PETITION REQUIRED COURSE MODIFICATION

*See Handbook for definition of Petition-Required Course Modifications and for procedures to be followed for Memorandum-Required Course Modifications.

1. Provide a description of the course as it currently exists, including course title, number, credit hours, and prerequisites: Math 433 Differential Equations-3 hours. Solutions to and applications of linear differential equations of order "n" and linear systems of differential equations. Prerequisite: MATH 335 (may be taken concurrently). Sp, F

2. Proposed Course Title, if modified: unchanged

3. Proposed Course Description, if modified: Differential Equations provides an introduction to solutions of ordinary differential equations with applications. Topics include first-order differential equations, second and higher order linear differential equations including the method of Laplace transform and linear systems of differential equations. Prerequisite: MATH 335 (may be taken concurrently). Sp,F,Su

4. Proposed Course Prerequisites, if modified: unchanged

5. Proposed Course Credit Hours, if modified (subject and number preferred) unchanged

6. Implementation Date: ☑ Fall ☐ Spring ☐ Summer I ☐ Summer II 2013 Year

7. Attach rationale for the course modification(s).

8. Department faculty signatures (majority required). If an interdisciplinary program, a majority of each department must sign this form. Number of faculty in department(s): 10

9. Sent to Chair of College Curriculum Committee:

10. Received by Chair of College Curriculum Committee:

   Approved ☑ Not Approved ☐

   Signature: ____________________________
   Chair of College Curriculum Committee

11. Sent to the Dean of the College of __________
12. Sent to originator **(originator responsible for items 13 through 15)**

13. Can the course be used to meet core curriculum requirements?
   Yes ☐   No ☒
   If yes, have this petition signed by the Director of University Core Curriculum for notification purposes.
   Signature: ____________________________________________  Date: ____________
   Director, University Core Curriculum

14. Is this course a part, or to be a part of teacher training? Yes ☒ No ☐
   If yes, this petition must be approved and signed by the Dean of Pott College of Science, Engineering, and Education.
   Signature: ____________________________________________  Date: ____________
   Dean, Pott College of Science, Engineering, and Education

15. Original petition plus electronic copy sent to Michele Duran, Provost's Office: Date: ____________

16. Received in Provost's Office: Date: ____________

17. Notification to Chair of Curriculum Committee of petition: Date: ____________

18. Schedule Curricular Committee meeting date to discuss petition: Date: ____________

19. Curricular Committee meeting date published online in **USI Today**:

20. Received by Chair of Curriculum Committee for review:
   Approved ☐ Not Approved ☐
   Signature: ____________________________________________  Date: ____________
   Chair, Curricular Committee

21. Petition provided to Provost for review:
   Approved ☐ Not Approved ☐
   Signature: ____________________________________________  Date: ____________
   Provost

22. Notice of approval by Provost with publication in **USI Today**:

23. Notified Registrar of **final approval**:
Question 6—Rationale for Prerequisite and Course Description Change

The course description was changed to give more detail to those reviewing our course for transferability or for interest in enrolling in the course.

The prerequisites for Math 412 were changed to include Math 253, Introduction to Mathematical Logic. This course was created to give students an opportunity to learn the basic techniques of proof writing prior to enrolling in a more difficult upper-level course heavily dependent on understanding and writing mathematical proofs. Methods such as mathematical induction, proof by contradiction, and proof by exhaustion (among others) are studied in depth in Math 253. This information is used extensively in Math 412, Abstract Algebra. Students earning a major in mathematics have successfully completed Math 253; however as the number of students earning a math minor increases, so does the number of students entering Math 412 without having successfully completed Math 253. Students who have not successfully completed Math 253 are at a disadvantage as they are being asked to write proofs of abstract ideas without a foundation in proof writing.