KUWAIT UNIVERSITY
College of Engineering & Petroleum
Office of Academic Assessment

Office of Academic Assessment

Annual Report

Academic Year 2020-2021

August 2021

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Introduction

The Office of Academic Assessment (OAA) mission is to serve the academic programs, faculty, staff, and administration within the College of Engineering and Petroleum at Kuwait University. It is designed to foster continuous assessment for achieving academic excellence. The goals of the office are:

- To help coordinate program assessment processes
- To develop and implement regularly scheduled and special-purpose student, alumni, and employer surveys
- To assist academic, administrative, and student-support units with data from assessments, and to develop or evaluate their own assessment processes
- To facilitate assessment training and awareness programs

Accordingly, the purpose of this report is to cover the activities of OAA in the academic year 2020/21. The main activities are summarized. Recommendations and plans for the next academic year are given.

This year the Office had few changes in the personnel. Prof. Andreas Christoforou who was the Director of OAA for the past six years, stepped down and Dr. Muhammad Tariq Chaudhary took charge of the office. Dr. Awatef retired and Mr. Soud Alrashed joined the OAA team. Ms. Rincy and Engr. Freya continued their service to OAA.

Online Course Assessment

The office provided the course assessment form to the faculty through an online system. Faculty members could leave the system at any time before submitting the form without losing any of the data they entered; they also were able to view previously submitted forms. After submitting the form, an instruction page appeared containing guidelines on how to prepare the course assessment file to be submitted to the departmental assessment coordinator.

Student outcomes were recently revised by ABET for programs seeking accreditation in the 2019-2020 cycle and later. The proposed modifications changed the eleven student outcomes (a-k) to seven student outcomes (1-7).

Starting with the Fall Semester of the 2018/19 academic year, the online assessment form and the ICEF report were modified to reflect the revised SO's changes. The results were accordingly prepared and issued.

The assessments provided in this report were conducted for the Fall, Spring, and Summer semesters of 2019/20. A comprehensive report including all the details and the results has been prepared and issued. A summary is given in **Appendix A**.

Exit Survey

Students are required upon graduation to submit the exit survey form in order participate in the design exhibition. The survey was filled online by students graduating at the end of the Fall, Spring

and Summer semesters of the academic year 2019/20. A comprehensive report including all the details and the results has been prepared and issued. The statistics are calculated according to the new student outcomes (1-7); acquired at Kuwait University–Engineering programs. A mapping framework was developed to properly implement the changes. A summary is given in **Appendix B**.

Migration of Servers

Due to the expiry of the college's previous website domain (www.eng.kuniv.edu), the college website was not accessible from outside the University. As a result, the exit survey for the graduating students was not reachable from outside the College. Similarly, the online course evaluation form for the instructors (ICEF) was also not accessible to the faculty from outside the College. The situation worsened due to the Covid pandemic requiring social distancing measures, suspension of on-campus teaching and limited access to other administrative services.

The OAA took appropriate action and coordinated with KUCIS in Shuwaikh in order to move the ICEF and student exit survey from the Khaldiya servers to those in Shuwaikh so that these services are available from anywhere. This task was successfully done during the Fall 2020 semester and all pertinent data and forms are now housed on the KUCIS's servers in Shuwaikh.

Migration to New College Website

Due to the expiry of our previous website domain (www.eng.kuniv.edu), our website was not accessible from outside the university. This necessitated migrating all data and surveys to the new college website (kuweb.ku.edu.kw/COEP).

The OAA collected all information required to update the new college website, earmarking outdated and missing information on the website in the process. All gathered information was sent to the College of Engineering and Petroleum's E-Services department to proceed with updating the college website. Periodic feedback was provided to the E-Services department on the items that were not updated and required remedial actions. As a result, most of the information was updated. However, there are still many items that requires update. E-Services department is aware of these shortcomings and is taking appropriate corrective actions.

Contribution to College-wide ISO Accreditation Initiative

The office contributed to the College of Engineering's initiative to attain ISO certification for all its constituent administrative offices. All required documents were filled out and delivered to the third-party ISO accreditation body in coordination with the college's Office of the Vice Dean for Academic affairs (VDAA).

This process involved outlining in detail all procedures undertaken by the Office of Academic Assessment (OAA) and creating standardized job descriptions for all office employees. Given that the goal of ISO certification is optimizing and standardizing procedural workflow, the OAA looks forward to studying the comments to be provided by the ISO accreditor and making necessary and suitable adjustments in that regard.

CAC Meetings

The Office of Academic Assessment (OAA) organized and called for two meetings of the College Assessment Committee (CAC). Both CAC meetings were held on Microsoft Teams in order to comply with and fulfill social distancing measures. Participants included the Engineering Area Committee chair, departmental assessment coordinators, as well as the OAA represented through both its director and employees. Issues relating to coordinating the college's assessment activities were discussed vigorously in both meetings. The meeting minutes are included in **Appendix C** while a brief account of the meetings is supplied below:

1- **CAC meeting #1:** Held on January 20th, 2021. Issues regarding college-wide and departmental assessment data were discussed, as well as ABET program criteria requirements. Further, the optimization of data collection relating to departmental outcome assessment was discussed, with an emphasis on moving to digital data collection before the upcoming ABET visit in 2025. Lastly, modifications to the Alumni survey form were also tabled for discussion.

2- **CAC meeting #2:** Held on June 7th, 2021. A presentation regarding key aspects of assessment practice, namely program criteria compliance and the notion of continuous improvement was presented and discussed by committee. Further, requirements relating to annual assessment reports were presented and subsequently discussed. Lastly, the full adoption of virtual assessment rooms on Sharepoint was discussed and principally agreed upon by committee members, this along with a basic framework for that goal.

OAA Internal Meetings

The Office of Academic Assessment conducted a total of seven internal meetings during the 2020 - 2021 academic year. All internal meetings were held on Microsoft Teams in order to comply with and fulfill social distancing measures.

The OAA's internal meetings were held periodically to discuss the office's goals for the year, and to cooperatively keep abreast of the office's practical duties undertaken by office employees to realize these goals. A summary account of these meetings is presented in **Appendix D.**

Interim Report (IR) Submission for Petroleum Engineerinng Department

OAA was involved in the planning, coordination, preparation and submission of the Interim Report (IR) for the Petroleum Engineering (PE) department during AY 2020-21. OAA was involved in the following aspects:

1- **Administrative issues**
   a- Communication with ABET headquarter
      i. Communication with ABET headquarter included inquiries about various steps related to preparation and submission of IR and supporting documents.
      ii. It also involved attending a live webinar on the topic and participation in the Q&A session. Representatives from the PE department were also asked to attend the

webinar. Later on, transcript of the webinar slides and webinar recording was also shared with PE department to get acquainted with the requirements of submitting an IR.

iii. Receiving the invoice for IR review and its timely payment through the Kuwait University Finance department was also part of this activity.

b- Coordination with other KU departments for filing the RFE

ABET requires that all programs of an institution, even under various commissions, must submit a single Request For Evaluation (RFE) for a particular review cycle. As two Kuwait University Programs; one each from the College of Sciences and College of Life Sciences, were also undergoing a general review under the Computing Accreditation Commission (CAC) during the AY 2021-22 cycle, therefore coordination was necessary for filing a joint RFE. OAA took the lead in this task and guided the other programs in getting the approval from NBAQ, arranging for transcripts and ceremonial diplomas, filling out on-line forms, coordinating with the Kuwait University President Office for electronically signing the RFE and mailing the transcripts for ABET Headquarters in Baltimore, USA.

c- Communication with NBAQ for getting RFA

OAA communicated with Kuwait's National Bureau for Academic Accreditation and Education Quality Assurance (NBAQ) for getting the Request for Acknowledgment (RFA) to proceed with the ABET accreditation process. All communications with NBAQ were done through the Kuwait University President's office and were facilitated by the respective Deans of involved Colleges (i.e. Engineering, Science and Life Science).

d- Communication with Deanship of Admissions for transcripts and diploma

ABET requires that the RFE should be accompanied by the transcript and ceremonial diploma of the most recent graduate, which was Summer 2020 for the Petroleum Engineering department. The transcript and supporting cover letter stating the name of degree was obtained from the Deanship of Admissions. However, ceremonial diploma was not available as the graduation ceremony was postponed due to the Covid pandemic. Therefore, ABET agreed to receive the ceremonial diploma of a student who graduated in Summer 2019. However, in this case transcript of the Summer 2019 student were also furnished.

2- **Meeting with the Petroleum Engineering department**
   a- Initial meeting to set out the framework

   OAA set up an initial meeting the Petroleum Engineering Department Chairman and UPC coordinator on 15 November 2020 to discuss the weaknesses cited in the ABET Final statement, to take a look at the 30-days and post-30-days response and to lay out a plan of action for preparing the IR.

   b- Meeting with UPC and TAG groups for identifying the requirements

A number of meeting were conducted by the UPC of Petroleum Engineering Department in which OAA was also invited. OAA provided the timelines and tasks that were refined by the TAGs according to their needs in coordination with the PE department UPC. OAA also furnished detailed instructions and template to prepare the response for each of the cited weakness item.

c- Reviewing the evidences

OAA participated in one in-person meeting to guide the UPC and TAG members on how to assure the quality and pertinence of the evidences for inclusion in the IR based on the ABET requirements and in accordance with the language of the ABET Final statement. Some evidences were examined in this meeting and procedure of write-up in the IR was also explained. Later on, UPC and TAGs did this review by themselves in other meetings for remaining pieces of evidence.

3- Reviewing the draft reports and submission to ABET AMS

Several faculty members from the Petroleum department were involved in preparing the response for weakness items in the IR. OAA reviewed the draft reports prepared by these faculty members multiple times and provided guidance on conforming to the three part construct of the response, which included: (1) cite the weakness item from the ABET Final statement, (2) provide details of the remedial actions (both administrative as well as academic) and (3) provide a detailed description of the supporting evidence backed-up with the evidence in an Appendix.

The draft reports from all faculty members were collected by the UPC coordinator of the PE department in the IR template provided by ABET. OAA worked closely with UPC coordinator in editing and formatting the IR as well as preparation of the Appendices.

After the IR and related Appendices were finalized and converted to pdf format, these were uploaded to the ABET AMS from VDAA's account on 29 June 2021.

OAA Guidance to Departments on ABET Procedures

The Office of Academic Assessment has included in its annual operational plan, a systematic procedure of providing assessment and accreditation related guidance to the departments. One guidance item is scheduled for each semester in the OAA operational plan. Accordingly, OAA sent guidance notes related to the Program Criteria in the Fall 2020 semester on 26 January 2021 and ABET Compliance Notes for Criterion 4 – Continuous Improvement in the Spring 2021 semester on 9 May 2021.

A follow-up on the Program Criteria compliance was done during the 2nd CAC meeting. All department except the Civil Engineering department had started taking appropriate steps for compliance. A presentation to the Civil Engineering department was given on Program Criteria items as mentioned in the next section.

OAA Meetings with Departments

The Office of Academic Assessment took the initiative of meeting with the department chairs along with the assessment coordinator to get first-hand knowledge of the assessment procedure implementation in the departments, to identify areas of potential weakness and to offer assistance in interpretation and implementation of ABET requirements. The following departments were visited during the Year 2020-21:

1- Electrical Engineering – informal meeting with Department Chairman, Dr. Muhammad Baidas, on 14 February 2021.
2- Chemical Engineering – formal meeting with Department Chairman and Assessment Coordinator on 31 May 2021. See **Appendix E** For meeting minutes.
3- Computer Engineering - formal meeting with Department Chairman and Assessment Coordinator on 9 June 2021. See **Appendix E** For meeting minutes.
4- Civil Engineering – invited presentation on Civil Engineering Program Criteria changes to Civil Engineering UPC members and TAG coordinators on 28 June 2021. See **Appendix E** For meeting minutes.

Participation in ABET Annual Symposium

ABET symposium is an annual event dedicated to the latest processes and best practices of academic assessment. In an effort to continuously update the faculty members of the College of Engineering about developments in academic assessment, the College provided training opportunities through participation in symposiums and workshops conducted by ABET. This year the ABET symposium was held virtually from 14-16 April 2021 with pre-symposium workshops on 12 & 13 April 2021. OAA sought nominations from all departments for attendance in this symposium. Seven faculty members, including OAA Director, attended the virtual symposium. OAA selected one presentation related to the Continuous Improvement process (Criterion 4) and circulated to all departments to raise awareness about the best practices for complaining with Criterion 4.

Participation in College UPC meetings

OAA director was invited to attend both meetings of the College UPC during AY 2020-21. Main focus of the meetings were College guidelines for revising the undergraduate curriculum. OAA provided comments on the guidelines and suggested modifications through letters dated 8/3/2021 and 13/6/2021.

Update to Survey Forms

The Office of Academic Assessment is responsible for conducting various surveys to obtain pertinent data for evaluation of student outcomes, relevance of program educational objectives and feedback from various constituents.

Student Exit Survey is conducted at the end of each semester. The Exit survey form was revised to be compatible with the updated student outcomes (1-7), to cater for the needs of the departments

to generate indirect assessment data for certain items in the Program Criteria of each department and to include a section on the online learning experience of the students. The Exit survey form was revised based on the input from the department Assessment Coordinators, VDAA and senior faculty members. The revised form was launched in the Spring 2021 semester. A copy of the revised student exit survey form is included in **Appendix F.**

Alumni survey is conducted after every 3-4 years. The next alumni survey is planned to be conducted in the Fall 2021 semester. This survey is launched in collaboration with the office of the Dean of the College, ETAC and administrative offices of each department. The Alumni survey form was revised and updated based on input from the departments, VDAA and senior faculty members to address changes in student outcomes, program educational objectives and to expand the areas for which feedback was needed. The revised Alumni survey form can be found in **Appendix G.**

The employer survey form will be revised during AY 2021-22.

Annual Assessment Activities Reports of Various Departments

All departments of the College are required to document their assessment activities in an annual report. The annual report discusses the assessment of student outcomes based on data of the previous academic year, reviews assessment practices in the department, reports any curricular modifications requiring update to student outcome attributes and summarizes the observations of the assessment coordinator.

All departments of the College submitted the Annual Assessment Activities Report that mostly consisted of assessment of student outcomes for data collected for AY 2019-20. OAA will review these reports and provide feedback to the departments in the first semester of the next academic year 2021-22.

Preparation of OAA Operational Plan for AY 2020 – 2026

Operation plan of the Office of Academic Assessment was prepared for the six-year period (2020-2026) coinciding with the ABET review cycle. Breakdown of salient activities in each semester for the six year period is provided along with a schedule of planning, conducting and analyzing the results of various surveys and a list of routine activities that are to be undertaken in each semester. A copy of the OAA operation plan for the period 2020-26 was given to the VDAA on 2 June 2021.

Academic Year 2020/21 - Fall 2020 (Y1)

- ➢ Submit OAA annual report for 2019/20.
- ➢ Prepare 2019/20 student exit survey report.
- ➢ Prepare 2019/20 ICEF assessment report.
- ➢ ABET maintenance fee reminder.
- ➢ Analyze placement data. Update placement/graduation data on college website.
- ➢ Coordinate revision of program assessment plans.
- ➢ Coordinate assessment activities among engineering programs. (**Emphasis: Program criteria and related curriculum issues).**
- ➢ Administer end of Semester Student Exit Survey.
- ➢ Review and Revise student exit survey form.
- ➢ Migrate OAA surveys and forms from College server to the University server.
- ➢ Coordinate update of College website as it pertains to OAA and Assessment.
- ➢ Plan for participation in ABET Symposium 2021.
- • Ensure that observations/concerns/deficiencies based on the final statement of ABET (Fall 2019 evaluation visit) have been addressed. – **Coordinate with programs-Prepare and file RFA & RFE as required.**
- • Establish a timeline for activities leading to the next ABET visit.

