

Guidelines for Engineering Practice

College of Engineering

Majmaah University

1. Purpose of the engineering practice

Engineers work in various research and development fields. They carry out both planning and managing activities, oversee and coordinate the operation of complex systems, conduct maintenance and perform commercial tasks.

Characteristic of these responsibilities is that a synthesis forms between the various disciplines and aspects.

This should also be reflected in the engineering practice, in which the student acquires know-how and experience from the work world.

The internship is designed not only to familiarize students with specific technologies and work flows, but also to give them practical insights into various activities and fields of work. An additional aspect involves comprehending the social elements of such work.

The student must perceive the operation as a social structure and become familiar with the manager-employee relationship in order to understand their position within the organization and how they can be effective on the job frequently as a supervisor. Generally, the engineering practice can be viewed as part of the student's training and education and an important experience that serves as a building block for the career.

2. Engineering Practice

Typical activities include:

- Examining, developing, designing, calculating and testing engineering concepts, machines, components, materials, processes and methods.
- Production development and planning

Activities that significantly enhance or expand the university course of study are highly recommended. Examples include:

- Project management: planning, coordinating and monitoring the technical and business aspects of projects
- Technical monitoring of complex equipment and systems.
- Creating complex technical proposals
- Engineering-oriented corporate planning
- Reviewing existing or planned technical systems and products to determine the demand, requirements and impact under the aspects of the environment and society.

These activities are carried out at small-to-medium and large companies and government agencies and organizations. The student should strive to gain experience

in a variety of activities and also within different positions in order to become familiar with the various department and corporate cultures.

Since most of these activities require a certain learning curve, students are advised to organize practical training that lasts several weeks.

3. Training report

Successful completion of the internship, or the individual aspects, shall be documented as follows:

- For the engineering practice, in addition to the product and organization descriptions outlined in section 2, the student should also document the work activities carried out during the training. The latter can be omitted if the student can provide a copy of the technical report that was written for the company that offered the practical training, provided it covers the timeframe of the practical training.
- Certificates (forms), acknowledgements from the company. In addition, the company must provide a stamped separate forms for progress and student performance (6 and 7).
- Confirmation of the training activities occurs once the Engineering practice Unit has received the progress and performance report and reviewed the student's report.

4. Training supervision

At training companies, students are typically supervised by a qualified trainer who ensures they receive proper practical training in accordance with the available opportunities at the company and in line with the internship guidelines.

The trainer also provides technical instruction through various discussions with the students.

Members from college of engineering staff and engineering practice committee visit the training sites to make sure the students follow the training plan and safety measures.

5. Guidelines for the intern's conduct

Students are not afforded special treatment during their practical training. They can gain the respect and recognition of their supervisors and colleagues by conscientiously observing company regulations and work schedules and exhibiting exemplary operational discipline, an eagerness to learn, diligence, outstanding performance and a willingness to help.

Apart from the organizational contexts, engineering technology and the relationship between machine and manual labor, the intern should also acquire an understanding of the human side of the operation and how it impacts the production flows.

6. Vacation, illness, missing days

If the student misses more than three days of the engineering practical training, these days must be made up. This includes days missed because of illness, vacation or other reasons.

Company holidays also count as missed days. Legal holidays are the only exception. If days are missed, the student should seek an extension with the training enterprise in order to complete the affected part of the training as required.

7. Students' safety

The committee assesses the dangers which may have happened to the students during their training in the site and make plans to reduce and avoid these dangers.

8. Insurance

Insurance issues are covered under applicable laws of Kingdom of Saudi Arabia.

9. Committee follow up

The committee members visit the sites to have a clear knowledge about the nature of the tasks that students do during the training. The visits to the training sites include give consultation to the students and have a notes about the company and the benefits that students gain during their training period.