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Morteza Shafii-Mousavi* (mshafii@iusb.edu), Mathematics and Computer Science, Indiana University South Bend, P.O.Box 7111, South Bend, IN 46634, **Paul Kochanowski** (pkochano@iusb.edu), Business and Economics, Indiana University South Bend, P.O.Box 7111, South Bend, IN 46634, and **Jesse H Warren**, South Bend Community School Corporation, Administrative Offices, 635 S. Main Street, South Bend, IN 46601. *Mathematics In Action: Social and industrial Problems.*

This paper describes an interdisciplinary course entitled "Mathematics in Action: Social and Industrial Problems" sponsored by the NSF grant "Mathematics and Science Throughout the Undergraduate Curriculum". The course has been successfully developed and team-taught at Indiana University South Bend for freshmen students with diverse academic interests. In the course, students learn mathematics by modeling and solving actual real-world problems in business, industry, social and governmental agencies such as banks, school corporations, industries, government agencies, and social organizations. Projects are selected to emphasize finite mathematics tools and are assigned to students who work in teams, with three or four students on each team. The learning activities that take place in working on the projects cut across all disciplines and benefit education majors as much as they do science and business majors. We will share our experience of several facets of the course including, the acquiring of projects, the dynamics of the teams, assessment of students' work, and lessons we have learned in dealing with the practice of mathematics outside of academia. Organization representatives describe the value of students' project to their organizations. (Received September 02, 2000)