**PEMDAS: Putting Emphasis on Mathematical Development and Success**

At the University of Southern Mississippi, every student is required to take a mathematics course as part of the General Education Curriculum (GEC). The focus of this proposal is an approach to improving student success in mathematics courses and in the use of mathematics in other courses.

The content of the MAT 99 course, Intermediate Algebra, is designed to address deficiencies in mathematical background and preparedness. However, despite the remedial nature of the content, the success of students in MAT 99 is not commensurate with success of students in MAT 100 or MAT 101. Furthermore, several lower-level mathematics courses, including MAT 101, 102, 103 and 114, serve as prerequisites for higher-level courses, both in mathematics and other departments. Unfortunately, a common complaint is that students using mathematics in higher-level courses do not possess the ability to abstract or retain what they have learned in lower-level courses. These issues present an opportunity to make a real difference in student success for a large number of students.

To address these issues, the first proposed initiative is to place more students into College Algebra through placement testing and non-course-based remediation. Students with a low ACT score can demonstrate proficiency by a suitable score on the COMPASS placement test. This avenue for students to avoid remediation is currently under-utilized and under-supported.

Second, fixed scheduling for Math Zone classes (along with reduced class sizes) can be implemented to increase the one-on-one time between instructor and student. In addition to addressing accountability, this provides an easier adjustment to the course design and a more convenient venue to deliver course announcements. It is also recommended to add an alternate attendance credit for each course, in the form of a recitation section that would focus on problem-solving in a group environment. Recitation sessions can address different learning styles, focus on application of concepts, provide active learning and inquiry, and provide students with a more meaningful academic experience.

Third, to increase the effectiveness of all lower-level mathematics courses, a review of content should take place. A stronger emphasis on modeling, while maintaining sufficient preparation in fundamental mathematical operations, would help to clarify the role of College Algebra in the General Education Curriculum. Lower-level math instructors should be exposed to examples of specific problems that their students will eventually see, and, to the extent to which it is practical, incorporate such problems into their own courses. In particular, course materials should include sufficient coverage of applications, which can help instructors to develop more meaningful learning activities. In addition, the mathematics department is currently proposing a course in Statistics to be added to the GEC. A stronger emphasis on modeling and applications in other courses will nicely complement this statistics course.

Finally, it is proposed to offer the following additional support for students and faculty: (1) face-to-face tutoring space in the Math Zone, (2) ongoing professional development targeted to faculty teaching remedial courses, and (3) relaxed test scheduling, including the option of multiple test attempts.