Academic Year 2020/21 - Spring 2021 (Y1)

- ➢ Remind programs for revision of program assessment plan.
- ➢ Follow-up with Departments regarding program criteria compliance.
- ➢ Remind programs for preparation of annual outcome assessment activities report.
- ➢ Coordinate assessment activities among engineering programs. (**Emphasis: Criterion 3 - Design and complex problems).**
- ➢ Review and revise as needed Alumni Survey form.
- ➢ Revisit Assessment toolbox and plan for virtual Assessment room. Solicit ideas from programs and coordinate with IT.
- ➢ Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
- ➢ Request Alumni data from ETAC. Start preparation for Alumni survey in Fall 2021.
- ➢ Administer end of Semester Student Exit Survey.
- ➢ Visit Programs – goodwill.
- ➢ Participation in ABET symposium 2021 and workshop.
- ➢ ABET IR fee payment follow-up.
- ➢ Coordinate and submit IR to ABET as required.
- ➢ Prepare OAA annual report for 2020/2021.

Academic Year 2021-2022 - Fall 2021 (Y2)

- Prepare 2020/2021 student exit survey report.
- Prepare 2020/2021 ICEF assessment report.
- Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
- ABET maintenance fee reminder.
- Follow-up with Departments regarding Criterion 3: Design and complex problems.
- Launch Alumni Survey.
- Analyze placement/graduate data obtained and update website.
- Follow-up with programs regarding revisions to program assessment plan.
- Virtual assessment room update –check readiness, assess needs, provide guidance & coordinate with IT as needed.
- Coordinate assessment activities among engineering programs. (**Emphasis: Criterion 4: Continuous Improvement**)
- Seek nominations for participation in ABET symposium/workshop 2022.
- Coordinate with Vice Dean for Student Affairs for student academic and career advising procedures in the College.
- Gather information on student academic and career advising procedures in each Department.
- Formulate and propose corrective actions that are based on assessment results.
- Conduct Faculty Workshop related to Academic Assessment.
- Administer end of Semester Student Exit Survey.
- Follow up on ABET Final statement on IR if needed.
- Review and revise as needed the employer survey form.

Academic Year 2021/2022 - Spring 2022 (Y2)

- Prepare alumni survey report.
- Comparative Study on exit Surveys for the past three Academic years.
- Another Comparative Study on ICEF Surveys for the past 3 years.
- Follow-up with Departments regarding Criterion 4: Continuous Improvement.
- Remind programs for preparation of annual outcome assessment activities report.
- Organize an alumni gathering (coordinate with ETAC).
- Coordinate assessment activities among engineering programs. (**Emphasis: Criterion 3 - Labs**).
- Formulate/Implement corrective actions, if any.
- Administer end of Semester Student Exit Survey.
- Seminar/workshop – Faculty development.
- Participate in ABET Symposium 2022.
- Prepare report on student advising procedures in the College and the Departments. Identify potential weakness and suggest improvements in list of ABET procedures.

Academic Year 2022-2023 - Fall 2022 (Y3)

- Submit OAA Annual Report for 2021/2022.
- Prepare 2021/2022 student exit survey report.
- Prepare 2021/2022 ICEF assessment report.
- Prepare and circulate alumni survey report.
- Plan and conduct Employer Survey.
- ABET maintenance fee reminder.
- Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
- Follow-up with Departments regarding Criterion 3: Labs.
- Organize an employer gathering (coordinate with ETAC).
- Coordinate assessment activities among engineering programs. (**Emphasis: Criterion 2: PEOs, SOs and participation of constituents**).
- Virtual assessment room update –check readiness, assess needs, provide guidance & coordinate with IT as needed.
- Formulate and propose corrective actions that are based on assessment results.
- Administer end of Semester Student Exit Survey.
- Conduct Faculty Workshop
- Plan for participation in ABET Symposium 2023
- Visit programs for ABET compliance and assess program needs. Check readiness for virtual assessment rooms. (4 programs)

Academic Year 2022/2023 - Spring 2023 (Y3)

- Remind programs for preparation of annual outcome assessment activities report.
- Prepare Employer survey report.
- Formulate/Implement corrective actions, if any.
- Follow-up with Departments regarding Criterion 2: PEOs, SOs and participation of constituents.
- Coordinate assessment activities among engineering programs. (**Emphasis: Professional Skills and lab safety**).
- Conduct Faculty Workshops.
- Administer end of Semester Student Exit Survey.
- Visit programs for ABET compliance (3 programs). Check readiness of virtual assessment rooms.
- Feedback report to programs on ABET criteria compliance and readiness for next visit review.
- Prepare OAA annual report for AY 2022-23.

Academic Year 2023/2024 - Fall 2023 (Y4)

- Submit OAA annual report for 2022/2023.
- Prepare 2022/2023 student exit survey report.
- Prepare 2022/2023 ICEF assessment report.
- Plan and conduct alumni survey.
- ABET maintenance fee reminder.
- Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
- Follow-up with Departments regarding professional skills and lab safety.
- Coordinate assessment activities among engineering programs. (**Emphasis: Revisit ABET criteria changes, program criteria changes, University Mission and PEOs**, **Assessment issues related to Curriculum revision etc.**)
- Administer end of Semester Student Exit Survey.
- Coordinate for updating website as needed.
- Plan for participation in ABET Symposium/Workshop 2024.
- Write-up for common parts in criteria 1 (Students), 6 (Facilities, including lab safety), 7 (Institutional support).

Academic Year 2023/2024 - Spring 2024 (Y4)

- Remind programs for preparation of annual outcome assessment activities report.
- Follow-up with Departments regarding ABET criteria changes, program criteria changes, PEOs, University Mission/Vision, curriculum revision etc.
- Prepare report for alumni survey.
- Coordinate assessment activities among engineering programs. (**Emphasis: Assessment evidence**)
- Coordinate organizing student works and assessment evidences at the departments.
- Check readiness of virtual Assessment rooms in all programs.
- Check whether all programs have updated outcome assessment plan.
- Administer end of Semester Student Exit Survey.
- College Website Updates.
- Write-up to be completed for common parts in criteria 1(students), 6(Facilities, including lab safety), 7(Institutional support).
- Plan for Employer survey.
- Prepare OAA Annual Report for AY 2023/2024.

Academic Year 2024/2025 - Fall 2024 (Y5)

- Submit OAA Annual Report for 2023/2024.
- Prepare 2023/2024 student exit survey report.
- Prepare 2023/2024 ICEF assessment report.
- ABET maintenance fee reminder.
- Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
- Administer end of semester Student Exit Survey.
- Administer Employer survey and prepare report.
- Follow-up with Departments regarding Criterion 4: Assessment evidence.
- Coordinate assessment activities among engineering programs**. (Emphasis: ABET SSR, On-site visit)**
- Update the college's website – Engage departments.
- Administer end of Semester Student Exit Survey.
- Coordinate with programs: updating Faculty CV's and activities.
- Seek nominations for participation in ABET symposium/workshop 2025.

ABET VISIT PREPARATIONS

- Ask departments to start preparing the SSR. Provide SSR template.
- Nov 2024:
    - ❖ Ask for NBAQ approval through KU President – RFA.
    - ❖ Give KU Budget estimate for ABET onsite visit.
    - ❖ Ask Deanship of Admissions for one transcript of a recent graduate for each program.
- Prepare for ABET evaluation visit.
- Prepare schedule for conducting internal review and mock visits.
- Prepare checklist for review of:
    1. SSR
    2. Labs/Safety
    3. Other items
- ➢ Follow up with departments for draft #1 of SSR
    - o SSR draft # 1 to be submitted end of the semester.
- ➢ Internal review and MOCK visit
    - o Send draft SSR for inter-program review.
    - o Send the documents required for the upcoming Mock Visit 1
    - o Mock visit scheduled.
    - o Feedback back to departments given
    - o Follow-up with MOCK visit
        1. Assessment room
        2. Department facilities (classroom, labs, etc.)
- ➢ Informal meetings with department chairs regarding the ABET visit.

Academic Year 2024/2025 - Spring 2025 (Y5)

- Coordinate assessment activities among engineering programs. (**Emphasis: ABET onsite visit, SSR**)
- Administer end of Semester Student Exit Survey.
- Send ICEF summary report for the previous semester to each department and reminder for completion of ICEF forms.
- Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
- Prepare OAA annual report for the current AY.
- Remind programs for preparation of annual outcome assessment activities report.
- RFE Submission: Late Jan 2025.
- Mock Visit 2 in preparation for ABET visit.
- Conduct internal review.
- Pay ABET on-site visit invoice.
- Finalize Self-Study Report.
- Summer 2025 – late June: Submit SSR.
- Ask Deanship of Admissions for transcripts of graduates of each program as requested by ABET.
- Departments to analyze transcripts and prepare report.
- Submit transcripts with transcript analysis to ABET.

Academic Year 2024/2025 – Fall 2025 (Y6)

- ➢ Coordinate assessment activities among engineering programs. **Workshop for ABET onsite visit preparation with Department chairs, UPC and AC.**
- ➢ Submit OAA Annual Report for 2024/2025.
- ➢ Prepare 2023/2024 student exit survey report.
- ➢ Prepare 2023/2024 ICEF assessment report.
- ➢ Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
- ➢ ABET maintenance fee reminder.
- ➢ Prepare for onsite ABET evaluation visit. (Details and logistics to be worked out).
- ➢ Prepare detailed plan for hosting ABET on-site visit. Coordinate with the College, University for logistics and finances.
- • Host ABET evaluation visit
- • Seek nominations for participation in ABET annual Symposium/workshop 2026.
- •

Academic Year 2025/2026 – Spring 2026 (Y6)

- • Coordinate assessment activities among engineering programs. (**Follow-up on ABET Exit / Draft statement, if needed**).
- • Remind programs for preparation of annual outcome assessment activities report.
- • Administer end of Semester Student Exit Survey.
- • Send ICEF summary report for the previous semester to each department and reminder for completion of ICEF forms.
- • Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
- • Prepare OAA annual report for the current AY.
- • Response to ABET Exit statement, if needed.
- ➢ Coordinate with departments for additional material for 30-days due response or post-30-days due response, if needed.
- • Summer 2026 – Review ABET Final Statement**.**

OAA 6-Year Survey & Data Analysis Plan (2020-2026)

	Y1		Y2		Y3		Y4		Y5		Y6	
	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	Spring 2025	Fall 2025	Spring 2026
EXIT	P C R*	P C	P C R*	P C	P C R*	P C	P C R*	P C	P C R*	P C	P C R*	P C
ICEF	R*		R*		R*		R*		R*		R*	
Alumni			P C	R			P C	R				
Employer					P C	R		P	C R			
Placement Data	P C R		P C R		P C R		P C R		P C R		P C R	
Graduation Data	P C R*		P C R*		P C R*		P C R*		P C R*		P C R*	

KEY:

P: Plan

C: Conduct

R: Report

R*: Report (for previous year data)

Graduation data is compiled at the end of every academic year.

Office of Academic Assessment (OAA)

College of Engineering and Petroleum

Routine Fall Semester Activities

1. Submit OAA Annual Report for the previous AY.
2. Prepare student exit survey report.
3. Prepare ICEF assessment report.
4. Analyze placement data. Update placement/graduation data on college website.
5. Administer end of Semester Student Exit Survey.
6. College Assessment Committee (CAC) meeting # 1.
7. Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.
8. Coordinate assessment activities among engineering programs.
9. Send ICEF summary report for the previous year to each department and reminder for completion of ICEF forms.
10. ABET maintenance fee reminder.
11. Plan for participating in annual ABET Symposium/Workshop.

Routine Spring Semester Activities

1. Remind programs for preparation of annual outcome assessment activities report.
2. Administer end of Semester Student Exit Survey.
3. Send ICEF summary report for the previous semester to each department and reminder for completion of ICEF forms.
4. College Assessment Committee (CAC) meeting # 2.
5. Follow-up on tasks identified for the Departments in the Fall semester.
6. Prepare OAA annual report for the current AY.

Evaluation of the OAA Operation Plan for AY 2020 – 2021

Academic Year 2020/21 - Fall 2020 (Y1)

S.No.	Item	Action taken
1.	Submit OAA annual report for 2019/20.	**Submitted on 28th September 2020.**
2.	Prepare 2019/20 student exit survey report.	**Sent on 21/10/2019.**
3.	Prepare 2019/20 ICEF assessment report.	**Sent on 3/2/2021.**
4.	ABET maintenance fee reminder**.**	**Email sent to VDAA on 3 Nov. 2020.**
5.	Analyze placement data. Update placement/graduation data on college website.	**Data requested and received and passed on to College E-services for updating it on the website.**
6.	Coordinate revision of program assessment plans.	**Postponed as Curriculum is being updated.**
7.	Coordinate assessment activities among engineering programs. (**Emphasis: Program criteria and related curriculum issues).**	**Letters and program criteria information sent to all departments on 26/1/2021.**
8.	Administer end of Semester Student Exit Survey.	**Done. Jan/Feb 2021.**
9.	Review and Revise student exit survey form.	**Completed on 16/2/2021.**
10.	Migrate OAA surveys and forms from College server to the University server.	**Completed on 25/3/2021.**
11.	Coordinate update of College website as it pertains to OAA and Assessment.	**In process.**
12.	Plan for participation in ABET Symposium 2021.	**Nominations sought from department Chairs on 24/12/2020. Finalized by VDAA on 18/01/2021.**
13.	Call College Assessment Committee (CAC) meeting # 1.	**Done on 20/01/2021.**
14.	Ensure that observations/concerns/deficiencies based on the final statement of ABET (Fall 2019 evaluation visit) have been addressed. – Coordinate with programs-Prepare and file RFA & RFE as required**.**	**RFA request for Petroleum Department sent to KU President on 15/11/2020. RFE submitted on 21/01/2021.**
15.	Establish a timeline for activities leading to the next ABET visit.	**In process.**

Academic Year 2020/21 - Spring 2021 (Y1)

S.No.	Item	Action taken
1.	Remind programs for revision of program assessment plan.	**Postponed as Curriculum is being updated.**
2.	Follow-up with Departments regarding program criteria compliance.	**Done during CAC meeting #2.**
3.	Remind programs for preparation of annual outcome assessment activities report.	**Email reminders sent in May, June, July and August. Also reminded during CAC meeting #2.**
4.	Coordinate assessment activities among engineering programs. (**Emphasis: Criterion 3 - Design and complex problems).**	**Postponed Criterion 3 for next semester Fall 2021.**
5.	Coordinate assessment activities among engineering programs. [in lieu of # 4]	**Sent ABET Criterion 4 compliance note on 9/5/2021 and explained during CAC meeting # 2.**
6.	Review and revise as needed Alumni Survey form.	**Task completed in July 2021.**
7.	Revisit Assessment toolbox and plan for virtual Assessment room. Solicit ideas from programs and coordinate with IT.	**Assessment toolbox revisit is pending. Virtual Assessment Room initiated using Sharepoint during CAC meeting # 2. Follow up with departments during Fall 2021.**
8.	Ask Programs for establishing Industry Advisory Boards/ Student Advisory Boards and documenting their activities.	**Postponed for Fall 2021.**
9.	Request Alumni data from ETAC. Start preparation for Alumni survey in Fall 2021.	**Planning now.**
10.	Participation in ABET symposium 2021 and workshop.	**Done on 14-16th April 2021**
11.	Call College Assessment Committee (CAC) meeting # 2.	**Done on 07/06/2021.**
12.	Administer end of Semester Student Exit Survey.	**Done in June/July 2021.**
13.	Visit Programs – goodwill.	**Done for CHEM on 31/5/2021 and CpE on 9th June 2021.**
14.	Coordinate and submit IR to ABET as required.	**Submitted on 26/6/21**
15.	Presentation to Civil Engineering regarding update to Program criteria. [This activity was not originally planned]	**Done on 28 June 2021**
16.	ABET IR fee payment follow-up.	**Reminded VDAA on 4/8/2021 for follow-up. Fee paid on 17/8/2021. Notified ABET by email.**
17.	Prepare OAA annual report for 2020/2021.	**Done. Last week of August 2021.**

Recommendations

This section puts forth some recommendations for action during the upcoming academic years to streamline and enhance the effectiveness of the academic assessment process in various departments of the College.

1) Coordinate efforts to regularly update the new college website, and make sure that all material on the website is both up to date and free of inconsistencies. Each college department/office should be responsible for updating its own pages by coordinating with E-services or delegating this duty to an engineer in the department.

