Course Inventory Change Request

Date Submitted: 12/09/14 8:11 pm

Viewing: MATH 1133 : Precalculus: Trigonometry

Last edit: 12/10/14 10:32 am

Changes proposed by: TAMTINY

Submitter: User ID: TAMTINY Phone: 6572

Change Type: Pre Requisite

Proposing College/School: Coll of Sciences & Mathematics

Department: Mathematics & Statistics

Effective Term: Fall 2015

Subject Code: Mathematics (MATH)

Course Number: 1133

Course Title: Precalculus: Trigonometry

Abbreviated Title: Precalculus: Trigonometry

Justification for change:

The proposed pre-requisite change is based on the recommendation by the Math Placement Committee of the Department of Mathematics and Statistics. The committee did a statistical analysis in which students with the proposed prerequisite will have 75% chance of success.

This is a core level course used under many majors. Offering it online would allow for flexibility and easier accessibility to the students.

Course Credit: | Schedule Type | Contact/Group Hours | Weekly or Per Term? | Credit Hours | Anticipated Enrollment
---|---|---|---|---|---

Approval Path

1. 12/10/14 10:19 am HOLLIGD: Approved for MATH Editor
2. 12/10/14 10:32 am TAMTINY: Approved for MATH Chair
3. 12/16/14 10:52 am CAMMAVI: Approved for SM Undergraduate Curriculum Committee Chair
4. 12/16/14 11:37 am YARBREL: Approved for SM Editor
5. 12/16/14 11:41 am CAMMAVI: Approved for SM Associate Dean
6. 12/16/14 6:36 pm SZC0024: Approved for DistanceEducation1
7. 12/17/14 7:31 am ALIASIM: Approved for DistanceEducation2
Course: MATH 1133: Precalculus: Trigonometry
https://nextbulletin.auburn.edu/courseleaf/courseleaf.cgi?page=/c...

<table>
<thead>
<tr>
<th>Schedule Type</th>
<th>Contact/Group Hours</th>
<th>Weekly or Per Term?</th>
<th>Credit Hours</th>
<th>Anticipated Enrollment</th>
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<td>Weekly</td>
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Can the course be repeated? No
Total Credit Hours: 3

Grading Type: Standard Grades

Prerequisites:
Pr. Math ACT 23 MPP score of 056 or Math SAT 540 MPA2 score of 056 or above, or MATH 1120/1123. 1120.

Prerequisite Courses:
MATH 1120- Pre-Calculus Algebra
MATH 1123- Pre-Calculus algebra

Corequisites:

Restrictions:

Admin Restrictions:

Course Description: This is an online version of MATH 1130. Students may receive credit for only one of MATH 1130/1133. Mathematics Core Preparatory course for the calculus sequence. Basic analytic and geometric properties of the trigonometric functions. Complex numbers, de Moivre's theorem, polar coordinates. Students who have previous credit in any higher-numbered math course may not receive credit.

May Count Either:
MATH 1130- Pre-Calculus Trigonometry

Affected Program(s):

Overlapping or Duplication of Other Units' Offerings:
No

Resources
We may need an experienced distance learning lecturer or adjunct faculty to teach the course.

1. The student will use the unit circle to evaluate trigonometric functions and their inverses.

2. The student will solve triangles and related application problems.

3. The student will graph the trigonometric functions and their
4. The student will prove trigonometric identities and use these to solve trigonometric equations.

5. The student will convert to, and plot in polar coordinates.

6. The student will use the polar form of a complex number including DeMoivre's Theorem.

7. The student will use vectors to solve applications.

Is this course considered University Core?
Yes

Which Student Learning Outcomes are achieved?
SL04 Mathematical Methods
SL05 Problem Solution

How would outcomes be assessed?
Questions assessing SLO4 are incorporated in the final exam to measure the SLO4. Data will be collected and analyzed.

Course Content Outline
Week 1
Section 6.1: Angles

Week 2
Section 6.2: Trigonometry of Right Triangles
Section 6.3: Reference Angles

Week 3
Section 5.1: Unit Circle
Section 5.2: Trigonometric Functions
Section 5.3: Graphs of Sine and Cosine

Week 4
Section 5.4: Trigonometric Graphs
Section 5.5: Graphs of Inverse Trigonometric Functions

Week 5
Section 6.4: Inverse Trigonometric Functions
Section 6.5: Law of Sines

Week 6
Section 6.6: Law of Cosines
Section 7.1: Proving Identities

Week 7
Module Quizzes will be conducted online in a virtual testing environment (timed exam, browser lock-down, IP address lock).

There will be 3 unit exams. These will be administered by a proctor approved by the department through Canvas.

Conference participation will be awarded for attending one of three online conferences per week at a time of the student’s choosing. Conferences will be held through Canvas using Big Blue Button. These will be question and answer sessions in
small groups.

The final will be a comprehensive multiple choice exam consisting of approximately 32 questions. It will be administered by a proctor approved by the department through Canvas.

All communication (emails, forums, etc.) will be conducted through Canvas with communication through WebAssign (emails, extension requests, forums, etc.) as secondary. Students can contact the instructor through either and using Tigermail. Grades will be posted in Canvas with a copy in WebAssign.

Grades will be awarded based on the following.

- Modules (10 units) 50%
- Participation 10%
- Final exam 40%
- Total awarded 100%

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<th>Grade</th>
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<td>D</td>
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Attachments

Supplemental for DE 1133 F14.pdf

Course reviewer comments

CAMMAVI (10/30/14 9:27 am): Rollback: equivalent SAT
WILLIF2 (12/01/14 1:42 pm): Rollback: correction