

Meeting: 1003, Atlanta, Georgia, MAA CP II, MAA Session on Initializing and Sustaining Undergraduate Research Projects and Programs

1003-I1-451 **Jennifer A. Bruce*** (jennifer.bruce@maryvillecollege.edu), Division of Mathematics and Computer Science, Maryville College, Maryville, TN 37804. *Research for Every Student: The Senior Study Program in Mathematics at Maryville College*. Preliminary report.

The Senior Study program at Maryville College is a two-semester required course in which each student works under the guidance of a faculty supervisor to complete a substantial piece of research in their major field. The challenge is to make the course a worthwhile capstone experience for both the strongest and weakest students. This requires broadening our definition of 'mathematical research' to make it accessible to students of all ability levels. This paper outlines the possible types of studies that are available to our students, and the methods we are employing to make this a workable process in our department. We address such challenges as finding suitable topics, teaching a scientific writing style, ensuring a consistent format, and weighing the merits of projects that make original contributions to mathematics against historical studies about mathematics. In particular, we provide an overview of our online Senior Study Guide, which leads the student through the research process step-by-step; from how to choose a topic and an advisor, to how to write an abstract and format a bibliography. The guide also includes a formatting template that allows each student to typeset their final project using Scientific Workplace. (Received September 14, 2004)