

**UCC/UGC/ECCC**

Proposal for Plan Change or Plan Deletion

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| **FAST TRACK (Select if this will be a fast track item**. Refer to  [***Fast Track Policy***](http://www4.nau.edu/avpaa/UCCPolicy/Agenda_FastTrack_Consent.docx) 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.***

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| 1. College: | **CEFNS** | | | 2. Academic Unit: | | | Mathematics & Statistics |
|  | |  |  | |  | | |
| 3. Academic      Plan Name: | | Minor in Mathematics Secondary Education **(MATEDMN)** | | 4. Emphasis: | |  | |

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

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| 6. Current student learning outcomes of the plan. If structured as plan/emphasis, include for **both c**ore and emphasis.   * Diversity: Special Education; English Language Learner; Culture * Implement: Inquiry/non-inquiry; Questioning; Management; Presentation Skills; Accommodation; Flexibility * Students: Caring Empathetic Attitude; Equity-Valuing all Students; Understand Students; Value Inquiry & Hands - On Lessons * Analysis: Analysis of Student Learning; Analysis of Student Behavior; Analysis of Student Response; Analysis of Student Engagement * Assessment: Research; Student Misconceptions; Types of Assessment * Basic Skills: Reading; Writing; speaking * Legal/Ethical: Safety; Reporting Student Conduct * Math and Science: Deep & Connected; General Content Knowledge; Nature of the Discipline; Process Standards; Syntactic knowledge; Modeling * Pedagogical: Research; Developmental A & S Interpret & Apply Standards; Making Content Assessable; Curriculum Resources; Teaching Strategies * Planning: Instructional Strategies; Sequencing; Learning Goals; Questioning; Assessment; Management; Unit sequencing; Metacognition; Curriculum Analysis * Profession: Value Application of Technology; Dress Professionally; Ethical - Academic Integrity; Time Management & Responsibility; Team Player/Collaborate * Self: Life - Long Learner; Reflective Practitioner; Flexibility & Adaptability; Open to Change; Hard Working Effective; Time Management * Teach and Learn: Problem Solving; Metacognition Instructional Strategies; General Pedagogical Knowledge; Classroom Management * Technology: Research; Pedagogically Appropriate * Ability to communicate mathematics clearly * Breadth and depth of mathematical knowledge * Facility with mathematical reasoning | 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*](http://www4.nau.edu/avpaa/Assessment/ProgramLearningOutcomesPDF_090712.pdf)*).*  **UNCHANGED** |

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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/>) In addition to University Requirements:   * Complete individual plan requirements.   Please note that you may be able to use some courses to meet more than one requirement. Contact your advisor for details.   | Minimum Units for Completion | 20 | | --- | --- | | GPA | C | | Mathematics Required | [MAT 401](http://catalog.nau.edu/Courses/course?courseId=005250&catalogYear=1314) | | Minor Requirements  * Take the following 20 units with a Grade of "C" or better in each course:   + [MAT 136](http://catalog.nau.edu/Courses/course?courseId=005211&catalogYear=1314), [MAT 137](http://catalog.nau.edu/Courses/course?courseId=005213&catalogYear=1314), [MAT 320W](http://catalog.nau.edu/Courses/course?courseId=005232&catalogYear=1314), [MAT 401](http://catalog.nau.edu/Courses/course?courseId=005250&catalogYear=1314) (14 units)   + [STA 275](http://catalog.nau.edu/Courses/course?courseId=010056&catalogYear=1314) (3 units)   Select from the following (3 units):   * + [MAT 185](http://catalog.nau.edu/Courses/course?courseId=010360&catalogYear=1314), [MAT 226](http://catalog.nau.edu/Courses/course?courseId=005221&catalogYear=1314), [MAT 365](http://catalog.nau.edu/Courses/course?courseId=005241&catalogYear=1314), [MAT 402](http://catalog.nau.edu/Courses/course?courseId=005251&catalogYear=1314) * Be aware that some courses may have prerequisites that you must also take. For prerequisite information click on the course or see your advisor. |  | | 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.   Please note that you may be able to use some courses to meet more than one requirement. Contact your advisor for details.   | Minimum Units for Completion | **19** ~~20~~ | | --- | --- | | GPA | C | | Mathematics Required | [MAT **402** ~~401~~](http://catalog.nau.edu/Courses/course?courseId=005250&catalogYear=1314) | | Minor Requirements  * Take the following **19** ~~20~~ units with a Grade of "C" or better in each course:   + [MAT 136](http://catalog.nau.edu/Courses/course?courseId=005211&catalogYear=1314)~~,~~ [~~MAT 137~~](http://catalog.nau.edu/Courses/course?courseId=005213&catalogYear=1314)~~,~~ [~~MAT 320W~~](http://catalog.nau.edu/Courses/course?courseId=005232&catalogYear=1314), **MAT185, MAT 220,**  [MAT 401](http://catalog.nau.edu/Courses/course?courseId=005250&catalogYear=1314)**, MAT 402**  (**16** ~~14~~ units)   + [STA **270 or** 275](http://catalog.nau.edu/Courses/course?courseId=010056&catalogYear=1314) (3 units)   ~~Select from the following (3 units):~~   * + [~~MAT 185~~](http://catalog.nau.edu/Courses/course?courseId=010360&catalogYear=1314)~~,~~ [~~MAT 226~~](http://catalog.nau.edu/Courses/course?courseId=005221&catalogYear=1314)~~,~~ [~~MAT 365~~](http://catalog.nau.edu/Courses/course?courseId=005241&catalogYear=1314)~~,~~ [~~MAT 402~~](http://catalog.nau.edu/Courses/course?courseId=005251&catalogYear=1314) * 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 change increases methodology coursework with the intended audience in mind, namely, secondary education majors in other areas such as physics and elementary education majors seeking a stronger background in mathematics content and teaching methodology. The new course MAT 220, which focuses on communication, reasoning, and problem solving, is also required in order to bolster those skills for students in the expected audience.**

9. NCATE designation, if applicable**:**

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| Initial Plan |  | Advanced Plan | | | |  | Remove Designation | |
| 10. Effective beginning **FALL**: | | | 2014 | |  | | |
| [**See effective dates calendar**](http://www4.nau.edu/avpaa/timelines/1314Effective.xls). | | | |  | | | |

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

**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.

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| **FLAGSTAFF MOUNTAIN CAMPUS** |  |
| **Scott Galland** | **12/5/2013** |
| 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

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| **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 |
|  |  |

Approved as submitted: Yes  No

Approved as modified: Yes  No