

Approvals:

Academic Unit Head Date

Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning) Date

Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning) Date

Faculty Chair of Extended Campuses Curriculum Committee (Yuma, Yavapai, or Personalized Learning) Date

Effective Fall 2013
FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 12/2/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) Date

Chair of college curriculum committee 12/9/13

Dean of college Date

For Committee use only:

UCC/UGC Approval 2/12/14

Approved as submitted: Yes □ No □

Approved as modified: Yes □ No □

EXTENDED CAMPUSES

Reviewed by Curriculum Process Associate Date

Approvals:

Academic Unit Head Date

Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning) Date

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Effective Fall 2013
NORTHERN ARIZONA UNIVERSITY  
DEPARTMENT OF MATHEMATICS & STATISTICS  
MASTER OF SCIENCE - MATHEMATICS EDUCATION  
Comprehensive Examination  
Degree Plan  
2014-Present

Student Name_________________________  Student ID Number_________________________

e-mail Address_________________________  Phone Number_________________________

TOTAL HOURS REQUIRED FOR COMPLETION OF PROGRAM (37 hours)

MATHEMATICS CONTENT COURSES (15 hours)

Term, Year to be Completed

Required Courses:

_________________________  MAT 502 (3 hours) Problem Solving: Theory and Practice
_________________________  MAT 504 (3 hours) Connections – Algebra and Number Theory
_________________________  MAT 505 (3 hours) Connections – Calculus
_________________________  MAT 506 (3 hours) Connections – Geometry
_________________________  MAT 507 (3 hours) Connections – Probability & Statistics

MATHEMATICS EDUCATION COURSES (22 hours)

Term, Year to be Completed

Required Courses:

_________________________  MAT 500 (3 hours) Reflections on/in Mathematics Education
_________________________  MAT 501 (3 hours) History and Philosophy of Mathematics Education
_________________________  MAT 508 (3 hours) Technology in Mathematics Education
_________________________  MAT 509 (3 hours) Assessment in Mathematics
_________________________  MAT 510 (3 hours) Curriculum in Mathematics Education
_________________________  MAT 600 (3 hours) Equity in Mathematics Education
_________________________  MAT 602 (3 hours) Research in Mathematics Education
_________________________  MAT 603 (1 hour) Capstone Course: Comprehensive Exam and Portfolio

Satisfactory performance on a comprehensive final oral exam is required to fulfill degree requirements.

Advisor:_________________________  Signature_________________________

Print Name_________________________  Signature_________________________

Department Chair:_________________________  Signature_________________________

Print Name_________________________  Signature_________________________

rev 1/2014
FAST TRACK (Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)

If this proposal represents changes to the intent of the plan or its integral components, review by the college dean, graduate dean (for graduate items) and/or the provost may be required prior to college curricular submission.

All Plans with NCATE designation, or plans seeking NCATE designation, must include an NCATE Accreditation Memo of Approval from the NAU NCATE administrator prior to college curricular submission.

UCC proposals must include an updated 8-term plan.
UGC proposals must include an updated program of study.


3. Academic
   Plan Name: MS Statistics (STAMS) 4. Emphasis:

5. Plan proposal:
   □ Plan Change
   □ New Emphasis
   □ Emphasis Change
   □ Emphasis Deletion

6. Current student learning outcomes of the plan. If structured as plan/emphasis, include for both core and emphasis.

This plan addresses three general student learning outcomes: breadth and depth of statistical knowledge, ability to communicate statistics clearly, and facility with statistical reasoning.

Breath and depth of statistical knowledge implies the understanding of a wide range of statistical

Show the proposed changes in this column (if applicable). **Bold** the changes, to differentiate from what is not changing, and change font to **Bold Red with strikethrough** for what is being deleted. *(Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes)*

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Effective Fall 2013
| applications and theories at the graduate level and the ability to work with them in applications or in statistical research. Students should be able to communicate statistics clearly and effectively (orally and in writing) and be comfortable collaborating with others on statistical problems. Facility with statistical reasoning involves the ability to understand and to construct statistical theory as well as the development of the creativity and intuition that is necessary when statistical reasoning is used to solve problems in new situations. |
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7. Current catalog plan overview and requirements in this column. Cut and paste the **Overview** and **Details** tabs, in their entirety, from the current on-line academic catalog: ([http://catalog.nau.edu/Catalog/](http://catalog.nau.edu/Catalog/))

In addition to University Requirements:
- Complete individual plan requirements.

Minimum Units for Completion 32
GPA 3.0
Additional Admission Requirements Admission requirements
Comprehensive Exam Comprehensive Exam is
Program of Study View Program of Study

Additional Admission Requirements

Admission requirements over and above admission to NAU are required.

- NAU Graduate Online application required ([www.nau.edu/graduateapply](http://www.nau.edu/graduateapply)) for all programs. Details on admission requirements are included in the online application.
- Undergraduate degree from a regionally accredited institution
- Grade Point Average (GPA) of 3.00 (scale is 4.00 = "A"), or the equivalent.
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- For details on graduate admission policies, please visit [http://nau.edu/GradCol/Admissions/Graduate-Admissions-Policy/](http://nau.edu/GradCol/Admissions/Graduate-Admissions-Policy/).
- International applicants have additional admission requirements: [http://nau.edu/GradCol/Admissions/International/](http://nau.edu/GradCol/Admissions/International/)

Individual program admission requirements include:

- 3 letters of recommendation
- Personal statement or essay
- Prerequisites (completed prior to enrolling in the program)

Show the proposed changes in this column. **Bold** the changes, to differentiate from what is not changing, and change font to **Bold-Red with strikethrough** for what is being deleted.

In addition to University Requirements:
- Complete individual plan requirements.

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Effective Fall 2013
Master's Requirements

Take the following 32 units:

**Core Coursework (20 units)**
- STA 471, STA 574, STA 585, STA 587, STA 673, STA 674, STA 675, STA 676 (20 units)

**Statistics Elective (3 units)**
- Select one course from: STA 570, STA 571, STA 572, STA 575, STA 608

**Coherent Area (9 units)**
- Coherent area of your own choosing, subject to advisor and department graduate operations committee approval.
- While a coherent area may consist of additional statistics or mathematics courses, students are encouraged to choose an area in forestry, environmental sciences, biological sciences, or another area of application of statistics.
- Coherent-area coursework must be appropriate for a graduate program.

**Comprehensive Final Exam**
- Perform satisfactorily on a comprehensive final exam conducted by your advisory committee

Be aware that some courses may have prerequisites that you must also take. For prerequisite information click on the course or see your advisor.
8. Justification for proposal:
STA 570 is no longer deemed appropriate for the MS in Statistics since the content is background expected of entering graduate students in statistics. The addition of STA 477 and STA 578 to the list of permitted electives simply indicates these courses are valuable for our graduate students. The minor change in admission standards clarifies for outside readers what is intended by the mathematical statistics course entry there. A probability course serves just as well for admission purposes.

9. NCATE designation, if applicable:
   - [ ] Initial Plan
   - [ ] Advanced Plan
   - [ ] Remove Designation

    See effective dates calendar.

11. Will this proposal impact other plans, sub plans, or course offerings, etc.?  
    Yes [ ]  No [X]  
    If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit

Answer 12-13 for UCC/ECCC only:

12. A major is differentiated from another major by required course commonality: 24 units of the required credit hours of a major must be unique, (i.e. not common or not dual use as a required element in another major), to that major. Does this plan have 24 units of unique required credit?  
    Yes [ ]  No [ ]

13. Minor: A planned group of courses from one or more subject matter areas consisting of at least 18 hours and no more than 24 hours. At least 12 hours of the minor must be unique to that minor to differentiate it from other minors. 
    Does this minor have 12 units of unique required credit?  
    Yes [ ]  No [ ]

Answer 14-15 for UGC only:

14. If this is a non-thesis plan, does it require a minimum of 24 units of formal graded coursework?  
    Yes [X]  No [ ]
    If no, explain why this proposal should be approved.

15. If this is a thesis plan, does it require a minimum of 18 units of formal graded coursework?  
    Yes [ ]  No [ ]
    If no, explain why this proposal should be approved.

FLAGSTAFF MOUNTAIN CAMPUS

Effective Fall 2013
Scott Galland
Reviewed by Curriculum Process Associate 12/2/2013

Approvals:

Department Chair/Unit Head (if appropriate) 3/04/13

Chair of college curriculum committee

Dean of college

For Committee use only:

UCC/UGC Approval

Approved as submitted: Yes ☐ No ☐

Approved as modified: Yes ☐ No ☐

**EXTENDED CAMPUSES**

Reviewed by Curriculum Process Associate

Approvals:

Academic Unit Head

Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning)

Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning)

Faculty Chair of Extended Campuses Curriculum Committee (Yuma, Yavapai, or Personalized Learning)

Chief Academic Office, Extended Campuses (or Designee)

Effective Fall 2013
Scott Galland 12/2/2013
Reviewed by Curriculum Process Associate

Approvals:

Department Chair/Unit Head (if appropriate)  Date

Chair of college curriculum committee  12/9/13

Dean of college  Date

For Committee use only:

UCC/UGC Approval  2/12/14

Approved as submitted:  Yes ☐ No ☐

Approved as modified:  Yes ☐ No ☐

EXTENDED CAMPUSSEs

Reviewed by Curriculum Process Associate  Date

Approvals:

Academic Unit Head  Date

Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning)  Date

Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning)  Date

Faculty Chair of Extended Campuses Curriculum Committee (Yuma, Yavapai, or Personalized Learning)  Date

Chief Academic Officer; Extended Campuses (or Designee)  Date

Effective Fall 2013
Approved as submitted: Yes ☐ No ☐

Approved as modified: Yes ☐ No ☐
Northern Arizona University  
Master of Science in Statistics  
Comprehensive Examination  
Degree Plan  
2014-present  

Student's Name: ___________________________  NAU ID: ___________________________

Advisor's Name: ___________________________  Date Admitted to Program: ___________________________

Local Address: _____________________________

E-mail address: _____________________________  Phone number: _____________________________

### PART ONE: REQUIREMENTS (20 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Sem. Taken</th>
<th>Course</th>
<th>Title</th>
<th>Units</th>
<th>Sem. Taken</th>
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<tbody>
<tr>
<td>STA 471</td>
<td>Regression Analysis</td>
<td>3</td>
<td></td>
<td>STA 673</td>
<td>Mathematical Statistics I.</td>
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<tr>
<td>STA 574</td>
<td>Categorical Data Analysis</td>
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<td>STA 674</td>
<td>Mathematical Statistics II.</td>
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<td>Statistical Consulting Prac.</td>
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<td>STA 675</td>
<td>Theory of Linear Models</td>
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<tr>
<td>STA 587</td>
<td>Professional Development</td>
<td>1</td>
<td></td>
<td>STA 676</td>
<td>Experimental Design</td>
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**TOTAL REQUIRED (20 UNITS)**

### PART TWO: ELECTIVES (3 units or more)

<table>
<thead>
<tr>
<th>Course</th>
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<th>Title</th>
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<tr>
<td>STA 477</td>
<td>Time Series Analysis</td>
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<td>STA 575</td>
<td>Applied Sampling</td>
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<td>STA 571</td>
<td>Statistical methods II.</td>
<td>3</td>
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<td>STA 578</td>
<td>Statistical Computing</td>
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<td>STA 572</td>
<td>Multivariate Stat. Methods</td>
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<td></td>
<td>STA 608</td>
<td>Fieldwork Experience</td>
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**TOTAL ELECTIVES (3 UNITS OR MORE)**

### PART THREE: COHERENT AREA* (9 units or more)

<table>
<thead>
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<th>Title</th>
<th>Units</th>
<th>Sem. Taken</th>
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</thead>
</table>

**TOTAL COHERENT AREA (9 UNITS OR MORE)**

**TOTAL UNITS PARTS ONE, TWO AND THREE (32 UNITS OR MORE)**

Verified: 
___________________________  Advisor's Name (print)  _____________________________  Chair's Name (print)

___________________________  Advisor's signature  _____________________________  Chair's Signature

---

* While a coherent area may consist of additional statistics or mathematics courses, students are encouraged to choose an area in forestry, environmental sciences, biological sciences, or another area of application of statistics. Coherent area coursework must be appropriate for a graduate program.

* All courses in the program shall be selected under the direction of the student's assigned advisor.

* Substitutions may be allowed by petition to the Department's Graduate Operations Committee.

* Satisfactory performance on a comprehensive final oral exam is required to fulfill degree requirements.
This form must be submitted with curriculum forms when multiple, related curriculum forms are submitted for approval.

**Date:** 11/25/2013

**College and department submitting change:**
College of Health and Human Services; School of Nursing

**Name of Faculty contact (if there are questions about the curriculum forms):**
Debbie J. Nogueras, Ph.D., MSN, RN, ANP-BC, FNP-BC
Associate Professor
Coordinator - Doctor of Nursing Practice and Family Nurse Practitioner Programs
Northern Arizona University, School of Nursing
PO Box 15035
Flagstaff, Arizona 86011
Phone: 928.523.3882 (office; messages)
debbie.nogueras@nau.edu (email; preferred)
Fax: 928.523.7171

**Brief explanation of changes and their relationship to each other:**
The school of nursing recently completed an accreditation self-study and on-site evaluation visit (November, 2013). The changes proposed are based on findings from the self-study, specifically mapping of course content to the Essentials of Doctoral Education for Advanced Practice Nurses [Essentials] (AACN, 2006) and to the curricular concepts and program outcomes. Identified gaps and duplication of content were addressed as the curriculum was reviewed and revised. Additionally, the on-site evaluators requested a change of course titles where the term ‘research’ was being use to ‘evidence-based practice’ to clearly reflect the scholarly project of the DNP learner. Other changes, editorial in nature, clarify expected student outcomes and course descriptions.

NUR 703 Change to Pass/Fail
NUR 704 Change to letter grade
NUR 706 change to Pass/Fail

Adding NUR 712 (3) Evidence-Based Practice, content needed to support student scholarly inquiry project.
Remove NUR 678 Legal/Ethics- content sufficiently covered in other classes. We wish to delete from the program of study but leave on the books for a potential elective in the future. The course was designed to be interprofessional in nature and available to the college.

Adding NUR 716 (3) Organizations and Systems – content missing from current courses and includes content from technology and informatics (delete course NUR 702), to fully meet requirements of Essentials.

Adding NUR 714 (3) Health and Vulnerable Populations (replaces Epidemiology NUR 707), adds missing content to fully meet requirements of Essentials.

Revising NUR 705 (3) Leadership- to include content missing from Essential 2.2

Rev 12.5.13  SG
Please attach proposed Syllabus in approved university format.

1. Course subject and number: **NUR 712**
2. Units: **3**
   See upper and lower division undergraduate course definitions.

3. College: **Health and Human Services**
4. Academic Unit: **Nursing**

5. Student Learning Outcomes of the new course. *(Resources & Examples for Developing Course Learning Outcomes)*

   **Critical Reasoning**
   1. Identify outcomes linked to measures, variables, and data sources for the scholarly project plan.
   2. Apply data collection and management principles to implementation plan.
   3. Apply evidence based practice theories or models and/or conceptual framework to guide the project plan.

   **Communication**
   4. Identify resources, facilitators and barriers to implementation.

6. Justification for new course, including how the course contributes to degree program outcomes, or other university requirements / student learning outcomes. *(Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes)*

   This new course addresses required content (not previously included in the curriculum) for accreditation through the Essentials of Doctoral Education for Advanced Nursing Practice *(AACN, 2011)* and supports students in their DNP scholarly project.

7. Effective **BEGINNING** of what term and year? **Fall 2014**
   See effective dates calendar.

8. Long course title: **EVIDENCE-BASED PRACTICE: PROJECT PLANNING AND IMPLEMENTATION**
   *(max 100 characters including spaces)*

9. Short course title: **EBP PLANNING IMPLEMENTATION**
   *(max. 30 characters including spaces)*

10. Catalog course description (max. 60 words, excluding requisites):
    This course focuses on identifying methods, tools or measurements, and outcomes for the execution of the DNP Scholarly Project. At the conclusion of this course, students will be prepared for their scholarly proposal oral defense.
    Effective Fall 2012
11. Will this course be part of any plan (major, minor or certificate) or sub plan (emphasis)?
   Yes ☒ No ☐
   If yes, include the appropriate plan proposal.

12. Does this course duplicate content of existing courses?
   Yes ☐ No ☒
   If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain why NAU should establish this course.

13. Will this course impact any other academic unit's enrollment or plan(s)?
   Yes ☐ No ☒
   If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

14. Grading option: Letter grade ☒ Pass/Fail ☐ Both ☐

15. Co-convened with: ______________________ 14a. UGC approval date*: ________________
   (For example: ESE 450 and ESE 550) See co-convening policy.
   *Must be approved by UGC before UCC submission, and both course syllabi must be presented.

