

Course Title: ICS 351 Cooperative Work Guidelines

(0-0-9)

Course Description

A continuous period of 28 weeks spent as a normal employee in industry, business, or government agencies with the purpose of familiarizing students with the real world of work and enabling them to integrate their classroom learning to a real work environment. During this period, a student is exposed to a real-life work in the field.

Each student is required to participate with at least one project. Students are required to submit progress reports during the work period. Students are also required to give a presentation and submit a final report on their experience and the knowledge they gained during their cooperative work.

Course Objectives

1. Gain real world work experience.
2. Develop work habits and work ethics.
3. Gain experience of workplace discipline.
4. Enhance employability skills.
5. Learn how to work with others.
6. Complete a supervised training period in the field.
7. Participate in at least one computer-related project.
8. Apply the knowledge and skills developed in the classroom in a practical work environment.
9. Confirm student concentration and/or career path.
10. Develop business contacts.
11. Experience reporting back in both written and verbal formats.

Course Learning Outcomes

Upon completion of this course, students will have the ability to:

1. Work with a company or organization with self confidence and exercise his skills safely and in a professional manner.
2. Practice an acceptable level of attendance and credibility to gain and maintain employment in a chosen occupation.
3. Exercise negotiating skills and learn how to seek and provide information and discuss problems in a constructive way.
4. Learn what is required to perform a specific task or series of tasks that meet the requirements of a company or organization.
5. Practice the application of theory in real life work.
6. Have a working knowledge of the career he has chosen based on his cooperative work experience.
7. Increase business contact.
8. Write reports according to predetermined guidelines and make oral presentations in English to convey in a limited time, the range of experience obtained on Coop and outline the most important skills learned.

Eligibility for Cooperative Assignment

ICS students who have completed 85 credit-hours or more of study and earned a major grade-point average (MGPA) of 2.0 or above can be nominated for coop training provided that they have taken and passed the following two courses:

1. ENGL 214 (Technical Report Writing)
2. ICS 324 (Database Systems)

3. SWE 311 (Principles of Software Engineering)

The following courses are also recommended:

1. ICS 343 (Fundamentals of Computer Networks)
2. SWE 444 (Web Application Development)

Since the cooperative work must be completed before the student's last semester in the University, it is the responsibility of the student alone with the help of his academic advisor to make sure that these courses have been completed and passed at least two semesters prior to their graduation.

Students who have been nominated and have been provided with training slots must take their coop training as scheduled.

Duration

The Coop duration is 28 weeks (that is a semester and a summer). Two scenarios are possible:

- Group A: COOP period (1-Spring + 1-Summer)
- Group B: COOP period (1-Summer + 1-Fall)

Registration

Eligible students should register as soon as possible. It is recommended that you pass by the coop instructor two semesters before your planning period for coop. Coop training registration usually starts with early registration period of the university. After you early register through the online registration system please pass by the office of ICS coop instructor for discussion. You can get the name and the office location of the coop instructor through the ICS department office.

Program (Plan)

- Every student must have a coop training program (Plan) within the first *two weeks* of his enrolment with the company. It should be signed by the company coop supervisor. The plan will be submitted electronically and reviewed for approval by the coop Instructor. The student will get immediate feedback for possible plan updates.
- Every student must have a project to work on during his training period. In case that if the student is not assigned a project, he must call the instructor.
- A copy of the program should be submitted to the instructor before the end of the *third week* of student enrolment with the company.
- Programs could be handed in, mailed or e-mailed to the instructor.

Program (plan) Outline

Submit a softcopy of your tentative plan for the coop period. A monthly-breakdown estimation of the nature of the work is recommended. Part of the plan should identify the project or the projects you are going to participate with. The plan may be updated later through the coop period. Samples of previous plans are posted at sample-reports section at this site. Please follow the guidelines described in the 'Guidelines' page.

If you have started your coop period late but you could manage to prepare the plan before the deadline of this requirement, please do submit the plan here and do not worry about the

late signal. If you can not submit it here for any reason please submit it in the updated/postponed plan.

The following is a possible outline for a plan:

- Header
 - Student Name, Id, E-Mail, Mobile, office phone
 - Semester, Coop Instructor
 - Company/ Institute name, department, division
 - Supervisor Name, Contact information, Office phone, e-mail
- Introduction: Two to three paragraph introduction the training workplace and the nature of the work
- Project(s): A brief description of the problem statement of each assigned project showing clearly what will be the role of the student in the project and the nature of the project.
- Weekly/ Monthly breakdown schedule in a form of table. A possible header of the table might include: period, Activity, notes
- A Statement indicates that the plan has been reviewed and approved by the training supervisor with his signature on a hard copy (to be kept by student to be submitted as an appendix to the final report).

