

King Fahd University of Petroleum and Minerals



جامعة الملك فهد للبترول والمعادن
King Fahd University of Petroleum & Minerals

Mechanical Engineering Department

COOP Guidelines for AME Students

All required COOP forms are available through the ME COOP Website

<http://www.kfupm.edu.sa/departments/me/Pages/en/COOP-Training.aspx>

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Chairman Message

Dear Coop Student

Welcome to the Coop training program, we hope you will find it fruitful and enjoyable before you embark on your career after KFUPM.

Taking Coop training will open the door to the learning by doing environment. The coop training is another learning phase in the student's life. We hope that the Coop training will pave the road for the student to the real working environment.

The ME Department is expecting you to take advantage of this opportunity to use it efficiently in learning and performing in a professional and ethical manner. It is your opportunity to build your communication and technical skills by interacting with technical and administrative staff in the industry.

During the coop training, kindly remember that you represent KFUPM, your Department as well as yourselves. Your professional and ethical performance will reflect on you and the University. They could also affect the placement of future KFUPM students.

We are confident that you will come out of the Coop experience professionally rewarded and enriched with new experiences, and make the Department proud.

We wish you all the best.

Dr. Zuhair Gasem
ME Chairman

1. INTRODUCTION

The ME Department at KFUPM recognizes the importance and the value of the Coop training program and its impact on student's education. The Coop program constitutes an integral part of student's education. In the Coop program, students are exposed to a real world work environment, where they are provided with the necessary tools and practical applications in order to understand and complement their acquired knowledge in their field of study at the University.

- The Coop is a 9 credit hour course.
- The Coop period is 28 continuous weeks of practical work in a relevant field of industry.

The ME Department expects students to build self discipline, confidence and practice proper work ethics during the Coop training.

2. OBJECTIVES

To give ME students the opportunity to work in a company where they can benefit from a real world work environment that would assist them to develop their individual and interpersonal team work skills, independence of judgment, work ethics, decision making and problem solving skills, and utilize their academic background.

3. REQUIREMENTS

3.1 University Requirements

The following criteria should be met before a student is considered eligible for admission to the Coop program:

- Student must have completed a minimum of 85 credit hours.
- Student must have a cumulative and major GPA > 2.0.
- Student must have completed or is currently enrolled in ENG 214 (Academic and Professional Communication).
- Student is not subject to dismissal for academic causes.
- Student must spend at least one semester at the University after finishing his Coop training.
- Student is not allowed to register for any other courses during the Coop program.

3.2 Department Requirements

The following department criteria should be met in addition to the above university criteria before a student is considered eligible for admission to the Coop program. Student must have finished or taking the following courses in the semester preceding the Coop period:

- ME 307: Machine Design I
- ME 315: Heat Transfer

- ME 309: Mechanics of Machines.
- ME414: Senior Design Project I
- All 200 level courses are completed before COOP training starts

4. DURATION OF THE COOP

The COOP duration is 28 continuous weeks (that is a semester and a summer) without counting Ramadhan and Hajj holidays. The Coop duration spans one regular semester and one summer semester. Two scenarios are possible:

- Spring + Summer (Group A)
- Summer + Fall (Group B)

5. PRIOR COOP TRAINING PERIOD (BEFORE COOP)

5.1 Coop Training within the Kingdom

Students planning to take Coop training should complete the following steps during the semester preceding the Coop:

1. Eligible students for Coop training will automatically receive a notice from the Registrar's Office either by a text message or by email. Accordingly, the ME Department will receive the same and a list of students eligible for Coop will be posted through the ME Coop Website <http://www2.kfupm.edu.sa/me/Coop.html> .
2. Eligible students planning to take the Coop should first fill out the **Coop Check List** form under the supervision of their academic advisors. The form is available through the ME Coop Website.
3. The **Coop Check List** must be signed by the student's Academic Advisor. A copy of the **Coop Check List** must be submitted to the ME Coop Coordinator for approval while the original must be submitted to the Training Department at the Deanship of Students Affairs.
4. During the preregistration period, students seeking to have their Coop and satisfying the above requirements must register for the course ME 350/351.
5. Normally, the registrar will approve most of the registered students for Coop after approval of the Coop Coordinator. However, the registrar may delay the approval until the end of the semester or may not approve the registration for some students who do not satisfy any of the above requirements.
6. Students are then required to follow the procedure set by training department to apply for coop opportunities. They need to follow up with the Training Department for the company placement in order to avoid any delay in the starting of the training program with the hosting company. The link for the Training Department at KFUPM is: <http://www.kfupm.edu.sa/stuttraining> .