16. Cross-listed with: ______________________
   (For example: ES 450 and DIS 450) See cross listing policy.
   Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

17. May course be repeated for additional units?
   Yes ☐ No ☒
   16a. If yes, maximum units allowed? ________________
   16b. If yes, may course be repeated for additional units in the same term? Yes ☐ No ☒

18. Prerequisites: NUR 677
   If prerequisites, include the rationale for the prerequisites.
   This course is only for students in the program who have completed the introductory course and first evidence based practice course (NUR 700 and NUR 677).

19. Co requisites: ______________________
   If co requisites, include the rationale for the co requisites.

20. Does this course include combined lecture and lab components?
   Yes ☐ No ☒
   If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course: Kimberly Gould, DNP, MSN

Effective Fall 2012
22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review "see description" and "see impacts" for "Classes Starting/Ending Outside Regular Term" under the heading "Forms" http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/.  
Do you anticipate this course will be scheduled outside the regular term? Yes □ No □

Answer 22-23 for UCC/ECCC only:

23. Is this course being proposed for Liberal Studies designation? Yes □ No □  
If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation? Yes □ No □  
If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 11/25/2013  
Reviewed by Curriculum Process Associate Date  

Approvals:  

Department Chair/Unit Head (if appropriate) Date  

Chair of college curriculum committee Date  

Dean of college Date  

For Committee use only:  

UCC/UGC Approval Date

Approved as submitted: Yes □ No □  
Approved as modified: Yes □ No □

EXTENDED CAMPUSES

Effective Fall 2012
<table>
<thead>
<tr>
<th>Reviewer/Committee</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Curriculum Process Associate</td>
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</tbody>
</table>

Approved as submitted: **Yes** [ ] **No** [ ]

Approved as modified: **Yes** [ ] **No** [ ]

Effective Fall 2012
Northern Arizona University

Name of College: College of Health and Human Services
Department: School of Nursing
Course Prefix, Number & Title: NUR 712
Course Prefix, Number & Title: Evidence Based Practice: Project Planning and Implementation
Semester Course Offered: Spring
Credit Hours: 3
Instructors Name: Kimberly Gould, DNP, RN, FNP-C
Office Hours: By appointment
Office Address: Northern Arizona University School of Nursing
Office Address: P.O. Box 15035
Office Address: Flagstaff, AZ 86011-5035
E-mail: Kimberly.gould@nau.edu
Phone: 928.523.5152
Course Pre-requisites: Admission to the DNP and NUR 677

Course Description
This course focuses on identifying methods, tools or measurements, and outcomes for the execution of the DNP Scholarly Project. At the conclusion of this course, students will be prepared for their scholarly proposal oral defense.

Student Learning Outcomes:

Critical Reasoning
1. Identify outcomes linked to measures, variables, and data sources for the scholarly project plan.
2. Apply data collection and management principles to implementation plan.
3. Apply evidence based practice theories or models and/or conceptual framework to guide the project plan.

Communication
4. Identify resources, facilitators and barriers to implementation.

Course Structure and Approach:
Bb Learn platform is used for the delivery of assignments, asynchronous online discussions, student presentations, and peer evaluation. A faculty member acting as project chair mentors the student in preparation for the proposal oral defense.

The following instructional methods are used to achieve learning outcomes:

Effective Fall 2012
- Text and electronic readings
- Discussion forums
- Written assignments

Textbooks and Required Materials


Modules
Module 1: Developing the project plan.
Module 2: Creating and developing the project plan.
Module 3: Data collection strategies.
Module 4: Cost analysis.
Module 5: Data analysis plan.
Module 6: Planning for change.
Module 7: Preparing for proposal defense

Assessment of Student Learning Outcomes

<table>
<thead>
<tr>
<th>Outcomes Measurement Plan Presentation</th>
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</thead>
<tbody>
<tr>
<td>Cost Analysis Plan</td>
<td>10%</td>
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<tr>
<td>SPSS Code Book</td>
<td>10%</td>
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<tr>
<td>Project Timeline and Protocol</td>
<td>20%</td>
</tr>
<tr>
<td>Scholarly Inquiry Project Methods and Evaluation Paper</td>
<td>40%</td>
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<tr>
<td>Project Proposal</td>
<td>15%</td>
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</tbody>
</table>

Grading System
A  93-100%
B  84-92%
C  78-83%
F  < 78%

A grade of 84% or better is required to pass a graduate course. Course with a C or less must be repeated.

Effective Fall 2012
Students are required to receive a score of 84% or better on the scholarly project or paper in each course, which will be submitted in the portfolio for partial fulfillment of the graduation requirements for the Doctor of Nursing Practice.

If less than an 84% is achieved, the portfolio assignment will be considered failed and the student will receive a grade of incomplete (IP) for that course. The student has one opportunity to revise the paper with a successful outcome score. The student and faculty member will agree upon a deadline for the revision and notify the program coordinator of the agreed learning. If the student fails the portfolio assignment a second time, they receive an F for the course grade and will need to repeat the course.

Course Policies
1. Each student is accountable and responsible for knowledge and skills obtained in the prerequisite courses.
2. Each student is expected to complete all readings, all assignments, and to participate in discussions.
3. All papers must be written in the American Psychological Association (APA) format 6th edition (typewritten, double-spaced, reference citations, etc.).
4. Papers may be sent as an attachment through course Email.
5. Microsoft Word (.doc or .docx) or Rich Text Format (.rtf) is the required word processing for sending papers as attachments.
6. Assignments (papers, discussions) are due by midnight on the due date. Discussion replies are due by midnight on the due date. There will be a 10% deduction each day (24 hours) for each late assignment. Extenuating circumstances (circumstances beyond the student’s control) resulting in late assignments will be evaluated on a case-by-case basis.
7. It is expected that students conform to and comply with the Northern Arizona University’s Graduate Student Handbook and the SON Graduate Student Handbook.
8. Oral or written material belonging to another author which is not properly documented and which is represented as the student’s own work constitutes plagiarism. Any student who plagiarizes will fail the course. Quotation marks should be used to indicate exact words of another. Paraphrasing (summarizing a passage, rearranging the order of a sentence, or changing some of the words) does not necessitate quotation marks; however, each time a source is either quoted or paraphrased, a credit for the source must be included in the text and at the end of the document. See the APA manual for the format for in-text and end-of-text referencing.

University Policies
NORTHERN ARIZONA UNIVERSITY
POLICY STATEMENTS

See the following document for additional policy statements:
http://www4.nau.edu/avpaa/UCCPolicy/plcystmt.html

Effective Fall 2012
Please attach proposed Syllabus in approved university format.

1. Course subject and number: **NUR 714**

See upper and lower division undergraduate course definitions.

2. Units: **3**

3. College: **Health and Human Services**

4. Academic Unit: **Nursing**

5. Student Learning Outcomes of the new course. (*Resources & Examples for Developing Course Learning Outcomes*)

**Clinical Practice and Prevention**

1. Analyze epidemiological data to develop primary, secondary and tertiary interventions for prevention & control of disease.

**Communication**

2. Communicate research evidence to guide collaborative, interprofessional practice in caring for the vulnerable and underserved under usual conditions and times of disaster.

**Critical Reasoning**

3. Synthesize relevant health data, methods of data collection and rates of events to assess the severity of health problems.

**Leadership**

4. Appraise research based evidence in health promotion and health protection of vulnerable populations.

**Global Health (Global Engagement)**

5. Examine the role of the DNP in promoting social justice and ethical practice in rural and underserved communities.

**Global Health (Diversity Education)**

6. Analyze social, political and physical determinants affecting health disparities in global communities.

6. Justification for new course, including how the course contributes to degree program outcomes, or other university requirements / student learning outcomes. (*Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes*).

This new course addresses required content (not previously included in the curriculum) for accreditation through the *Essentials of Doctoral Education for Advanced Nursing Practice* (*AACN, 2011*) and supports our focus in leadership in rural and underserved communities.

Effective Fall 2012
7. Effective BEGINNING of what term and year? Fall 2014
   See effective dates calendar.

8. Long course title: HEALTH AND VULNERABLE POPULATIONS
   (max 100 characters including spaces)

9. Short course title: POPULATIONS
   (max. 30 characters including spaces)

10. Catalog course description (max. 60 words, excluding requisites):
    The social and political factors that lead to health disparities in vulnerable and underserved populations in the US and globally are examined. A critical Analysis of multiple risk factors and the combined effect on health status provides an understanding of the needs of the vulnerable. Approaches to improving to improving health care delivery systems and disaster management are discussed.

11. Will this course be part of any plan (major, minor or certificate) or sub plan (emphasis)?
    Yes ☒ No ☐
    If yes, include the appropriate plan proposal.

12. Does this course duplicate content of existing courses?
    Yes ☐ No ☒
    If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain why NAU should establish this course.

13. Will this course impact any other academic unit's enrollment or plan(s)?
    Yes ☐ No ☒
    If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit

14. Grading option: Letter grade ☒ Pass/Fail ☐ Both ☐

15. Co-convened with: __________________________
    14a. UGC approval date*:
    (For example: ESE 450 and ESE 550) See co-convening policy.
    *Must be approved by UGC before UCC submission, and both course syllabi must be presented.

16. Cross-listed with:
    (For example: ES 450 and DIS 450) See cross listing policy.
    Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

17. May course be repeated for additional units?
    Yes ☐ No ☒
    16a. If yes, maximum units allowed? ______
    16b. If yes, may course be repeated for additional units in the same term?
    Yes ☐ No ☒

18. Prerequisites: Admission to the DNP program and NUR 700
    Effective Fall 2012
If prerequisites, include the rationale for the prerequisites.

This course is only for students in the program who have completed the introductory course (NUR 700).

19. Co requisites:  
   If co requisites, include the rationale for the co requisites.

20. Does this course include combined lecture and lab components?  
    Yes ☐  No ☒  
   If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course:  Janine Saulpaugh, DNP

22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review “see description” and “see impacts” for “Classes Starting/Ending Outside Regular Term” under the heading “Forms” http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/.  
   Do you anticipate this course will be scheduled outside the regular term?  Yes ☐  No ☒

Answer 22-23 for UCC/ECCC only:

23. Is this course being proposed for Liberal Studies designation?  Yes ☐  No ☐  
    If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation?  Yes ☐  No ☐  
    If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland  12/5/2013
Reviewed by Curriculum Process Associate  Date

Approvals:

Department Chair/Unit Head (if appropriate)  Date  12-5-13

Chair of college curriculum committee  Date  12-9-13

Dean of college  Date  10/9/13

Effective Fall 2012
### EXTENDED CAMPUSES

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<th>Approval Category</th>
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<td></td>
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</tbody>
</table>

Approved as submitted:       Yes [ ]   No [ ]
Approved as modified:         Yes [ ]   No [ ]

Effective Fall 2012
Northern Arizona University
College of Health and Human Services
School of Nursing

Course Prefix, Number:  NUR 714
Course Title:           Health and Vulnerable Populations
Semester Offered:      Spring
Credit Hours:          3 credits
Instructor's Name:     Janine Saulpaugh, DNP, RN, WHNP-BC
Office Address:        Northern Arizona University School of Nursing
                       3895 N. Business Center Dr, Suite 120
                       Tucson, AZ 85705
E-mail:               Use the course e-mail in Bb Learn for all correspondence
                       Janine.Saulpaugh@nau.edu
Phone:                520-879-7954
Office Hours:         By appointment
Course Prerequisites:  Admission to the DNP Program, NUR 700

Catalog/ Course Description: The social and political factors that lead to health disparities in vulnerable and underserved populations in the US and globally are examined. A critical analysis of multiple risk factors and the combined effect on health status provides an understanding of the needs of the vulnerable. Epidemiological concepts and methods are introduced to analyze population data and identify effective measures for prevention and control of disease. Current and future Innovative approaches to improving health care delivery systems and disaster management are discussed.

Student Learning Outcomes
**Clinical Practice and Prevention**
- Analyze epidemiological data to develop primary, secondary and tertiary interventions for prevention & control of disease.

**Communication**
- Communicate research evidence to guide collaborative, interprofessional practice in caring for the vulnerable and underserved under usual conditions and times of disaster.

Effective Fall 2012
Critical Reasoning
- Synthesize relevant health data, methods of data collection and rates of events to assess the severity of health problems.

Leadership
- Appraise research based evidence to advance health promotion and health protection in vulnerable populations.

Global Health
- Examine the role of the DNP in promoting social justice and ethical practice in rural and underserved communities. (Global Engagement)
- Analyze social, political and physical determinants affecting health disparities in global communities. (Diversity Education)

Course Structure and Approach
Bb Learn platform is used for the delivery of assignments, asynchronous online discussions, and exploration of selected issues. The health of vulnerable populations is examined through application of epidemiological concepts, discussions and a scholarly paper. The scholarly paper will be included in the portfolio requirements for the DNP.
The following instructional methods are used to achieve learning outcomes:
- Text and electronic readings
- Discussion forum
- Written assignments
- Web based activities; multimedia resources

Textbook and Required Materials


Internet sources for epidemiology
http://www.cdc.gov/osels/scientific_edu/SS1978/

http://www.cdc.gov/osels/scientific_edu/SS1978/

Modules
Module 1: Introduction to Vulnerable Populations; a framework for study
Basic Concepts and Applications of Epidemiology

Module 2: Influence of Risk Factors in Vulnerable Populations
Measures of Morbidity and Mortality; Descriptive Epidemiology

Effective Fall 2012
Module 3: Health Equity and Health Disparities; a Global Perspective
Epidemiology to Evaluate Health Services
Validity & Reliability of Diagnostic Screening Tests

Module 4: Resolving Health Disparities in US; Social Justice and Advocacy
Epidemiology and Public Policy

Assessment of Student Learning Outcomes

| Discussions                                                                 | Six vulnerable population topics  
| Social and physical determinants of health, US and global; health disparities; DNP role for social justice; epidemiology and health policy; interprofessional practice for improved access; innovative approaches. | 30% |
| Applied epidemiology assignments                                            | Disaster preparedness in special populations: evaluation of a disaster plan for identification and management of vulnerable populations. (15%) | 30% |
| Scholarly Paper *(portfolio assignment)*                                   | Population case studies: student presentations of health issues in select sub-populations to include interpretation of epidemiologic data to identify priority problems. (15%) | 40% |
| Total                                                                      | Health disparities in Vulnerable Populations | 100% |

Grading System
A 93-100%
B 84-92%
C 78-83%
F < 78%

A grade of 84% or better is required to pass a graduate course. Students with a grade of C or less must repeat the course.

Students are required to receive a score of 84% or better on the scholarly project or paper in each course, which will be submitted in the portfolio for partial fulfillment of the graduation requirements for the Doctor of Nursing Practice.

If less than an 84% is achieved, the portfolio assignment will be considered failed, and the student will receive a grade of in progress (IP) for that course. The student has one opportunity to revise the paper for a successful outcome score. The student and faculty member will agree upon terms for revision to include a deadline and notify the program coordinator of the learning agreement. If the student fails the portfolio assignment a second time, they receive an F for the course grade and will need to repeat the course.

Course Policies
1. Each student is accountable and responsible for knowledge and skills obtained in the prerequisite courses.

Effective Fall 2012
2. Each student is expected to complete all readings, all assignments, and to participate in discussions.
3. All papers must be written in the American Psychological Association (APA) format 6th edition (typewritten, double-spaced, reference citations, etc.).
4. Papers may be sent as an attachment through course Email.
5. Microsoft Word (.doc or .docx) or Rich Text Format (.rtf) is the required word processing for sending papers as attachments.
6. Assignments (papers, discussions) are due by midnight on the due date. Discussion replies are due by midnight on the due date. **There will be a 10% deduction each day (24 hours) for each late assignment.** Extenuating circumstances (circumstances beyond the student's control) resulting in late assignments will be evaluated on a case-by-case basis.
7. It is expected that students conform to and comply with the Northern Arizona University's Graduate Student Handbook and the SON Graduate Student Handbook.
8. Oral or written material belonging to another author which is not properly documented and which is represented as the student's own work constitutes plagiarism. **Any student who plagiarizes will fail the course.** Quotation marks should be used to indicate exact words of another. Paraphrasing (summarizing a passage, rearranging the order of a sentence, or changing some of the words) does not necessitate quotation marks; however, each time a source is either quoted or paraphrased, a credit for the source must be included in the text and at the end of the document. See the APA manual for the format for in-text and end-of-text referencing.

**University Policies**

**NORTHERN ARIZONA UNIVERSITY**

**POLICY STATEMENTS**

See the following document for additional policy statements:

http://www4.nau.edu/avpaa/UCCPolicy/plcystmt.html

Effective Fall 2012
Please attach proposed Syllabus in approved university format.

1. Course subject and number: NUR 716
2. Units: 3

See upper and lower division undergraduate course definitions.

3. College: Health and Human Services
4. Academic Unit: Nursing

5. Student Learning Outcomes of the new course. (Resources & Examples for Developing Course Learning Outcomes)

Professionalism and Professional Values
1. Apply the knowledge developed to design a quality and safety program and related initiatives in the health care setting.

