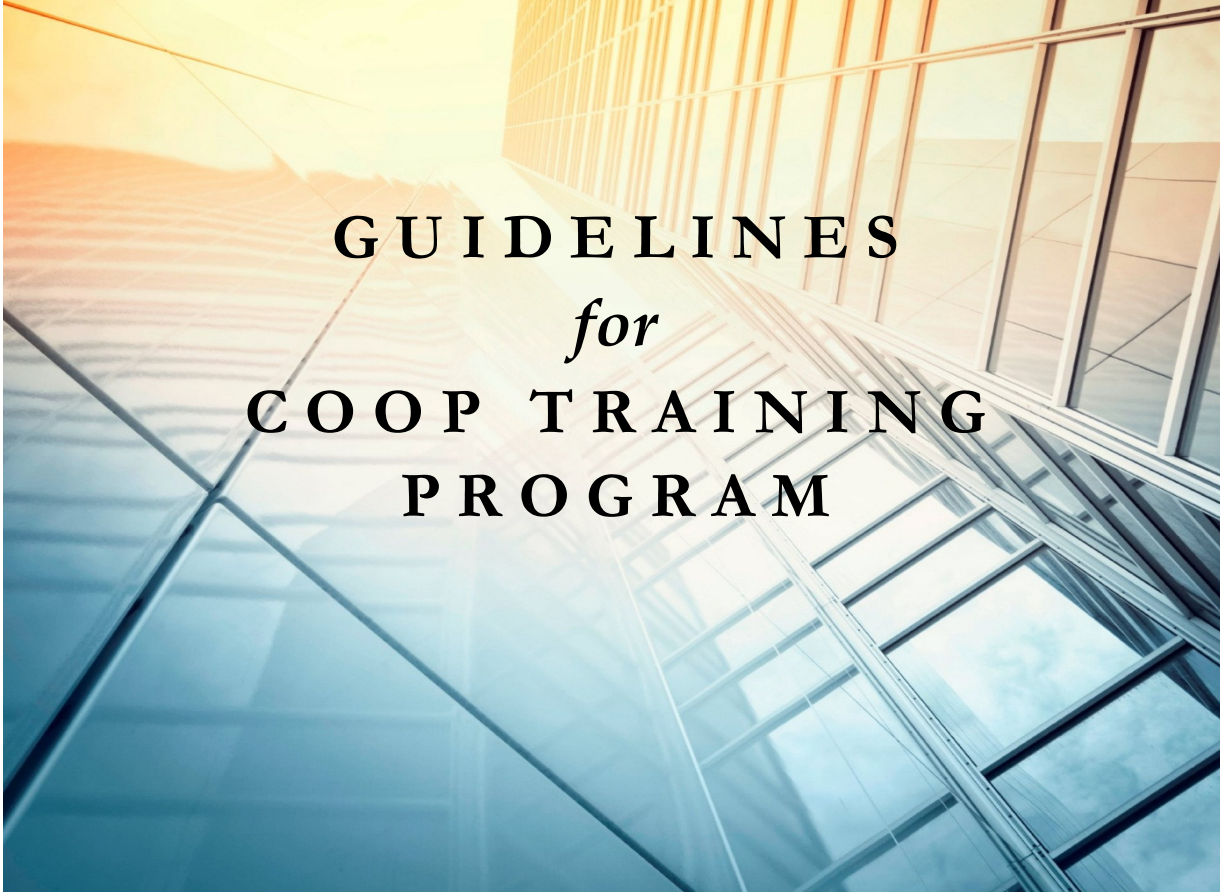




**King Fahd University of Petroleum & Minerals**

**College of Engineering Sciences**

**Mechanical Engineering Department**

The background of the title page is a photograph of a modern building with a glass facade, viewed from a low angle looking up. The sun is shining brightly from the upper left, creating a warm, golden glow and long, diagonal shadows across the glass panels.

# **GUIDELINES** *for* **COOP TRAINING PROGRAM**

All required COOP forms are available through the ME COOP Website

<http://www2.kfupm.edu.sa/me/Coop.html>

**Dr. Abdelaziz Bazoune**

**May 2013**

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## Chairman's 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 and 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 working 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 working environment that will assist them 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.

## 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 e-mail. 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 and stamped by the ME Department. 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 select their preferences for Coop opportunities from the available list of companies at the Training Department (Building 17) as early as possible. 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 does not object if the student makes his own arrangement to find a hosting company that would provide him with an appropriate training. 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.
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 28-week 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. 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 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. Once approved by the Coop advisor, the student must submit a copy of the approved work plan to the mentor in the company and a copy to his advisor **by the end of the third week**. 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 advisor will 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 advisor 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. 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.**
20. 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:

Date	Evaluation Form	Sent by	Sent to
<b>Week # 8</b>	Evaluation no. (1)	Company	<ul style="list-style-type: none"> <li>▪ Training Department and</li> <li>▪ Coop Coordinator.</li> </ul>
<b>Week # 28</b>	Evaluation no. (2)	Company	<ul style="list-style-type: none"> <li>▪ Training Department and</li> <li>▪ Coop Coordinator.</li> </ul>

The evaluation forms may be downloaded from the following links:

([http://www2.kfupm.edu.sa/me/Coop.html/Company\\_Evaluation\\_1](http://www2.kfupm.edu.sa/me/Coop.html/Company_Evaluation_1)) and  
([http://www2.kfupm.edu.sa/me/Coop.html/Company\\_Evaluation\\_2](http://www2.kfupm.edu.sa/me/Coop.html/Company_Evaluation_2))