2) The assessment plans of all programs need to be revised to reflect the forthcoming changes in curriculum.

3) Course assessment is a continuous process and should be encouraged so we could achieve >70% participation by faculty. VDAA needs to take up this issue with Department Chairs.

4) Departments are welcome to customize their assessment plan which require collection of data and assessment of only selected student outcomes in a semester / academic year.

5) Encourage higher student participation in the exit survey to have adequate data for use in the continuous improvement processes.

6) Encourage all programs to follow the assessment and evaluation process and submit a yearly report to the college. This year all departments submitted annual assessment report. OAA plans on providing feedback on these reports in the Fall 2021 semester.

7) Launch the Alumni survey in the Fall 2021/22 semester and prepare the alumni survey report in the following semester.

8) Be on the alert for revisions and updates of ABET criteria/documents.

9) Work towards implementing Sharepoint-based virtual assessment rooms in all departments as principally agreed upon in the second CAC meeting (7th of June 2021), and aim to have these virtual assessment rooms fully functional for the 2025 ABET visit. Preliminary work has been initiated and progress will be reviewed during first CAC meeting of the next academic year (2021-22).

Summary of Salient OAA Communications during AY 2020-21

S:no	Activity	Prepared by	Submitted to	date
1	ICEF Summary for the AY 2019-2020	Dr. Tariq Chaudhary	All departments chair	29/12/20
2	Nomination for participation in ABET Symposium 2021	Dr. Tariq Chaudhary	All departments chair	29/12/20
3	Call in for CAC Meeting 1	Dr. Tariq Chaudhary	All departments CAC members	10/01/21
4	ABET Program Criteria Items	Dr. Tariq Chaudhary	All departments chair	26/01/21
5	Exit Survey Summary	Dr. Tariq Chaudhary	All departments chair	11/02/21
6	Comments on proposed guidelines for curriculum revision	Dr. Tariq Chaudhary	Dr. Osamah Al Omair (Dean)	08/03/21
7	Participation in student Exit Survey – Fall 2020	Dr. Tariq Chaudhary	All departments chairs	21/03/21
8	Submission of Annual Assessment Activities Report for AY 2020-21	Dr. Tariq Chaudhary	All departments chairs	06/04/21
9	Summary of ICEF and Exit Survey Submission – Fall 2020	Dr. Tariq Chaudhary	All departments chairs	26/04/21
10	ABET Interim Report Draft – Follow up	Dr. Tariq Chaudhary	Dr. Mabkhout Aldousari	27/04/21
11	Approval for nominated team chair for ABET IR review	Dr. Tariq Chaudhary	Dr. Mabkhout Aldousari	27/04/21
12	ABET Criteria 4 Compliances Notes	Dr. Tariq Chaudhary	All departments chairs	09/05/21
13	Call for CAC MEETING 2	Dr. Tariq Chaudhary	All departments CAC members	23/05/21
14	ABET Program Criteria change for CE	Dr. Tariq Chaudhary	Prof. Fahad Al Rukaibi	30/05/21
15	OAA Operational Plan	Dr. Chaudhary	Dr. Osamah Al-Omair	02/06/21
16	Meeting with CHE department	Dr. Tariq Chaudhary	CHEM department chair and CAC	31/06/21
17	Meeting with Computer department	Dr. Tariq Chaudhary	Computer department chair and CAC	07/06/21
18	Comments on proposed guidelines for curriculum revisions – Round 2	Dr. Tariq Chaudhary	Dr. Osamah Al-Omair	13/6/21
19	Exit Survey Statistics for Fall 2020	Dr. Chaudhary	All department chairs	13/06/21
20	ICEF submission reminder for Spring Semester 2020-2021	Dr. Tariq Chaudhary	All department chairs	17/06/21
21	Comments on incomplete Annual report submitted by Civil department	Dr. Tariq Chaudhary	Prof. H.R.H. Kabir	04/08/21
22	ICEF and Exit survey statistics for AY 2020-21	Dr. Tariq Chaudhary	All department chairs	15/08/21

Summary of Salient OAA Email correspondence during AY 2020-21

S:no	Activity	Prepared by	Submitted to	Date (MM/DD/YYYY)
1	PE Response to ABET statement	Dr. Tariq Chaudhary	PE CHAIR, UPC AND CAC, Vice Dean	11/15/2020
2	ABET final statement and corrective actions	Dr. Tariq Chaudhary	PE CHAIR, Vice Dean	11/22/2020
3	Letter from NABAQ and transcript of a recent PE graduate	Dr. Tariq Chaudhary	Vice Dean and Eng. Ma'Ali	12/21/2020
4	Participation in ABET Symposium 2021	Dr. Tariq Chaudhary	Vice Dean	12/21/2020
5	Discuss RFE and RFA	Dr. Tariq Chaudhary	Acting Chair Information chair, Vice Dean, Eng. Ma'ali, ABET and Dean	12/23/2020
6	KU President letter to NABAQ	Eng. Ma'ali	Dr. Tariq Chaudhary	12/24/2020
7	Modification of Student Exit Survey	Dr. Tariq Chaudhary	Dr. Raed, Prof. Andreas	01/04/2020
8	Call in for CAC Meeting 1	Dr. Tariq Chaudhary	All departments CAC members	01/10/2021
9	Course Catalogue	Dr. Tariq Chaudhary	Eng. Bhazad, Dr. Raed, VDAA	01/12/2021
10	Supporting documents for RFE submission	Dr. Tariq Chaudhary	Ms. Anna, OAA	01/18/2021
11	MOM CAC Meeting#1	Dr. Tariq Chaudhary	CAC Members, VDAA	01/27/2021
12	Student Exit survey question related to online learning	Dr. Tariq Chaudhary	CAC Members, VDAA	02/07/2021
13	Student Exit survey - Revision to Questions related to student outcomes	Dr. Tariq Chaudhary	CAC Members, VDAA, Dr. Osamah, Dr. Raed	02/09/2021
14	ICEF Report 2019-2020	Dr. Tariq Chaudhary	CAC Members, VDAA, Dr. Osamah, Dr. Raed ,	03/03/2021
15	Extra Questions- Exit Survey	Dr. Tariq Chaudhary	Dept Chairman, CAC members, VDAA	03/15/2021
16	OAA Response to query about ABET definition of Design, constraints and engineering standards	Dr. Tariq Chaudhary	PE Chairman, CAC, VDAA, Dr. Osamah	04/13/2021
17	Comments on college of engineering website	Dr. Tariq Chaudhary	Eng. Bahzad, VDAA, Dr. Raed, Dr. Osamah	04/14/2021

18	Courses to be assessed at CPE dept. during FALL 2020 semester	Dr. Tariq Chaudhary	CpE CAC Member, Chairman, VDAA	04/19/2021
19	Invoice for ABET 2021-22 cycle	Dr. Tariq Chaudhary	Ms. Emmet and Ms. Karapetyan	04/26/2021
20	ABET issues	Dr. Tariq Chaudhary	Eng. Ma'ali	05/02/2021
21	2nd CAC meeting - AY 2020-21	Dr. Tariq Chaudhary	CAC Members	05/20/2021
22	Meeting Schedule with computer	Dr. Tariq Chaudhary	CpE Chairman and CAC	06/03/2021
23	OAA visit to ChE department - minutes	Dr. Tariq Chaudhary	Chemical chairman, CAC	06/03/2021
24	IR report - OAA comments on draft 2 by Dr. Fahad	Dr. Tariq Chaudhary	PE Chairman, UPC, VDAA	06/07/2021
25	ICEF Reminder	Dr. Tariq Chaudhary	All departments chair	07/08/2021
26	Revision to the Alumni survey form	Dr. Tariq Chaudhary	Dr. Raed, VDAA	07/10/2021
28	Reminder to submit Assessment report 2019-2020	OAA	Department chairs and CAC	08/10/2021
27	Enrollment & Graduation Data	OAA	Ms.Nancy	08/22/2021

APPENDIX A:
Online Course Assessment
For Academic year 2019-2020

September 2020

Introduction

The online assessment submission system was developed by the Office of Academic Assessment (OAA). The system is monitored and maintained by OAA. At the end of each semester the assessment response statistics are reported to all programs for a follow-up in order to improve them. This report presents the results of the online course assessment at the College of Engineering and Petroleum 2019-2020. The first part of the report presents the response statistics for all the programs, and the second part presents the measured student performance college-wide according to the Student Outcomes (SO).

Preparation and Implementation of the Process

The form was provided to the faculty through an online system. Faculty members were able to leave the system at any time before submitting the form without losing any of the data they entered. They were also able to view the previously submitted forms. After submitting the form, an instruction page appears. It contains guidelines on how to prepare a course assessment file to be submitted to the departmental assessment coordinator.

For the Fall Semester (Table 1), a total course assessment response of 122 was recorded from 71 faculty members in the college (29.6% faculty response rate). The response was out of total 433 course sections (28.2% course response rate).

For the Spring Semester (Table 2), a total course assessment response of 83 was recorded from 53 faculty members in the college (22.1% faculty response rate). The response was out of total 423 course sections (19.6 % course response rate).

For the Summer Semester (Table 3), a total course assessment response of 12 was recorded from 12 faculty members in the college (7.3% faculty response rate). The response was out of total 165 course sections (7.3% course response rate).

Results and Discussion

The ABET SO (1-7) were adopted at the College for all its programs in the Fall of 2018/2019. They had been modified from the previous ABET SO (a-k) for programs seeking accreditation in 2019-2020 cycle and later.

The new SO (1-7) are as follows:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences

4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The online assessment form, and the ICEF report were modified to reflect these changes. Therefore, beginning with the Fall Semester of the 2019-20 academic year, assessment has been conducted for the new 1-7 student outcomes.

Tables 4, 6, and 8 show the average rating of student performances in all courses in the college during Fall, Spring and Summer Semesters, respectively, according to the new 7 student outcomes. The results are presented graphically in Figures 1, 3, and 5, respectively. As it can be seen the students have achieved the desired outcomes.

Tables 5, 7, and 9 show the comparison of the weighted average scores of student performance between individual program courses, engineering core courses, and college-wide courses according to the new 7 student outcomes during Fall, Spring and Summer Semesters, respectively. The results are presented graphically in Figures 2, 4, and 6, respectively.

As seen with some exceptions of 0% and 100% ratings, most program averages are between 60%-80% and are close to college averages. The most likely reasons for these sharp disparities are: the lack of data with respect to the respective outcomes and programs, and/or the relatively small pool of data available on these respective outcomes and programs.

The relevance ratings given for each course are used as weights in the performance calculations. Since the response rate is somewhat low (some courses are not represented in a balanced way, as a result) some results may not be valid for some programs.

More detailed results are presented below in the program tables, where both relevance ratings and student performance are given for all outcomes. Instructor comments are also included. The programs should review and analyze the results, along with the assessment files at the TAG and UPC levels and make necessary conclusions and adjustments.

Table 1: Response statistics – Fall Semester

Course Assessment Response Statistics –Fall Semester 2019-2020 (22/12/2020)

Departments	Total Faculty	Total Course Sections	Total Response (courses)	Unique Responder	% Response Courses	% Response Faculty
CHEMICAL	20	52	18	10	34.6	50.0
CIVIL	58	86	17	13	19.8	22.4
COMPUTER	39	64	30	21	46.9	53.8
ELECTRICAL	44	75	15	5	20.0	11.4
IMSE	15	28	2	1	7.1	6.7
MECHANICAL	43	85	23	14	27.1	32.6
PETROLEUM	21	43	17	7	39.5	33.3
TOTAL	240	433	122	71	28.2	29.6

Table 2: Response statistics – Spring Semester

Course Assessment Response Statistics –Spring Semester 2019-2020 (22/12/2020)

Departments	Total Faculty	Total Course Sections	Total Response (courses)	Unique Responder	% Response Courses	% Response Faculty
CHEMICAL	20	50	8	5	16.0	25.0
CIVIL	58	87	10	7	11.5	12.1
COMPUTER	39	53	30	21	56.6	53.8
ELECTRICAL	44	80	6	3	7.5	6.8
IMSE	15	30	4	3	13.3	20.0
MECHANICAL	43	83	14	9	16.9	20.9
PETROLEUM	21	40	11	5	27.5	23.8
TOTAL	240	423	83	53	19.6	22.1

Table 3: Response statistics – Summer Semester

Course Assessment Response Statistics –Summer Semester (28/12/ 2020)

Departments	Total Faculty *	Total Course Sections *	Total Response (courses)	Unique Responder	% Response Courses	% Response Faculty
CHEMICAL	19	19	0	0	0.0	0.0
CIVIL	32	32	0	0	0.0	0.0
COMPUTER	24	24	0	0	0.0	0.0
ELECTRICAL	34	34	1	1	2.9	2.9
IMSE	10	10	0	0	0.0	0.0
MECHANICAL	33	33	7	7	21.2	21.2
PETROLEUM	13	13	4	4	30.8	30.8
TOTAL	165	165	12	12	7.3	7.3

COLLEGE: 19/20 Fall

R E S P O N S E

Department	Total Responses	Unique Responder
CHEMICAL	18	10
CIVIL	17	13
COMPUTER	30	21
ELECTRICAL	15	5
IMS	2	1
MECHANICAL	23	14
PETROLEUM	17	7
TOTAL	122	71

Table 4: Students performance – College (Fall 2019-2020) according to the new 1-7 student outcomes (2019-2020 cycle ABET updates)

O	Outcome	5	4	3	2	1	0	Average	Weighted Average
1	Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	14	53	27	8	1	20	3.7	3.6
		11%	43%	22%	7%	1%	16%	74%	72%
2	Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	17	30	17	3	1	55	3.9	4
		14%	24%	14%	2%	1%	45%	78%	80%
3	Communicate effectively with a range of audiences.	15	33	24	3	0	48	3.8	3.9
		12%	27%	20%	2%	0%	39%	76%	78%
4	Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	12	31	21	3	2	54	3.7	3.9
		10%	25%	17%	2%	2%	44%	74%	78%
5	Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	19	29	6	2	1	66	4.1	4.2
		15%	24%	5%	2%	1%	54%	82%	84%
6	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	7	21	16	0	1	78	3.7	3.9
		6%	17%	13%	0%	1%	63%	74%	78%
7	Acquire and apply new knowledge as needed, using appropriate learning strategies.	13	33	25	6	2	44	3.6	3.7
		11%	27%	20%	5%	2%	36%	72%	74%

The weighted average for an outcome is calculated by $\dfrac{\sum (performance \times relevance)}{\sum relevance}$

Figure 1: Students performance according to the 1-7 student outcomes – College (Fall 2019-2020)

Table 5: Students performance (weighted averages) – comparison between programs, engineering core, and college (Fall 2019-2020) according to the new 1-7 student outcomes (2019-2020 cycle ABET updates)

O	Outcome	chemical	civil	computer	electrical	ims	mechanical	petroleum	core	college
1	Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	76%	76%	84%	76%	80%	62%	66%	70%	**72%**
2	Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	78%	90%	86%	76%	80%	64%	88%	70%	**80%**
3	Communicate effectively with a range of audiences.	76%	78%	84%	74%	80%	68%	84%	60%	**78%**
4	Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	80%	80%	92%	88%	80%	64%	70%	56%	**78%**
5	Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	82%	92%	90%	82%	80%	76%	80%	80%	**84%**
6	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	64%	100%	88%	78%	80%	66%	68%	72%	**78%**
7	Acquire and apply new knowledge as needed, using appropriate learning strategies.	76%	82%	92%	72%	80%	62%	58%	68%	**74%**

Comparative student performance across engineering programs, core, and college (Fall 2019-2020)

Figure 2: Students performance (weighted averages) – comparison between programs, engineering core, and college (Fall 2019-2020) (According to the new 1-7 student outcomes)

COLLEGE: 19/20 Spring

R E S P O N S E

Department	Total Responses	Unique Responder
CHEMICAL	8	5
CIVIL	10	7
COMPUTER	30	21
ELECTRICAL	6	3
IMS	4	3
MECHANICAL	14	9
PETROLEUM	11	5
TOTAL	83	53