Communication
2. Critically examine barriers and facilitators to organizational change in health care and to the creation of a culture of quality and safety.
3. Analyze selected models of management and leadership, and organization theories for their relevance to advanced practice nursing.

Leadership
4. Assess the theoretical underpinnings of systems principles as a tool to manage the challenges in the health care environment.
5. Differentiate the benefits and drawbacks of using systems thinking in the healthcare environment.

6. Justification for new course, including how the course contributes to degree program outcomes, or other university requirements / student learning outcomes. (Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes).

This new course addresses required content (not previously included in the curriculum) for accreditation through the Essentials of Doctoral Education for Advanced Nursing Practice (AACN, 2011) and supports our focus in leadership in rural and underserved communities.

7. Effective BEGINNING of what term and year? Fall 2014

See effective dates calendar.

8. Long course title: ORGANIZATIONAL AND SYSTEMS LEADERSHIP FOR QUALITY CARE
(max 100 characters including spaces)

9. Short course title: ORGNZTNL & SYSTMS LEADERSHIP

Effective Fall 2012
10. Catalog course description (max. 60 words, excluding requisites):
This course will facilitate understanding of how to lead, advocate, and manage for the application of innovative responses to organizational challenges. Emphasis is on the development and evaluation of care delivery approaches that meet the needs of vulnerable populations by enhancing effective and efficient health care, quality improvement, and patient safety.

11. Will this course be part of any plan (major, minor or certificate) or sub plan (emphasis)?
   Yes ☒   No ☐
   If yes, include the appropriate plan proposal.

12. Does this course duplicate content of existing courses?
   Yes ☐   No ☒
   If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain why NAU should establish this course.

13. Will this course impact any other academic unit's enrollment or plan(s)?
   Yes ☐   No ☒
   If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit

14. Grading option:
   Letter grade ☒   Pass/Fail ☐   Both ☐

15. Co-convened with: __________________________ 14a. UGC approval date*:
    (For example: ESE 450 and ESE 550) See co-convening policy.
    *Must be approved by UGC before UCC submission, and both course syllabi must be presented.

16. Cross-listed with: __________________________
    (For example: ES 450 and DIS 450) See cross listing policy.
    Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

17. May course be repeated for additional units?
    Yes ☐   No ☒
    16a. If yes, maximum units allowed?
    16b. If yes, may course be repeated for additional units in the same term?
    Yes ☐   No ☒

18. Prerequisites: NUR 700
    Admission to the DNP program and
    If prerequisites, include the rationale for the prerequisites.

19. Co requisites: __________________________
    If co requisites, include the rationale for the co requisites.

This course is only for students in the program who have completed the introductory course (NUR 700).

Effective Fall 2012
20. Does this course include combined lecture and lab components?  Yes ☐ No ☑
   If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course:  Debbie Nogueras, PhD, MSN

22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review “see description” and “see impacts” for “Classes Starting/Ending Outside Regular Term” under the heading “Forms” http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/.
   Do you anticipate this course will be scheduled outside the regular term?  Yes ☐ No ☑

Answer 22-23 for UCC/ECCC only:

23. Is this course being proposed for Liberal Studies designation?  Yes ☐ No ☑
   If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation?  Yes ☐ No ☑
   If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 12/5/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate)  12-5-13
Date

Chair of college curriculum committee  12/9/13
Date

Dean of college

For Committee use only:

UCC/UGC Approval  2/12/14
Date

Approved as submitted:  Yes ☐ No ☑

Approved as modified:  Yes ☐ No ☑

Effective Fall 2012
## EXTENDED CAMPUSES

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<tr>
<td>Chief Academic Officer; Extended Campuses (or Designee)</td>
<td>Date</td>
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</tbody>
</table>

Approved as submitted: Yes □ No □

Approved as modified: Yes □ No □

Effective Fall 2012
Northern Arizona University

Name of College: College of Health and Human Services
Department: School of Nursing
Course Prefix & Number: Title: Organizational and Systems Leadership for Quality Care
Semester Course Offered: Fall
Credit Hours: 3
Instructors Name: Debbie Nogueras, PhD, MSN
Office Hours: By appointment
Office Address: Northern Arizona University School of Nursing
P.O. Box 15035
Flagstaff, AZ 86011-5035
debbie.nogueras@nau.edu
E-mail: (Blackboard messaging preferred)
Phone: 928-523-3882
Course Pre-requisites: Admission to the DNP and NUR 700

Course Description
This course will facilitate understanding of how to lead, advocate, and manage for the application of innovative responses to organizational challenges. Emphasis is on the development and evaluation of care delivery approaches that meet the needs of vulnerable populations by enhancing effective and efficient health care, quality improvement, and patient safety.

Student Learning Outcomes
Professionalism and Professional Values
1. Apply the knowledge developed to design a quality and safety program and related initiatives in the health care setting.

Communication
2. Critically examine barriers and facilitators to organizational change in health care and to the creation of a culture of quality and safety.
3. Analyze selected models of management and leadership and organizational theories for their relevance to advanced practice nursing.

Leadership
4. Assess the theoretical underpinnings of systems principles as a tool to manage the challenges in the health care environment.

Effective Fall 2012
Course Structure and Approach

Bb Learn platform is used for the delivery of assignments, asynchronous online discussions, and exploration of selected issues. Organizational and systems leadership to promote quality care is examined through application of leadership, systems, and change theories, discussions, and a scholarly paper. The scholarly paper will be included in the portfolio requirements for the DNP.

The following instructional methods are used to achieve learning outcomes:
- Text and electronic readings
- Discussion forums
- Written assignments
- Web based activities; multimedia resources

Textbooks and Required Materials


Modules

**Module 1:** Introduction to systems theory; Principles of systems, complexity, and chaos theories; Overview of the components of the U.S. Healthcare System: environment, input, throughput, output and feedback loops; Benefits and drawbacks of systems thinking; designing a systems intervention.

**Module 2:** System Inputs: Providers, resources, financing, and policy; Systems Throughputs: Care processes, diagnostics, interventions and education; Systems Outputs: Clinical outcomes, financial stability, and sustainability of the system; Health care reform efforts in the 21st century

**Module 3:**
Introduction to the Intelligent Complex Adaptive System (ICAS). Measuring system effectiveness for patient quality, patient safety, worker resources and cost effectiveness; Principles of leadership

Effective Fall 2012
synthesis; integrating the roles of innovation and leadership; addressing the challenges of system integration; Managing resistance to system innovations.

**Module 4:** Leadership synthesis. Demonstrating competence in leadership synthesis, creating support for new thinking, facilitating change.

**Module 5:** Strategy and balance in the complex system. Synthesis of concepts of ICAS to create knowledge solution utilizing principles of knowledge management and leadership for profound innovation and change.

### Assessment of Student Learning Outcomes

<table>
<thead>
<tr>
<th>Discussions/Blogs</th>
<th>5 Discussions Systems theory; Systems inputs, throughputs, outputs, and outcomes; ICAS system &amp; Quality; Leadership and Change.</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team-based Project</td>
<td>Integrating the roles of innovation and leadership to enhance quality of care.</td>
<td>30%</td>
</tr>
<tr>
<td>Scholarly Paper* (portfolio assignment)</td>
<td>Assessment of an ongoing system change in practice.</td>
<td>40%</td>
</tr>
</tbody>
</table>

**Total** 100%

### Grading System

- **A** 93-100%
- **B** 84-92%
- **C** 78-83%
- **F** < 78%

A grade of 84% or better is required to pass a graduate course. Course with a C or less must be repeated.

Students are required to receive a score of 84% or better on the scholarly project or paper in each course, which will be submitted in the portfolio for partial fulfillment of the graduation requirements for the Doctor of Nursing Practice.

If less than an 84% is achieved, the portfolio assignment will be considered failed and the student will receive a grade of in progress (IP) for that course. The student has one opportunity to revise the paper with a successful outcome score. The student and faculty member will agree upon a deadline for the revision and notify the program coordinator of the agreed learning.

If the student fails the portfolio assignment a second time, they receive an F for the course grade and will need to repeat the course.

### Course Policies

1. Each student is accountable and responsible for knowledge and skills obtained in the prerequisite courses.
2. Each student is expected to complete all readings, all assignments, and to participate in discussions.

*Effective Fall 2012*
3. All papers must be written in the American Psychological Association (APA) format 6th edition (typewritten, double-spaced, reference citations, etc.).

4. Papers may be sent as an attachment through course Email.

5. Microsoft Word (.doc or .docx) or Rich Text Format (.rtf) is the required word processing for sending papers as attachments.

6. Assignments (papers, discussions) are due by midnight on the due date. Discussion replies are due by midnight on the due date. There will be a 10% deduction each day (24 hours) for each late assignment. Extenuating circumstances (circumstances beyond the student's control) resulting in late assignments will be evaluated on a case-by-case basis.

7. It is expected that students conform to and comply with the Northern Arizona University's Graduate Student Handbook and the SON Graduate Student Handbook.

8. Oral or written material belonging to another author which is not properly documented and which is represented as the student's own work constitutes plagiarism. Any student who plagiarizes will fail the course. Quotation marks should be used to indicate exact words of another. Paraphrasing (summarizing a passage, rearranging the order of a sentence, or changing some of the words) does not necessitate quotation marks; however, each time a source is either quoted or paraphrased, a credit for the source must be included in the text and at the end of the document. See the APA manual for the format for in-text and end-of-text referencing.

Course policies:

Important Notice: There is strict adherence to every part of the NAU Student Handbook and the NAU Graduate Nursing Student Handbook.

Testing: Module quizzes and examinations will be offered on-line through Bb Learn. It is the student's responsibility to make arrangements to take quizzes and examinations during the time specified. All quizzes and examinations are timed and must be completed once started. It is the student's responsibility to ensure they have a working computer and reliable Internet access. Quizzes and examinations are to be completed without the assistance of books, Internet resources, or assistance from other individuals or resources.

Retests/Makeup tests: It is expected that quizzes and examinations will be taken during the time scheduled. Illness or other reasons to delay testing should be brought up with the instructor prior to the date of the quiz/examination. Rescheduling of a quiz or examination may be arranged for valid reasons such as illness or personal/family emergencies. This is arranged at the discretion of the instructor.

Late assignments: ALL ASSIGNMENTS are to be submitted as scheduled. Late assignments will not be accepted unless prior approval is obtained. It is your responsibility to communicate with the instructor to re-negotiate an assignment due date, in advance, if a delay is anticipated. Late assignments, if accepted, may be subject to a 10% per day reduction in points at the discretion of the instructor.

Attendance Policy: Under NAU Policy students are expected to engage in class and prepare for participation in all activities and discussions. The SON believes active engagement enriches the learning experience.

Effective Fall 2012
Academic Dishonesty/Plagiarism: All forms of student academic dishonesty, including cheating, fabrication, facilitating academic dishonesty, and plagiarism are prohibited and subject to disciplinary action. Cheating means intentionally using or attempting to use unauthorized materials, information, or study aids in any academic exercise. In this course, quizzes and tests are to be completed without the assistance of books, Internet resources, or assistance from other individuals or resources. Fabrication means intentional and unauthorized falsification or invention of any information or citation in an academic exercise. Plagiarism means intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise. For further explanation of academic dishonesty refer to the School of Nursing Graduate Student Handbook and Northern Arizona University Student Handbook.

University Policies
NORTHERN ARIZONA UNIVERSITY POLICY STATEMENTS

See the following document for additional policy statements:
http://www4.nau.edu/avpaa/UCCPolicy/plcystmt.html

Effective Fall 2012
FAST TRACK (Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)

If the changes included in this proposal are significant, attach copies of original and proposed syllabi in approved university format.

1. Course subject and number: NUR 677
2. Units: 3

See upper and lower division undergraduate course definitions.

3. College: Health and Human Services
4. Academic Unit: Nursing

5. Current Student Learning Outcomes of the course.

Critical Reasoning
- Examine established as well as emerging concepts of nursing phenomenon including global contributions.
- Examine the nature and function of theory and theoretical frameworks as strategies to develop nursing knowledge.
- Examine the process of translational research in relationship to evidenced-based practice.
- Apply research findings in the design of care.
- Critique research for application to advanced nursing practice.

Leadership
- Analyze the role of the DNP in translational research and evaluation

Professionalism and Professional Values
- Critically examine age, ethnicity, culture and gender issues related to the application of research

Critical Reasoning
- Examine established as well as emerging concepts of nursing phenomenon including global contributions.
- Examine Address the nature and function of theory and theoretical frameworks as strategies to develop nursing knowledge.
- Examine Articulate the process of translational research in relationship to evidenced-based practice.
- Apply Incorporate research findings in the design of care.
- Critique research for application to advanced nursing practice.

Leadership
- Analyze the role of the DNP in translational research and evaluation

Professionalism and Professional Values
- Analyze the role of the DNP in translational research and evaluation
- Critically examine age, ethnicity, culture and gender issues related to the application of research

Effective Fall 2012
6. **Current title, description and units.** Cut and paste, in its entirety, from the current on-line academic catalog*  
   [http://catalog.nau.edu/Catalog/](http://catalog.nau.edu/Catalog/).

**NUR 677 RESEARCH METHODS FOR ADVANCED PRACTICE NURSES (3)**  
**Description:** This course provides students with knowledge about the elements of theory and the research process needed to generate evidence. Students will apply theories and research methods to guide practice and design transformative models of healthcare. In particular, students will develop their scholarly inquiry project plan. Letter grade only.

**Units:** 3

**Prerequisite:** Graduate status and NUR 700

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<tr>
<td>Current course subject and number:</td>
<td>Proposed course subject and number:</td>
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<tr>
<td>Current number of units:</td>
<td>Proposed number of units:</td>
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<tr>
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<td>Proposed short course title (max 30 characters): METHODS EVIDENCE-BASED PRACTICE</td>
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<td>Proposed long course title (max 100 characters): METHODS FOR EVIDENCE-BASED PRACTICE</td>
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<td>Current grading option:</td>
<td>Proposed grading option:</td>
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Show the proposed changes in this column **Bold** the proposed changes in this column to differentiate from what is not changing, and **Bold with strikethrough** what is being deleted.

**NUR 677 RESEARCH METHODS FOR ADVANCED EVIDENCE-BASED PRACTICE NURSES (3)**  
**Description:** This course provides students with knowledge about the elements of theory and the research process needed to generate evidence. Students will apply theories and research methods to guide practice and design transformative models of healthcare. In particular, students will develop their scholarly inquiry project plan. Letter grade only.

**Units:** 3

**Prerequisite:** Graduate status and NUR 700  
**Admission to the DNP program.**

*If there has been a previously approved UCC/UGC/ECCC change since the last catalog year, please copy the approved text from the proposal form into this field.

7. **Justification for course change.**

**Changes in this course are to meet current accreditation standards (replacing research with evidence-based practice).** Course outcome action verbs corrected to better assess student learning. Remapping of outcomes to correct program curricular strands for accuracy. The course content/syllabus is not affected by this change. **Prerequisite change based on new program plan sequencing.**

8. **Effective BEGINNING of what term and year?**  
   **Fall 2014**

   See effective dates calendar.

---

**IN THE FOLLOWING SECTION, COMPLETE ONLY WHAT IS CHANGING**

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Effective Fall 2012
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<td>Current prerequisite: Graduate status and NUR 700</td>
<td>Proposed prerequisite (include rationale in the justification): Admission to the DNP program.</td>
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<td>Current co-requisite:</td>
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<td>Current cross list with:</td>
<td>Proposed cross list with:</td>
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9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes ☒ No ☐ If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

**Nursing Practice; DNP**

10. Is there a related plan or sub plan change proposal being submitted? Yes ☐ No ☒ If no, explain. **These proposed changes will not require a related plan change.**

11. Does this course include combined lecture and lab components? Yes ☐ No ☒ If yes, include the units specific to each component in the course description above.

**Answer 12-15 for UCC/ECCC only:**

12. Is this course an approved Liberal Studies or Diversity course? Yes ☐ No ☐ If yes, select all that apply. Liberal Studies ☒ Diversity ☐ Both ☒

13. Do you want to remove the Liberal Studies or Diversity designation? Yes ☐ No ☐ If yes, select all that apply. Liberal Studies ☐ Diversity ☒ Both ☒

14. Is this course listed in the **Course Equivalency Guide**? Yes ☐ No ☐

15. Is this course a **Shared Unique Numbering** (SUN) course? Yes ☐ No ☐

**FLAGSTAFF MOUNTAIN CAMPUS**

Scott Galland 11/26/2013
Reviewed by Curriculum Process Associate Date

Effective Fall 2012
<table>
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<tr>
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Approved as submitted: Yes [ ] No [ ]
Approved as modified: Yes [ ] No [ ]

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Effective Fall 2012
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**Approved as modified:**
- Yes [ ]
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<td>Chief Academic Officer; Extended Campuses (or Designee)</td>
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**Approved as submitted:**
- Yes [ ]
- No [ ]

*Effective Fall 2012*
If the changes included in this proposal are significant, attach copies of original and proposed syllabi in approved university format.

