

**CAL POLY**  
**IME 596 Internship / Team Project**  
**TEAM PROJECT GUIDELINES AND PROCEDURES**  
**for EMP and ITM Program**

An Internship and Team Project with an industrial sponsoring organization are important components of the Engineering Management Program (EMP) and the Integrated Technology Management (ITM) program. These have proven to be valuable learning experiences that enable students to go beyond what is attainable in the classroom. Specific guidelines and procedures for the Team Project follow. Internship Guidelines are found in a companion document.

**TEAM PROJECT GUIDELINES AND PROCEDURES**

The Team Project component of IME 596 is normally done near the end or after completion of the Internship. Specific guidelines and procedures for Team Project follow in the form of answers to frequently asked questions.

**1. Who is the "Team" in the Team Project?**

The "Team" is made up of student(s), faculty, and industry representatives. There is one (or more) EMP or ITM program students. The industry representatives are from the firm sponsoring the projects. Faculty from the College of Engineering (CENG) are involved in at least an advisory capacity (see item number 5 below). Faculty may also participate directly on the project in a major way as a subject matter expert if the project is sponsored at an appropriate level.

**2. What is the Purpose of the Team Project?**

Team Projects are designed for students to fulfill the primary purposes of the EMP or ITM program, which are:

- The primary purpose of the EMP is to develop high quality, industry ready graduates who will be facilitators of change and integrators of engineering, business, and people issues.
- The primary purpose of the ITM program is to develop high quality, industry ready graduates who will be facilitators of change and integrators of engineering disciplines, industry concerns, and technology management

Both programs focus on change and integration. The EMP has more of a comprehensive business component, while the ITM program may focus more on integration across technical disciplines. With the primary purpose of both programs involving: industry ready graduates, facilitation of change, and cross-organizational integration, the natural culminating experience would be a

significant industry project involving change and integration within the sponsoring firm and conducted by a project team involving one or more students, industry representatives, and faculty.

Team Projects are intended to be a collaborative "learn by doing" experience at the graduate level. The projects are expected to investigate some real and unstructured problem or opportunity within the sponsoring firm, and may typically involve integrative cross-organizational, engineering and management issues. Additionally, Team Projects are intended to achieve the following mutual benefits for participants.

- Graduate students in the EMP and ITM program gain experience with firms through managing key projects and competitive issues of importance to firms.
- Participating firms are able to obtain useful and innovative results from the projects on key problems, opportunities, and issues confronting their firms. Also, the firms get an up-close look at prospective employees.
- Cal Poly faculty can become major contributors if the project is suitably sponsored. Then faculty can gain first-hand involvement with current and future technology management problems and issues. Faculty can then integrate these experiences into future curricula and research.

**3. How are Team Projects Initiated and Approved?**

The initiation and approval process is as follows:

- Team Projects can be identified and proposed by the student before or during the Internship period, by sponsoring industry representatives with the potential problem or opportunity, by

Cal Poly faculty, or by some combination of the above.

- If the Team Project is known before the start of the Internship, then it should be defined in the **Internship / Team Project Proposal Summary**. This is required if more than 4 units are expected for the Team Project component of IME 596.
- If the Team Project is not known before the start of the Internship, then the intern should seek approval from the sponsoring organization during the Internship period. The approval should be obtained on: the project objective, the project scope, major deliverables, the project schedule, and the firm's financial and personnel support.
- The Team Project proposal should also be reviewed and approved by the ITPF Advisor(s) (at least) for consistency with Team Project Guidelines (next).

#### 4. What are the Team Project Guidelines?

- Team Projects should require integration of knowledge and skills across engineering/ technical and business / management disciplines.
- Team Projects should be focused on management of technology, management of technological-engineering change, or other issues associated with technological-engineering change in enterprises.
- Team Projects should represent an unstructured problem or opportunity and be meaningful to managerial or business decisions.
- Team projects should involve one or more students, one or more key representatives from the sponsoring organization, and (with sufficient sponsorship) one or more faculty members.
- Team Projects should be scheduled to be conducted over a period of approximately three to nine months.
- The combined Internship and Team Project components should be of a scope that is approximately equivalent to 10 units of course credit. The Team Project portion of IME 596 may vary from a minimum of 4 units to a maximum of 7 units of course credit. This means that the project scope should take at least 120 hours to no more than 210 hours (assuming

3 hours per week per unit for a 10 week quarter).