7. The Training Department and ME Department encourage students to make their own arrangement to find a hosting company that would provide appropriate training opportunities. In this case, both parties, the company and the student, must fill out the “**Training Opportunity**” form and obtain approval of the Coop Coordinator. A copy of the approved training opportunity is required by both the Training Department and the Coop Coordinator. The **Training Opportunity** form may be downloaded through the ME Coop Website.
8. All required paper work must be completed before the stated deadlines in order to receive the Department approval on time.
9. Students with cumulative or major **GPA <2** or those who do not satisfy any of the University and ME Requirements need to fill out a “**Petition Form**” together with the “**Coop Checklist Form**”. The **Petition Form** can be downloaded through ME Coop Website.
10. Recommendation of the Coop Coordinator is required for processing the **Petition Form**. Accordingly, students need to submit the two forms (**Petition Form** and **Checklist Form**) to the ME Chairman’s Office for further processing.

5.2 Coop Training Outside the Kingdom

The following criteria should be met for students who desire to have their Coop training outside the kingdom:

- 1 Students must have **Cumulative and Major GPA > 3.0** in addition to the above University and ME Department requirements.
- 2 Students must have a minimum grade of “**B**” or above in ENGL 214.
- 3 Students will have an interview that is usually conducted by the Coop Coordinator or training Department.
- 4 Students must write a statement not exceeding 300 words explaining why they want to have their Coop training abroad.
- 5 The Coop Coordinator compiles a short list of eligible students and sends his recommendations to the ME Chairman.
- 6 Next, the ME Chairman forwards the short list of approved students to the Training Department for further processing.
- 7 Students selected by the Training Department will be contacted to provide other necessary documents for the completion of their files.

6. DURING THE COOP PERIOD

1. The Coop student is requested to join the company hosting him for his Coop training on the

prescribed date determined by KFUPM Registrar.

2. The Coop student must spend the whole 28week period in the assigned department(s) of the Coop employer.
3. The Coop student in placement is treated as a regular employee and should obey and adhere to all regulations of the hosting company.
4. During his first week in the company, the Coop student should fill out the “**Contact Guide**” form with the help of his mentor in the company and send one copy to the Training Department and another one to his Coop advisor at KFUPM through Blackboard system. The “**Contact Guide**” form may be downloaded from the ME Coop Website.
5. During the first two weeks in the company, the student should prepare, with the help of his mentor in the company, a **work plan** describing his activities that covers the whole period of his Coop training in the company in accordance with the “**AME Work Plan**” template. The “**AME Work Plan**” template may be downloaded from the ME Coop Website.
6. The mentor responsible for the student’s training approves and signs the proposed filled “**AME Work Plan**”.
7. After the mentor’s approval, the student should provide a copy of the proposed work plan to his Coop advisor at KFUPM through Blackboard course shell in order to discuss its suitability and implementation within the period of training. They (The Advisor and the student) should make sure that the work plan places a rather heavy emphasis (at least 75%) on student’s major. The work plan will serve as a common framework to all parties involved in the execution of the technical aspect of the Coop training process (The student, the advisor and the mentor).
8. Late submission of the work plan is **NOT ACCEPTABLE** and will result in deduction of marks from the student’s final grade. **Table I** of Appendix **A** shows the grading policy regarding the submission of the work plan.
9. During the Coop period, the student should work closely with his mentor in the company and report to his Coop advisor at KFUPM. It is the responsibility of the student to execute all the required tasks and in a timely manner.
10. It is recommended that a student in Coop must have a “**daily diary**” where he can document all his activities during his training period. He should keep records of his daily activities, such as specific tasks performed, field trips made, meetings, seminars and workshops attended. This will help him in remembering and writing all his performed tasks at the time of writing the required reports.
11. If you are not assigned a task, do not wait and do not be passive. Take initiatives, look, and ask for tasks related to your work plan so that execution of your work plan will not be delayed.
12. Pay attention to your work. Ask if you are not sure how to do something. All questions are good questions. (When in doubt ... Don’t do it). Seek your mentor’s assistance.
13. If there is any problem preventing the smooth running of your training, immediately contact your Coop advisor and inform him **in writing**.