1. Course subject and number:  NUR 703  
   2. Units:  3  
   See upper and lower division undergraduate course definitions.

3. College:  Health and Human Services  
4. Academic Unit:  Nursing  

5. Current Student Learning Outcomes of the course.

Clinical Practice and Prevention
- Integrate nursing science with knowledge from ethics, the biophysical, psychosocial, analytical, and organizational sciences as the basis for the highest level of nursing practice.

Critical Reasoning
- Implement the intervention for scholarly clinical inquiry to address the clinical practice question.
- Design and implement processes to evaluate outcomes of practice, practice patterns, and systems of care within a practice setting.
- Collect data relevant to scholarly inquiry.

Professionalism and Professional Values
- Develop and/or evaluate effective strategies for managing the ethical dilemmas inherent in patient care, the healthcare organization, and research.

Communication
- Analyze and communicate change processes in clinical practice.

Show the proposed changes in this column (if applicable). Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted. (Resources & Examples for Developing Course Learning Outcomes)

Clinical Practice and Prevention
- Integrate nursing science with knowledge from ethics, the biophysical, psychosocial, analytical, and organizational sciences as the basis for the highest level of nursing practice.

Critical Reasoning
- Implement Develop the intervention plan for the scholarly clinical inquiry project to address the clinical practice question utilizing implementation models and change theories.
- Design and implement processes to evaluate outcomes of practice, practice patterns, and systems of care within a practice setting.
- Collect data relevant to scholarly inquiry.

Professionalism and Professional Values
- Develop and/or evaluate effective Identify strategies for managing the ethical dilemmas inherent in patient care, the healthcare organization, and research to facilitate successful implementation of scholarly inquiry project.

Communication

Effective Fall 2012
6. Current **title, description** and units. Cut and paste, in its entirety, from the current on-line academic catalog*.
   
   [http://catalog.nau.edu/Catalog/](http://catalog.nau.edu/Catalog/).

   **NUR 703 DOCTOR OF NURSING PRACTICE**
   **CLINICAL PRACTICE (1-9)**
   Description: The students build on concepts and skills derived from prerequisite courses and will focus on developing advanced skills in integration and synthesis of practice and knowledge. Letter grade only. May repeated for up to 9 units of credit.
   
   Units: 1-9
   
   Prerequisite: Admission to DNP program and NUR 700

   Show the proposed changes in this column **Bold** the proposed changes in this column to differentiate from what is not changing, and **Bold with strikethrough** what is being deleted.

   **NUR 703 DOCTOR OF NURSING PRACTICE**
   **CLINICAL PRACTICE IMMERSION (1-9)**
   Description: The students build on concepts and skills derived from prerequisite DNP courses and will focus on developing advanced skills in integration and synthesis of practice and knowledge. **Letter grade Pass-fail** only. May repeated for up to 9 units of credit.
   
   Units: 1-9
   
   Prerequisite: Admission to DNP program and NUR 700

   *
   if there has been a previously approved UCC/UGC/ECCC change since the last catalog year, please copy the approved text from the proposal form into this field.

7. Justification for course change.

   **Changes in this course are to meet current accreditation standards (replacing practice with immersion in the title).** Course outcome action verbs corrected to better assess student learning. Remapping of outcomes to correct program curricular strands for accuracy. The course content/syllabus is not affected by this change. Prerequisite change based on new program plan course sequencing.

8. Effective **BEGINNING** of what term and year? **Fall 2014**

   See effective dates calendar.

   **IN THE FOLLOWING SECTION, COMPLETE ONLY WHAT IS CHANGING**

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9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes X No □
   If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

**Nursing Practice; DNP**

10. Is there a related plan or sub plan change proposal being submitted? Yes □ No X
    If no, explain.

**These proposed changes will not require a related plan change.**

11. Does this course include combined lecture and lab components? Yes □ No X
    If yes, include the units specific to each component in the course description above.

**Answer 12-15 for UCC/ECCC only:**

12. Is this course an approved Liberal Studies or Diversity course? Yes □ No □
    If yes, select all that apply. Liberal Studies □ Diversity □ Both □

13. Do you want to remove the Liberal Studies or Diversity designation? Yes □ No □
    If yes, select all that apply. Liberal Studies □ Diversity □ Both □

14. Is this course listed in the Course Equivalency Guide? Yes □ No □

15. Is this course a Shared Unique Numbering (SUN) course? Yes □ No □

**FLAGSTAFF MOUNTAIN CAMPUS**

Scott Galland

Effective Fall 2012
15. Is this course a Shared Unique Numbering (SUN) course? Yes □ No □

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 11/26/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) 12.5.13
Date

Chair of college curriculum committee 12-5-13
Date

Dean of college 12/9/13
Date

For Committee use only: 2/12/14

UCC/UGC Approval Date

Approved as submitted: Yes □ No □

Approved as modified: Yes □ No □

EXTENDED CAMPUSES

Reviewed by Curriculum Process Associate Date

Approvals:

Academic Unit Head Date

Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning) Date

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Approved as submitted:  
Yes [ ]  No [ ]

Approved as modified:   
Yes [ ]  No [ ]
NORTHERN ARIZONA UNIVERSITY

UCC/UGC/ECCC
Proposal for Course Change

☐ FAST TRACK  (Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)

If the changes included in this proposal are significant, attach copies of original and proposed syllabi in approved university format.

1. Course subject and number:  NUR 704  
2. Units:  3  
   See upper and lower division undergraduate course definitions.

3. College:  Health and Human Services  
4. Academic Unit:  Nursing  

5. Current Student Learning Outcomes of the course.

Show the proposed changes in this column (if applicable). Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted. (Resources & Examples for Developing Course Learning Outcomes)

Critical Reasoning
- Implement actions and advanced strategies to enhance, alleviate, and ameliorate health and healthcare delivery phenomena as appropriate and evaluate outcomes.
- Analyze collected data for scholarly inquiry.

Professionalism and Professional Values
- Integrate ethical values into practice while developing a scholarly inquiry plan.

Communication
- Evaluate practice models, peer review, practice guidelines, health policy, standards of care, and/or other scholarly products using effective communication and interdisciplinary collaborative skills.
- Summarize results of scholarly inquiry project.

Clinical Practice and Prevention
- Create a plan for dissemination of products of scholarly inquiry.
- Evaluate practice models, peer review, practice guidelines, health policy, standards of care, and/or other scholarly products using effective communication and interdisciplinary collaborative skills.
- Summarize results of scholarly inquiry project.

Effective Fall 2012
6. **Current title, description and units.** Cut and paste, in its entirety, from the current on-line academic catalog* http://catalog.nau.edu/Catalog/.

**NUR 704 SCHOLARLY INQUIRY DOCTORAL PROJECT RESEARCH (3)**
Description: This course builds upon the research methods course, focusing on translational methods for scholarly inquiry. Focus will be on implementation, data collection, and analysis of scholarly inquiry findings. Pass-fail only.

Units: 3
Prerequisite: Admission to DNP program and NUR 677

Show the proposed changes in this column **Bold** the proposed changes in this column to differentiate from what is not changing, and **Bold with strikethrough** what is being deleted.

**NUR 704 SCHOLARLY INQUIRY DOCTORAL EVIDENCE BASED PRACTICE: PROJECT RESEARCH EVALUATION (3)**
Description: This course builds upon the research methods course, focusing on translational methods for scholarly inquiry. Focus will be on implementation, data collection, and analysis of scholarly inquiry findings. Pass-fail **Letter grade** only.

Units: 3
Prerequisite: Admission to DNP program, and NUR 677, NUR 712

*if there has been a previously approved UCC/UGC/ECCC change since the last catalog year, please copy the approved text from the proposal form into this field.

7. **Justification for course change.**

Changes in this course are to meet current accreditation standards. Course outcome action verbs corrected to better assess student learning. Remapping of outcomes to correct program curricular strands for accuracy. The course content syllabus is not affected by this change. Prerequisite change based on new program plan sequencing.

8. **Effective BEGINNING of what term and year?** **Fall 2014**

See effective dates calendar.

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9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes ■ No □
   If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

**Nursing Practice; DNP**

10. Is there a related plan or sub plan change proposal being submitted? Yes □ No ■
    If no, explain.
    **These proposed changes will not require a related plan change.**

11. Does this course include combined lecture and lab components? Yes □ No ■
    If yes, include the units specific to each component in the course description above.

**Answer 12-15 for UCC/ECCC only:**

12. Is this course an approved Liberal Studies or Diversity course? Yes □ No □
    If yes, select all that apply. Liberal Studies □ Diversity □ Both □

13. Do you want to remove the Liberal Studies or Diversity designation? Yes □ No □
    If yes, select all that apply. Liberal Studies □ Diversity □ Both □

14. Is this course listed in the **Course Equivalency Guide**? Yes □ No □

15. Is this course a **Shared Unique Numbering** (SUN) course? Yes □ No □

**FLAGSTAFF MOUNTAIN CAMPUS**

Effective Fall 2012
### Scott Galland

**Reviewed by Curriculum Process Associate**

**Date**

**Approvals:**

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- **Approved as submitted:** Yes □ No □
- **Approved as modified:** Yes □ No □

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### EXTENDED CAMPUSES

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15. Is this course a **Shared Unique Numbering** (SUN) course?  

Yes □  No □

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### FLAGSTAFF MOUNTAIN CAMPUS

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Approved as modified:  
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Approved as modified:  
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Effective Fall 2012
NORTHERN ARIZONA UNIVERSITY

UCC/UGC/ECCC
Proposal for Course Change

☐ FAST TRACK (Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)

If the changes included in this proposal are significant, attach copies of original and proposed syllabi in approved university format.

1. Course subject and number: NUR 705 2. Units: 3

See upper and lower division undergraduate course definitions.

3. College: Health and Human Services 4. Academic Unit: Nursing

5. Current Student Learning Outcomes of the course.

Clinical Practice and Prevention
- Apply the tenets of contemporary theory, research, and leadership models (including transformational leadership, emotional intelligence, leadership IQ, etc.) in advanced nursing practice.
- Integrate knowledge of organizational behavior, systems theory, process/outcome models, interdisciplinary teams and collaborative leadership to plan and design an innovation initiative in advanced nursing practice that affects a clinical practice or patient safety outcome.

Leadership
- Compare leadership styles to appreciate team and individual contributions inclusive of the differences in cultural, gender, and professional attributes of other members of the interdisciplinary healthcare team.

Critical Reasoning
- Analyze the systems, structure, function and outcomes of healthcare delivery systems and complex organizations at multiple levels.

Professionalism and Professional Values
- Clarify dimensions of an advanced nurse practitioner's values, beliefs, attitudes and

Show the proposed changes in this column (if applicable). Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted. (Resources & Examples for Developing Course Learning Outcomes)

Clinical Practice and Prevention
- Apply the tenets of contemporary theory, research, and leadership models (including transformational leadership, emotional intelligence, resilience, leadership IQ, etc.) in advanced nursing practice.
- Integrate knowledge of organizational behavior, systems theory, process/outcome models, interdisciplinary teams and collaborative leadership to plan and design an innovation initiative in advanced nursing practice that affects a clinical practice or patient safety outcome.

Leadership
- Global Health (Environmental Sustainability)
- Compare leadership styles to appreciate team and individual contributions inclusive of the differences in cultural, gender, and professional attributes of other members of the interdisciplinary healthcare team.
- Evaluate the impact of innovation and leadership in sustainable healthcare programs that serve vulnerable populations globally

Critical Reasoning

Effective Fall 2012
| personal leadership style through assessment, reflection, and action. | • Analyze the systems, structure, function and outcomes of healthcare delivery systems and complex organizations at multiple levels. Professionalism and Professional Values  
• Clarify dimensions of an advanced nurse practitioner's values, beliefs, attitudes and personal leadership style through assessment, reflection, and action.  
• Develop a personal philosophy and leadership framework for advanced nursing practice that addresses professional values and ethics critical to shaping health care in transition. |

6. Current **title, description** and **units**. Cut and paste, in its entirety, from the current on-line academic catalog*  
http://catalog.nau.edu/Catalog/.  

**NUR 705 LEADERSHIP FOR ADVANCED PRACTICE NURSES IN CLINICAL PRACTICE (3)**  
Description: Students will explore the leadership roles of advanced practice nurses within healthcare organizations to affect change and ensure quality improvement. Students will focus on inter- and intra-professional collaboration. Critical topics in organizational and systems leadership that emphasize the primacy of clinical work and the opportunity for nursing innovation to transform service delivery, and improve health outcomes to ensure patient safety will be examined. Letter grade only.  

Units: 3  

Prerequisite: Admission to DNP program and NUR 700  

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Show the proposed changes in this column  
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**NUR 705 LEADERSHIP FOR ADVANCED PRACTICE NURSES IN CLINICAL PRACTICE (3)**  
Description: Students will explore the leadership roles of advanced practice nurses within healthcare organizations to affect change and **identify characteristics of innovative leaders and transformative change ensure quality improvement. Students will focus on inter- and intra-professional collaboration**  

Interdisciplinary and interprofessional collaborative skills will provide the foundation for engaging in consensus building for the purpose of advancing innovation in healthcare. **Critical topics in organizational and systems leadership that emphasize the primacy of clinical work and the opportunity for nursing innovation to transform service delivery, and improve health outcomes to ensure patient safety will be examined. Letter grade only.**  

Units: 3  

Prerequisite: Admission to DNP program and NUR 700  

---
7. Justification for course change.
Changes in this course are to meet current accreditation standards (Essentials of Doctoral Education for Advanced Practice Nurses) and clearly articulate content in learning outcomes and course description. Remapping of outcomes to correct program curricular strands for accuracy. Current and new syllabi are attached.

8. Effective BEGINNING of what term and year? Fall 2014
See effective dates calendar.

IN THE FOLLOWING SECTION, COMPLETE ONLY WHAT IS CHANGING

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Nursing Practice; DNP

10. Is there a related plan or sub plan change proposal being submitted? Yes □ No □
    If no, explain.

These proposed changes will not require a related plan change.

11. Does this course include combined lecture and lab components? Yes □ No □
Effective Fall 2012
If yes, include the units specific to each component in the course description above.

**Answer 12-15 for UCC/ECCC only:**

12. Is this course an approved Liberal Studies or Diversity course?  
   If yes, select all that apply.  
   Liberal Studies ☐  Diversity ☐  Both ☐

13. Do you want to remove the Liberal Studies or Diversity designation?  
   If yes, select all that apply.  
   Liberal Studies ☐  Diversity ☐  Both ☐

14. Is this course listed in the **Course Equivalency Guide**?  
   Yes ☐  No ☐

15. Is this course a **Shared Unique Numbering** (SUN) course?  
   Yes ☐  No ☐

---

**FLAGSTAFF MOUNTAIN CAMPUS**

**Scott Galland**  
Reviewed by Curriculum Process Associate  
Date

**Approvals:**

Department Chair/Unit Head (if appropriate)  
Date

Chair of college curriculum committee  
Date

Dean of college  
Date

**For Committee use only:**

UCC/UGC Approval  
Date

Approved as submitted:  
Yes ☐  No ☐

Approved as modified:  
Yes ☐  No ☐

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**EXTENDED CAMPUSES**

Effective Fall 2012
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Nursing Practice; DNP

10. Is there a related plan or sub plan change proposal being submitted?  
   Yes ☐ No ☒
   These proposed changes will not require a related plan change.

11. Does this course include combined lecture and lab components?  
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   If yes, include the units specific to each component in the course description above.

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FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 12/5/2013
Reviewed by Curriculum Process Associate

Approvals:

Department Chair/Unit Head (if appropriate)  

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Chair of college curriculum committee  

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<td>Reviewed by Curriculum Process Associate</td>
<td>Date</td>
</tr>
<tr>
<td>Academic Unit Head</td>
<td>Date</td>
</tr>
<tr>
<td>Division Curriculum Committee (Yuma, Yavapai, or Personalized Learning)</td>
<td>Date</td>
</tr>
<tr>
<td>Division Administrator in Extended Campuses (Yuma, Yavapai, or Personalized Learning)</td>
<td>Date</td>
</tr>
<tr>
<td>Faculty Chair of Extended Campuses Curriculum Committee (Yuma, Yavapai, or Personalized Learning)</td>
<td>Date</td>
</tr>
<tr>
<td>Chief Academic Officer; Extended Campuses (or Designee)</td>
<td>Date</td>
</tr>
</tbody>
</table>

Approved as submitted:  Yes [ ]  No [ ]

Approved as modified:   Yes [ ]  No [ ]
CURRENT SYLLABUS

COURSE SYLLABUS NUR 705
General Information

Name of College: College of Health and Human Services
Name of Department: School of Nursing
Course Prefix, Number: NUR 705
Course Title: Leadership for Advanced Practice Nurses in Clinical Practice
Semester Offered: TBA
Credit Hours: 3
Instructor's Name: Dorothy Dunn, PhD, FNP
Kathleen Timbers, MS, FNP
Office Address: Northern Arizona University School of Nursing
PO Box 15035
Room 201 (Dr. Dunn) Room 106 (Kathleen Timbers)
Flagstaff, AZ 86011-5035
E-mail: Use the course e-mail in LMS for all correspondence
Alternate E-mail: Use if unable to get into LMS
Dorothy.Dunn@nau.edu
Kathleen.Timbers@nau.edu
Phone: 928-523-2671 (office) Dr. Dunn
928-523-2673 (office) Kate Timbers
Office Hours: By appointment
Course Prerequisites: Admission to the DNP Program, and NUR 700

Catalog/Course Description:
Students will explore the leadership roles of advanced practice nurses within healthcare organizations to affect change and ensure quality improvement. Students will focus on inter- and intra-professional collaboration. Critical topics in organizational and systems leadership that emphasize the primacy of clinical work and the opportunity for nursing innovation to transform service delivery, and improve health outcomes to ensure patient safety will be examined. Letter grade only.