## 7. ETHICS

- 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.
- 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.
- Coop students should be punctual (on time) and always remember that they are representing the University at the training institution.
- Coop students should inform their mentors if they will be absent due to illness, or will be late.
- Coop students should not ask to leave early.
- 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. (See “**AME A2 Form**” available at the ME Coop Website).
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 studies** and must take into account all remarks and suggestions pointed out by the Coop advisor. **Quality** is more important than **Quantity**. A precise 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. In submitting the final copy of the Coop report (thermally bound) to the Coop Coordinator, the student should include the followings:
  - 4.1 The agreement form (**AME A1 Form**) together with the final Coop report signed by both the Coop advisor and the student. The **AME A1 Form** includes an executive summary of the students' Coop work and a statement indicating that student is ready to take the oral exam. The **AME A1 Form** can be downloaded through the ME Coop Website.
  - 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 on the first day of 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 the evaluation form (**A2-Form**). 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. To sign the agreement form (**AME A1 Form**) that includes:
  - 7.1 Executive summary of the student's work.
  - 7.2 Statement indicating the readiness of the student for oral exam presentation.
8. The Coop Advisor will assign 50 marks out of 100 for student's work in the Coop (10 marks for the work plan + 40 marks for reports).
9. To report earned marks by Coop students to the Coop Coordinator (**AME A2 Form**) 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 WebCT.
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. Communicate any visitation plans scheduled by the Training Department to Coop advisors.
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 e-mail 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:

Source	Evaluation	Weight
The company	Evaluation no. (1) Evaluation no. (2)	25 %
Coop Advisor	(AME A2 Form)	50 %
Exam Committee Chairman	(AME A3 Form)	25 %
<b>TOTAL</b>		<b>100 %</b>

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 and will appear in student's transcript 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 I Grading Policy for AME Work Plan**

Submission Dates	Earned Marks for Coop Work Plan
3 <sup>rd</sup> Week	10
4 <sup>th</sup> Week	8
5 <sup>th</sup> Week	5
6 <sup>th</sup> Week	3
7 <sup>th</sup> Week	1
7 <sup>th</sup> Week	0



## Appendix B

**Table II AME Coop Calendar<sup>(\*)</sup>**

Period	Week #	Event
<b>Coop Training Period (28 weeks )</b>	<b>1</b>	<ul style="list-style-type: none"> <li>▪ <b>Beginning of Coop Program</b></li> <li>▪ <b>Submission of Contact Guide</b> <ul style="list-style-type: none"> <li>▪ One copy to Coop advisor</li> <li>▪ One copy to Training Department at KFUPM.</li> </ul> </li> </ul>
	<b>3 (Wednesday)</b>	▪ <b>Submission of proposed Work Plan</b> to Coop advisor for approval and grading
	<b>8 (Wednesday)</b>	<ul style="list-style-type: none"> <li>▪ <b>Submission of Company Evaluation (1) by the Employer</b> <ul style="list-style-type: none"> <li>▪ One copy to Coop Coordinator<sup>(**)</sup></li> <li>▪ One copy to Training Department at KFUPM.</li> </ul> </li> </ul>
	<b>10 (Wednesday)</b>	▪ <b>Submission of First Progress Report</b> to Coop advisor
	<b>20 (Wednesday)</b>	▪ <b>Submission of Second Progress Report</b> to Coop advisor
	<b>28 (Wednesday)</b>	<ul style="list-style-type: none"> <li>▪ <b>End of Coop Period</b></li> <li>▪ <b>Submission of Company Evaluation (2) by the Employer</b> <ul style="list-style-type: none"> <li>▪ One copy to Coop Coordinator<sup>(**)</sup></li> <li>▪ One copy to Training Department at KFUPM.</li> </ul> </li> </ul>
<b>Semester Following Coop Training</b>	<b>2 (Monday)</b>	▪ <b>Submission of the first draft</b> of the final report to Coop advisor
	<b>3 (Wednesday)</b>	▪ <b>Submission of the second draft</b> of the final report to Coop advisor
	<b>4 (Saturday)</b>	<ul style="list-style-type: none"> <li>▪ <b>Submission of the final report as indicated below</b> <ul style="list-style-type: none"> <li>▪ Hard copy to Coop advisor (Thermally bounded).</li> <li>▪ Hard copy to Coop Coordinator (Thermally bounded).</li> <li>▪ Soft copy to the Coop Coordinator in a CD.</li> <li>▪ Upload a copy to the WebCT to check the originality of the student's work.</li> </ul> </li> </ul> <p><b>Notice:</b></p> <p>(1) <b>Late submission: Deduction of 1 mark for each day late from the final grade.</b></p> <p>(2) <b>No make up for Coop oral exam.</b></p>
	<b>Week # 5 (Sunday and Tuesday)</b>	▪ <b>Coop Oral Exam:</b> (Location & time will be announced on Sat. of week # 5)
	<b>Week # 5 (Wednesday)</b>	▪ Due date for exam committees' Chairmen to submit average Coop oral exam in XL-sheet format
	<b>Week # 6 (Wednesday)</b>	▪ Due Date for Coop advisor to submit the Evaluation Form (AME - A2 form)

(\*) Refer to the AME-A2 form for the breakdown and distribution of marks.

(\*\*) Coop Coordinator E-mail: [abazoune@kfupm.edu.sa](mailto:abazoune@kfupm.edu.sa)

## APPENDIX C

**TABLE IV Grading Scheme**

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

$$90 \leq A < 95$$

$$85 \leq B+ < 90$$

$$80 \leq B < 85$$

$$70 \leq C+ < 80$$

$$60 \leq C < 70$$

$$50 \leq D+ < 60$$

$$40 \leq D < 50$$

$$F < 40$$