14. Be flexible during your training. As long as there is no major deviation from your overall training work plan, then this is acceptable as companies often face personnel emergencies and rotation of staff. If there is, a change that is envisioned to affect negatively on your training program, then immediately inform your Coop advisor.
15. To enrich your practical training experience, do not miss any opportunity to participate in training specialized courses available at the sponsoring organization.
16. Normally, during week 6 to week 18 the Coop coordinator may pay visits to his Coop student. The student and his advisor should plan ahead of time for the dates of these visits. The student should arrange with the company to make it a successful visit. The purpose of these visits is:
 - 16.1 To meet with the student's mentor in the company.
 - 16.2 To get a brief description of the daily activities of the Coop student in the company.
 - 16.3 To check the progress in the execution of the approved work plan.
 - 16.4 To get feedback from the company about KFUPM students in general and AME students in particular.
17. According to the Training Department Office, the Coop coordinator may pay a visit to three students per day within the same location area. (See Procedures for Coop visit memo) available at the ME Coop Website.
18. Preparation of case studies:
 - 18.1 Write about the origin of the problem and its frequency.
 - 18.2 Describe the ways discussed to solve the problem.
 - 18.3 Explain why such a solution was adopted to the problem and what could be alternative solutions?
 - 18.4 Write a brief estimate of the cost of repairing versus the cost of replacement (in terms of cost + time).
19. A design case is another requirement that must be fulfilled. Please refer to the sample coop report for more information about the design case
20. Submit on time all required reports and summaries to the Coop advisor as indicated by the **AME Coop Calendar in Table II of Appendix B**.
21. The Coop trainee is responsible to make sure that the employer sends Evaluation Report Forms (1) and (2) to The training Department and Coop Coordinator according the following schedule:

The evaluation forms may be downloaded from the following links:

(http://www2.kfupm.edu.sa/me/Coop.html/Company_Evaluation_1) in week 8 and

(http://www2.kfupm.edu.sa/me/Coop.html/Company_Evaluation_2) after completion of training

7. ETHICS

1. The Coop student should respect the Coop employer's property, maintain good order within the department, and do nothing to harm the reputation of his Coop employer in any way.
2. Since businesses are founded on mutual trust, integrity, and public confidence, Coop students should not discuss confidential issues with anyone who is not directly involved with the Coop employer.
3. Coop students should be punctual (on time) and always remember that they are representing the University at the training institution.
4. Coop students should inform their mentors if they will be absent due to illness, or will be late.
5. Coop students should not ask to leave early.
6. Coop students should dress appropriately according to the company regulations (Discuss attire with supervisor. In some locations protective goggles, safety shoes and special uniforms are required to access certain areas of the company).
7. Coop students should not use companies' telephones for personal use.
8. Coop students should not ask, or expect others to do their work.
9. Coop students should complete assigned duties before leaving work.