Student Learning Outcomes
Clinical Practice and Prevention

Effective Fall 2012
- Apply the tenets of contemporary theory, research, and leadership models (including transformational leadership, emotional intelligence, leadership IQ, etc.) in advanced nursing practice.
- Integrate knowledge of organizational behavior, systems theory, process/outcome models, interdisciplinary teams and collaborative leadership to plan and design an innovation initiative in advanced nursing practice that affects a clinical practice or patient safety outcome.

**Communication**
- Develop a leadership style to appreciate team and individual contributions inclusive of the differences in ethnic, gender, and professional style of others.

**Critical Reasoning**
- Analyze the systems, structure, function and outcomes of healthcare delivery systems and complex organizations at multiple levels.

**Leadership**
- Engage in leadership performance through participation in: simulated experiences, servant leadership, volunteer service, working with student organizations, civic groups, community groups or political activities.

**Professionalism and Professional Values**
- Clarify dimensions of an advanced nurse practitioner’s values, beliefs, attitudes and personal leadership style through assessment, reflection, and action.

**Course Structure and Approach**
This online course uses a Bb Learn platform for the delivery of assignments, asynchronous online discussions, and exploration of selected issues using internet sources. Text and electronic readings and written assignments are included as approaches to learning. In this course students will be expected to discuss questions, application, insights and understandings as they relate to the required readings and professional experience. Students function as teachers as well as learners while discussing questions, application, insights and understanding of the reading and class exercises.

**Textbook and Required Materials**


**Course Outline**

<table>
<thead>
<tr>
<th>Module 1</th>
<th>Leadership Theories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theories of Leadership and Management Development</td>
</tr>
<tr>
<td></td>
<td>Organizational Structure and Behavior</td>
</tr>
<tr>
<td></td>
<td>Organizational Concepts and Structures</td>
</tr>
<tr>
<td></td>
<td>Organizational Culture, Change, and Innovation</td>
</tr>
</tbody>
</table>

Effective Fall 2012
| Module 2 | • Formulation of public, governmental and third party policy: the actors (consumers, congress, PACs, professional organizations)  
• Influence of political and economic forces on policy making in the healthcare system and professional nursing practice  
• Nurses' roles in effecting the formulation and implementation of healthcare policy  
• Strategic and Operational Planning |
| --- | --- |
| Module 3 | • Risk management; Equal Employment Opportunity legislation; Americans with Disabilities Act; workplace violence; impaired professional  
• Continuous Quality Improvement, Risk Management, and Program Evaluation |
| Module 4 | • Advanced Practice Scope of Practice: Differentiation from other provider roles  
• Change Theory and Appreciative Inquiry  
• Consultation  
• Collaboration |
| Module 5 | • Advocacy: patient and professional  
• Credentialing (certification)  
• Evaluation and Discipline of Personnel |
| Module 6 | • Decision-Making Process and Tools  
• Motivation and Morale  
• Power, Politics, and Labor Relations  
• Conflict Management and Negotiation |

**Assessment of Student Learning Outcomes:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Practices Inventory</td>
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<tr>
<td>Autobiography</td>
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<tr>
<td>Leadership Interview</td>
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<tr>
<td>Leadership Action Plan</td>
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<tr>
<td>Transformational Leadership Paper</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Grading System**

- A: 93-100%
- B: 84-92%
- C: 75-83%
- F: < 75%

**Course Policies**

1. Each student is accountable and responsible for knowledge and skills obtained in the prerequisite courses.
2. Each student is expected to complete all readings, all assignments, and to participate in discussions.
3. All papers must be written in the American Psychological Association (APA) format 6th edition (typewritten, double-spaced, reference citations, etc.).
4. Papers may be sent as an attachment through course Email. Assignments may also be hand delivered, mailed by US Mail, or faxed. For faxed papers, use a cover sheet that indicates the course (NUR 700) and the instructor.

Effective Fall 2012
5. Microsoft Word (.doc or .docx) or Rich Text Format (.rtf) is the required word processing program for sending papers as attachments.

6. Assignments (papers, discussions, IRB tutorial) are due by midnight on the due date. Discussion replies are due by midnight on the following university business day (not Saturday, Sunday, holidays, Spring Break). There will be a 10% deduction each day (24 hours) for each late assignment. Extenuating circumstances (circumstances beyond the student’s control) resulting in late assignments will be evaluated on a case-by-case basis.

7. It is expected that students conform to and comply with the Northern Arizona University’s Graduate Student Handbook and the SON Graduate Student Handbook.

8. Oral or written material belonging to another author which is not properly documented and which is represented as the student’s own work constitutes plagiarism. Any student who plagiarizes will be given a grade of zero on the paper. Quotation marks should be used to indicate exact words of another. Paraphrasing (summarizing a passage, rearranging the order of a sentence, or changing some of the words) does not necessitate quotation marks; however, each time a source is either quoted or paraphrased, a credit for the source must be included in the text and at the end of the document. See the APA manual for the format for in-text and end-of-text referencing.

University Policies:

NORTHERN ARIZONA UNIVERSITY
POLICY STATEMENTS

SAFE ENVIRONMENT POLICY

NAU’s Safe Working and Learning Environment Policy seeks to prohibit discrimination and promote the safety of all individuals within the university. The goal of this policy is to prevent the occurrence of discrimination on the basis of sex, race, color, age, national origin, religion, sexual orientation, disability, or veteran status and to prevent sexual harassment, sexual assault or retaliation by anyone at this university.

You may obtain a copy of this policy from the college dean’s office or from the NAU’s Affirmative Action website http://home.nau.edu/diversity/. If you have concerns about this policy, it is important that you contact the departmental chair, dean’s office, the Office of Student Life (928-523-5181), or NAU’s Office of Affirmative Action (928-523-3312).

STUDENTS WITH DISABILITIES

If you have a documented disability, you can arrange for accommodations by contacting Disability Resources (DR) at 523-8773 (voice) or 523-6906 (TTY), dr@nau.edu (e-mail) or 928-523-8747 (fax). Students needing academic accommodations are required to register with DR and provide required disability-related documentation. Although you may request an accommodation at any time, in order for DR to best meet your individual needs, you are urged to register and submit necessary documentation (www.nau.edu/dr) 8 weeks prior to the time you wish to receive accommodations. DR is strongly committed to the needs of student with disabilities and the promotion of Universal Design. Concerns or questions related to the accessibility of programs and facilities at NAU may be brought to the attention of DR or the Office of Affirmative Action and Equal Opportunity (523-3312).

INSTITUTIONAL REVIEW BOARD

Any study involving observation of or interaction with human subjects that originates at NAU—including a course project, report, or research paper—must be reviewed and approved by the Institutional Review Board (IRB) for the protection of human subjects in research and research-related activities.

Effective Fall 2012
The IRB meets monthly. Proposals must be submitted for review at least fifteen working days before the monthly meeting. You should consult with your course instructor early in the course to ascertain if your project needs to be reviewed by the IRB and/or to secure information or appropriate forms and procedures for the IRB review. Your instructor and department chair or college dean must sign the application for approval by the IRB. The IRB categorizes projects into three levels depending on the nature of the project: exempt from further review, expedited review, or full board review. If the IRB certifies that a project is exempt from further review, you need not resubmit the project for continuing IRB review as long as there are no modifications in the exempted procedures.

A copy of the IRB Policy and Procedures Manual is available in each department's administrative office and each college dean's office or on their website: http://www.research.nau.edu/vpr/IRB/index.htm. If you have questions, contact the IRB Coordinator in the Office of the Vice President for Research at 928-523-8288 or 523-4340.

ACADEMIC INTEGRITY

The university takes an extremely serious view of violations of academic integrity. As members of the academic community, NAU's administration, faculty, staff and students are dedicated to promoting an atmosphere of honesty and are committed to maintaining the academic integrity essential to the education process. Inherent in this commitment is the belief that academic dishonesty in all forms violates the basic principles of integrity and impedes learning. Students are therefore responsible for conducting themselves in an academically honest manner.

Individual students and faculty members are responsible for identifying instances of academic dishonesty. Faculty members then recommend penalties to the department chair or college dean in keeping with the severity of the violation. The complete policy on academic integrity is in Appendix G of NAU's Student Handbook http://www4.nau.edu/stulife/handbookdishonesty.htm.

ACADEMIC CONTACT HOUR POLICY

The Arizona Board of Regents Academic Contact Hour Policy (ABOR Handbook, 2-206, Academic Credit) states: "an hour of work is the equivalent of 50 minutes of class time...at least 15 contact hours of recitation, lecture, discussion, testing or evaluation, seminar, or colloquium as well as a minimum of 30 hours of student homework is required for each unit of credit."

The reasonable interpretation of this policy is that for every credit hour, a student should expect, on average, to do a minimum of two additional hours of work per week; e.g., preparation, homework, studying.

SENSITIVE COURSE MATERIALS

If an instructor believes it is appropriate, the syllabus should communicate to students that some course content may be considered sensitive by some students.

"University education aims to expand student understanding and awareness. Thus, it necessarily involves engagement with a wide range of information, ideas, and creative representations. In the course of college studies, students can expect to encounter—and critically appraise—materials that may differ from and perhaps challenge familiar understandings, ideas, and beliefs. Students are encouraged to discuss these matters with faculty."

Effective Fall 2012
COURSE SYLLABUS NUR 705

General Information

Name of College: College of Health and Human Services

Name of Department: School of Nursing

Course Prefix, Number: NUR 705

Course Title: Leadership for Advanced Practice Nurses in Clinical Practice

Semester Offered: Spring

Credit Hours: 3

Instructor’s Name: Lonnie Edwin Wederski, PhD, MSN, MBA, RN

Office Address: Northern Arizona University School of Nursing
PO Box 15035
Flagstaff, AZ 86011-5035

E-mail: Use the course e-mail in Bb Learn for all correspondence

Alternate e-mail (address)

Phone: Lonnie.wederski@nau.edu
Phone: 602.290.9147

Office Hours: By appointment

Course Prerequisites: Admission to the DNP and NUR 700

Catalog/Course Description:
Students will explore leadership roles in healthcare and identify characteristics of innovative leaders and transformative change. Interdisciplinary and interprofessional collaborative skills will provide the foundation for engaging in consensus building for the purpose of advancing innovation in healthcare.

Student Learning Outcomes:

Leadership
• Apply the tenets of contemporary theory, research, and leadership models (including transformational leadership, emotional intelligence, resilience, leadership IQ, etc.) in advanced nursing practice.

Critical Reasoning
• Analyze the systems, structure, function and outcomes of healthcare delivery systems and complex organizations at multiple levels.

Effective Fall 2012
Professionalism and Professional Values
- Develop a personal philosophy and leadership framework for advanced nursing practice that addresses professional values and ethics critical to shaping health care in transition.

Global Health (Environmental Sustainability)
- Compare a leadership style to appreciate team and individual contributions inclusive of the differences in cultural, gender, and professional attributes of other members of the interdisciplinary healthcare team.
- Evaluate the impact of innovation and leadership in sustainable health care programs that serve vulnerable populations globally.

Course Structure and Approach
This online course uses a Bb Learn platform for the delivery of assignments, asynchronous online discussions, and exploration of selected issues. Text, electronic readings, team activities, online quizzes, presentations and written assignments are included as approaches to learning. In this course students will be expected to discuss questions, application, insights and understandings as they relate to the required readings and professional experience.

Textbook and Required Materials


Course Outline

<table>
<thead>
<tr>
<th>Module 1</th>
<th>Module 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Leadership vs. Management</td>
<td>- Vision</td>
</tr>
<tr>
<td>- Leadership theory</td>
<td>- Errors</td>
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<tr>
<td>- Leading professionals</td>
<td>- Emotional competence</td>
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<td>- Followership</td>
<td>- Transforming a punitive culture</td>
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<td>- Power</td>
<td>- Gender</td>
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<td>- Leading change</td>
<td>- Toxic organizations</td>
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<tr>
<td>- Leader characteristics</td>
<td>- Toxic people</td>
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<td>- Conflict management</td>
<td>- Chaos</td>
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<td>- Transformation</td>
<td>- Willingness</td>
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<tr>
<td>- Effectiveness</td>
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<tr>
<td>- Organizational change and change drivers</td>
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<tr>
<td>- Innovation</td>
<td></td>
</tr>
<tr>
<td>- Organizational culture</td>
<td></td>
</tr>
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</table>

Effective Fall 2012
- Crisis management
- Change barriers and process
- Conflict solutions

| Module 3 | The future of nursing
| Coaching
| Courage
| Developing as a Leader
| Empowerment
| Mentoring
| Willingness
| Personal leadership development
| Excellence
| Introspection as a leader
| Trust

| Module 4 | Budgeting
| Leadership and culture
| Exceptional leaders
| Practice application in case analysis of modules 1, 2 and 3.

| Module 5 | Self and peer appraisal
| Working in teams
| Practice application in case analysis of modules 1, 2 and 3.

**Assessment of Student Learning Outcomes**

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<td>Case Study Final Paper</td>
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<tr>
<td>Self-Assessment &amp;Team 360</td>
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<td><strong>Total</strong></td>
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</table>

**Grading System**

- **A** 93-100%
- **B** 84-92%
- **C** 78-83%
- **F** < 78%

A grade of 84% or better is required to pass a graduate course. Course with a C or less must be repeated

Students are required to receive a score of 84% or better on the scholarly project or paper in each course, which will be submitted in the portfolio for partial fulfillment of the graduation requirements for the Doctor of Nursing Practice.

Effective Fall 2012
If less than an 84% is achieved, the portfolio assignment will be considered failed and the student will receive a grade of in progress (IP) for that course. The student has one opportunity to revise the paper with a successful outcome score. The student and faculty member will agree upon a deadline for the revision and notify the program coordinator of the agreed learning contract. If the portfolio assignment is failed a second time, the course will be considered failed and the student will need to repeat the course.

(approved graduate faculty 2/4/13)

Course Policies
1. Each student is accountable and responsible for knowledge and skills obtained in the prerequisite courses.
2. Each student is expected to complete all readings, all assignments, and to participate in discussions.
3. All papers must be written in the American Psychological Association (APA) format 6th edition (typewritten, double-spaced, reference citations, etc.).
4. Papers may be sent as an attachment through course Email.
5. Microsoft Word (.doc or .docx) or Rich Text Format (.rtf) is the required word processing for sending papers as attachments.
6. Assignments (papers, discussions) are due by midnight on the due date. Discussion replies are due by midnight on the due date. **There will be a 10% deduction each day (24 hours) for each late assignment.** Extenuating circumstances (circumstances beyond the student's control) resulting in late assignments will be evaluated on a case-by-case basis.
7. It is expected that students conform to and comply with the Northern Arizona University's Graduate Student Handbook and the SON Graduate Student Handbook.
8. Oral or written material belonging to another author which is not properly documented and which is represented as the student's own work constitutes plagiarism. **Any student who plagiarizes will fail the course.** Quotation marks should be used to indicate exact words of another. Paraphrasing (summarizing a passage, rearranging the order of a sentence, or changing some of the words) does not necessitate quotation marks; however, each time a source is either quoted or paraphrased, a credit for the source must be included in the text and at the end of the document. See the APA manual for the format for in-text and end-of-text referencing.

University Policies

NORTHERN ARIZONA UNIVERSITY
POLICY STATEMENTS

See the following document for additional policy statements:

Effective Fall 2012
FAST TRACK  (Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)

If the changes included in this proposal are significant, attach copies of original and proposed syllabi in approved university format.

1. Course subject and number:  NUR 706  
2. Units:  2  
   See upper and lower division undergraduate course definitions.

3. College:  Health and Human Services  
4. Academic Unit:  Nursing  

5. Current Student Learning Outcomes of the course.

   Critical Reasoning
   • Analyze the impact of the scholarly inquiry project.

