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A laboratory course in mathematics.

Peterson, Mark A. (ed.) et al., Directions for mathematics research experience for undergraduates. Based on the conference “New directions for mathematics research experiences for undergraduates”, Mount Holyoke College, South Hadley, MA, USA, June 21–22, 2013. Hackensack, NJ: World Scientific (ISBN 978-981-4630-31-3/hbk; 978-981-4630-33-7/ebook). 33-52 (2016).

Summary: For the past eleven years, the Mathematics Department at the Massachusetts Institute of Technology has offered an undergraduate course known as 18.821 Project Laboratory in Mathematics. The course is designed to give students a sense of what it is like to do mathematical research. It exhibits characteristics of undergraduate research programs and Inquiry Based Learning courses, but it does not fit comfortably in either camp. This paper describes the course and its reception by faculty and students, and explores its relationship to contemporary trends in learning theory.

Classification: D45 D35

Keywords: undergraduate research; laboratory course; inquiry-based learning

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