Table 6: Students performance – College (Spring 2019-2020) according to the new 1-7 student outcomes (2019-2020 cycle ABET updates)

O	Outcome	5	4	3	2	1	0	Average	Weighted Average
1	Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	13	42	16	2	0	16	3.9	3.9
		15%	47%	18%	2%	0%	18%	78%	78%
2	Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	18	17	15	2	0	37	4	4.1
		20%	19%	17%	2%	0%	42%	80%	82%
3	Communicate effectively with a range of audiences.	12	26	8	1	1	41	4	4.1
		13%	29%	9%	1%	1%	46%	80%	82%
4	Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	6	26	8	4	2	43	3.7	3.9
		7%	29%	9%	4%	2%	48%	74%	78%

5	Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	14	18	4	0	1	52	4.2	**4.4**
		16%	20%	4%	0%	1%	58%	84%	**88%**
6	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	7	18	8	1	1	54	3.8	**4**
		8%	20%	9%	1%	1%	61%	76%	**80%**
7	Acquire and apply new knowledge as needed, using appropriate learning strategies.	15	20	13	3	0	38	3.9	**4.1**
		17%	22%	15%	3%	0%	43%	78%	**82%**

The weighted average for an outcome is calculated by $\dfrac{\sum(performance \times relevance)}{\sum relevance}$
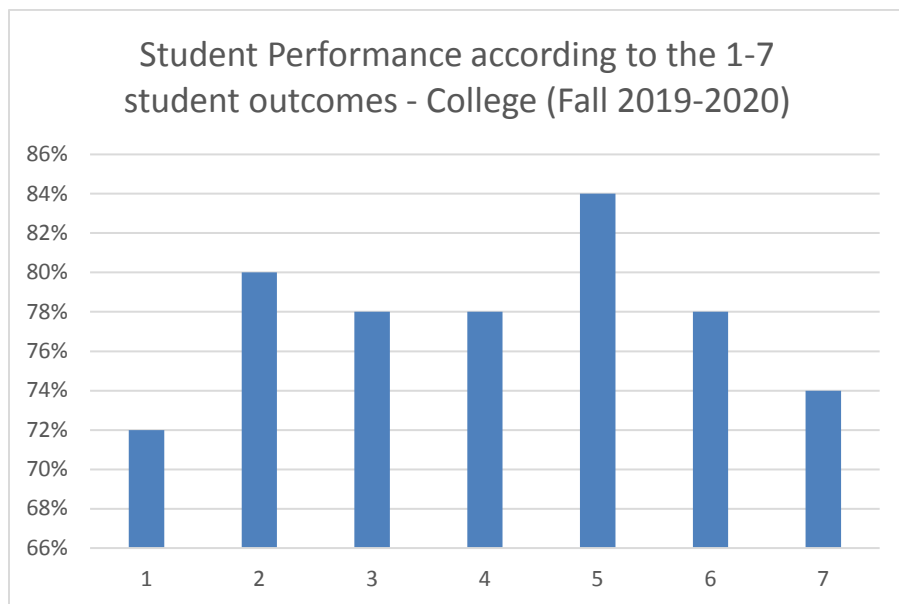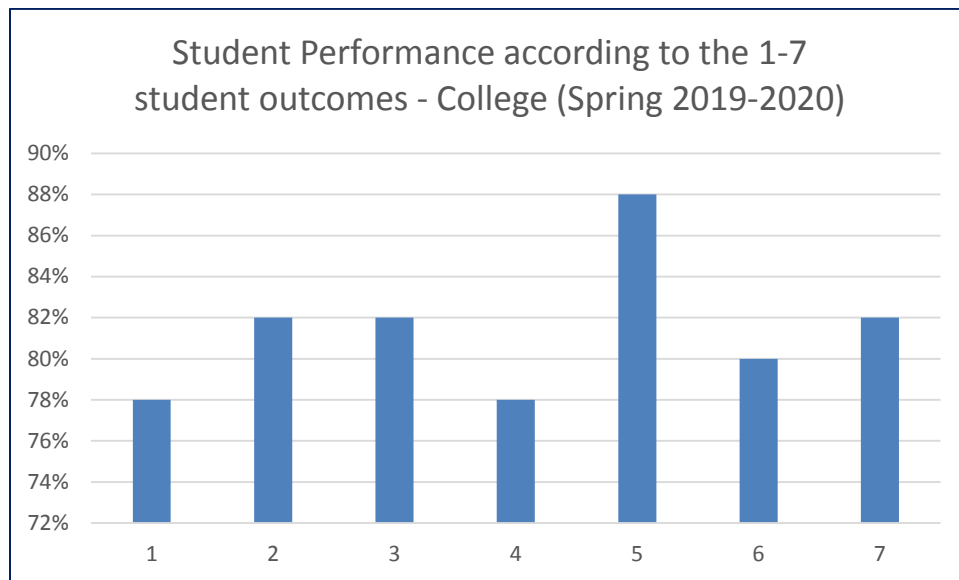

Figure 3: Students performance according to the 1-7 student outcomes – College (Spring 2019-2020)

Table 7: Students performance (weighted averages) – comparison between programs, engineering core, and college (Spring 2019-2020) according to the new 1-7 student outcomes (2019-2020 cycle ABET updates)

O	Outcome	chemical	civil	computer	electrical	ims	mechanical	petroleum	core	college
1	Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	90%	86%	84%	80%	80%	68%	76%	76%	**78%**
2	Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	94%	86%	90%	90%	80%	68%	78%	60%	**82%**
3	Communicate effectively with a range of audiences.	100%	82%	84%	86%	80%	76%	74%	80%	**82%**
4	Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	80%	80%	86%	86%	80%	74%	60%	60%	**78%**
5	Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	100%	92%	94%	86%	86%	84%	80%	74%	**88%**
6	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	46%	100%	86%	80%	84%	56%	80%	76%	**80%**
7	Acquire and apply new knowledge as needed, using appropriate learning strategies.	80%	86%	98%	80%	86%	74%	72%	72%	**82%**

Comparative student performance across engineering programs, core, and college (Spring 2019-2020)

Legend: Chemcial, Civil, Computer, Electrical, IMS, Mechanical, Petroleum, Core, College
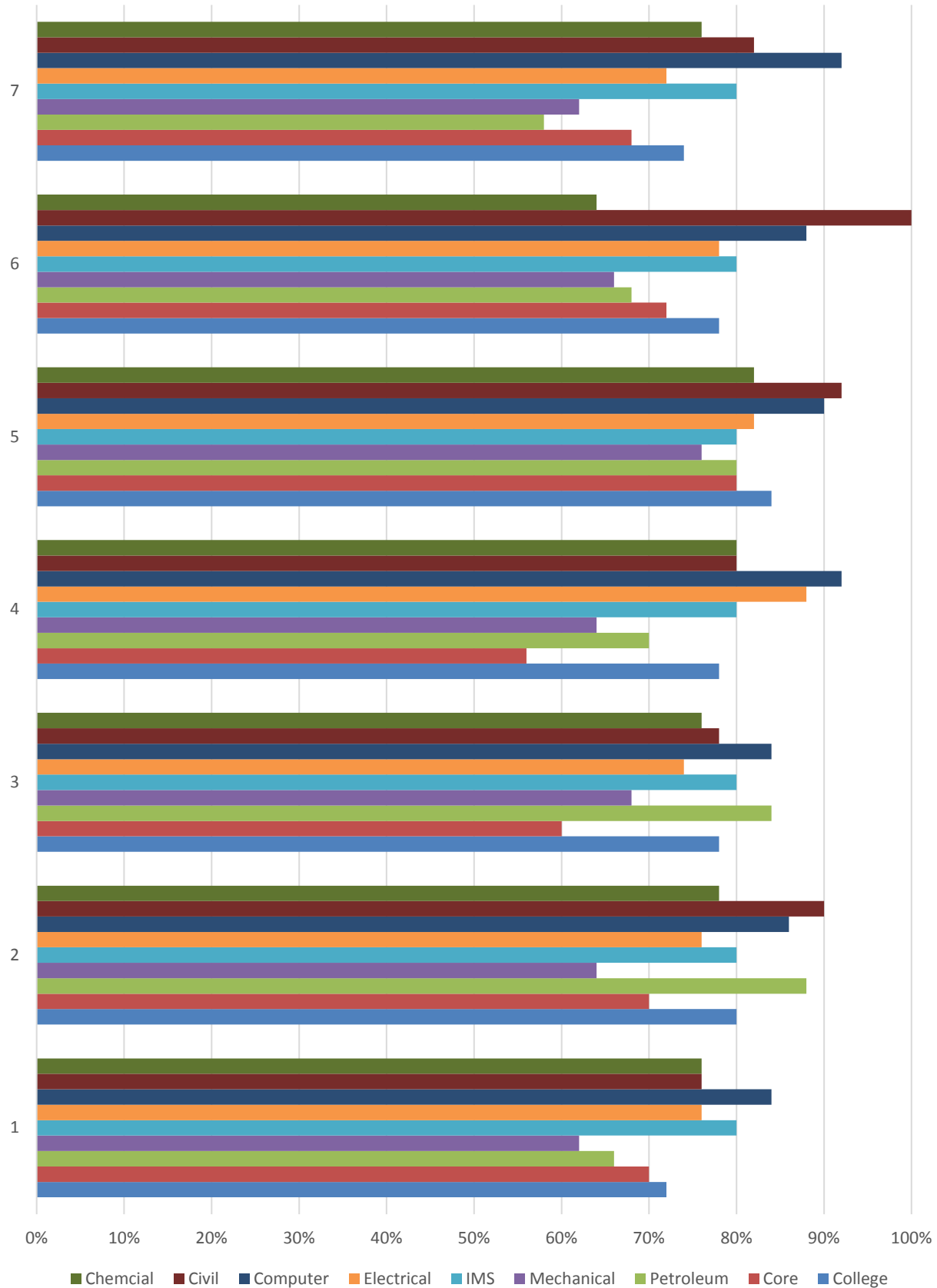
Figure 4: Students performance (weighted averages) – comparison between programs, engineering core, and college (Spring 2019-2020) (According to the new 1-7 student outcomes)

COLLEGE: 19/20 Summer

Department	Total Responses	Unique Responder
CHEMICAL	0	0
CIVIL	0	0
COMPUTER	0	0
ELECTRICAL	1	1
IMS	0	0
MECHANICAL	7	7
PETROLEUM	4	4
TOTAL	12	12

Table 8: Students performance – College (Summer 2019-2020) according to the new 1-7 student outcomes (2019-2020 cycle ABET updates)

O	Outcome	5	4	3	2	1	0	Average	Weighted Average
1	Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	0	7	2	4	0	0	3.2	3.2
		0%	54%	15%	31%	0%	0%	64%	64%
2	Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	0	1	2	1	1	8	2.6	2.8
		0%	8%	15%	8%	8%	62%	52%	56%
3	Communicate effectively with a range of audiences.	0	0	5	2	0	6	2.7	2.9
		0%	0%	38%	15%	0%	46%	54%	58%
4	Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	1	1	4	0	1	6	3.1	3.4
		8%	8%	31%	0%	8%	46%	62%	68%
5	Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	0	0	3	0	0	10	3	3
		0%	0%	23%	0%	0%	77%	60%	60%
6		0	1	3	0	0	9	3.3	3.2

	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	0%	8%	23%	0%	0%	69%	66%	**64%**
7	Acquire and apply new knowledge as needed, using appropriate learning strategies.	0	2	7	0	1	3	3	**3**
		0%	15%	54%	0%	8%	23%	60%	**60%**

The weighted average for an outcome is calculated by $\dfrac{\sum(performance \times relevance)}{\sum relevance}$
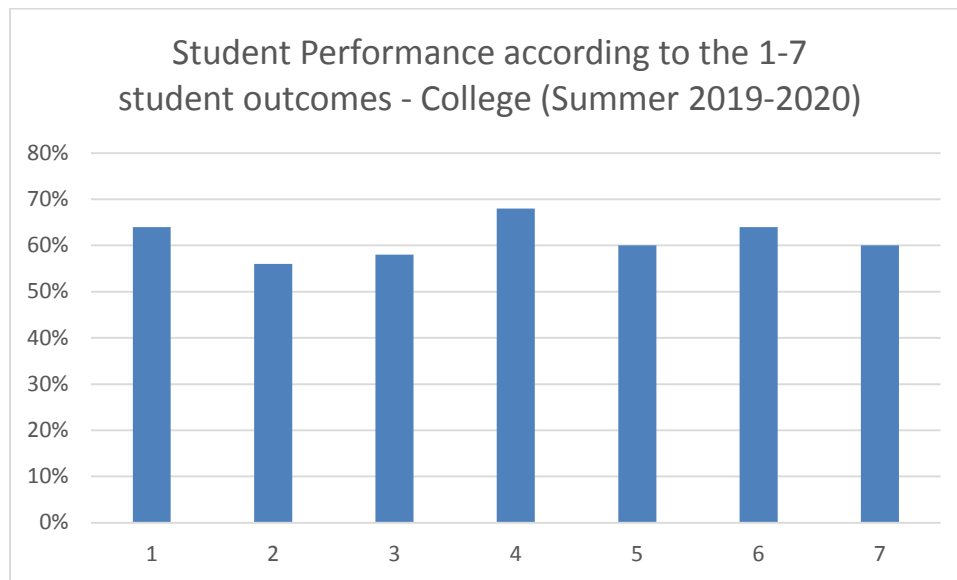
Figure 5: Students performance according to the 1-7 student outcomes – College (Summer 2019-2020)

Table 9: Students performance (weighted averages) – comparison between programs, engineering core, and college (Summer 2019-2020) according to the new 1-7 student outcomes (2019-2020 cycle ABET updates)

O	Outcome	chemical	civil	computer	electrical	ims	mechanical	petroleum	core	college
1	Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	0%	0%	0%	80%	0%	50%	80%	74%	**64%**
2	Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	0%	0%	0%	0%	0%	56%	0%	0%	**56%**
3	Communicate effectively with a range of audiences.	0%	0%	0%	60%	0%	58%	60%	0%	**58%**
4	Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	0%	0%	0%	0%	0%	72%	80%	40%	**68%**
5	Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	0%	0%	0%	60%	0%	60%	0%	0%	**60%**
6	Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.	0%	0%	0%	60%	0%	0%	60%	70%	**64%**
7	Acquire and apply new knowledge as needed, using appropriate learning strategies.	0%	0%	0%	60%	0%	56%	60%	70%	**60%**

Comparative student performance across engineering programs, core, and college (Summer 2019-2020)

