1. **Project description:** To improve student performance in remedial/developmental mathematics courses, MCC proposes the following self-paced, individualized, computerized course redesign based on the emporium model used at Cleveland State. The proposed project would require funding for a consultant, infrastructure for a 65-station computer lab, and support for staffing the lab. The emporium model utilizes a learning resource center featuring online materials and on-demand personalized assistance, using a) an open attendance model or b) a required attendance model depending on student motivation and experience levels. Students at MCC would be required to attend both a computer classroom for an hour a week with the balance of their scheduled time in a computer math lab.

The initial work of creating the course outlines is being finalized. Resources are needed to support faculty in selecting course materials, networking with discipline and related MCC faculty, creating common materials (modules incorporating diagnostics, homework, quizzes, exams), establishing common policies that will support student success, and generating the necessary infrastructure.

John Squires has led a successful course redesign at Cleveland State Community College. Having him visit the campus on December 4th and 5th (Stage One) to consult with the MCC faculty, the system math faculty, and the administration will help to guide MCC math department with the additional changes and modifications needed to successfully implement this math course redesign based on our current infrastructure.

2. This is a new project.

3. Cleveland State Community College implemented this course redesign model with the following success (taken from http://thencat.org/Newsletters/Jan09.htm#1):

**Student Learning Outcomes**

Cleveland State assessed student learning outcomes by comparing common content items from selected departmental final exams administered in the traditional format during the previous five years to the redesigned sections in spring and fall 2008.

- In Basic Math, the number of common test items answered correctly increased from 73.3% to 86.2% in fall 2008.
- In Elementary Algebra, the number increased from 70.3% to 86.2% in spring 2008 and 83.8% in fall 2008.
- In Intermediate Algebra, the number increased from 77.3% to 90.1% in spring 2008 and 88.7% in fall 2008.
Course Completion Rates

Prior to the redesign, an average of 55% of students taking any developmental math course at Cleveland State earned a final grade of A, B or C. After the redesign during fall 2008, 72% earned an A, B or C, which represents a 31% increase in course completion rates.

- **Basic Math**: Course completion rates improved from 52% to 65%, and the average grade increased from 1.92 to 2.53. Students in Basic Math were required to do a mountain of work, with the average student performing more than 1,000 exercises in the semester. This amount of work will serve to better prepare the students for success in their future math courses.

- **Elementary Algebra**: Course completion rates improved from 52% to 70% in spring 2008 and 67% in fall 2008, and the average grade increased from 1.95 to 2.88 and 2.63 respectively.

- **Intermediate Algebra**: Course completion rates improved from 56% to 71% in spring 2008 and 79% in fall 2008, and the average grade increased from 2.02 to 2.85 and 3.20 respectively.

See the complete report at the following link: [http://www.pearsoned.com/pr_2009/021709b.htm](http://www.pearsoned.com/pr_2009/021709b.htm), along with additional information at: [http://thencat.org/Newsletters/Jan09.htm#1](http://thencat.org/Newsletters/Jan09.htm#1)

4. There are currently no CC partners on this particular project. There is potential for packaging the model as a beta site and then sharing the developed materials with other campuses. MCC will network with others in the system that are piloting math course redesigns for student success.

5. UH Strategic Outcome 2.3 (Increase Developmental Success)

6. Once infrastructure (computer lab with 65 stations) is in place, the project will be funded through continuing student enrollment- tuition and fee. Additional funding for computers will be from Laptop Initiative Phase II

7. Evaluation will be measured by student retention, student persistence, student readiness in subsequent math courses, and student focus groups. (The R/D committee recommends evaluation be done by external evaluators.)

8. This project reduces delivery costs and time for students by compressing the sequence of math courses from two three-credit courses to one three-credit course (MATH 18) and two three-credit courses to one four-credit courses (MATH 82), shortening the math sequence from four semesters to two semesters.
## Proposed Budget for Math Course Redesign

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimated Cost</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td>Computers for student lab (35@$1000) (Remaining 30 computers to</td>
<td></td>
<td>$35,000</td>
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<td>be paid for by MCC Tech Fees.)</td>
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<tr>
<td>Furniture (60@$500)</td>
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<tr>
<td>Supplies</td>
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<td>Faculty fill-behind time to create necessary course redesign</td>
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<td>$30,000</td>
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<td>infrastructure</td>
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<td><strong>Budget Total</strong></td>
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This proposal has been approved by the VCAA at Maui Community College