8. AFTER THE COOP

The Coop student should return to the university for at least one semester after completion of his Coop training. He must register the remaining courses as per the University requirements for his graduation. The following steps clarify the “**After Coop Period**” related to the Coop training:

- 1 After Coop training, the student must immediately contact his advisor for the write up of the final Coop report.
- 2 The student should strictly observe the deadlines indicated in the **AME Coop Calendar** when submitting the required Coop reports. Any late submission will result in the deduction of marks.
- 3 The final report should be thermally bound. It should be written by the Coop student using his own words. The student should particularly elaborate on **case and design studies** and must take into account all remarks and suggestions pointed out by the Coop advisor. **Quality** is more important than **Quantity**. About 35-page report that captures the most important points well is more informative than a lengthy one that does not clearly show the student's contribution.(Maximum number of pages of the final report is 35).
- 4 The final report is to be submitted through Blackboard Course shell, the student should include the followings:

- 4.1 The final Coop report signed by both the Coop advisor and the student.
- 4.2 Copy of the approved work plan.

5. The Coop Coordinator will form Coop oral exam committees (examiners) and groups of students to be examined. Each group of students is assigned a Coop oral exam committee. Depending on the number of students, each group consists of 4 to 6 students. Usually a Coop oral exam committee comprises 3 faculty members one of them is the Chairman of the committee.

6. The Coop coordinator posts the location, time and groups for the oral exams during Week #4. Students are advised to be at the specified locations on time to avoid any delay in their presentations.

7. Each student must deliver a presentation on his COOP training to the examining committee. Each student is given 20 minutes for presentation of his work and 5 minutes for questions.

8. In their evaluation of the student's presentation, examiners use the **AME A3 Form**. It is worthwhile for the student to have a look at this form to have an idea about the points upon which he is going to be assessed. The **AME A3 Form** may be downloaded from the ME Coop Website. The chairman of each exam committee will collect the AME A3 form from each member at the end of the exam presentation. He will take the average mark for each student and submit the earned grades in the attached sheet to the Coop Coordinator no later than 24 hours after the exam time.

9. The Coop advisor will review the final report of the student and will determine the grade as earned using Blackboard grading. He will provide his feedback to coordinator no later than last day of the sixth week.

9. ROLE OF THE COOP ADVISOR

The Coop advisor is a faculty member assigned by the Coop Coordinator. His role is to provide assistance, guidance and help to Coop students. Guidance and help are extremely important ingredients to students' success in their Coop training. His role is not limited to but can be summarized in the following points:

1. To check and approve the suitability of the Coop training plan.
2. To reply to student's enquiries on time.
3. To communicate with the student's company mentor.
4. To pay visits, whenever necessary, to the company to see how the student is performing during his training. Specific date and time for visits must be set as early as possible in agreement with the coop advisor, the student and the mentor in the company. Preferable dates for visitation are suggested by the Training Department Office between week 8 and week 20.
5. To report any changes in the Coop plan or problems related to training to the Coop Coordinator, so that corrective actions, if necessary, can be taken at appropriate times.
6. To monitor the progress of Coop students according to the Coop calendar (submission of drafts and final reports).

7. The Coop Advisor will assign 50 marks out of 100 for student's work in the Coop (as given below).
8. To report earned marks by Coop students to the Coop Coordinator according to the Coop calendar.

10. ROLE OF THE COOP COORDINATOR

The ME Coop Coordinator is usually assigned by the ME Chairman. He is also a member of the Coop University Committee formed by the Rector of the University. His role is not limited to but includes the following:

1. Assigns Coop advisors to Coop students before the starting of the Coop period.
2. Approves all petition forms for Coop students who do not satisfy any University or ME requirements.
3. Checks any eligibility violation during the registration period of the Coop.
4. Approves registered Coop students.
5. Maintain continuous contact with all Coop students using Blackboard.
6. Maintain contacts with:
 - 6.1 Students that completed their Coop and have returned to University.
 - 6.2 Students who are in Coop.
 - 6.3 Students who are in the process of leaving the University for the Coop.
7. Prepare any visit plans scheduled through arrangement with the Training Department.
8. Participate in the gathering organized by the training Department.
9. Communicate with the Training Department, advisors and Coop coordinators from other Departments.
10. Nominate students for training abroad. (See criteria for nomination).
11. Maintain regular meetings organized by the Training Department.
12. Participate in all discussions and recommendations in the Coop University Committee.
13. Forms exams Committees

14. Send email to Registrar to allocate examination rooms for the indicated exam time slots (see AME Coop Calendar).
15. Receives students' marks from three different sources as indicted below:
16. Preparing and assigning the final grades for Coop students based on the marks received from the company, the exam committee and the coop advisor. Final grades will be sent directly to the registrar's office through the portal by the end of the semester.