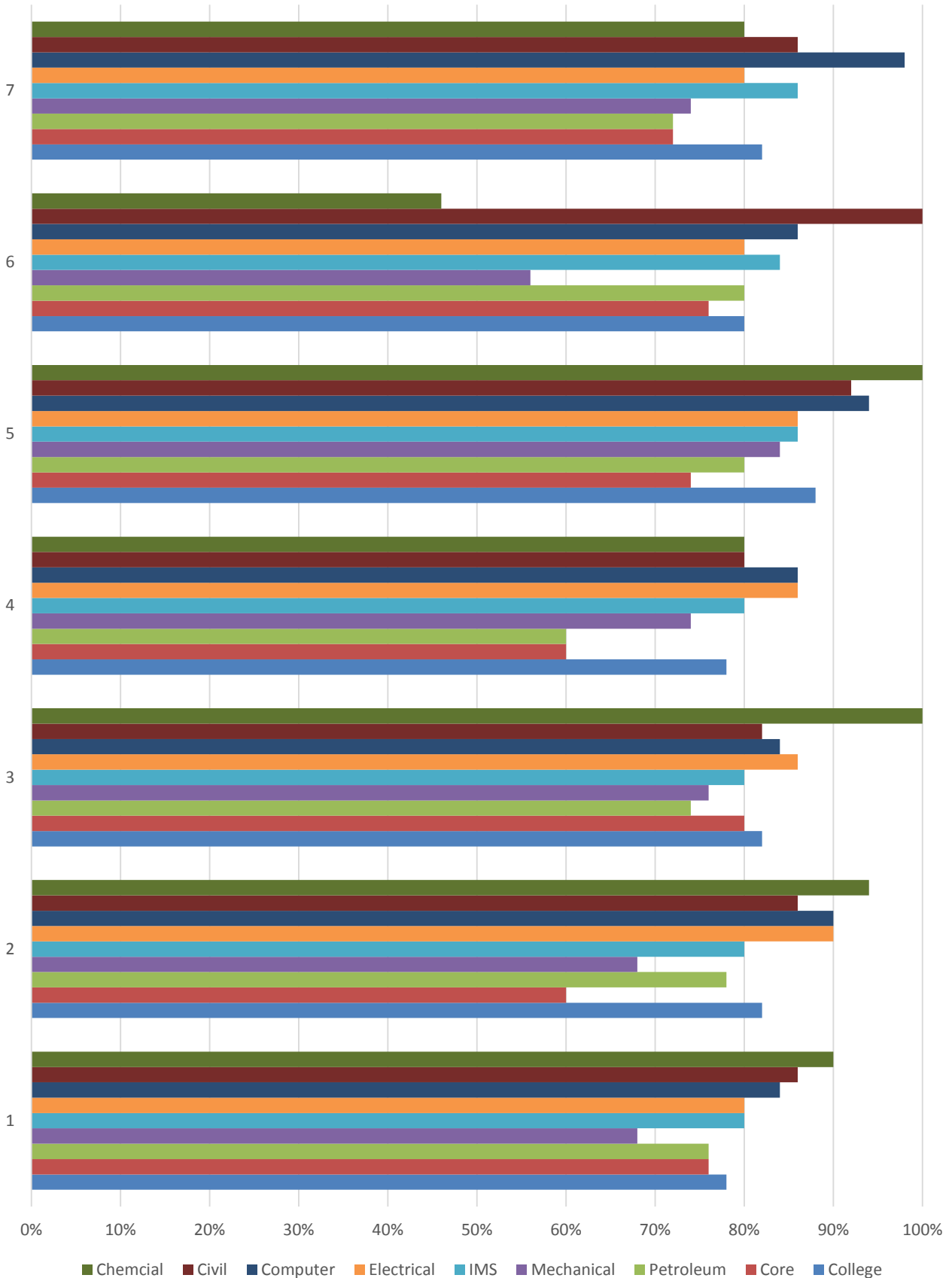Legend: Chemcial, Civil, Computer, Electrical, IMS, Mechanical, Petroleum, Core, College
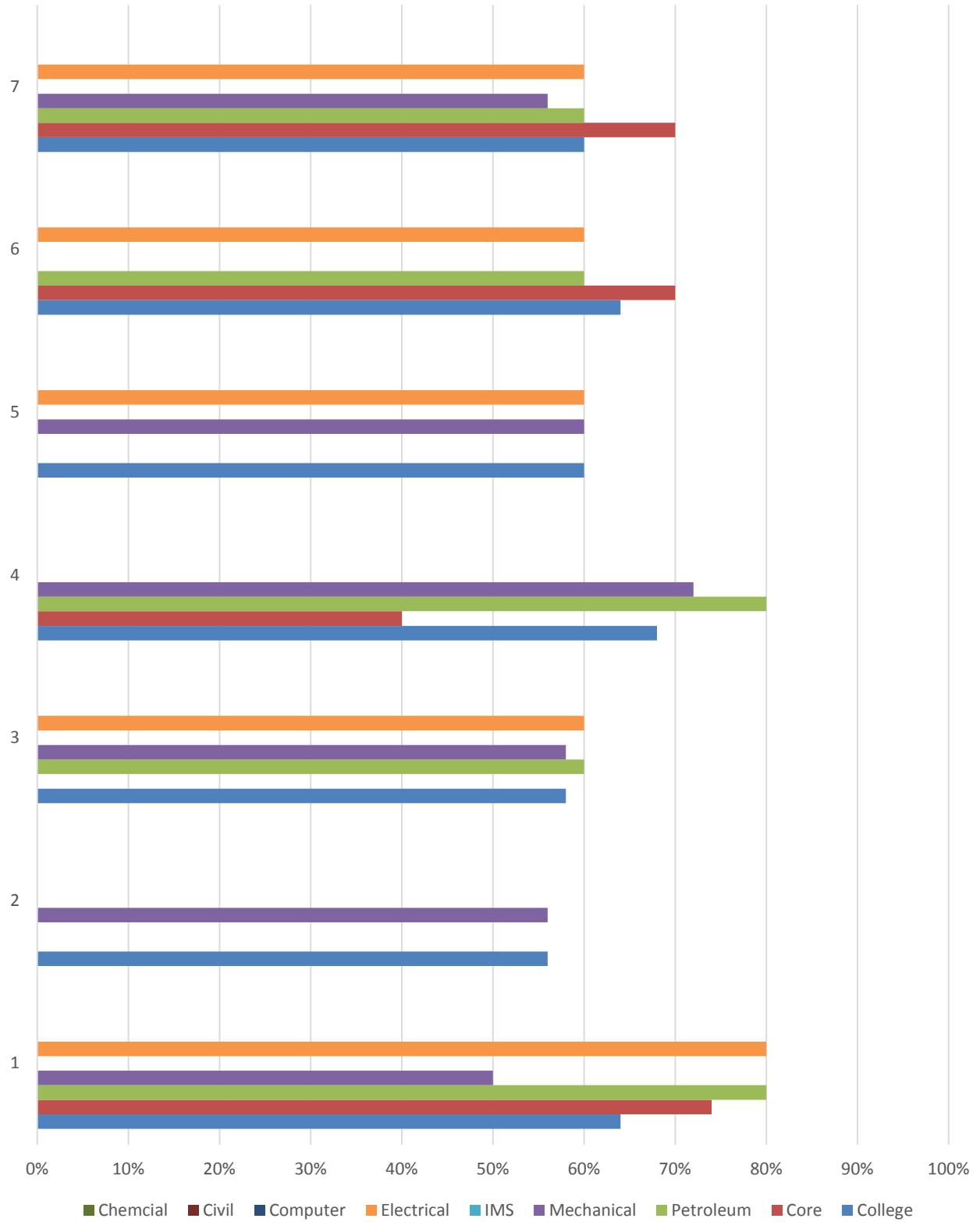
Figure 6: Students performance (weighted averages) – comparison between programs, engineering core, and college (Summer 2019-2020) (According to the new 1-7 student outcomes)

Program results for online course assessment

for the academic year 2019-2020

Chemical Engineering Program

Fall semester 19/20

Instructors: **10**

Courses: **18**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0640-211	Chemical Engineering Principles I	H	L		L			
0640-324	Kinetics and Reactor Design (A)	H	H					
0640-324	Kinetics and Reactor Design (A)	H	H					
0640-440	Mass Transfer Operations	H	H				L	
0640-443	Mass Transfer Operations Laboratory							
0640-462	Introduction to Biochemical Engineering	H	H		M		M	
0640-472	Petroleum Refining Engineering	M		M	L	M	L	L
0640-472	Petroleum Refining Engineering	M		M	L	M	L	L
0640-475	Gas Sweetening							
0640-491	Plant Design	M	H	H	M	H		H
0640-491	Plant Design	M	H	H	M	H		H
0640-491	Plant Design	M	H	H	M	H		H
0640-491	Plant Design	M	H	H	M	H		H
0640-491	Plant Design	M	H	H	M	H		H
0640-493	Equipment Design		H	M				M

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0640-211	Chemical Engineering Principles I	2	2		2			
0640-324	Kinetics and Reactor Design (A)	4	4					
0640-324	Kinetics and Reactor Design (A)	4	4					
0640-440	Mass Transfer Operations	4	4	3	3		4	

Course Number	Course Name							
0640-443	Mass Transfer Operations Laboratory	4		3		4	4	
0640-462	Introduction to Biochemical Engineering	4	4		4		4	
0640-472	Petroleum Refining Engineering	3		4	4	5	3	4
0640-472	Petroleum Refining Engineering	5		3	4	1	1	1
0640-475	Gas Sweetening	3	4	4	3	4	3	4
0640-491	Plant Design	4	4	5	4	4		4
0640-491	Plant Design	4	4	5	4	4		4
0640-491	Plant Design	4	4	4	4	4		4
0640-491	Plant Design	4	4	3	4	5		4
0640-491	Plant Design	4	4	3	5	5		4
0640-493	Equipment Design		4	3				4
	Weighted Average	**3.8**	**3.9**	**3.8**	**4**	**4.1**	**3.2**	**3.8**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0640-440	Mass Transfer Operations	Students performed overall satisfactorily in the class
0640-472	Petroleum Refining Engineering	The students performed very well in this course despite the confusion caused by the decision of the college to partially move the lectures to the new Shidadiya campus with the lack of TA's, secretarial and staff support and lack of computer facilities.
0640-491	Plant Design	Most of the students worked hard to achieve the objectives of the course

Spring Semester 19/20

Instructors: **5**

Courses: **8**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0640-241	Fluid Mechanics	M	M				M	
0640-324	Kinetics and Reactor Design (A)	H	H					
0640-324	Kinetics and Reactor Design (A)	H	H					
0640-440	Mass Transfer Operations	H	H				L	
0640-491	Plant Design	M	H	H	M	H		H

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0640-241	Fluid Mechanics	3	3				3	
0640-324	Kinetics and Reactor Design (A)	5	5					
0640-324	Kinetics and Reactor Design (A)	5	5					
0640-440	Mass Transfer Operations	5	5				1	
0640-491	Plant Design	4	5	5	4	5		4
	Weighted Average	**4.5**	**4.7**	**5**	**4**	**5**	**2.3**	**4**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0640-440	Mass Transfer Operations	Students were not given computer aided design (ASPIN-HYSYS) assignment to design and analyze a rigorous multi-component industry-scale mass transfer equipment because of COVID-19 pandemic and the limited access to computation facilities at Kuwait University. Online education proved to be very good for the students in general, they displayed better understanding of the material learned and encouraged online cooperation between the students which in my opinion explain the high performance of the students.

Summer Semester 19/20

No Data Available

Civil Engineering Program

Fall Semester 19/20

Instructors: **13**

Courses: **17**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0620-201	Introduction to Design	M	H	H	M	M		M
0620-271	Structural Analysis I	H		H	L			
0620-271	Structural Analysis I	H		H	L			
0620-310	Fluid Mechanics	H	L					
0620-312	Environmental Engineering	H	H	L	L	L	H	
0620-371	Structural Analysis II	H		M				L
0620-373	Reinforced Concrete I	M	H	H	M			L
0620-430	Legal, Professional, and Social Aspects of Engineering			H	H	H		H
0620-435	Construction Engineering and Management	M	M	H		M		H
0620-490	Capstone Design Course	L	H	H	M	M		M
0620-490	Capstone Design Course	L	H	H	M	M		M
0620-490	Capstone Design Course	L	H	H	M	M		M
0620-490	Capstone Design Course	L	H	H	M	M		M

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0620-201	Introduction to Design	3	5	4	4	4		1
0620-271	Structural Analysis I	2		3	3			
0620-271	Structural Analysis I	4		2	4			

Course Number	Course Name							
0620-310	Fluid Mechanics	4	4					
0620-312	Environmental Engineering	4	4	5	4	4	5	
0620-371	Structural Analysis II	4		3				4
0620-373	Reinforced Concrete I	4	3	4	4			4
0620-430	Legal, Professional, and Social Aspects of Engineering			4	3	5		4
0620-435	Construction Engineering and Management	4	4	4		4		4
0620-490	Capstone Design Course	5	5	4	4	5		5
0620-490	Capstone Design Course	5	5	5	4	4		5
0620-490	Capstone Design Course	5	5	5	5	5		5
0620-490	Capstone Design Course	5	5	4	5	5		5
	Weighted Average	**3.8**	**4.5**	**3.9**	**4**	**4.6**	**5**	**4.1**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0620-271	Structural Analysis I	Student preparation in earlier courses (statics and strength of materials) was not sufficient for this group of students. Some students took strength of materials class in the summer and certain topics were not covered due to lack of time. This class struggled with concepts of force equilibrium and writing internal force functions. A mandatory weekly tutorial is highly recommended for improving student participation, learning and practice. It will be a

		good idea to unify the final exam of this course across all sections as this course is a pre-req for other courses and concepts not fully covered in this course cause hindrance to instructors teaching related upper-level courses.
0620-310	Fluid Mechanics	This is a group of 25 Female students. One Student dropped the course. The students has a mixed academic standings from Excellent to average students.
0620-373	Reinforced Concrete I	It is suggested to reduce the rating of Outcome 2.
0620-490	Capstone Design Course	Class size was very good. In capstone design, there shall not be more than 12 students. I was lucky getting 10.
0620-490	Capstone Design Course	The course should be taught in two-semester format

Spring Semester 19/20

Instructors: **8**

Courses: **11**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0620-271	Structural Analysis I	H		H	L			
0620-310	Fluid Mechanics	H	L					
0620-312	Environmental Engineering	H	H	L	L	L	H	
0620-435	Construction Engineering and Management	M	M	H		M		H
0620-490	Capstone Design Course	L	H	H	M	M		M
0620-490	Capstone Design Course	L	H	H	M	M		M

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0620-271	Structural Analysis I	5		4	4			
0620-310	Fluid Mechanics	4	4					
0620-312	Environmental Engineering	4	5	5	4	4	5	
0620-435	Construction Engineering and Management	4	3	3		4		4
0620-490	Capstone Design Course	5	5	5	4	5		5
0620-490	Capstone Design Course	4	4	4	4	5		4
	Weighted Average	**4.3**	**4.3**	**4.1**	**4**	**4.6**	**5**	**4.3**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0620-310	Fluid Mechanics	This is the First Course to Use Distance Learning using Microsoft Teams. This is the class of 24 Female students . The average is very High using Distance Learning !!!!
0620-435	Construction Engineering and Management	Break down social barriers among female students attending classes on-line

0620-490	Capstone Design Course	The class was small. It has been excellent until the COVID-19 appeared. On line classes and presentation not much rewarding.