Contact information

- Every Coop student should send detailed contact information and frequently accessed e-mail address to the instructor as soon as possible through the course management system (WEBCT). The contact information should be updated whenever changed.
- Every Coop student should discuss the progress of his coop program with his *instructor* and maintain continuous proper contact with him.

Course WebCT Page

- Each Coop student must have an access to the WebCT.
- Every Coop student should submit his contact information through WebCT. Please update the contact information whenever needed.
- WebCT is used for submitting the reports, checking your grades, discussing some issues, blogging you weekly activities, sending e-mail...etc.

Student Performance

Coop students performance will be evaluated through the following:

(1) Company Evaluation

- Every student will be evaluated during his coop period twice by his work supervisors. This evaluation will be forwarded to the instructor through the University Coop office. The weight for company evaluation is 15%. The first evaluation has 35% of the 15% and the second evaluation has 65% of the 15%).
- The evaluation is based on the following criteria: Enthusiasm, Accurate work, Quality of work, initiative, dependability, ability to learn, judgment, Relation with others, reporting ability, attendance, punctuality, and overall rating.

(2) Progress Reports:

Each student must submit three progress reports to the instructor by *the seventh, fourteenth and twenty-first week* of the training period respectively. (The exact deadlines are specified in the WEBCT site under the requirements section). The reports should follow the format described below. Progress reports should not exceed 3 pages and submitted electronically through WEBCT. A hard copy of the progress report should be signed by the company supervisor and should be stamped by the company official stamp and kept with the student to be included as an appendix in the final report.

Each progress report will have 5% weight.

Coop Progress Report Format

The reports must be brief (should not exceed 3-pages other than the cover page). Progress reports **MUST** be **SIGNED** by Company Supervisor. The following points **MUST** be addressed in each progress report:

- 1) **Cover Page:** (In addition to University, college, department titles, and progress report number, it should include your name and student ID, Training Company and Department, Company Supervisor Name, Semester (e.g. 981), Advisor name, and coordinator name).
- 2) **Schedule** (Summary of the training Program schedule with dates, duration, and status of various tasks).
- 3) **Description of the accomplished work**
 - Tasks accomplished
 - Approach taken to accomplish tasks
 - Experience gained
 - Techniques learned
- 4) **Description of the unaccomplished work**
 - Partially accomplished and unaccomplished tasks (schedule slip), Explain
 - Problems faced
 - Solutions or attempted solutions
- 5) **Work Plan for the Coming Period and Schedule adjustments**

Coop Progress Report Grading

Cover page	0
Schedule	1
accomplished	1.5
unaccomplished	1.5
Coming Period and Schedule adjustments	1
penalties for lateness	0
total	5

(3) Final report:

- Each student must submit a final report to the instructor through WEBCT at the first day of the semester immediately following the coop-training period (returning semester). The report format should follow the following guidelines. The grading policy of the final report is also included.
- The following is the expected final report structure with expected grading criteria and some description.

Final Report Outline

Main Section	Sub Section	Some Description	Weight (out of 40)	reasonable number of pages	Maximum number of pages unless it is a must
Report Header	Title Page	Cover page that Include your name, ID , Course Name, Instructor, Supervisor The Cover page should also have something similar to the following Final Report Cooperative Work of First Name Family Name at Division/ Department of Company/ Institute Project 1 title: Choose a Title Project 2 title: Choose a Title Project 3title: Choose a Title	1	1	1
	Abstract	An abstract description of what is there in the report. Including the names of the main activities that have been done.	0.5	0.3	1
	Acknowledgments	It is all for you	0	1	1
	Table of Contents	The headers of sections, subsections and sub-subsections (at least 3 levels) with actual page numbers. You need to update the page numbers before you print the final copy to reflect the actual page numbers. Appendices internals could be excluded.	0.3	1	3
	List of Tables	The caption of each table and the actual page number. You need to update the page numbers before you print the final copy to reflect the actual page numbers. Tables inside Appendices could be excluded.	0.1	0.5	3