   Communication
   • Create a product for the dissemination of the scholarly inquiry project.
   • Defend scholarly inquiry project to peers and interdisciplinary community.

   Clinical Practice and Prevention
   • Analyze the impact of the scholarly inquiry project on practice

   Show the proposed changes in this column (if applicable). Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted. (Resources & Examples for Developing Course Learning Outcomes)

   UNCHANGED

6. Current title, description and units. Cut and paste, in its entirety, from the current on-line academic catalog*
   http://catalog.nau.edu/Catalog/.

   NUR 706 DISSEMINATION OF SCHOLARLY INQUIRY PROJECT FOR ADVANCED PRACTICE NURSING IN CLINICAL PRACTICE (2)
   Description: Students will disseminate the findings from a scholarly inquiry to improve practice or patient outcomes. Pass-fail only.

   Show the proposed changes in this column
   Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted.

   NUR 706 EVIDENCE BASED PRACTICE: DISSEMINATION OF SCHOLARLY INQUIRY PROJECT FOR ADVANCED PRACTICE NURSING IN CLINICAL PRACTICE (2)
   Description: Students will disseminate the findings from a scholarly inquiry to improve practice or patient outcomes. Pass-fail only.

Effective Fall 2012
Units: 2

Prerequisite: NUR 703 and 704

---

Units: 2

Prerequisite: Admission to the DNP program, NUR 703 and 704 NUR 712

* If there has been a previously approved UCC/UGC/ECCC change since the last catalog year, please copy the approved text from the proposal form into this field.

7. Justification for course change.

Changes in this course are to meet current accreditation standards (replacing research with evidence-based practice) as well as changing pre-requisites based on new program plan course sequencing. The course content/syllabus is not affected by this change.

8. Effective BEGINNING of what term and year? Fall 2014

See effective dates calendar.

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IN THE FOLLOWING SECTION, COMPLETE ONLY WHAT IS CHANGING

<table>
<thead>
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<td>Proposed short course title (max 30 characters): EVIDENC BASED PRAC DISSMNTN</td>
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<td>Proposed long course title (max 100 characters): EVIDENCE BASED PRACTICE: DISSEMINATION</td>
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<td>Current max number of units:</td>
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<tr>
<td>Current prerequisite: NUR 703 and 704</td>
<td>Proposed prerequisite (include rationale in the justification): Admission to the DNP program, NUR 712</td>
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<tr>
<td>Current co-requisite:</td>
<td>Proposed co-requisite (include rationale in the justification):</td>
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<tr>
<td>Current cross list with:</td>
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</tr>
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</table>

9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes ☒ No ☐

If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

Nursing Practice; DNP

Effective Fall 2012
10. Is there a related plan or sub plan change proposal being submitted?  
   Yes ☐  No ☒  
   If no, explain.  
   **These proposed changes will not require a related plan change.**

11. Does this course include combined lecture and lab components?  
   Yes ☐  No ☒  
   If yes, include the units specific to each component in the course description above.

**Answer 12-15 for UCC/ECCC only:**

12. Is this course an approved Liberal Studies or Diversity course?  
   Yes ☐  No ☒  
   If yes, select all that apply.  
   Liberal Studies ☐  Diversity ☐  Both ☐

13. Do you want to remove the Liberal Studies or Diversity designation?  
   Yes ☐  No ☒  
   If yes, select all that apply.  
   Liberal Studies ☐  Diversity ☐  Both ☐

14. Is this course listed in the **Course Equivalency Guide**?  
   Yes ☐  No ☒

15. Is this course a **Shared Unique Numbering** (SUN) course?  
   Yes ☐  No ☒

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**FLAGSTAFF MOUNTAIN CAMPUS**

<table>
<thead>
<tr>
<th>Scott Galland</th>
<th>11/26/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewed by Curriculum Process Associate</td>
<td>Date</td>
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**Approvals:**

<table>
<thead>
<tr>
<th>Department Chair/Unit Head (if appropriate)</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Chair of college curriculum committee</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Dean of college</th>
<th>Date</th>
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**For Committee use only:**

<table>
<thead>
<tr>
<th>UCC/UGC Approval</th>
<th>Date</th>
</tr>
</thead>
</table>
9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes ☒ No ☐
   If yes, describe the impact. If applicable, include evidence of notification to and/or response
   from each impacted academic unit.

Nursing Practice; DNP

10. Is there a related plan or sub plan change proposal being submitted? Yes ☐ No ☒
    If no, explain.
    These proposed changes will not require a related plan change.

11. Does this course include combined lecture and lab components? Yes ☐ No ☒
    If yes, include the units specific to each component in the course description above.

Answer 12-15 for UCC/ECCC only:

12. Is this course an approved Liberal Studies or Diversity course? Yes ☐ No ☒
    If yes, select all that apply. Liberal Studies ☐ Diversity ☐ Both ☒

13. Do you want to remove the Liberal Studies or Diversity designation? Yes ☐ No ☒
    If yes, select all that apply. Liberal Studies ☐ Diversity ☐ Both ☒

14. Is this course listed in the Course Equivalency Guide? Yes ☐ No ☒

15. Is this course a Shared Unique Numbering (SUN) course? Yes ☐ No ☒

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 11/26/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) 12-5-13

Chair of college curriculum committee 12-5-13

Dean of college 12-9-13

For Committee use only: 2/12/14

Effective Fall 2012
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<tbody>
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<td>Approved as submitted:</td>
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<tr>
<td>Approved as modified:</td>
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**EXTENDED CAMPUSES**

<table>
<thead>
<tr>
<th>Reviewed by Curriculum Process Associate</th>
<th>Date</th>
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Approved as submitted: Yes  No
Approved as modified:   Yes  No

Effective Fall 2012
If this proposal represents changes to the intent of the plan or its integral components, review by the college dean, graduate dean (for graduate items) and/or the provost may be required prior to college curricular submission.

All Plans with NCATE designation, or plans seeking NCATE designation, must include an NCATE Accreditation Memo of Approval from the NAU NCATE administrator prior to college curricular submission.

UCC proposals must include an updated 8-term plan.
UGC proposals must include an updated program of study.

1. College: Health and Human Services
2. Academic Unit: Nursing
3. Academic: Nursing Practice; D.N.P. (NURPRDNP)
4. Emphasis:
6. Current student learning outcomes of the plan. If structured as plan/emphasis, include for both core and emphasis.

Clinical Practice and Prevention
Synthesize concepts, including psychosocial dimensions and cultural diversity, related to clinical prevention and population health in developing, implementing, and evaluating interventions to address health promotion and disease prevention efforts, improve health status/access patterns, and/or address gaps in care of individuals, aggregates, or populations.

Show the proposed changes in this column (if applicable). **Bold** the changes, to differentiate from what is not changing, and change font to **Bold Red** with strikethrough for what is being deleted. (Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes).

UNCHANGED

Effective Fall 2013
**Communication**
Develop and implement practice models, peer review, practice guidelines, health policy, standards of care, and/or other scholarly products using effective communication and collaborative skills.

Design, select, use, and evaluate programs that evaluate and monitor outcomes of care, care systems, and quality improvement including consumer use of health care information systems.

**Critical Reasoning**
Integrate nursing science with knowledge from ethics, the biophysical, psychosocial, analytical, and organizational sciences as the basis for the highest level of nursing practice.

Use science-based theories and concepts to determine the nature and significance of health and health care delivery phenomena, describe the actions and advanced strategies to enhance, alleviate, and ameliorate health and health care delivery phenomena as appropriate and evaluate outcomes.

Design and implement processes to evaluate outcomes of practice, practice patterns, and systems of care within a practice setting, health care organization, or community against national and/or international benchmarks to determine variances in practice outcomes and population trends.

**Leadership**
Develop and evaluate care delivery approaches that meet current and future needs of patient populations based on belief systems and scientific findings in nursing and other clinical sciences, as well as organizational, political, and economic sciences.

Demonstrate leadership ability in the development and implementation of institutional, local, state, federal, and/or international health policy.

**Professionalism and Professional Values**
Develop and/or evaluate effective strategies for managing the ethical dilemmas inherent in

---

Effective Fall 2013
| patient care, the health care organization, and research. |
| Ensure accountability for quality of health care and patient safety for populations with whom they work. |
| Guide, mentor, and support other nurses to achieve excellence in nursing practice. |
Nursing Practice; D.N.P.
In addition to University Requirements:
- At least 66 units of graduate nursing courses
- At least 5 units of scholarly inquiry

<table>
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<tr>
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<td>Required</td>
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<tr>
<td>Program of Study</td>
<td>View Program of Study</td>
</tr>
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</table>

Additional Admission Requirements
Admission requirements over and above admission to NAU are required.
- NAU Graduate Online application required (www.nau.edu/graduateapply) for all programs. Details on admission requirements are included in the online application.
- Undergraduate degree from a regionally accredited institution
- Grade Point Average (GPA) of 3.00 (scale is 4.00 = "A"), or the equivalent.
- Admission to many graduate programs is on a competitive basis, and programs may have higher standards than those established by the Graduate College.
- Transcripts
- For details on graduate admission policies, please visit http://nau.edu/GradCol/Admissions/Graduate-Admissions-Policy/.
- International applicants have additional admission requirements: http://nau.edu/GradCol/Admissions/International/.

Individual program admission requirements include:
- Master's degree in nursing from a nationally accredited nursing program or equivalent if

Show the proposed changes in this column.
**Bold** the changes, to differentiate from what is not changing, and change font to **Bold Red** with strikethrough for what is being deleted.

Nursing Practice; D.N.P.
In addition to University Requirements:
- At least 66 units of graduate nursing courses
- At least 5 units of scholarly inquiry

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- For details on graduate admission policies, please visit http://nau.edu/GradCol/Admissions/Graduate-Admissions-Policy/.
- International applicants have additional admission requirements: http://nau.edu/GradCol/Admissions/International/.

Individual program admission requirements include:
- Master's degree in nursing from a nationally accredited nursing program or equivalent if

Effective Fall 2013
program is outside the U.S.

- Official letter from the degree issuing institution with the total number of completed clinical hours (admitted students only)
- Current national certification as a Nurse Practitioner, Nurse Midwife, Nurse Anesthetist or Clinical Nurse Specialist. Note: Arizona Advanced Practice Registered Nurses License obtained prior to July 1, 2004 are exempt from certification requirement
- Current Arizona Registered Nurse License and Arizona Advanced Practice Registered Nurse Certificate (APRN) in good standing
- 3.0 GPA in all nursing coursework
- Current RN license in good standing to practice as a registered nurse in Arizona or eligibility to obtain an Arizona license, or meet the Arizona Board of Nursing regulations regarding multistate licensure.
- 3 letters of recommendation
- Prerequisites (completed prior to enrolling in the program)
  - Completed courses in the following areas:
    1) Graduate Advanced Pathophysiology with a grade of B, P, or better; 2) Graduate Advanced Pharmacology with a grade of B, P, or better; 3) Graduate Advanced Physical assessment from a college or university with a grade of B, P, or better; 4) Graduate Descriptive and Inferential Statistics course from a college or university with a grade of B P, or better. Another option is graduate statistics completed before enrollment in NUR 677

**Doctoral Requirements**

Take the following 71 units with a minimum GPA of 3.0:

Graduate nursing courses (66 units)
- NUR 510, NUR 520, NUR 530, NUR 540, NUR 560, NUR 560, NUR 561, NUR 562, NUR 563, NUR 564, NUR 565, NUR 567, NUR 577, NUR 578, NUR 700, NUR 701, NUR 702, NUR 703, NUR 705, NUR 707 (66 units)

Scholarly inquiry (5 units)
- NUR 704, NUR 706 (5 units)
8. Justification for proposal:
The school of nursing recently underwent a self-study for the first accreditation on-site evaluation of the DNP which occurred this November. During this self-study process, DNP courses were thoroughly reviewed in relationship to meeting requirements in the Essentials of Doctoral Education for Advanced Practice Nursing and program outcomes. During this review it was determined the curriculum required revision to adequately meet these requirements. The on-site evaluators reviewed the proposed curricular changes and confirmed the program, with the changes, would meet the criteria for accreditation.

Regarding the ethics course (NUR 678); we wish to delete from the program of study but leave on the books for a potential elective in the future. The course was designed to be interprofessional in nature and available to the college.

9. NCATE designation, if applicable:
   - Initial Plan
   - Advanced Plan
   - Remove Designation

    See effective dates calendar.

11. Will this proposal impact other plans, sub plans, or course offerings, etc.?  Yes ☒  No ☐
    If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

Effective Fall 2013
Answer 12-13 for UCC/ECCC only:

12. A major is differentiated from another major by required course commonality: 24 units of the required credit hours of a major must be unique, (i.e. not common or not dual use as a required element in another major), to that major. Does this plan have 24 units of unique required credit? Yes □ No □

13. Minor: A planned group of courses from one or more subject matter areas consisting of at least 18 hours and no more than 24 hours. At least 12 hours of the minor must be unique to that minor to differentiate it from other minors. Does this minor have 12 units of unique required credit? Yes □ No □

Answer 14-15 for UGC only:

14. If this is a non-thesis plan, does it require a minimum of 24 units of formal graded coursework? Yes □ No □

If no, explain why this proposal should be approved.

15. If this is a thesis plan, does it require a minimum of 18 units of formal graded coursework? Yes □ No □

If no, explain why this proposal should be approved.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 12/5/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) 12-5-13

Chair of college curriculum committee 12-9-13

Dean of college Date

For Committee use only: 2/12/14

UCC/UGC Approval Date

Effective Fall 2013
## EXTENDED CAMPUSES

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Approved as submitted: Yes ☐  No ☐

Approved as modified: Yes ☐  No ☐

Effective Fall 2013
DNP Proposed Sequencing Plan for 2014-2016 Cohort
2-year Option 30-35 Credits / 240 minimum clinical hours

<table>
<thead>
<tr>
<th>Fall I</th>
<th>Spring I</th>
<th>Summer I</th>
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<tbody>
<tr>
<td>NUR 700 (3)</td>
<td>NUR 705 (3) Leadership</td>
<td>NUR 703 (2) Clinical Immersion</td>
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<tr>
<td>Intro to DNP</td>
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<tr>
<td>677 (3)</td>
<td>NUR 712 (3) EBP: Project planning and</td>
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<td>Methods for EBP</td>
<td>implementation</td>
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<td>NUR 703 (1)</td>
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<td>NUR 701 (3) Healthcare and Policy NUR</td>
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<tr>
<td>Clinical Immersion</td>
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<td>7 credits</td>
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<tr>
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<tr>
<td>NUR 716 (3)</td>
<td>NUR 714 (3) Health and Vulnerable</td>
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<td>Organizations</td>
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<td>and Systems</td>
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<td>Quality Care</td>
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<td>NUR 704 (3)</td>
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<td>NUR 706 (2) EBP: Dissemination</td>
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<td>6 credits</td>
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- Students requiring more than 4 credits of 703 can take summer 1

NUR 703 Change to Pass/Fail
NUR 704 Change to letter grade
NUR 706 change to Pass/Fail

Adding NUR 712 (3) EBP, content needed to support student scholarly inquiry. Removes NUR 678 Legal/Ethics- content in other classes already.

Adding NUR 716 (3) Organizations and Systems – content missing from current courses and includes content from technology and informatics (delete course), to meet requirements of Essentials

NUR 714 (3) Health and Vulnerable Populations – replaces Epidemiology NUR 707, adds missing content

Revising NUR 701 (3) Healthcare and Policy for APN - to include finance piece from Essential 2.2

Revising NUR 705 (3) Leadership- to include content missing from Essential 2.2

11/25/13 approved graduate committee and full faculty
Please attach proposed Syllabus in approved university format.

1. Course subject and number: **ECO 526**
2. Units: **3**

See upper and lower division undergraduate course definitions.

3. College: **The W.A. Franke College of Business**
4. Academic Unit: **Economics**

5. Student Learning Outcomes of the new course. *(Resources & Examples for Developing Course Learning Outcomes)*

Upon successful completion of the course, students will be able to:

A. Understand the basic theory of externalities be able to apply the theory to environmental problems
B. Analyze the concepts of efficiency in terms of marginal benefits and marginal costs of abatement
C. Discuss and analyze the tragedy of the commons and understand ways it applies to climate change
D. Understand the economic underpinnings of different pollution abatement policies, including cap and trade
E. Describe methods of non-market valuation and recognize relevant applications
F. Obtain increased awareness of the concept of environmental justice (equity) as it relates to climate change
G. Improve communication skills through group and individual presentations
H. Perform in-depth analysis of the economic aspect of a specific environmental issue of their choosing and summarize their insight in a semester term paper

6. Justification for new course, including how the course contributes to degree program outcomes, or other university requirements / student learning outcomes. *(Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes).*

Provides an efficient mechanism for students to acquire knowledge necessary for graduate level Required for the Climate Science and Solutions Masters degree.

7. Effective BEGINNING of what term and year? **Fall 2014**

See effective dates calendar.