Summer Semester 19/20
No Data Available

Computer Engineering Program

Fall Semester 19/20

Instructors: **21**

Courses: **30**

R E L E V A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0612-201	Object-Oriented Paradigm						H	
0612-201	Object-Oriented Paradigm						H	
0612-207	Data Structures	H					H	
0612-207	Data Structures	H					H	
0612-210	Computer Ethics and Professional Practice			H	H			H
0612-221	Software Engineering I	H	H	H	H	H		
0612-262	Fundamentals of Digital Logic		H					
0612-264	Digital Logic Laboratory		H	H		H	H	
0612-264	Digital Logic Laboratory		H	H		H	H	
0612-300	Design and Analysis of Algorithms	H	H					
0612-300	Design and Analysis of Algorithms	H	H					
0612-325	Human Computer Interaction		H	H	H			
0612-325	Human Computer Interaction		H	H	H			
0612-356	Computer Networks I	H					H	
0612-356	Computer Networks I	H					H	
0612-363	Introduction to Embedded Systems		H					
0612-364	Microprocessors Laboratory		H	H		H	H	
0612-364	Microprocessors Laboratory		H	H		H	H	
0612-395	Computer Systems Engineering	H	H	H	H	H	H	H
0612-395	Computer Systems Engineering	H	H	H	H	H	H	H
0612-395	Computer Systems Engineering	H	H	H	H	H	H	H
0612-395	Computer Systems Engineering	H	H	H	H	H	H	H

Course Number	Course Name	1	2	3	4	5	6	7
0612-395	Computer Systems Engineering	H	H	H	H	H	H	H
0612-445	Operating System Principles	H	H				H	
0612-445	Operating System Principles	H	H				H	
0612-445	Operating System Principles	H	H				H	
0612-469	Computer Architecture Laboratory		H	H			H	
0612-469	Computer Architecture Laboratory		H	H			H	
0612-495	Capstone Design	H	H	H	H	H	H	H
0612-495	Capstone Design	H	H	H	H	H	H	H

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0612-201	Object-Oriented Paradigm						4	
0612-201	Object-Oriented Paradigm							
0612-207	Data Structures	3						
0612-207	Data Structures	4					4	
0612-210	Computer Ethics and Professional Practice			3				
0612-221	Software Engineering I	5	5	4	5	5		
0612-262	Fundamentals of Digital Logic		4					
0612-264	Digital Logic Laboratory			4		4		
0612-264	Digital Logic Laboratory			4		4		
0612-300	Design and Analysis of Algorithms	5	3					
0612-300	Design and Analysis of Algorithms	4						
0612-325	Human Computer Interaction		4	4	4			
0612-325	Human Computer Interaction			3				
0612-356	Computer Networks I	4						
0612-356	Computer Networks I	4					4	
0612-363	Introduction to Embedded Systems		4					
0612-364	Microprocessors Laboratory			5		4		
0612-364	Microprocessors Laboratory			3		3		

Course Number	Course Name							
0612-395	Computer Systems Engineering	5	5	5	5	5	5	5
0612-395	Computer Systems Engineering	5	5	5	5	5	5	5
0612-395	Computer Systems Engineering	4	4	3	4	4	4	3
0612-395	Computer Systems Engineering	5	5	5	5	5	5	5
0612-395	Computer Systems Engineering	4	5	5	5	5		4
0612-445	Operating System Principles	3						
0612-445	Operating System Principles	4	3				3	
0612-445	Operating System Principles		3					
0612-469	Computer Architecture Laboratory		4	4				
0612-469	Computer Architecture Laboratory			4				
0612-495	Capstone Design	4	5	5	4	5	5	5
0612-495	Capstone Design	4	5	5	4	5	5	5
	Weighted Average	**4.2**	**4.3**	**4.2**	**4.6**	**4.5**	**4.4**	**4.6**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0612-356	Computer Networks I	N/A
0612-356	Computer Networks I	No suggestions
0612-395	Computer Systems Engineering	See the journal for further reference
0612-395	Computer Systems Engineering	None
0612-445	Operating System Principles	Students were very receptive to the idea of designing a complete multi-phase project (a mini-OS shell) from scratch on a virtual machine, and it seemed to have solidified their understanding on various OS concepts. However, I observed that the main hindrance to working on such a project was mostly due to their inexperience in the C language itself (perhaps due to a lack of practice or competence). In the future, it is not clear to me how this class will be taught without a low-level system language such as C in light of it being replaced with MATLAB.
0612-469	Computer Architecture Laboratory	I think that the outcome need to changed to 2.

| 0612-469 | Computer Architecture Laboratory | See attachments. |

Spring Semester 19/20

Instructors: **21**

Courses: **30**

Course Number	Course Name	1	2	3	4	5	6	7
0612-201	Object-Oriented Paradigm						H	
0612-201	Object-Oriented Paradigm						H	
0612-201	Object-Oriented Paradigm							
0612-207	Data Structures	H					H	
0612-207	Data Structures	H					H	
0612-210	Computer Ethics and Professional Practice			H	H			H
0612-210	Computer Ethics and Professional Practice			H	H			H
0612-221	Software Engineering I	H	H	H	H	H		
0612-221	Software Engineering I	H	H	H	H	H		
0612-300	Design and Analysis of Algorithms	H	H					
0612-325	Human Computer Interaction		H	H	H			
0612-325	Human Computer Interaction		H	H	H			
0612-356	Computer Networks I	H					H	
0612-363	Introduction to Embedded Systems		H					
0612-363	Introduction to Embedded Systems		H					
0612-364	Microprocessors Laboratory		H	H		H	H	
0612-364	Microprocessors Laboratory		H	H		H	H	
0612-364	Microprocessors Laboratory		H	H		H	H	
0612-364	Microprocessors Laboratory		H	H		H	H	
0612-395	Computer Systems Engineering	H	H	H	H	H	H	H
0612-395	Computer Systems Engineering	H	H	H	H	H	H	H
0612-395	Computer Systems Engineering	H	H	H	H	H	H	H
0612-410	Automata Theory	H	H	H	H	H	H	H

Course Number	Course Name	1	2	3	4	5	6	7
0612-453	Cryptography and Network Security	H	H	H	H			H
0612-469	Computer Architecture Laboratory		H	H			H	
0612-474	ASIC Design	H	H				H	
0612-495	Capstone Design	H	H	H	H	H	H	H
0612-495	Capstone Design	H	H	H	H	H	H	H
0612-495	Capstone Design	H	H	H	H	H	H	H
0612-495	Capstone Design	H	H	H	H	H	H	H
0612-495	Capstone Design	H	H	H	H	H	H	H

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0612-201	Object-Oriented Paradigm						4	
0612-201	Object-Oriented Paradigm						4	
0612-201	Object-Oriented Paradigm	3	4	3	2	3	4	4
0612-207	Data Structures	3						
0612-207	Data Structures	4					4	
0612-210	Computer Ethics and Professional Practice			4				
0612-210	Computer Ethics and Professional Practice			5				
0612-221	Software Engineering I	4		4		5		
0612-221	Software Engineering I	4		5		4		
0612-300	Design and Analysis of Algorithms	5						
0612-325	Human Computer Interaction		3	3	3			
0612-325	Human Computer Interaction		4	4	4			
0612-356	Computer Networks I	4						
0612-363	Introduction to Embedded Systems		5					
0612-363	Introduction to Embedded Systems		4					
0612-364	Microprocessors Laboratory			3				
0612-364	Microprocessors Laboratory			4				
0612-364	Microprocessors Laboratory			3				

0612-364	Microprocessors Laboratory			3				
0612-395	Computer Systems Engineering	4	5	5	4	5		5
0612-395	Computer Systems Engineering	4	5	5	4	5		5
0612-395	Computer Systems Engineering	4	5	4	5	5		5
0612-410	Automata Theory	4						
0612-453	Cryptography and Network Security	4						
0612-469	Computer Architecture Laboratory				4			
0612-474	ASIC Design	4	3				4	
0612-495	Capstone Design	5	5	4	4	4	5	5
0612-495	Capstone Design	5	5	5	5	5	4	5
0612-495	Capstone Design	5	5	5	5	5	5	5
0612-495	Capstone Design	5	5	5	5	5	5	5
0612-495	Capstone Design	4	4	4	4	4	4	4
	Weighted Average	**4.2**	**4.5**	**4.2**	**4.3**	**4.7**	**4.3**	**4.9**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0612-221	Software Engineering I	An interaction with real stake holders is a plus on a course project to increase realistic requirement elicitations and evaluate user experience on produced SW artifacts.
0612-300	Design and Analysis of Algorithms	The course included three projects. It is strongly recommended that this course always include projects.
0612-363	Introduction to Embedded Systems	In this course, I suggest that we give more focus on human real applications using sensors in order to design more interesting systems.
0612-364	Microprocessors Laboratory	Due to the exceptional circumstances that we pass through in this term and for the implementation of the virtual learning using MS Teams, the only way a student could show the presentation of his/her project was sharing the screen of each presenter within a specific period of time, The experiment was good and most of the students have got new skills in how to

		implement, test, demonstrate and present a hardware project through screens
0612-364	Microprocessors Laboratory	- Distance learning was implemented to teach this lab using MS teams due to COVID 19 pandemic. - Since Ms. teams was used to do project presentations, therefore all students are having almost same presentation rubric score, as attached above. Therefore, no separate presentation rubrics will be attached for each student. - Three evidences were submitted (best, average, worst) for the project. However, it might appear that the average evidence may have the best report or vice versa since project grade is distributed on many factors.
0612-364	Microprocessors Laboratory	- Distance learning was implemented to teach this lab using MS teams due to COVID 19 pandemic. - Since Ms. teams was used to do project presentations, therefore all students are having almost same presentation rubric score, as attached above. Therefore, no separate presentation rubrics will be attached for each student. - Three evidences were submitted (best, average, worst) for the project. However, it might appear that the average evidence may have the best report or vice versa since project grade is distributed on many factors.
0612-395	Computer Systems Engineering	- Students applied basic science and engineering concepts in evaluating the alternative designs and rank them based on matrix ranking. This goes to all design stages. In addition, many calculations are needed based on the project nature. - The whole course is based on teamwork. Teams consist from 3-4 students and the work is divided among them. The students test, evaluate and combine all parts to build the complete corresponding design. - Different phases of report submissions were carried out during this course where feedback is given to each team. Students must consider the feedback, modify and update the documentation on the next submission. In addition, 4-5 oral presentations held in class and the students were evaluated and given feedback. - Students need applied the latest technology used in terms of Hardware/Software to select the suitable components. This is approved by comparing different technologies.
0612-410	Automata Theory	Students performed well in knowing the concepts and applied science and math to formulate and solve some

		computing/engineering soft machine designs
0612-495	Capstone Design	Students were able to develop, implement, and collaborate even in a remote setting which leads me to believe that this alternative form of collaboration can be successful (at least for the case of computer engineering projects) even if certain aspects of teamwork are slightly diminished (such as the lack of a tactile environment).
0612-495	Capstone Design	All outcomes are required in capstone design course.
0612-495	Capstone Design	None

Summer Semester 19/20

No Data Available

Electrical Engineering Program

Fall Semester 19/20

Instructors: **5**

Courses: **15**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0610-297	Corner-Stone Design	H	H	H	H	H	H	H
0610-297	Corner-Stone Design	H	H	H	H	H	H	H
0610-312	Signals and Systems	H						H
0610-318	DSP	H		M		M	M	H
0610-320	Electromagnetic Field Theory	H						H
0610-333	Electronics II	H						H
0610-334	Electronics Laboratory II			M		M	H	M
0610-370	Control Theory I	H	M		M		M	
0610-374	Control Laboratory I	H	M	M	M	M	H	
0610-381	Communication Theory	H						H
0610-420	Antenna and Propagation	H		M		M		H
0610-432	Analog Integrated Circuits	H						M
0610-477	Optimization Techniques	H			M		M	M

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0610-297	Corner-Stone Design	4	5	5	5	5	5	5
0610-297	Corner-Stone Design	4	3	3	4	4	3	4
0610-312	Signals and Systems	3						3
0610-318	DSP	3		3		3	3	3
0610-320	Electromagnetic Field Theory	3						3
0610-333	Electronics II	3						3

Course Number	Course Name							
0610-334	Electronics Laboratory II			4		4	4	4
0610-370	Control Theory I	5	3		4			
0610-374	Control Laboratory I	4	4	4	5	4	4	
0610-381	Communication Theory	4						3
0610-420	Antenna and Propagation	4		3		4		4
0610-432	Analog Integrated Circuits	4						4
0610-477	Optimization Techniques	4			4		4	4
	Weighted Average	**3.8**	**3.8**	**3.7**	**4.4**	**4.1**	**3.9**	**3.6**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0610-320	Electromagnetic Field Theory	Students are in great need for college level detailed orientation highlighting the duties of engineering student and stressing on time management. Students lack mathematical and scientific background.
0610-420	Antenna and Propagation	We hope that this course can be accompanied with a lab, but this lab should be somewhat sophisticated by having near-field and far-field anechoic chambers, power meter, and vector network analyzer.

Spring Semester 19/20

Instructors: **3**

Courses: **6**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0610-297	Corner-Stone Design	H	H	H	H	H	H	H
0610-297	Corner-Stone Design	H	H	H	H	H	H	H
0610-381	Communication Theory	H						H
0610-410	Active Filter Design	H	M					M
0610-497	Engineering Design	H	H	H	H	H	H	H

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0610-297	Corner-Stone Design	4	5	5	4	4	4	4
0610-297	Corner-Stone Design	4	5	4	5	5	4	5
0610-381	Communication Theory	4						3
0610-410	Active Filter Design	4	4					4
0610-497	Engineering Design	4	4	4	4	4	4	4
	Weighted Average	4	4.5	4.3	4.3	4.3	4	4

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0610-297	Corner-Stone Design	No Remarks to be provided
0610-381	Communication Theory	No remarks

Summer Semester 19/20

Instructors: **1**

Courses: **1**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0610-385	Introduction to DSP	H		M		M	M	H

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0610-385	Introduction to DSP	4		3		3	3	3
	Weighted Average	4	0	3	0	3	3	3

Remarks and Suggestions

No Data Available

Industrial & Management Systems Engineering Program

Fall Semester 19/20

Instructors: **2**

Courses: **3**

R E L E V A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0660-325	Safety and Health for Engineers			H	H	H	H	H
0660-481	Systems Simulation	H	H	H		H	H	H
0660-494	Industrial Engineering in Process and Service Systems	H	H	H	H	H	H	

P E R F O R M A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0660-325	Safety and Health for Engineers			4	4	4	4	4
0660-481	Systems Simulation	4	4	4		4	4	4
0660-494	Industrial Engineering in Process and Service Systems	4	4	4	4	4	4	
	Weighted Average	4	4	4	4	4	4	4

Remarks and Suggestions

No Data Available

Spring Semester 19/20

Instructors: **4**

Courses: **7**

R E L E V A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0660-209								
0660-325	Safety and Health for Engineers			H	H	H	H	H
0660-425	Human Factors Engineering		H	H	H	H	H	H
0660-475	Engineering Marketing Analysis		H		H		H	
0660-481	Systems Simulation	H	H	H		H	H	H
0660-496	Industrial Engineering Design	H	H	H	H	H	H	H

P E R F O R M A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0660-209		3					3	
0660-325	Safety and Health for Engineers			4	4	4	4	4
0660-425	Human Factors Engineering		4	4	4	4	4	4
0660-475	Engineering Marketing Analysis		4		4		4	
0660-481	Systems Simulation	4	4	4		5	5	
0660-496	Industrial Engineering Design	4	4	4	4	4	4	5
	Weighted Average	4	4	4	4	4.3	4.2	4.3

Remarks and Suggestions

No Data Available

Summer Semester 19/20
No Data Available

Mechanical Engineering Program

Fall Semester 19/20

Instructors: **14**

Courses: **23**

Course Number	Course Name	1	2	3	4	5	6	7
0630-241	Materials Science and Metallurgy	H			L		L	L
0630-241	Materials Science and Metallurgy	H			L		L	L
0630-311	Theory of Machines	H	M	L				M
0630-311	Theory of Machines	H	M	L				M
0630-311	Theory of Machines	H	M	L				M
0630-318	System Dynamics	H	M	M				
0630-322	Engineering Thermodynamics II	H	M		M	L		L
0630-331	Fluid Mechanics I	H	L					
0630-351	Mechanical Design I	H	M		L			L
0630-353	Manufacturing Processes	H	M	M	L	M		
0630-361	Project Planning and Management							
0630-415	Mechanical Vibrations	H	M	M	L			L
0630-417	Control of Mechanical Systems	H	H	M		L		L
0630-421	Heat Transfer	H	M	M				
0630-451	Mechanical Design II	H	H	M	M	L		M
0630-451	Mechanical Design II	H	H	M	M	L		M
0630-455	Computer-Aided Design	H	M	M	M	L		M
0630-455	Computer-Aided Design	H	M	M	M	L		M
0630-459	Engineering Design	H	H	H	H	H	M	H
0630-459	Engineering Design	H	H	H	H	H	M	H
0630-459	Engineering Design	H	H	H	H	H	M	H

Course Number	Thermal Systems Design							
0630-488	Thermal Systems Design							

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0630-241	Materials Science and Metallurgy	3			3		3	3
0630-241	Materials Science and Metallurgy	3			3		3	3
0630-311	Theory of Machines	1	1	2				2
0630-311	Theory of Machines	2	2					2
0630-311	Theory of Machines	4	4	3				3
0630-318	System Dynamics	3	3	2				
0630-322	Engineering Thermodynamics II	2	2		2	2		2
0630-331	Fluid Mechanics I	4	4					
0630-351	Mechanical Design I	3	3		3			3
0630-353	Manufacturing Processes	4	3	4	4	3		
0630-361	Project Planning and Management	4		4	5	4		4
0630-415	Mechanical Vibrations	3	3	4	3			4
0630-417	Control of Mechanical Systems	3	3	4		5		4
0630-421	Heat Transfer	3	4	3				
0630-451	Mechanical Design II	3	3	3	3	4		4
0630-451	Mechanical Design II	2	3	3	3	3		3
0630-455	Computer-Aided Design	4	3	4	3	4		4
0630-455	Computer-Aided Design							
0630-459	Engineering Design	4	5	4	3	4	3	3
0630-459	Engineering Design	4	4	3	4	4	3	4
0630-459	Engineering Design	4	4	4	4	4	4	3
0630-488	Thermal Systems Design	4	4	4	4			5
	Weighted Average	3.1	3.2	3.4	3.2	3.8	3.3	3.1