	List of Figures	The caption of each table and the actual page number. You need to update the page numbers before you print the final copy to reflect the actual page numbers. Figures inside Appendices could be excluded.	0.1	0.5	3
	Introduction	This is an introduction for the report. It might include a brief introduction about the course, work environment, activities, tasks, projects, and the structure of the report. You might need to have a one paragraph as an introduction for each section.	0.5	1	2
Com pany	Organizational Structure	The hierarchical structure of the company. As this section and the next one is usually done using references you should point to the reference number as [1], [2], [3], and so on, then list the references in the References section.	0.25	1	1
	Main product	The main products of the company	0.25	0.3	0.5
	Market	A paragraph or two describing the role of the company in the market related to its products.	0.25	0.3	0.5
	Size	The size if the company including number of branches, areas, employees, etc.	0.25	0.3	0.5
Dep artm ent	Organizational structure	The hierarchical structure of the department showing your place in the hierarchy.	0.5	1	1
	List of Project/Projects assigned with Brief description	Here you only list the project or projects assigned to you with on paragraph describing the problem statement of the project.	0.5	0.5	1
Cont ents	Objective or statement of the problem	In the content section you need to divided per task or per project. For each task or project you need to have an introduction then a specific clear objective(s) of the discussed work. State if the work is team base or not. Show your role clearly.	1.5	0.3 for each problem	1 for each problem

	Theoretical background	This section is very dependent on the nature of the work you are describing. In this section you need to introduce briefly the theoretical background used in your work. If you need to add more details you can add them as an appendix.	1.5	1 for each problem + appendix	5 for each problem
	Data collection and analysis (if applicable)	Describe the high level procedures you went through in this phase. If you have detailed documents as Specification document, SRS, design document, testing document, or other documents describe the work behind them briefly and add them as appendices. Show your role clearly.	3	1 for each problem + appendix	5 for each problem
	My role & Model (if applicable)	You explicitly state what was your role in the task and what the other members (if any) did. Also if you used a model in solving the problem show which model you have used and why you have chosen this model.	1	0.3 for each problem	1 for each problem
	Analysis and Discussion of results versus the expected ones	Here you look and analyze the results. You might show few main screen of your system but detailed screen shots should be added in the appendix. If the results are different than what was expected you need to explain. You might also show the accomplished and unaccomplished parts and the reasons behind that and the problem faced. You might also need to mention the status of the task after it has been completed whether it is in use, production, testing, cancelled, etc.	3	0.5 for each problem + appendix	2 for each problem
	Relationship to ICS courses and your background as a Computer Scientist	Connect things you worked and faced to things you have studied. You might need to connect thing to some elements in the courses rather than connecting to overall of the course.	1	0.3 for each problem	1 for each problem

	Conclusions and Recommendations	You can assume this as two parts: conclusion and recommendation. In the conclusion you need to summarize what you have went through in one or two paragraphs and what things you have learned and skills you have achieved. In the recommendation, it is expected to see your recommendation to the company, ICS department, Next students, and coop instructor.	2	2	3
	References	List of the references you have used. You should use references as you had learned in ENGL 214. You should give them numbers. Also you should put the number where you site something from the reference.	0.5	0.5	2
	Signed Weekly Breakdown	A weekly breakdown signed from your supervisor. Usually in form of a table that contains the list of tasks, their description, and the period.	2	2	3
	Other Appendices	Appendices such as created specification document, requirements and SRS document, design document, system manual, detailed screen shots , detailed theoretical background, other documentation, useful used resources, also other appendices could be added as softcopies in the CD.	1	Open	Open
Format and Presentation	Format and Presentation	If you don't know how to format and present your report the best thing might be is review the material you have covered in ENGL 214 related to report writing. You need to use spell-checking. You need to read your report at least once before printing the final copy. You might need to ask some one to prove-reading your report and get his notes.	4		
Relevancy	Relevancy	Let the report describe all the tasks that you gone through the coop period; not more; not less. Don't miss tasks, don't add irrelevant material.	5		

Over all Struc ture and Cont ents	Overall Structure and overall Contents	Overall Structure and overall Contents	5		
Wor k Qual ity	Work Quality	What quality of work does report reflect.	5		
	Bonus		+++++		
	Reduction - Cheating		-----		

- The hardcopy of the final report **MUST BE SUBMITTED** to the instructor before the *end of the first week* of the semester immediately following the coop-training period.

