SENIOR PROJECT:
AN OVERVIEW OF THE UNDERGRADUATE THESIS

While institutions of higher learning conduct research at the graduate level, Cal Poly also recognizes the advantages of research experiences for undergraduate students through the senior project. A tradition at this University dating back to 1940, the senior project is a formal report of the results of a study or experiment. The undergraduate thesis demonstrates a student's ability to reduce a problem to specific points of analysis, organize points into a logical sequence, apply competencies acquired in other courses, obtain information necessary to the solution of a problem, and organize and write a clear and concise report (Campus Administrative Manual). Through the senior project, students develop research methods, acquire skills in presenting findings, increase subject matter confidence and expertise in a chosen area, develop organizational ability, identify problems and solutions, improve communication skills, develop networking and career-related skills, and provide a unique contribution to the body of knowledge of a discipline. The final report is tangible evidence of the ability to conduct research and prepare a comprehensive report.

The senior project in Industrial Technology is a one-quarter (10-week), three-unit class and is the culmination of the academic program. This requirement is a student initiated, independent project and report. Some student projects have involved development of items (proposals, plan, prototypes, equipment, designs, manuals, brochures, videos, lessons, etc.) which are then evaluated by professionals, users, industry representatives, etc. Some students conduct investigations for potential employers or industry partners, compare or test products, or conduct laboratory evaluations.

The process includes identifying the problem / objective and providing justification / rationale for the study *(Introduction)* and conducting a comprehensive examination and report of professional information / literature as the background to the topic *(Review of Literature)*. A comprehensive, detailed description of the steps followed in conducting the study is prepared *(Procedure)*. Results are presented and discussed in narrative forms and in tables and /or figures *(Results and Discussion)*. Conclusions are drawn and suggestions for further study are presented *(Conclusions and Recommendations)* adding to the body of knowledge and providing suggestions for further projects.

Ideally, studies should be of interest to students and have practical value i.e., provide learning, increase career potential, provide benefits to business/industry, be timely (cutting edge), etc. They may be research and/or project oriented. Project oriented studies which do not have "objective results" require appropriate formal evaluation by experts, professionals, clients, or users, etc.

Several Industrial Technology senior projects have involved conducting studies for business and industry. These provide "real world" opportunities for students while simultaneously assisting industry in problem solving and research. The industry professional must assist the student in defining the problem and identifying the justification / rationale to conduct the study. In addition business / industry contacts frequently provide samples, equipment, testing funds, contributions to the department, etc. Invaluable benefits accrue to those businesses / industries which do not have the resources (personnel and / or time) to conduct the study.

Professionals seeking student help with projects / research may contact the Industrial Technology Department with requests, and the information will be made available to students. The following information should be provided:

- Brief description of the problem / topic
- Name of the professional willing to work with the student
- Contact information (phone, email, address, company name, etc.)

The above should be sent to Industrial Technology, Cal Poly, San Luis Obispo, CA 93407.