- The final report from the Team Project must contain an analysis of the competitive and strategic context of the sponsoring organization, and how the Team Project fits into that context.

#### 5. Who Ensures that Guidelines are Followed?

The Internship and Team Project components of the EMP and ITM program will be coordinated with an Internship/Team Project Faculty (ITPF) Advisor(s). The ITPF Advisor(s) will consist of one or two faculty members from the CENG. Other faculty member(s) may also be involved for an individual student depending on the project requirements and sponsorship level of the specific Team Project.

#### 6. What are the Student Responsibilities on the Team Project?

The EMP and ITM program student acts as the project manager for the Team Project. The project manager is responsible for:

- defining/documenting/obtaining approval for all critical components of the project, including: project objective, statement of work, scope, major deliverables, intermediate and final milestones, schedule, and cost of project,
- ensuring that project components are achievable, and meet the needs of the client firm.
- developing consensus on the roles and responsibilities of individual team members,
- defining individual project tasks with the team and ensuring their completion,
- identifying and overcoming barriers to project success,
- seeking help and other advice as needed to assure successful completion of the project,
- preparing project status reports as appropriate.

If the project has no funded faculty sponsorship, the ITPF Advisor(s) will act only in a general faculty advisor role. If the project is a sponsored project that funds significant faculty involvement, then the project manager works with the faculty and coordinates the above activities between the faculty and the sponsoring firm representatives.

For either case, at the end of the project, the project manager must:

- draft and finalize the comprehensive **Team Project Final Report**,
- complete the **Feedback on Team Project** form (see attached),
- verify that the other sponsoring firm project team member(s) have completed and returned their feedback forms, and
- turn-in the completed **Team Project Final Report** and feedback forms to the ITPF Advisor(s) as the final step in the project.

## 7. What are the Sponsoring Firm Responsibilities?

The sponsoring firm is responsible for:

- assigning a project mentor for the student(s) to facilitate their experience and to provide a focal point for the Team Project,
- helping student(s) define the scope of the Team Project so it is feasible, useful to the firm, and meets the Team Project Guidelines,
- validating the written project objective, statement of work, scope, major deliverables, intermediate milestones, schedule, and cost of project prepared by the student,
- coordinating the activities within the sponsoring organization to ensure the success of the Team Project, and
- ensuring that administrative requirements are completed in a timely manner (e.g., Team Project payments, nondisclosure statements).

The Team Project mentor can provide a critical role in facilitating the successful outcome of the Team Project through his or her communication of the Team Project purpose for the firm and (as applicable), through advanced discussion with other individuals in the firm involved with the project. As a final step in the project, the mentor will be asked to complete the **Feedback on Team Project** form (see attached) and return it to the faculty members of the ITPF Advisor(s).

## 8. What are Faculty Responsibilities?

Cal Poly faculty involved with the EMP and ITM program believe that the Team Project is a critical component of both programs. As such, we are extremely interested in ensuring that the Team Project: provides a rich experience for the students, provides useful outcomes for the sponsoring firm,

and operates smoothly for all. The ITPF Advisor(s) will:

- Establish and maintain guidelines and processes for the Team Projects to communicate to EMP and ITM program students and to sponsoring firm representatives.
- Collaborate with students and sponsoring firm supervisors/mentors as appropriate, to achieve consensus by all parties involved regarding the Team Project assignment.
- Approve the **Internship / Team Project Proposal Summary** before the start of the Team Project so the student may receive the appropriate level of academic credit for the Team Project via IME 596.
- Review the student's final report, the **Team Project Final Report**, at the conclusion of the Team Project.
- Review the employer's final report on the student(s) for the Team Project (see attached **Feedback on Team Project**).
- Be available to answer questions and to help resolve potential problems as the need arises.
- Assign a grade (i.e., A, B, C,...) for each student enrolled in IME 596 for the Team Project.
- Identify and implement continuous improvements to the EMP and ITM program Team Project process.