8. Long course title: **APPLIED ENVIRONMENTAL ECONOMICS**

(max 100 characters including spaces)

9. Short course title: **APPLIED ENV ECONOMICS**

(max. 30 characters including spaces)

Effective Fall 2013
10. Catalog course description (max. 60 words, excluding requisites):
Introduction to and analysis of Environmental Economics as it applies to environmental policy
and management; including the theory of public goods, externalities, taxation, cap and trade,
non-market valuation, and environmental justice.

11. Will this course be part of any plan (major, minor or certificate) or sub plan (emphasis)?
  Yes ☒ No ☐
  If yes, include the appropriate plan proposal.
Climate Science and Solutions M.S.

12. Does this course duplicate content of existing courses? Yes ☐ No ☒
  If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain why
  NAU should establish this course.
This course has some duplicate material with the undergraduate level Environmental
Economics course, ECO 324. However, this course is well established as a fast-pace graduate
level seminar, with significantly more focus on current research and readings including
journal articles. In addition, this course requires students to perform graduate level in-depth
analysis through presentations and a research paper.

13. Will this course impact any other academic unit’s enrollment or plan(s)? Yes ☒ No ☐
  If yes, describe the impact. If applicable, include evidence of notification to and/or response from
  each impacted academic unit
This course will replace FOR 593 in the Climate Science and Solutions; MS. See attached
notification.

14. Grading option: Letter grade ☒ Pass/Fail ☐ Both ☐

15. Co-convened with:
   (For example: ESE 450 and ESE 550) See co-convening policy.
   *Must be approved by UGC before UCC submission, and both course syllabi must be presented.

16. Cross-listed with:
   (For example: ES 450 and DIS 450) See cross listing policy.
   Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

17. May course be repeated for additional units?
   Yes ☐ No ☒
   If yes, maximum units allowed?
   16a. If yes, maximum units allowed?
   16b. If yes, may course be repeated for additional units in the same term?
   Yes ☐ No ☒

18. Prerequisites: Graduate status
   If prerequisites, include the rationale for the prerequisites.
This course is designed for graduate students with little economics background.
Undergraduates with more economics training can be permitted to take the course on an
individual basis.

Effective Fall 2013
19. Co requisites: ____________________________________________
   If co requisites, include the rationale for the co requisites.

20. Does this course include combined lecture and lab components?  Yes ☐  No ☒
   If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course:  Julie Mueller

22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review "see description" and "see impacts" for "Classes Starting/Ending Outside Regular Term" under the heading "Forms"
   http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/.

   Do you anticipate this course will be scheduled outside the regular term?  Yes ☐  No ☒

**Answer 22-23 for UCC/ECCC only:**

23. Is this course being proposed for Liberal Studies designation?  Yes ☐  No ☒
    If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation?  Yes ☐  No ☒
    If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 02/03/2014
Reviewed by Curriculum Process Associate Date

Approvals:

Department Chair/Unit Head (if appropriate) Date

Chair of college curriculum committee Date

Dean of college Date

For Committee use only:

Effective Fall 2013
19. Co requisites:
    If co requisites, include the rationale for the co requisites.

20. Does this course include combined lecture and lab components? Yes □  No □
    If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course: Ron Gunderson

22. Classes scheduled before the regular term begins and/or after the regular term ends may require
    additional action. Review “see description” and “see impacts” for “Classes Starting/Ending
    Outside Regular Term” under the heading “Forms”
    http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Classes-Maintenance/.

    Do you anticipate this course will be scheduled outside the regular term? Yes □  No □

**Answer 22-23 for UCC/ECCC only:**

23. Is this course being proposed for Liberal Studies designation? Yes □  No □
    If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation? Yes □  No □
    If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 10/01/2013
Reviewed by Curriculum Process Associate Date

Approvals:
N/A

Department Chair/Unit Head (if appropriate) Date

Chair of college curriculum committee 10/7/13

Dean of college 10/7/13

For Committee use only:

Effective Fall 2013
### EXTENDED CAMPUSES

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Approved as submitted:  Yes [ ]  No [ ]

Approved as modified:  Yes [ ]  No [ ]
Hi Jim,
This message is to notify you that the School of Earth Science and Environmental Sustainability is proposing to remove FOR 593 from the Climate Science and Solutions MS (please see below).
Thank you!

Scott Galland
Curriculum Process Associate
Office of Curriculum, Learning Design, and Academic Assessment
928-523-1753
928-699-9147 (cell)
scott.galland@nau.edu

From: James A Allen
Sent: Monday, November 18, 2013 11:53 AM
To: Stuart S Galland
Cc: Deborah Nicole Huntzinger
Subject: RE: Proposed changes to the Climate Science and Solutions

Hi Scott,
Thanks for letting me know. As far as I can tell, it has been effectively removed for the past couple of years, anyway.
Best wishes,
Jim

James A. Allen, Professor and Executive Director
School of Forestry
College of Engineering, Forestry and Natural Sciences
Northern Arizona University
P.O. Box 15018
Flagstaff, AZ 86011-5018
Office Phone: 928-523-5894
Fax: 928-523-1080
School of Forestry

MASTER SYLLABUS—ECO 526 APPLIED ENVIRONMENTAL ECONOMICS

General Information
  • The W.A. Franke College of Business

Effective Fall 2013
- ECO 526, Applied Environmental Economics
- 3 Units
- Instructor’s name: TBD
- Office address: TBD
- Office hours: TBD

Course prerequisites:
Graduate status or instructor’s permission

Course description:
Introduction to and analysis of Environmental Economics as it applies to environmental policy and management; including the theory of public goods, externalities, taxation, cap and trade, non-market valuation, and environmental justice.

Student Learning Expectations/Outcomes for this Course:
A. Understand the basic theory of externalities be able to apply the theory to environmental problems
B. Analyze the concepts of efficiency in terms of marginal benefits and marginal costs of abatement
C. Discuss and analyze the tragedy of the commons and understand ways it applies to climate change
D. Understand the economic underpinnings of different pollution abatement policies, including cap and trade
E. Describe methods of non-market valuation and recognize relevant applications
F. Obtain increased awareness of the concept of environmental justice (equity) as it relates to climate change
G. Improve communication skills through group and individual presentations
H. Perform in-depth analysis of the economic aspect of a specific environmental issue of their choosing and summarize their insight in a semester term paper

Course structure/approach:
The course will introduce concepts of environmental economics with a focus on applied policy implications. We will begin with a primer on public goods and externalities and continue with a discussion of carbon markets, cap and trade, and emissions regulations. We will also introduce non-market valuation with a particular focus on the economics of climate change. The first half of the course will be primarily lecture format and class discussions of assigned articles as we build our knowledge of economic theory. We will spend the second half of the course discussing applications of economic theory in student presentations. A large portion of the final grade is attributed to an individual student paper analyzing the economic aspect of an environmental issue. Students are encouraged to choose a topic that directly relates to their proposed career path and potential internship opportunities. The paper is reviewed by the instructor in stages, and students will also be expected to present their research to the class in a brief presentation at the end of the semester.

The course is organized as a graduate seminar and is paced accordingly. Students are expected to read all assignments and come to class prepared for meaningful discussions. The quality of the course and the depth of the learning experience depend upon student engagement and
participation.

Textbook and required materials:

Additional Materials: The textbook is supplemented with relevant manuscripts. Graduate students are expected to present recent research in the area of environmental economics and to apply their research in their final papers.

Sample Course outline:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assigned Readings</th>
</tr>
</thead>
</table>
| 1-3  | Introduction to Economics and Environmental Economics: Concepts | - Tietenberg and Lewis, Chapter 1 Visions of the Future  
- Tietenberg and Lewis, Chapter 2 Valuing the Environment: Concepts |
| 4    | Efficiency, Public Goods, and Externalities | - Tietenberg and Lewis, Chapter 4 Property Rights, Externalities, and Environmental Problems  
| 5-8  | Economics of Environmental Policy | - Tietenberg and Lewis, Chapter 15 Economics of Pollution Control: An Overview  
- Tietenberg and Lewis, Chapter 16 Stationary-Source Local Air Pollution  
| 9-11 | Valuing the Environment—Methods and Applications | **Paper Proposal Due**  
- Tietenberg and Lewis, Chapter 3 Valuing the Environment: Methods  
| 12-13| Environmental Justice | **First Draft of Paper Due**  
- Tietenberg and Lewis, Chapter 21 Environmental Justice  
| 14   | Individual meeting times to discuss papers |
| 15   | Individual Paper Presentations |
| 16   | **Final Papers Due** | Individual Paper Presentations |

Assessment of Student Learning Outcomes:

- **Methods of Assessment**  
  - Group projects: 20%-30%  
  - Participation: 20%  
  - Individual Research Paper: 50-60%  

- **Learning Objective Emphasis:**  
  - Objectives A, B, C, D, E, F and G  
  - Objectives A and G  
  - Objective H

Effective Fall 2013
• Timeline for Assessment
   Presentations will be spread throughout the term. The individual paper will be graded in stages, with the first stage occurring before the middle of the semester. Final papers and presentations will be due at the end of the semester.

• Grading System
   Grades will be assigned on the basis of total points earned relative to the following scale:
   
   90% or greater      A
   80% to 89%          B
   70% to 79%          C
   60% to 69%          D
   below 60%           F

   Final grades may be based upon a curved scale representing lower point values than those above.

Course policy:
• Attendance
   Failure to attend class will reduce a student's participation grade.

• Statement on academic honesty
   Students are expected to adhere to high standards of integrity and honesty. Copying answers from another classmate is a form of plagiarism and will be punished accordingly. Any form of dishonesty or plagiarism with regard to assignments or examinations will result in a failing grade for the assignment on the first offense. The second offense will result in a failing grade for the course. All incidences of academic dishonesty will be reported to the appropriate university authorities.

University policies:
Attach the Safe Working and Learning Environment, Students with Disabilities, Institutional Review Board, and Academic Integrity policies or reference them on the syllabus. See the following document for policy statements: http://www4.nau.edu/avpaa/UCCPolicy/picystmt.html.
Proposal for New Course

Please attach proposed Syllabus in approved university format.

1. Course subject and number: ES 520 2. Units: 3
   See upper and lower division undergraduate course definitions.


5. Student Learning Outcomes of the new course. (Resources & Examples for Developing Course Learning Outcomes)
   * Exhibit an advanced understanding of the social forces that create racial and spatial segregation and their consequences for people of color in the U.S. and other societies; (Global Engagement & Diversity)
   * Demonstrate advanced analyses of how cities produce and reinforce social, racial/ethnic hierarchies; (Diversity)
   * Research and assess how Corporate and State interests shape the development of urban spaces and the oppression of low-income populations and people of color; (Diversity & Global Engagement)
   * Critically assess how individuals and organized social movements challenge various forms of exploitation, inequality, and segregation; (Diversity & Global Engagement)
   * Demonstrate advanced understanding of how the development of cities and social inequalities are linked to the natural environment; (Global Engagement & Environmental Sustainability)
   * Exhibit mastery in utilizing methods to research how socially just and ecologically sustainable communities are created. (Environmental Sustainability & Diversity)

6. Justification for new course, including how the course contributes to degree program outcomes, or other university requirements / student learning outcomes. (Resources, Examples & Tools for Developing Effective Program Student Learning Outcomes).
   This course gives graduate-level students interested in Ethnic Studies methodology more options to research and explore issues critical to both the university and the local community. The course increases graduate-level course electives for the Ethnic Studies grad certificate and for other degree programs which require interdisciplinary research. The ES Program and affiliate faculty are prepared to provide instruction in a course format which previously only existed for independent study and fieldwork research. Student learning outcomes will contribute to global engagement, diversity education, and sustainability projects as well as participation in graduate-level work in Ethnic Studies, as measured by the outcomes listed above.

Effective Fall 2013
7. Effective BEGINNING of what term and year? Fall 2014
   See effective dates calendar.

8. Long course title: RACE, SPACE & SEGREGATION
   (max. 100 characters including spaces)

9. Short course title: RACE, SPACE & SEGREGATION
   (max. 30 characters including spaces)

10. Catalog course description (max. 60 words, excluding requisites):
    This course examines concepts of race, class, gender, space, and segregation through U.S. as well as global perspectives. We consider both the social forces that create racial and spatial segregation and their consequences for the life chances of people of color. We also consider organized responses to these phenomena, including social movements and other forms of opposition to oppression. Co-convenes with ES 420. Letter grade only.

11. Will this course be part of any plan (major, minor or certificate) or sub plan (emphasis)?
    Yes ☑ No □
    If yes, include the appropriate plan proposal.
   Ethnic Studies GCERT (elective).

12. Does this course duplicate content of existing courses?
    Yes □ No ☑
    If yes, list the courses with duplicate material. If the duplication is greater than 20%, explain why NAU should establish this course.

13. Will this course impact any other academic unit's enrollment or plan(s)?
    Yes □ No ☑
    If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

14. Grading option: Letter grade ☑ Pass/Fail □ Both □

15. Co-convened with: ES 420
    (For example: ESE 450 and ESE 550) See co-convening policy.
    14a. UGC approval date*: __________
    "Must be approved by UGC before UCC submission, and both course syllabi must be presented.

16. Cross-listed with:
    (For example: ES 450 and DIS 450) See cross listing policy.
    Please submit a single cross-listed syllabus that will be used for all cross-listed courses.

17. May course be repeated for additional units?
    Yes □ No ☑
    16a. If yes, maximum units allowed?
    16b. If yes, may course be repeated for additional units in the same term? Yes □ No □

Effective Fall 2013
18. Prerequisites: Admission to the Graduate College
If prerequisites, include the rationale for the prerequisites.
Graduate standing is the only pre-requisite for this course.

19. Co-requisites: 
If co-requisites, include the rationale for the co-requisites.

20. Does this course include combined lecture and lab components? Yes ☐ No ☒
If yes, include the units specific to each component in the course description above.

21. Names of the current faculty qualified to teach this course: Ricardo Guthrie, Mark Beeman, Gerald Wood

22. Classes scheduled before the regular term begins and/or after the regular term ends may require additional action. Review "see description" and "see impacts" for "Classes Starting/Ending Outside Regular Term" under the heading "Forms"
http://nau.edu/Registrar/Faculty-Resources/Schedule-of-Courses-Maintenance/.

Do you anticipate this course will be scheduled outside the regular term? Yes ☐ No ☒

Answer 22-23 for UCC/ECCC only:

23. Is this course being proposed for Liberal Studies designation? Yes ☐ No ☐
If yes, include a Liberal Studies proposal and syllabus with this proposal.

24. Is this course being proposed for Diversity designation? Yes ☐ No ☐
If yes, include a Diversity proposal and syllabus with this proposal.

FLAGSTAFF MOUNTAIN CAMPUS

Scott Galland 2/5/2014
Reviewed by Curriculum Process Associate Date

Approvals:

Ricardo Guthrie, Ethnic Studies 3/3/2014
Department Chair/Unit Head (if appropriate) Date

Chair of college curriculum committee 3/10/14
Date

Dean of college Date

Effective Fall 2013
### EXTENDED CAMPUSES

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<tr>
<td>Chief Academic Officer; Extended Campuses (or Designee)</td>
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Approved as submitted: ☐ Yes ☐ No
Approved as modified: ☐ Yes ☐ No
Ethnic Studies 520
RACE, SPACE & SEGREGATION
Semester, year
3 credits
Meeting Time/Location

Instructor:
Phone:
Office:
Office Hours:
E-mail:

Course prerequisites:
Graduate student status.

Course description
This course convenes undergraduates and graduate students to examine concepts of race, class, gender, space, and segregation through U.S. as well as global perspectives. We consider both the social forces that create racial and spatial segregation and their consequences for the life chances of people of color. We also consider organized responses to these phenomena, including social movements and other forms of opposition to oppression. Students will learn to apply relevant concepts and social scientific theories to the subject matter. *Graduate students are required to engage in approximately 30% more readings and research work compared to undergraduates. Graduate students will engage in substantial research work, design and lead project teams, and complete an original research paper as part of their final project.

In this co-convened course, the following distinctions differentiate undergraduate from graduate-level work: Graduate students are required to engage in substantial RESEARCH. The two courses will reflect qualitative and quantitative differences between graduate and undergraduate-level work: Graduate students design and lead project teams, and complete an original research paper as part of their final project. Graduate student LEARNING OUTCOMES are greater than for Undergrads, and the degree of mastery, critical thinking, and critical writing are at a higher level. Graduate students do individual PRESENTATIONS of original research work (plus bibliography) while Undergrads do a PRESENTATION which summarizes a journal article, and they work in pairs to present in a creative, engaging manner. Finally, Graduate students present their initial Research Paper outline and Bibliography for their MIDTERM, while Undergrads take a written MIDTERM exam.