11. ROLE OF THE COOP MENTOR (Supervisor)

The supervisor in the company is directly involved with the student's duties and performance during his Coop period. His role is not limited to but includes the followings:

- 1 The supervisor is responsible for making the student's training program meaningful and beneficial.
- 2 The supervisor should design a detailed training plan, which covers the whole training period. A copy of the training plan should be sent to the student's Coop advisor for approval.
- 3 If the Coop student does not perform as hoped or his performance does not meet the employer's standards, the supervisor should notify the University so that corrective actions may be taken.
- 4 The supervisor should sign students' progress reports.
- 5 The supervisor should complete and sign two (2) evaluation reports and send them directly to the University Training Department, with a copy to the Coop Coordinator.

Appendix A

Table 1 Grading Policy for AME Work

Source	Evaluation	Weight
The company	Evaluation no. (1) Evaluation no. (2)	25 %
Coop Advisor Elements include: Contact guide (2 marks) Training plan (8 marks) First progress report (10 marks) Second progress report (10 marks) First draft of final report (5 marks) Second draft of final report (5 marks) Final report (60 marks) These marks sum up to 100, they are divided by two to represent 50% of coop grade.	On Blackboard	50 %
Exam Committee Chairman	To appear in Blackboard	25 %
TOTAL		100 %

Appendix B

Table II, Typical AME Coop Calendar (*)

Period	Week #	Event
Coop Training Period (28 weeks)	2 30 Jan	<ul style="list-style-type: none"> Beginning of Coop Program Submission of Contact Guide <ul style="list-style-type: none"> One copy to Coop advisor One copy to Training Department at KFUPM.
	3 6 th February	<ul style="list-style-type: none"> Submission of proposed Work Plan to Coop advisor for approval and grading
	8 12 th March	<ul style="list-style-type: none"> Submission of Company Evaluation (1) by the Employer to the Training Department
	10 26 th March	<ul style="list-style-type: none"> Submission of First Progress Report to Coop advisor
	20 25 th June	<ul style="list-style-type: none"> Submission of Second Progress Report to Coop advisor
	28 20 th August	<ul style="list-style-type: none"> End of Coop Period Submission of Company Evaluation (2) by the Employer to the training Department
Semester Following Coop Training	2 10 th Sept.	<ul style="list-style-type: none"> Submission of the first draft of the final report to Coop advisor
	3 17 th Sept.	<ul style="list-style-type: none"> Submission of the second draft of the final report to Coop advisor
	4 24 th Sept.	<ul style="list-style-type: none"> Submission of the final report as indicated below <ul style="list-style-type: none"> Hard copy to Coop advisor (Thermally bounded). Soft copy to the Coop Coordinator through Blackboard. <p>Notice:</p> <p>(1) Late submission: Deduction of 1 mark for each day late from the final grade.</p> <p>(2) No make up for Coop oral exam.</p>
	Week # 5 27 th Sept.- 1 st Oct.	<ul style="list-style-type: none"> Coop Oral Exam: (Location & time will be announced on week # 4)
	Week # 5 1 st Oct.	<ul style="list-style-type: none"> Due date for exam committees' Chairmen to submit average Coop oral exam.
	Week # 6 1 st Oct.	<ul style="list-style-type: none"> Due Date for Coop advisor to submit the grades through Blackboard

(*) Coop Coordinator E-mail: antar@kfupm.edu.sa

APPENDIX C

TABLE IV Grading Scheme

$$95 \leq A+ \leq 100$$

$$90 \leq A < 95$$

$$85 \leq B+ < 90$$

$$80 \leq B < 85$$

$$70 \leq C+ < 80$$

$$60 \leq C < 70$$

$$50 \leq D+ < 60$$

$$40 \leq D < 50$$

$$F < 40$$