Institution: *Pellissippi State Community College*

Course Number and Name: **MATH1530 Elementary Probability & Statistics**

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<tr>
<th><strong>PROJECT LEADER</strong></th>
<th><strong>NAME OF FACULTY MEMBER</strong></th>
<th><strong>ANTICIPATED DISTRIBUTION OF WORK (MUST = 100%)</strong></th>
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<td>30%</td>
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<td><strong>PROJECT TEAM MEMBER</strong></td>
<td><strong>Claire Suddeth</strong></td>
<td>30%</td>
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Please provide the following information for each member of your revitalization team.

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<tr>
<th><strong>NAME</strong></th>
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Describe the revitalized course in its complete implementation, especially how it differs from the traditional course.

MATH1530 will be offered with a remedial, embedded co-requisite option, open to students identified by a score of 17 or 18 on the MATH section of the ACT (or an equivalent COMPASS Algebra score).

Currently, students who score below 19 on the MATH section of the ACT are placed into Mathematics Learning Support courses, which are pre-requisites to all college-level math and math related courses (such as science, economics, etc). This requirement forces those students to spend at least one semester in remediation before college-level math and/or math related courses can be attempted.

In the revitalized embedded co-requisite course, those borderline students with MATH ACT scores of 17 or 18 will take MATH1530 as a traditional college-level course, while concurrently receiving remedial instruction during an additional lab hour each week, designed to address the five competencies of the existing Mathematics Learning Support courses. A capstone project at the end of the MATH1530 course will be structured to specifically focus on statistical concepts that will fulfill the final Learning Support competency of modeling and critical thinking.

Explain the academic problems that the revitalized course addresses.

The embedded sections will address the following deficiencies as recognized by 1530 faculty:

- Remedial algebra skills through co-requisite requirements
- Reading, writing, and critical thinking skills through completion of a final, capstone project

Explain how the revitalized course will enhance student learning and improve student success.

Fewer than 50% of students who place into Mathematics Learning Support courses successfully complete the required five competencies and their next college-level math course within the recommended two semesters. Offering targeted remedial instruction to those borderline students while they are enrolled in MATH1530, will increase their likelihood of completing of both the Learning Support competencies and the college-level math course in one semester.

Additionally, the capstone project will include analyzing large sets of real data, drawing conclusions through statistical inference on the data, and preparing written and oral reports to present students’ findings. This will offer a richer, hands-on experience of statistics, enhancing student learning through engagement and active learning.
**Describe the pilot phase and its project objectives.**

The pilot phase will begin fall 2014 with at least one co-requisite section at each campus. Participating faculty will be identified during spring 2014. During the pilot phase, the team will monitor the following aspects of the course:

- Enrollment, especially at site campuses
- Appropriateness of the 17-18 MATH ACT cutoff
- Progress towards success in completing the remedial competencies
- Progress towards success in completing MATH1530

**Outline all of the steps that will be required to complete the project.**

The revitalization team plans to accomplish the following steps:

- Develop the embedded co-requisite curriculum and methods of assessment (Jan-Mar 2014)
- Identify and train faculty participating in the pilot sections (Apr-Aug 2014)
- Collaborate with administration to determine scheduling and number of pilot sections (Feb-Mar 2014)
- Inform academic advisors of requirements for co-requisite sections of MATH1530 prior to Fall Registration (Mar-Apr 2014)
- Continuously monitor and evaluate students’ progress toward completing remedial competencies and MATH1530 learning objectives (Aug-Dec 2014)

**Explain the formative evaluation methods (reflective process used to measure and improve the quality of student learning during the pilot phase).**

- Initial diagnostic test for co-requisite students
- Subsequent competency reports compiled at regular intervals throughout the semester
- Timeline of expected progress for satisfactory completion of remedial competencies

**Explain the summative evaluation methods (reflective process used to measure the effectiveness of course-delivery methods in achieving project objectives).**

- Completion rates higher than those currently seen for the students requiring the remediation
- Demonstration of proficiency in remedial competencies and traditional MATH 1530 student learning objectives
- Participation in a department-wide general education assessment final exam
**Identify who has to take the course.**

Pellissippi State offers 27 career/technical Associate of Applied Science programs of study and 40 Tennessee Transfer Pathway majors for Associate of Art or Associate of Science degrees. In total, 80% of the programs and majors offered either require or accept MATH1530 as credit towards completion of a degree.

**Identify the average annual course enrollment or justify the estimated annual course enrollment if different.**

Average annual enrollment in the traditional sections of MATH1530 is approximately 1600 students. This past fall there were an estimated 400 incoming, first-time students that had an ACT MATH score of 17 or 18 and were enrolled in Mathematics Learning Support courses. Through academic advising, it will be recommended that all students with a 17 or 18 enroll in a co-requisite section of MATH1530.

**Is this redesign part of a collaborative with another submission?**

No.