*This course fits all three components of the Global Learning Initiative: Global Engagement (assessing the extent to which segregation is a "universal" feature of urban development across the globe); Diversity (examining how segregation in U.S. cities emerges as the result of systemic disempowerment of racial and ethnic groups, locally and nationally); and Environmental Sustainability (analyzing whether "liveable" cities can include strategic planning that addresses racial, economic, social, and political conflicts in multicultural population centers of the present and future).

Student Learning Expectations/Outcomes for this Course

Effective Fall 2013
* Exhibit an advanced understanding of the social forces that create racial and spatial segregation and their consequences for people of color in the U.S. and other societies; (Global Engagement & Diversity)
* Demonstrate advanced analyses of how cities produce and reinforce social, racial/ethnic hierarchies; (Diversity)
* Research and assess how Corporate and State interests shape the development of urban spaces and the oppression of low-income populations and people of color; (Diversity & Global Engagement)
* Critically assess how individuals and organized social movements challenge various forms of exploitation, inequality, and segregation; (Diversity & Global Engagement)
* Demonstrate advanced understanding of how the development of cities and social inequalities are linked to the natural environment; (Global Engagement & Environmental Sustainability)
* Exhibit mastery in utilizing methods to research how socially just and ecologically sustainable communities are created. (Environmental Sustainability & Diversity)

Course structure/approach
This class combines lectures with small group discussion and activities, as well as guest speakers and media. Graduate students will present original research and lead research teams in completing term projects.

Textbook and required materials
Required Texts


Recommended


Additional Readings on BB LEARN
Journal articles and research papers will be posted on BB LEARN.

Course outline:
UNIT ONE: RACE, POWER, AND URBAN VS. RURAL SPACE

Week 1
Introduction to the course; Exercise: "What is Race?"

Logan and Molotch, *Urban Fortunes*, Ch. 1: "The Social Construction of Cities," and begin reading Ch. 2

Week 2
Logan and Molotch, Ch. 2: "Places as Commodities" and Ch. 3: "The City as a Growth Machine"

Undergraduate Presentations: Wilson, "The Meaning and Significance of Race" (Bb Learn)

Week 3
Logan and Molotch, Ch. 4 "Homes: Exchange and Sentiment in the Neighborhood"
Logan and Molotch Ch. 5: "How Government Matters"

Undergraduate Presentations: Pardo, “Creating Community: Mexican American Women in Eastside Los Angeles.” (Bb Learn)

**Week 4**

Undergraduate Presentations: Zubrinsky-Charles. “Socioeconomic Status and Segregation: African Americans, Hispanics, and Asians in Los Angeles.” (Bb Learn folder)

Massey and Denton, Ch. 2: “The Construction of the Ghetto”

**Week 5**
Massey and Denton, Ch. 3: “The Persistence of the Ghetto”

Undergraduate Presentations: Ong and Umemoto, “Life and Work in the Innercity.” (Bb Learn)

Massey and Denton, Ch. 3 & Begin Ch. 4

Undergraduate Presentations: Moss and Tilly, “Employer Perceptions of Race and Skill.” (Bb Learn)

**Week 6**
Massey and Denton, Ch. 4: “The Continuing Causes of Segregation”

Undergraduate Presentations: Hossfeld, “Hiring Immigrant Women: Silicon Valley’s ‘Simple Formula.’” (Bb Learn)

Massey and Denton, Ch. 5: “The Creation of Underclass Communities”

Undergraduate Presentations: Robinson, “Racial Inequality and the Logic of the Labor Market.” (Bb Learn)

**Week 7**
Massey and Denton, REVIEW

Lipsitz, “The Rent Strike.” (Bb Learn)

**MIDTERM PAPER** (Graduate students submit research outline and preliminary bibliography)

**Unit Two: Environmental Racism**

**Week 8**

Hurley, *Environmental Inequalities* “Preface” & Ch. 1: “Class, Race, and...the Urban...”

Hurley, Ch. 1 Review, and Begin Ch. 2

Introduce Southside Project Assignments
Graduate student Presentations on research projects

Week 9

Hurley, Ch. 2: “The Perils of Pollution in the Steel City”

Undergraduate Presentations: *Benally*: “Uranium Mining Begins Near Grand Canyon” (Bb Learn)

Hurley, Ch. 2 Review, and Begin Ch. 3

Week 10

Hurley, Ch. 3: “Opposition to Blind Progress: Middle-Class Environmentalism”

Undergraduate Presentations: *Santa Clara Center for Occupational Safety and Health*, “Struggle and Strength Tales from the Workers Story Process.” (Bb Learn)

Hurley, Ch. 3 Review, and Begin Ch. 4

Southside Project Assignments
Graduate student Presentations on research projects

Week 11

Hurley, Ch. 4: “Tired of Working in Pollution and Having it Follow Us Home Working-Class Environmentalism.”

Undergraduate Presentations: *Burtman*, “The Revolution will be Mapped.” (Bb Learn)

Hurley, Ch. 4 Review, and Begin Ch. 5

Southside Project Assignments
Graduate student Presentations on research projects

Unit Three: Race, Cities, and Landscapes: The Struggle for Sustainability

Week 12

*Hurley, Ch. 5: “Rats, Roaches, and Smoke: African American Environmentalism”*

Undergraduate Presentations: *Sachs*, “Virtual Ecology: A Brief Environmental History of Silicon Valley.” (Bb Learn)

*Hurley, Ch. 5 Review, and Begin Ch. 6*
Undergraduate Presentations: Goldsmith, "From the Metropolis to Globalization" (Bb Learn)

Southside Project Assignments
Graduate student Presentations on research projects

Week 13

Hurley, Ch. 6: "The Rise and Fall of an Environmental Coalition" and Ch. 7-8: "The Social Geography of Pollution and the Politics of Sand" and "Epilogue"

Southside Project Assignments

Bb LEARN Course Website Online Assignment

Week 14

Lipsitz, How Racism Takes Place, Chs. TBA;
Southside Project Work

Undergraduate Presentations: Rodriguez, "The Real 'New World Order'" (Bb Learn)

Lipsitz, Chs. TBA;
Southside Project Work – Feedback and Critiques

Undergraduate Presentations: Sassen, "Cities in a World Economy." (Bb Learn)

Week 15

Lipsitz, Chs. TBA
Southside Project Work – Feedback and Critiques

Week 16       FINALS WEEK

Presentation/Exhibition of Final Projects on exam day

Assessment of Student Learning Outcomes

Attendance and Participation: Consistent attendance and active participation in each class meeting are required. Missing three or more classes (unexcused absences) will affect your participation grade; students can be dropped for excessive absences or tardiness. Students are expected to contribute to in-class discussion and activities. Occasional on-line assignments and class discussions will be posted through the Bb LEARN course website or on media reserves for analysis outside of class. In addition, individual presentations and group projects will be assigned to help students comprehend critical themes, issues or methods of analysis.

Pop Quizzes will be given periodically during the semester, in conjunction with in-class work. Quizzes will assess students' ability to effectively demonstrate critical reading and critical thinking skills through their comprehension of the reading material, lectures, and class discussions.

Class Presentation: Graduate students will present original research work related to course themes, lead selected discussion sessions and/or research teams. Rather than being a summary of the literature on a given
topic, graduate research presentations will reflect your developing research design, description of methods, hypothesis and initial results of ongoing work. A four-to-six-page outline and preliminary bibliography for the research will be due the week before your presentation. The purpose is to demonstrate an advanced level of critical thinking about the topic, your grasp of the scholarly literature related to your topic, and suggesting your progress towards a research/scholarly paper that can ultimately be submitted for conferences and/or publication. Instructions will be posted on Bb LEARN.

**Term Project & Research Paper:** Graduate students will lead groups on a project applying the course themes to Flagstaff’s historic Southside neighborhood. All students will collaborate on group projects, but each graduate student will submit an 8-10 page Research Paper plus an annotated bibliography critically assessing the topic and themes of the course, and demonstrating their mastery of scholarly methods employed in leading research and completing the project. For example, whereas undergraduates will be assigned oral history subjects from the Cline Library Special Collections, graduate students may develop original ethnographic subjects or identify new oral history subjects worthy of research and acquisition. Groups will assemble materials from archives, Cline Library online resources, Census documents, media archives, planning documents, as well as original interviews, photographs, and creative activities related to the course themes. Graduate students will help determine the nature and extent of new and existing materials to assemble, and assign tasks as needed within each group.

NAU borders the southern boundary of the Southside, which is the oldest continuously occupied neighborhood in the city. Southside is home to more than 3,000 residents (about 5% of the City’s overall population). Considered to be the “wrong side of the tracks,” Southside was established as a segregated neighborhood—occupied by culturally, racially and ethnically diverse groups of Basque shepherders, Latinos, and African-Americans who were recruited from Mexico and Louisiana, respectively, to work in the sawmills and railroad companies. Historical perceptions and stereotypes remain to this day, while Southside is still considered the “poor” side of town.

Beginning with Cline Library Special Collections and then participating in field work in the Southside, graduate students will lead groups in designing and implementing term projects on the history and development of the Southside. Instructions will be posted on Bb LEARN.

**Grading System**

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<th>Component</th>
<th>Points</th>
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<td>Class Participation/Attendance</td>
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<tr>
<td>Quizzes</td>
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<td>Presentations</td>
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<td>Midterm Paper</td>
<td>100</td>
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<tr>
<td>Term Project &amp; Research Paper</td>
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**Total:** 500 points

- **A** = 450-500pts (90% and above)
- **B** = 400-449pts (80-89%)
- **C** = 350-399pts (70-79%)
- **D** = 300-349 (60-69%)
- **F** = less than 300pts (59% and below)
University Policies

Safe Working and Learning Environment Policy: NAU's Safe Working and Learning Environment Policy seeks to prohibit discrimination and promote the safety of all individuals within the university. The goal of this policy is to prevent the occurrence of discrimination on the basis of sex, race, color, age, national origin, religion, sexual orientation, disability, or veteran status and to prevent sexual harassment, sexual assault or retaliation by anyone at this university. You may obtain a copy of this policy from the college dean's office. If you have concerns about this policy, it is important that you contact the departmental chair, dean's office, the Office of Student Life (523-5181), the academic ombudsperson (523-9366), or NAU's Office of Affirmative Action (523-3312).

Students with disabilities: If you have a documented disability, you can arrange for accommodations by contacting the office of Disability Support Services (DSS) at 523-8773 (voice), 523-6906 (TTY). In order for your individual needs to be met, you are required to provide DSS with disability related documentation and are encouraged to provide it at least eight weeks prior to the time you wish to receive accommodations. You must register with DSS each semester you are enrolled at NAU and wish to use accommodations. Faculty are not authorized to provide a student with disability related accommodations without prior approval from DSS. Students who have registered with DSS are encouraged to notify their instructors a minimum of two weeks in advance to ensure accommodations. Otherwise, the provision of accommodations may be delayed. Concerns or questions regarding disability related accommodations can be brought to the attention of DSS or the Affirmative Action Office.

Institutional Review Board: Any study involving observation of or interaction with human subjects that originates at NAU—including a course project, report, or research paper—must be reviewed and approved by the Institutional Review Board (IRB) for the protection of human subjects in research and research-related activities. The IRB meets once each month. Proposals must be submitted for review at least fifteen working days before the monthly meeting. You should consult with your course instructor early in the course to ascertain if your project needs to be reviewed by the IRB and/or to secure information or appropriate forms and procedures for the IRB review. Your instructor and department chair or college dean must sign the application for approval by the IRB. The IRB categorizes projects into three levels depending on the nature of the project: exempt from further review, expedited review, or full board review. If the IRB certifies that a project is exempt from further review, you need not resubmit the project for continuing IRB review as long as there are no modifications in the exempted procedures. A copy of the IRB Policy and Procedures Manual is available in each department's administrative office and each college dean's office.

Academic Integrity: The University takes an extremely serious view of violations of academic integrity. As members of the academic community, NAU's administration, faculty, staff and students are dedicated to promoting an atmosphere of honesty and are committed to maintaining the academic integrity essential to the education process. Inherent in this commitment is the belief that academic dishonesty in all forms violates the basic principles of integrity and impedes learning. Students are therefore responsible for conducting themselves in an academically honest manner. Individual students and faculty members are responsible for identifying instances of academic dishonesty. Faculty members then recommend penalties to the department chair or college dean in keeping with the severity of the violation. The complete policy on academic integrity is in Appendix F of NAU's Student Handbook.

Academic Contact Hour Policy: The Arizona Board of Regents Academic Contact Hour Policy (ABOR Handbook, 2-206, Academic Credit) states: "an hour of work is the equivalent of 50 minutes of class time...at least 15 contact hours or recitation, lecture, discussion, testing or evaluation, seminar, or colloquium as well as a minimum of 30 hours of student homework is required for each unit of credit." The reasonable interpretation of this policy is that for every credit hour, a student should expect, on average, to do a minimum of two additional hours of work per week; e.g., preparation, homework, studying. (Revised 10/23/01).

Additional References: Please see also NAU's Student Handbook for additional information at http://www4.nau.edu/stulife/handbook.htm

Effective Fall 2013
ES 520: Race, Space & Segregation

Additional Readings on Bb Learn


Proposal for Course Change

FAST TRACK (Select if this will be a fast track item. Refer to Fast Track Policy for eligibility)

If the changes included in this proposal are significant, attach copies of original and proposed syllabi in approved university format.

1. Course subject and number: ES 420  
2. Units: 3
   See upper and lower division undergraduate course definitions.

3. College: Social and Behavioral Sciences  
4. Academic Unit: Ethnic Studies

5. Current Student Learning Outcomes of the course.

   * Basic understanding of the social forces that create racial and spatial segregation and their consequences for people of color in the U.S. and other societies (Global Engagement & Diversity)
   * Foundational understanding of how cities produce and reinforce social, racial/ethnic hierarchies (Diversity)
   * Assessing how individuals and organized social movements challenge various forms of exploitation, inequality, and segregation (Diversity & Global Engagement)
   * Understanding of the methods and movements that have helped build socially just and ecologically sustainable communities (Environmental Sustainability & Diversity)

   Show the proposed changes in this column (if applicable). Bold the proposed changes in this column to differentiate from what is not changing, and Bold with strikethrough what is being deleted. (Resources & Examples for Developing Course Learning Outcomes)

   **UNCHANGED**


   **ES 420 – RACE, SPACE, AND**

   Effective Fall 2013

   **ES 420 – RACE, SPACE, AND**
SEGREATION (3)
Description: This course examines concepts of race, class, gender, space, and segregation through U.S. as well as global perspectives. We consider both the social forces that create racial and spatial segregation and their consequences for the life chances of people of color. We also consider organized responses to these phenomena, including social movements and other forms of opposition to oppression. Letter grade only.

Units: 3
Requirement Designation: US Ethnic Diversity
Prerequisite: ES 100 or Junior status or higher

*if there has been a previously approved UCC/UGC/ECCC change since the last catalog year, please copy the approved text from the proposal form into this field.

7. Justification for course change.
This course will be made available for co-convening with graduate-level course, ES 520. The basic requirements and academic outcomes for the undergraduate students in ES 420 will be augmented by including graduate-level students in the lectures, course meetings, discussions, research work and presentations.

8. Effective BEGINNING of what term and year?  
See effective dates calendar.  

Fall 2014

IN THE FOLLOWING SECTION, COMPLETE ONLY WHAT IS CHANGING

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9. Is this course in any plan (major, minor, or certificate) or sub plan (emphasis)? Yes ☒ No ☐
   If yes, describe the impact. If applicable, include evidence of notification to and/or response from each impacted academic unit.

**Ethnic Studies Minor (elective).**

10. Is there a related plan or sub plan change proposal being submitted? Yes ☐ No ☒
    If no, explain.

    **This proposal to add co-convening course will not require a related plan change proposal.**

11. Does this course include combined lecture and lab components? Yes ☐ No ☒
    If yes, include the units specific to each component in the course description above.

**Answer 12-15 for UCC/ECCC only:**

12. Is this course an approved Liberal Studies or Diversity course? Yes ☒ No ☐
    If yes, select all that apply. Liberal Studies ☐ Diversity ☒ Both ☐

13. Do you want to remove the Liberal Studies or Diversity designation? Yes ☐ No ☒
    If yes, select all that apply. Liberal Studies ☐ Diversity ☐ Both ☐

14. Is this course listed in the **Course Equivalency Guide**? Yes ☐ No ☒

15. Is this course a **Shared Unique Numbering (SUN) course**? Yes ☐ No ☒

**FLAGSTAFF MOUNTAIN CAMPUS**

Scott Galland 10/17/2013
Reviewed by Curriculum Process Associate Date

Approvals:

Ricardo Martinez, Ethnic Studies 3/3/2014
Department Chair/Unit Head (if appropriate) Date

3/10/14
Chair of college curriculum committee

3/10/14
Dean of college Date

Effective Fall 2013
For Committee use only:

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<td>Chief Academic Officer; Extended Campuses (or Designee)</td>
<td>Date</td>
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<td>Yes □ No □</td>
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Effective Fall 2013