

# Modular Delivery and Supplemental Instruction (SI) for Calculus Course

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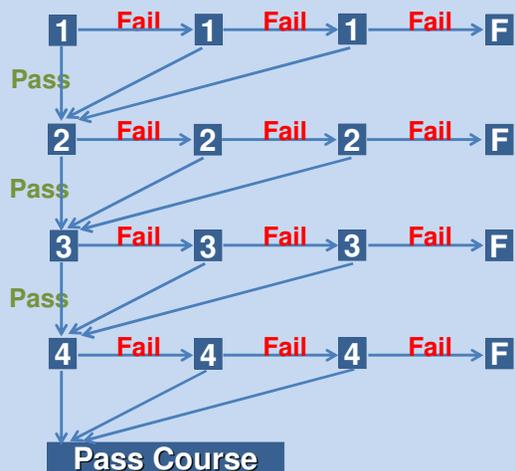
Traditionally the student success rate in a beginning Calculus course has been low.

## Step 1

-The Department of Mathematical Sciences has started to implement a modular course delivery format for Calculus I, based on a similar successful "modularization" of the Precalculus course at UTEP.

- The modular course design divides the curriculum into four parts and the semester into four time intervals.

### Modular Calculus I



## Step 2

-For the last three years we have received funding from the U.S. Department of Education - MSEIP program to provide students in Calculus I with Supplemental Instruction (SI), to enhance student achievement in high-risk courses through collaborative learning techniques.

- The Calculus course will be accompanied by regularly scheduled out-of-class peer-facilitated study sessions.

### Changing the Math Curriculum to include more Peer-Led Learning

#### FORMERLY

Four lectures per week

#### NEW FORMAT (lecture-lab)

Three lectures per week

+

Two hours Supplemental Instruction per week

### Supplemental Instruction (SI)

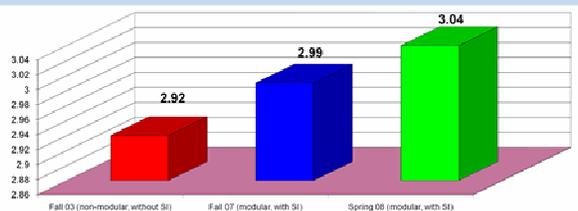
#### What is SI?

- SI targets high-risk courses instead of high-risk students.
- SI is open to all students in the class; it is not remedial.
- SI is active learning in small size sections, group-based, lead by a - SI leader; it is not lecture or study-group or tutoring.
- SI is proactive rather than reactive.
- SI is dynamic, interactive, argumentative and engaging.
- SI begins the first week of class before students encounter academic problems.

#### What are SI leaders?

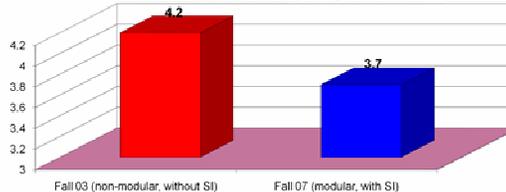
- SI leaders are undergraduate students knowledgeable of the course content and trained in specific teaching/learning theory and techniques.
- SI leaders attend classes with students, read assigned materials, take class notes, and conduct regularly scheduled SI.
- SI leaders, rather than acting as lecturers or teachers, facilitate and encourage the group to process material.

Course Grade of Successful Completers of Calculus I



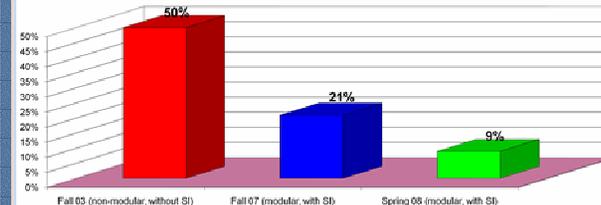
The average course grade of all students finishing the course with a passing grade of A, B, or C.

Completion Time for Three Semesters Sequence  
Precalculus - Calculus I - Calculus II



For the group of students successfully completing Calculus II, we compute how many semesters ago on average they first enrolled in Precalculus.

Drop - Out Rate



The ratio of all students finishing the course with the grade of D, F, or W, to the number of all students registered for the course.