(4) Presentation

- The ICS department holds a coop workshop day at the beginning of the returning semester. It is usually scheduled at the first Thursday of the returning semester. Every student must give a 20-minute presentation on his coop training in the workshop. The presentation are evaluated by all audience including the students themselves. The evaluation is based on the following criteria: Introduction, Clarity, Knowledge Depth, Content, Delivery, Preparation, Organization, Language Usage, Result & Conclusion, Question & Answer, Over all Evaluation, Presentation Evaluation, and Quality of Work. We use the following for presentation evaluation.

STUDENT NAME	ID#	Order	Name:													
			Introduction/10	Clarity/10	Knowledge Depth/10	Content/10	Delivery/10	Preparation/10	Organization/10	Language Usage/10	Result & Conclusion/10	Question & Answer/10	Over all Evaluation/10	Leave Blank Please	Quality of Work/10	
Best work for																
	First															
	Second															
Best Presentation for																
	First															
	Second															

Grading

- The coop training final grade will be determined as follows:

Company Evaluation (2)	15 % (35% for the first one & 65% for the second one)
Progress Reports (3)	15 % (5 each)
Final Report	40 %
Presentation	20 %
Coordinator and forms	10 %
- Students, who do not complete their reports and/ or conduct their presentations at the beginning of the subsequent semester as scheduled, will automatically receive an F grade (See Undergraduate Bulletin).

Letter Grades:

Score	Letter Grade	Points	Interpretation
95 – 100	A+	4.00	Exceptional
90 – 95	A	3.75	Excellent
85 – 90	B+	3.50	Superior
80 – 85	B	3.00	Very Good
75 – 80	C+	2.50	Above Average
70 – 75	C	2.00	Good
65 – 70	D+	1.50	High Pass
60 – 65	D	1.00	Pass
Less than 60	F	Zero	Fail
In-Progress	IP	-----	In-Progress

Summary of Important Training Events

Individual breakdown for each student. Plan oriented. As agreed with the work supervisor and approved by course instructor. Activity Schedule:

Period	Week / Month	Event
Before Coop Training Period	3 Months	Registration for Coop – Meeting prerequisites.
	2 Months	Applying/ selecting work entity with the help of the University coop office.
	2 Weeks	Common Meeting with the Instructor – Coop Guidelines and Expectations.
Coop Training Period	1 st – 3 rd Week	receiving and approving coop plans
	6 th Week	Instructor Calls and/ or visits *
	7 th – 8 th Week	Progress report 1
	8 th Week	Receiving First Employer's Evaluation of the student's work performance.
	10 th Week	Instructor Calls and/ or visits *
	14 th – 15 th Week	Progress report 2
	19 th Week	Instructor Calls and/ or visits *
	21 st – 22 nd Week	Progress report 3
	25 th Week	Instructor Calls and/ or visits *
	Last Week	Receiving Second Employer's Evaluation of the student's work performance
Semester Following Training	1 st – 2 nd Week	Common Meeting with the Instructor – How to give good presentation? Final Report format.
	2 nd – 3 rd Week	Final Report submission
	3 rd – 4 th week	Final Presentations

* Each student expects to get a call or visit from the instructor to discuss his progress in Coop and it will be recorded as part of coordinator grade (10%).

APPENDIX 1: Tips for ICS Coop Students

1. Remember that your performance in the training period affects both the image of your department and the future prospects of jobs of ICS graduates. You are an ambassador of the KFUPM ICS department. Your grade in the Coop. WILL CERTAINLY reflect how well or bad you have promoted the professionalism, ethics and high quality education you received at the department.
2. Make sure that you are provided with a Co-op training schedule.
3. Make sure that your training schedule is not comprised mainly of clerical jobs.
4. Make sure that your training schedule is related as closely as possible to your field.
5. Be alert and observe how the department to which you belong actually works.
6. Ask questions as to why things are done the way they are.
7. Make sure, before the end of your co-op program, that you have collected enough data, which will enable you to write an analytical co-op report.
 - Keep an accurate record of your activities on a daily/weekly basis. Summarize work done, objectives achieved, experience gained, problems faced, solutions found on a week by week basis. The collection of these records at the end of the training period will be the core of your coop training report. DO NOT WAIT till the training period is over to start writing your report. You should not rely on your memory to generate the report.
 - Whenever you consult a reference during training, write down complete information about it (author, publisher, date, etc). If the reference is a special document or a technical report, you should either try to get a copy or make copies of most pertinent information. Since this is not always possible, it should be carried out as the situation permits. The student is reminded that the information, documents, etc. gained from coop training is not just for the purpose of the report. It is for your own future reference.
8. Take the initiative to gain useful experience during the co-op program. *Do not be passive.*