## 9. How is Satisfactory Completion and Grade of the Team Project Determined?

EMP and ITM program students enroll in IME 596 for the Team Project. Receiving credit for the Team Project requires the successful and timely completion of all of the following:

- **Team Project Plan** approval at start of project,
- **Comprehensive Team Project Final Report** on the assignment due before end of Team Project quarter,

- The **Feedback on Team Project** form completed by the employer (see attached) due before end of Team Project quarter,
- The **Feedback on Team Project** form completed by the student(s) that conducted the Team Project (see attached) due before end of Team Project quarter, and
- Receipt of the above by student's ITPF Advisor(s) for the Team Project on or before above due dates .

The student grade for the IME 596 Team Project will be based on all of the above feedback. Also,

adhering to due dates above will be a factor in determining grades.

#### **10. How is the Team Project Process Continuously Improved?**

The *Feedback on Team Project* form is to be completed by every project team member (students/faculty/industry mentor) as noted in items 5 through 9 above. This feedback will provide important information both for the continuous improvement of Team Projects (both process and mutually beneficial outcomes) and for assigning course credit to students as already noted.

### **FINAL REMARKS and NEXT STEPS**

The EMP and ITM program faculty appreciate the willingness of firms to sponsor Team Project opportunities for the students in the Cal Poly EMP and ITM program. We encourage you to ask any questions that may arise before or during the Team Project, and we also welcome additional dialogue and/or suggestions regarding the programs, the Internships, and the Team Projects.

For further information, please contact:

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**CAL POLY**  
**Engineering Management Program (EMP) and**  
**Integrated Technology Management (ITM) Program**  
**San Luis Obispo, CA 93407**

**FEEDBACK on TEAM PROJECT**

Firm Sponsoring Team Project \_\_\_\_\_ Date \_\_\_\_\_

Evaluator Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Email : \_\_\_\_\_

Team Project Members:

Student(s) (Project Manager.) \_\_\_\_\_

Sponsor Representative \_\_\_\_\_

Faculty Representative(s) \_\_\_\_\_

The evaluation feedback on each Team Project is needed at the conclusion of each project. This form is to be completed by student(s), faculty, and sponsoring firm contact(s) for each Team Project. The purpose is to give feedback to the student(s) and faculty involved with each project, and to identify continuous improvements to the process of developing and conducting Team Projects.

Use the space provided below to provide your evaluation and feedback, and **RETURN THE COMPLETED FORM TO: Dr. Don White, Chair, IME Department, Cal Poly, San Luis Obispo, CA 93407.**

**PART 1: Evaluation of The Student Project Manager (Students Skip to Part 2)**

	<b>Strongly Disagree</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>Strongly Agree</b>
The EMP/ITM program student project manager:	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1. Successfully defined and achieved Team Project objectives	1	2	3	4	5
2. Identified and overcame barriers to Team Project success	1	2	3	4	5
3. Demonstrated effective management of the Team Project	1	2	3	4	5

4. Please circle the number that best summarizes the overall performance of the student project manager.

<u>Lacking</u>	<u>Adequate</u>	<u>Good</u>	<u>Excellent</u>	<u>Superb</u>
1	2	3	4	5
6	7	8	9	10

Comments on Student Participant(s) (e.g., initiative, drive, communications, interpersonal skills, creativity):

**PART 2: Team Project Overall (All Participants Complete)**

Please provide your overall evaluation of the Team Project and recommendations for improving the process.

1. Please circle the number that best summarizes the overall success of the Team Project.

<u>Lacking</u>		Adequate		Good		Excellent		Superb	
1	2	3	4	5	6	7	8	9	10

2. What were the most important factors that contributed to Team Project Success?

3. What was (were) the most worthwhile outcome(s) of the Team Project?

4. Was the Team Project experience what you expected? How was it the same? How was it different?

5. What aspects of the Team Project process seemed to work well?

6. What improvement suggestions can you offer for the Team Project process?