

962-J1-240

**David E Betounes\*** ([david.betounes@usm.edu](mailto:david.betounes@usm.edu)), Mathematics Department, Univ. of Southern Mississippi, Hattiesburg, MS 39406, and **Mylan E Redfern** ([m.redfern@usm.edu](mailto:m.redfern@usm.edu)), Mathematics Department, University of Southern Mississippi, Hattiesburg, MS 39406. *A Math Course to Teach Computer Programming using Maple*. Preliminary report.

We describe a new math course: MAT 305 *Mathematical Computing*, and a book: *Mathematical Computing: An Introduction to Programming using Maple*, that we have developed in conjunction with a recent NSF CCLI-CMD Grant (DUE-9950705). The course is designed to teach the fundamentals of computer programming with an emphasis on programs and projects that involve ideas and concepts from the calculus sequence. The course is meant to supplement the standard programming courses in C, FORTRAN, etc., that math and science majors presently take. It is intended to not only teach them how to construct computer algorithms for solving complex problems but also to reinforce the calculus techniques they have learned. This course serves also to prepare our students to use Maple in their other upper-division courses both inside and outside of the department. In particular the course MAT 492: *Projects in Computation* is offered as a senior level course that requires the background and experience in programming with Maple that MAT 305 provides. (Received September 01, 2000)