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0630-241	Materials Science and Metallurgy	The main issues with the students were English, lack of focus, and weak problem solving skills, which involves reading problems carefully, comprehending the requirements, applying methods correctly, and evaluating the results.
0630-241	Materials Science and Metallurgy	In general, the students had a satisfactory performance in exams and short tests throughout the semester. I had a few number of students with excellent performance who were eager to learn and ask questions about the subject. Unfortunately, the number of students with poor performance was quite large. Most of those students had low performance in exams and poor class attendance. The new On-line Course System (OCS), http://ocs.eng.ku.edu.kw/, was utilized to take on-line quiz on phase diagram and phase transformation (ch.11 and ch.12). Also, the OCS website included many solved problems and examples, animations and links to useful materials science websites.
0630-311	Theory of Machines	In my opinion, the second outcome does not apply to this course. It is hard to design a mechanism according to public health, safety, welfare, cultural, social, or environmental factors.
0630-318	System Dynamics	Programming is needed for this course, however, it not a prerequisite. That's why students are not doing well in the logic needed for the project like using for loops and if statements.
0630-322	Engineering Thermodynamics II	Fall 2019 (ME322-51) I have started the ME 322 (Engineering Thermodynamics II) course by revising the ENG208 (Engineering Thermodynamics I) course for about five hours. It was notice that some students are VERY WEAK in the basics of thermodynamics and facing some difficulty at the beginning of the course as we are working with cyclic devices that involve many states. In my opinion, this is because some students keep a big gap between the two courses and by the time they take ME322 they already forgot many topics from ENG208. So I suggest to force every ME student who is done with ENG208 to take ME322 in the following semester. I notice that some students are VERY WEAK in the using EES software, although it has been introduced in Thermodynamics I course. A number of students are not able to write simple codes, and they may just copy the codes from other students or ask for external help. As for the

		EES-project, during the Spring 19 when I set the students into group, I have notice that they don't work effectively as some students are not participating at all in the project in addition the share in information from unknown source. For Summer19 and Fall19 I have changed the project method, I have provided the student with "Project Draft" that includes the cycle but no information given regarding the properties. The student has one day to study the cycle and be ready for an individual in-lab project for 2-hours. This method was a good filter to measure the student understanding of the material and knowing how to use the EES software. Also, I had a small group of good student in my class, there performance was relatively better than others. They raise good question in class, and promote interesting discussion. Having such group, the class was so energetic and interesting to teach. Teaching this course for consecutive 3 semesters, this group had the lowest performance amount other groups, basically shocking results. Alia H. Marafie
0630-331	Fluid Mechanics I	Students had performed very well in this course. The fundamental of fluid dynamics is perfectly understood, and the applications of fluid systems is completely covered in this course.
0630-351	Mechanical Design I	Students are weak in strength of materials topics. Detailed review of strength of materials was needed in order to proceed well in the course subjects.
0630-353	Manufacturing Processes	This was a relatively varied class. Some students were attentive throughout the course and these students have performed very well in quizzes and exams as well as the project. Whereas another group of students seemed to lack motivation and apparently did not place a lot of effort in the quizzes and exams. Therefore, explaining the large range of grades for this particular section.
0630-361	Project Planning and Management	Most students were engaged in this class as they considered the subject-matter to be interesting. They were kept active though assignments, quizzes, and extra-curricular activities that helped them gain more knowledge. Most performed well in exams and quizzes. A few were busy with Capstone Design projects, so their performance was inconsistent.
0630-415	Mechanical Vibrations	Two points have to be remarked: 1) The students could not learn the vibration subject from basically the old method that is based on some figures in the book and equations derived in the class. I believe the students

		have to go to the lab to see why vibrations are important to consider and to control. We visited the lab and the engineer explained thoroughly the experiment covered in the vibration lab and explained and showed the setup and results. They knowledge that students acquired from the lab is more superior than the topics given in the class. I believe that either the instructors have to make a lab visit or make the vibration course and its lab as corequisite. 2) The second point is the lack knowledge of using commercial software. The students are so weak in terms of mathematical principles (Linear algebra and differential equation) and mechanical engineering principles (dynamics and system dynamics). To solve this issue, six assignments and one project were given and have to be solved using MATLAB (or any other commercial software) From the above mentioned points, the students could understand the vibration from different perspective views (analytical, numerical, and experimental). Instructors have to adjust his/her teaching style to relate the subject with recent problems. For instance, the project was based on modeling the dynamics of human movement which was adopted from a recent paper in Journal of Biomechanics.
0630-417	Control of Mechanical Systems	Nee more Programming Skills in MATLAB
0630-421	Heat Transfer	The performance of the students in general was satisfactory. Testing students four times forced the students to study more frequently, which is something very much needed in the heat transfer course. I will continue to use this methodology when i teach this course again. I think changing the text book should be investigated. The new edition of the text book included a lot of unneeded material that confuse the students.
0630-455	Computer-Aided Design	Despite the fact that this was a reasonably large class, there was good interaction between the instructor and the students. The students suffered when they have to write small m-files for using optimization toolbox. We need to emphasize programming skills more.
0630-459	Engineering Design	Overall this course met its objective more than satisfactory and students (teams) managed to fullfill their responsibilities toward building a solution to s pecific engineering problem by conducting a design process.
0630-459	Engineering Design	Mechanical design course (ME 451) is required as a prerequisite of this course.
0630-488	Thermal Systems Design	The course was beneficial for senior students since it include applications from different

topics in thermal sciences. Also, it integrate these topics with modeling, simulation, and optimization methods. The course needs a lot of work in the homework and assignments, and this was the setback in the student performance. However, most of the students did well in the exams. I really support teaching this course in the future.

Spring Semester 19/20

Instructors: **10**

Courses: **16**

Course Number	Course Name	1	2	3	4	5	6	7
0630-241	Materials Science and Metallurgy	H			L		L	L
0630-241	Materials Science and Metallurgy	H			L		L	L
0630-259	Introduction to Design	L	H	H	M	H		M
0630-351	Mechanical Design I	H	M		L			L
0630-351	Mechanical Design I	H	M		L			L
0630-415	Mechanical Vibrations	H	M	M	L			L
0630-415	Mechanical Vibrations	H	M	M	L			L
0630-417	Control of Mechanical Systems	H	H	M		L		L
0630-421	Heat Transfer	H	M	M				
0630-446	Introduction to Composite	H	M	L	L			L
0630-455	Computer-Aided Design	H	M	M	M	L		M
0630-456	Computer Aided Manufacturing	H	L	M	L	M		L
0630-459	Engineering Design	H	H	H	H	H	M	H
0630-483	Biomechanics							

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0630-241	Materials Science and Metallurgy	2			3		2	2
0630-241	Materials Science and Metallurgy	4			3		3	3
0630-259	Introduction to Design	5	5	4	5	5		4
0630-351	Mechanical Design I	3	2		4			5
0630-351	Mechanical Design I	3	2		2			2
0630-415	Mechanical Vibrations	3	3	4	3			
0630-415	Mechanical Vibrations	2	3	2	2			2
0630-417	Control of Mechanical Systems	4	3	3		3		3
0630-421	Heat Transfer	4	5	4				
0630-446	Introduction to Composite	3	3	4	4			3
0630-455	Computer-Aided Design	4	3	4	4	4		4
0630-456	Computer Aided Manufacturing	4	4	5	4	4		5
0630-459	Engineering Design	4	4	4	4	4	3	5
0630-483	Biomechanics	3	3			4	4	4
	Weighted Average	**3.4**	**3.4**	**3.8**	**3.7**	**4.2**	**2.8**	**3.7**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0630-241	Materials Science and Metallurgy	As it can be seen the performance of the students was very disappointing. I don't know if the problem was online teaching or same as usual. I found the majority of students totally unprepared for remote learning and teaching. In any case only 3 students achieved the outcomes of the course.
0630-241	Materials Science and Metallurgy	In general, the students had good performance in exams and short tests throughout the semester. I had good number of students with excellent performance who were eager to learn and ask questions about the subject. There were few students with poor performance. Recorded and live lectures and other course materials were made available to students using MS Teams. Short tests, bonus quiz, midterm exam and final exam were carried out using MOODLE. Also, course website using MOODLE included many solved problems and

		examples, animations and links to useful materials science websites.
0630-259	Introduction to Design	Get rid of the (word, excel, and power point) subjects and focus on Matlab skills
0630-351	Mechanical Design I	Course project is extremely needed in order to apply the course material into a real life engineering application
0630-351	Mechanical Design I	Extremely weak strength of materials background. Online learning lessened the quality of collaborative work between students and scientific discussions since forming groups to solve problems during the class time was not applicable.
0630-415	Mechanical Vibrations	Two points have to be remarked: 1) The students could not learn the vibration subject from basically the old method that is based on some figures in the book and equations derived in the class. I believe the students have to go to the lab to see why vibrations are important to consider and to control. We visited the lab and the engineer explained thoroughly the experiment covered in the vibration lab and explained and showed the setup and results. They knowledge that students acquired from the lab is more superior than the topics given in the class. I believe that either the instructors have to make a lab visit or make the vibration course and its lab as corequisite. 2) The second point is the lack knowledge of using commercial software. The students are so weak in terms of mathematical principles (Linear algebra and differential equation) and mechanical engineering principles (dynamics and system dynamics). To solve this issue, six assignments and one project were given and have to be solved using MATLAB (or any other commercial software) From the above mentioned points, the students could understand the vibration from different perspective views (analytical, numerical, and experimental). Instructors have to adjust his/her teaching style to relate the subject with recent problems. For instance, the project was based on modeling the dynamics of human movement which was adopted from a recent paper in Journal of Biomechanics.
0630-415	Mechanical Vibrations	Distance learning is hard for truly assessing student outcomes.
0630-417	Control of Mechanical Systems	It is hard to assess the student outcome this semester with distance learning.
0630-421	Heat Transfer	Part of this course was taught using distance learning because of COVID-19

0630-446	Introduction to Composite	The overall performance of the students was satisfactory. Half of the students were able to meet the outcomes of the course. Because of the pandemic, half of the course was offered online, which proved very difficult for many students who gave up in the end.
0630-455	Computer-Aided Design	This was a relatively small class, and a very long interrupted semester. Despite all odds, the students are achieved most of learning outcomes of the course. Due to the need to do extensive review after the long break, some of the optimization topics were not treated with justice, only for this term.
0630-456	Computer Aided Manufacturing	Classes started in-person prior to March 2020. Then went online in August. The total number of students was 32. Around 20 of these students were highly motivated and driven. They requested that we conduct classes during the break in July, so for 5 weeks I covered most of the topics ahead of time. The 20 students or so who made this request were extremely disciplined and they attended at 8 am twice a week in this informal class session. When we resumed in August, I repeated and added to what I have covered in July. So most of the high performing students had seen the material twice and had enough time to absorb it. I find that this is the main reason for their high scores in the exams and assignments.
0630-459	Engineering Design	This was a long and interrupted semester due to Covid-19 crisis. In general, the students followed the design process taught and produced reasonably good results. In fact, during the period of interruptions the teams continued working and this gave us enough time to conduct a thorough analysis of the problems. The only disadvantage was not to be able to produce physical prototypes to be tested.
0630-483	Biomechanics	Students show good sign of using engineering fundamentals in analyzing human body parts in its static and dynamic principle. The students handle the given experimental data very well and go to the literature to discuss their findings. Homework and assignments were given as a group of two people to help in collaboration and enhance their communication skills.

Summer Semester 19/20

Instructors: **8**

Courses: **8**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0630-241	Materials Science and Metallurgy	H			L		L	L
0630-311	Theory of Machines	H	M	L				M
0630-421	Heat Transfer	H	M	M				
0630-424	Air conditioning and Refrigeration	M	H	M	M	L		L
0630-451	Mechanical Design II	H	H	M	M	L		M
0630-455	Computer-Aided Design	H	M	M	M	L		M

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0630-241	Materials Science and Metallurgy	2			3			3
0630-311	Theory of Machines	2	1	2				1
0630-421	Heat Transfer	2	3					
0630-424	Air conditioning and Refrigeration	3	4	3	3	3		3
0630-451	Mechanical Design II	2	3	3	3	3		3
0630-455	Computer-Aided Design	4	2	3	5			4
	Weighted Average	2.5	2.8	2.9	3.6	3	0	2.8

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0630-241	Materials Science and Metallurgy	The performance of the students was average, even though the online exams were open book and notes. Furthermore, the exam problems were similar to example problems given in the lectures. I don't know if the problem was online teaching and students lack of attention, or simply comprehension issues.

0630-421	Heat Transfer	1- Students are weak in pre-requisite courses (Math, thermo, fluid, etc.) 2- The course is heavy for summer. 3- Students don't read the textbook.
0630-424	Air conditioning and Refrigeration	I am teaching ME 424 for the first time virtually during Summer 2020 in which around 26 students were registered. I struggled with preparing video recording modified and edited for every class. Therefore, I had to give live classes at some point. This course is an applied course and therefore, a cap should be set on the number of students to ensure the understanding of the course's contents. In addition, applied courses are difficult to be understandable online, and it is preferable to be on-campus. However, preparing online exams was much convenient for grading and recondring. The students were interested in this course when we spoke about Kuwait's practice in HVAC. However, some students lack the motive to interact with any topic outside the courses' curriculum. Some students do not interact or perform the task without any promised reward (i.e., bonus points). As for the course's project, some students lack the ability to defend their own statements during the oral presentations. I gave two midterms and one final exam and the students performed fine in general. In summary, my recommendation is to keep the number of students low for this course all the time and move to classical teaching method rather than online. This is a very applied course and students enjoy the application aspect of it.
0630-455	Computer-Aided Design	COVID-19 was a bit of a challenge, but most did OK. i was fairly happy with the outcome, but maybe not the final grades.

Petroleum Engineering Program

Fall Semester 19/20

Instructors: **7**

Courses: **17**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0650-251	Introduction to Design	H	H	H	H	H	H	L
0650-323	Phase Behavior of Reservoir Fluids	H		L	M	L		M
0650-341	Oil Well Drilling and Completion	H	M		L	M		M
0650-354	Well Logging	M	L	L	L	L	H	H
0650-411	Petroleum Production Engineering	H	H	M	M	M		L
0650-425	Natural Gas Reservoir Engineering	H		H	M			M
0650-427	Secondary Recovery	H	M	M	M	H	M	H
0650-432	Well Testing	H		L	M		H	M
0650-432	Well Testing	H		L	M		H	M
0650-442	Industrial Safety for Oil Field Operations		M	M	M	L		

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0650-251	Introduction to Design	4	5	5	4	5	4	3
0650-323	Phase Behavior of Reservoir Fluids	2		3	3	3		2
0650-341	Oil Well Drilling and Completion	4	4		2	2		2
0650-354	Well Logging	3	3	3	4	3	3	3
0650-411	Petroleum Production Engineering	4	5	4	3	5		3
0650-425	Natural Gas Reservoir Engineering	3		4	3			3
0650-427	Secondary Recovery	4	3				3	4
0650-432	Well Testing	3		4	3		4	3
0650-432	Well Testing	3		4	4		3	3

Course Number	Course Name							
0650-442	Industrial Safety for Oil Field Operations	5	5	5	5			
	Weighted Average	**3.3**	**4.4**	**4.2**	**3.5**	**4**	**3.4**	**2.9**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0650-251	Introduction to Design	The description of this course should be modified to reflect a higher component of engineering design. A suggestion to move this course into upper courses level and to make it adjacent to PE 496 needs urgent considerations.
0650-323	Phase Behavior of Reservoir Fluids	Students lack the basic skills of computing. An introductory course in computing is recommended
0650-427	Secondary Recovery	I think the learning objectives set for this course should be modified to reflect the nature of this course. This course investigate the performance of waterflooding, as a secondary recovery mechanism, under different conditions.
0650-432	Well Testing	This course highly requires one of the commercial well testing softwares such as PanSystem, Kappa, ect.. that are frequently used in the oil industry for well test interpretation. None of these softwares were available in the department for this semester.

Spring Semester 19/20

Instructors: **5**

Courses: **11**

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0650-241	Fluid Mechanics	H	L	L	M	L	L	M
0650-323	Phase Behavior of Reservoir Fluids	H		L	M	L		M
0650-324	Reservoir Engineering	H			L			M
0650-341	Oil Well Drilling and Completion	H	M		L	M		M
0650-425	Natural Gas Reservoir Engineering	H		H	M			M
0650-427	Secondary Recovery	H	M	M	M	H	M	H
0650-435	Production Equipment Design	H	H	H	M	H		M
0650-496	Well Design	H	H	H	H	H	H	H

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0650-241	Fluid Mechanics	4	3	1	2	1	4	4
0650-323	Phase Behavior of Reservoir Fluids	3			3			3
0650-324	Reservoir Engineering	4						
0650-341	Oil Well Drilling and Completion	4	4		4	4		4
0650-425	Natural Gas Reservoir Engineering	3			1			3
0650-427	Secondary Recovery	4		4			4	
0650-435	Production Equipment Design	4	4	4	4	5		5
0650-496	Well Design	4	4	4	4	4	4	3
	Weighted Average	3.8	3.9	3.7	3	4	4	3.6

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0650-323	Phase Behavior of Reservoir Fluids	Online distance all grades below c is changed to on line no grade
0650-324	Reservoir Engineering	I think students outcomes linked to this course should be updated by removing outcome 4 and 7 and replace them with outcome # 6.
0650-341	Oil Well Drilling and Completion	The following topics have been covered and discussed in this course: 1. Introduction to Drilling Engineering 2. Rig power system, hoisting system and circulating system 3. Rotary system, well control system, and monitoring system 4. Drilling cost analysis 5. Principal functions and composition of drilling fluids 6. Well cementing application 7. Hydrostatic pressure calculations and application 8. Kick Identification under conditions of risk and uncertainty 9. Estimating friction losses for different flow regimes 10. Jet bit nozzle size selection 11. Pump pressure schedule for well control operations 12. Well completion basic principles and methods
0650-425	Natural Gas Reservoir Engineering	Online distance all grades below c is changed to online no grade see the official sheet after instructor grade submission. Cheating and coping was exceptionally high.
0650-427	Secondary Recovery	I think student's outcome # 4 and 7 are not relevant to this course.
0650-435	Production Equipment Design	Half the course was taught in class and half the course was taught as distance learning due to Coronavirus restrictions.
0650-496	Well Design	N/A

Summer Semester 19/20

Instructors: **4**

Courses: **4**

R E L E V A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0650-425	Natural Gas Reservoir Engineering	H		H	M			M
0650-432	Well Testing	H		L	M		H	M

P E R F O R M A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0650-425	Natural Gas Reservoir Engineering	4						
0650-432	Well Testing	4		3	4		3	3
	Weighted Average	4	0	3	4	0	3	3

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0650-425	Natural Gas Reservoir Engineering	I think this course has a major overlap with other courses in the department. By looking at the course description, around 67% of the material are taught in other courses such as (PE 324, PE 323, PE 411, PE 435)

Core Engineering Courses

Fall Semester 19/20

Course Number	Course Name	1	2	3	4	5	6	7
0600-202	Statics	M		M				
0600-202	Statics	M		M				
0600-204	Strength of Materials	H	M					L
0600-204	Strength of Materials	H	M					L
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	H				M		L
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING							
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING							
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	H				M		L

Course Number	Course Name	1	2	3	4	5	6	7
0600-202	Statics	4		3				
0600-202	Statics	3		3				

Course Number	Course Name							
0600-204	Strength of Materials	4	4					3
0600-204	Strength of Materials	4	3					3
0600-304	Engineering Probability and Statistics	5			4		4	4
0600-304	Engineering Probability and Statistics	2			3		3	2
0600-304	Engineering Probability and Statistics	3			3		3	3
0600-304	Engineering Probability and Statistics	4			4		4	3
0600-304	Engineering Probability and Statistics	2			3		3	3
0600-304	Engineering Probability and Statistics	3			3		3	3
0600-304	Engineering Probability and Statistics	3			3		4	4
0600-304	Engineering Probability and Statistics	4			1		4	4
0600-304	Engineering Probability and Statistics	3			1		4	4
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	4				4		4
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	3				4		4
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	5		4				5
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	5				4		5
	Weighted Average	**3.5**	**3.5**	**3**	**2.8**	**4**	**3.6**	**3.4**

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0600-204	Strength of Materials	This class was weak and students did not have interest to learn. Most of them were searching through the mobiles during the lectures.
0600-204	Strength of Materials	NA
0600-304	Engineering Probability and Statistics	Students are very good in using specialized software and engineering tools related to the course, i.e., programmable hand-held calculators. However, most of them have problems in English communication especially reading comprehension, which is

		essential in this course to interpret the problems and formulate the solution. Relevance of students outcomes should be revised especially student outcome 1 related to complex problems.
0600-304	Engineering Probability and Statistics	Students are very good in using specialized software and engineering tools related to the course, i.e., programmable hand-held calculators. However, most of them have problems in English communication especially reading comprehension, which is essential in this course to interpret the problems and formulate the solution. Relevance of students outcomes should be revised especially student outcome 1 related to complex problems.
0600-304	Engineering Probability and Statistics	Students are in great need for college level orientation as done in any world class (state) university. Lack of mathematical and scientific background. Majority Students no longer take notes in class, depend on iphone photography, etc
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	Students have to expose more on coding and programming. Most of the students took the calculus, linear algebra, and differential equation long time ago so they show some struggle in understanding the concept of the numerical method. I strongly recommend to increase the weight of the midterms grades to 40% and decrease the final weight to 30%. The remaining 30% will be distributed as 15% lab activity, 7.5% MATLAB quizzes, and 7.5% in-class MATLAB written quizzes or MATLAB assignments. The proposed distribution of the grades will make sure that the students who is not strong enough on MATLAB and does not have adequate knowledge in MATLAB will not pass the class.

Spring Semester 19/20

RELEVANCE

Course Number	Course Name	1	2	3	4	5	6	7
0600-202	Statics	M		M				
0600-204	Strength of Materials	H	M					L
0600-204	Strength of Materials	H	M					L
0600-204	Strength of Materials	H	M					L
0600-204	Strength of Materials	H	M					L
0600-208	Engineering Thermodynamics	H			L			
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	H				M		L
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	H				M		L
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	H				M		L

PERFORMANCE

Course Number	Course Name	1	2	3	4	5	6	7
0600-202	Statics	5		4				
0600-204	Strength of Materials	3	3					3
0600-204	Strength of Materials	3	3					3
0600-204	Strength of Materials	4	3					4
0600-204	Strength of Materials	4	3	3	3	3	3	3
0600-208	Engineering Thermodynamics	4			4			
0600-304	Engineering Probability and Statistics	3			3		3	3

Course Number	Course Name							
0600-304	Engineering Probability and Statistics	3					3	3
0600-304	Engineering Probability and Statistics	5			4		5	4
0600-304	Engineering Probability and Statistics	4			3		3	4
0600-304	Engineering Probability and Statistics	4			1		5	5
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	4				4		4
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	3				3		3
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	4				4		4
	Weighted Average	3.8	3	4	3	3.7	3.8	3.6

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0600-204	Strength of Materials	The course was affected by the COVID-19 pandemic and seven weeks of instructions and all assessments were done online. Delivery of course contents through video lectures, live class session and office hours through chat were successfully done and there seems to be no issue in the quality of lecture delivery. The only noted shortcoming, to some extent, was instructor's eye contact with the students and inability to explain the concepts through physical modeling or gesturing. However, student assessment part was rather unsatisfactory with complaints from both students and the instructor. Students were of the opinion that online testing is harsher on them as it deprives them of the partial grades that they can earn in case of a wrong final answer but correct or incomplete procedure. From the point of view of instructors, it was hard to control widespread academic dishonesty by the students who used multiple devices and outside help in completing the exams; especially the final exam. There is not only a need for educating the students about the perils of this dishonest behavior for their future life and engineering career but also to explore technological innovations that can make it hard for the student to indulge in this kind of a practice.
0600-204	Strength of Materials	The course was affected by the COVID-19 pandemic and seven weeks of instructions and all assessments were done online. Delivery of course contents through video lectures, live class session and office hours through chat were successfully done and there seems to be no issue

		in the quality of lecture delivery. The only noted shortcoming, to some extent, was instructor's eye contact with the students and inability to explain the concepts through physical modeling or gesturing. However, student assessment part was rather unsatisfactory with complaints from both students and the instructor. Students were of the opinion that online testing is harsher on them as it deprives them of the partial grades that they can earn in case of a wrong final answer but correct or incomplete procedure. From the point of view of instructors, it was hard to control widespread academic dishonesty by the students who used multiple devices and outside help in completing the exams; especially the final exam. There is not only a need for educating the students about the perils of this dishonest behavior for their future life and engineering career but also to explore technological innovations that can make it hard for the student to indulge in this kind of a practice.
0600-204	Strength of Materials	NA
0600-204	Strength of Materials	NA
0600-208	Engineering Thermodynamics	Distance learning made many students to change their grades to pass.
0600-304	Engineering Probability and Statistics	Half the course was taught in class and half the course was taught as distance learning due to Coronavirus restrictions.
0600-304	Engineering Probability and Statistics	Half the course was taught in class and half the course was taught as distance learning
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	The students outcomes (SO) in this course should be revisited and discussed to choose proper matching between what is covered in the course and the SO.

Summer Semester 19/20

R E L E V A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0600-203	Dynamics	H						
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-304	Engineering Probability and Statistics	H			L		M	M
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING							

P E R F O R M A N C E

Course Number	Course Name	1	2	3	4	5	6	7
0600-203	Dynamics	3						
0600-304	Engineering Probability and Statistics	4			3		3	3
0600-304	Engineering Probability and Statistics	4			1		4	4
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	4	2					3
	Weighted Average	3.7	0	0	2	0	3.5	3.5

Remarks and Suggestions

Course Number	Course Name	Remarks and Suggestions
0600-203	Dynamics	The course was offered on-line using Microsoft Teams. The interaction with the students was reasonable compared to in-class interaction. Most of the students were able to achieve the objectives of the course as evidenced by their performance in the two exams and the Final exam which were all online using a Proctoring program and a synchronous proctoring using the webcam in MS Teams.
0600-304	Engineering Probability and Statistics	The course was taught as distance learning due to Coronavirus restrictions.
0600-307	APPLIED NUMERICAL METHODS AND PROGRAMMING	Students have to expose more on coding and programming. Most of the students took the calculus, linear algebra, and differential equation long time ago so they

show some struggle in understanding the concept of the numerical method. I strongly recommend to increase the weight of the midterms grades to 40% and decrease the final weight to 30%. The remaining 30% will be distributed as 15% lab activity, 7.5% MATLAB quizzes, and 7.5% in-class MATLAB written quizzes or MATLAB assignments. The proposed distribution of the grades will make sure that the students who is not strong enough on MATLAB and does not have adequate knowledge in MATLAB will not pass the class.

Instructor Class Evaluation Form

Kuwait University

College of Engineering & Petroleum

Instructor Class Evaluation Form

Course Number and Title:

Instructor:

Semester:

Number of times that you taught this course at KU:

EVALUATION   **GRADING**

  METHOD   **SYSTEM**

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

TOTAL   *100 %*

	GRADE DISTRIBUTION													
	A	A−	B+	B	B−	C+	C	C−	D+	D	F or FA	Sum	I	W
Weight (W)	4.0	3.6	3.3	3.0	2.6	2.3	2.0	1.6	1.3	1.0	0.0	−	−	−

No. of Students (N)											ΣN =		
N*W											Σ(W*N) =		

CLASS GPA $= \Sigma$ **(W* N) /** Σ **N = _____**

CLASS GPA without (F or FA) = _____

Program Outcomes	Relevance				Performance					Explanation Activities and Practices	Interpretation & Evidence
	Not Relevant	Somewhat Relevant	Moderately Relevant	High Relevant	Very Weak	Weak	Satisfactory	Very Good	Excellent		
1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.	☐	☐	☐	☐	☐	☐	☐	☐	☐		
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	☐	☐	☐	☐	☐	☐	☐	☐	☐		
3. Communicate effectively with a range of audiences.	☐	☐	☐	☐	☐	☐	☐	☐	☐		
4. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	☐	☐	☐	☐	☐	☐	☐	☐	☐		
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.	☐	☐	☐	☐	☐	☐	☐	☐	☐		
6. Develop and conduct appropriate experimentation analyze and interpret data, and use engineering judgment to draw conclusions.	☐	☐	☐	☐	☐	☐	☐	☐	☐		

| 7. Acquire and apply new knowledge as needed, using appropriate learning strategies. | ☐☐☐☐ | ☐☐☐☐ | | |

Remarks and Suggestions:

_____
_____
_____

Instructions for Course Assessment

Instructions for Course Assessment

Introduction

All instructors at the college should carry out course assessment and submit a course assessment file to the departmental assessment coordinators at the end of the term. In the following some guidelines on how to prepare an assessment file are given:

Objectives of Course Assessment

- To obtain direct measurements of student performance
- To assure that students are acquiring the required outcomes
- To assure that learning experiences are consistent with the outcomes
- To establish the required feedback loops

The items to be included in the course assessment file

- A hardcopy of completed instructor class evaluation form (ICEF) submitted online.
- A copy of the list of final grades
- Course syllabus including the following information as a minimum
    - Instructor contact details and office hours
    - Textbook and references
    - Tentative course outline
    - Dates of mid-term and final exams
    - Grading policy
- A list of course outcomes and their relationship with the college or program outcomes (Course description and classification)
- A copy of final exam and major term project(s)
- Summary data and analysis from various assessment tools (e.g., oral and written report evaluation, teamwork, self evaluations)
- Samples of student works supporting the ICEF (e.g., key assignments, homework, exams, project reports, essays etc.)
- Any other supporting material demonstrating student achievement (e.g., sample class portfolios, video recordings, etc.)

Instructor Class Evaluation Form

The main assessment tool used for the course assessment is the Instructor Class Evaluation Form. This form reports the grade distribution as well as the assessment of program student outcomes served by the course. First, the instructors are asked to indicate the level of importance of each outcome as it relates to the course. Normally, this rating should have been already assigned by the Teaching Area Group using the following guidelines:

H (highly relevant (3)): Demonstrating this outcome is critical for the students to perform successfully; or the students may benefit significantly from this course toward the outcome (formal instruction, practice, assessment).

M (Moderately relevant (2)): Demonstrating this outcome has considerable impact on the overall performance of the student, or the students may benefit moderately from this course toward the outcome (informal instruction, practice, and assessment).

L (Somewhat relevant (1)): Demonstrating this outcome has only minor impact on the overall performance of the student. However, there are opportunities to observe this outcome (practice and assessment).

The instructors then evaluate student performance relative to what is normally expected from them at their level according to the following scale:

- Students' performance was very weak (1)
- Students' performance was weak (2)
- Students' performance was satisfactory (3)
- Students' performance very good (4)
- Students' performance excellent (5)

The best method of evaluation of the student achievement is to assess individual students relative to the outcomes. Then, an average rating can be obtained for the whole class. The rating should be justified by referring to specific student works or assessment results.

The instructors are also asked to provide feedback on the course content and outcomes, instructional and assessment methods. They also comment on the achievement of program outcomes and indicate any deficiencies observed.

Assessment Methods

The assessment methods include but not limited to the following:

- Performance Appraisals (e.g., written and oral presentations, teamwork, lab experiments, artwork, etc.)
- Surveys (Online tools, or custom designed forms seeking student perception of learning gains, or their opinions on certain aspects)
- Traditional assessment methods (Exams, homework, project, etc.)

Assessment Tools

The following is a list of available assessment instruments to be used in course assessment. Instructors are encouraged to use standard tools as much as possible to facilitate analysis. However, these tools can be modified to suit a specific course, or additional tools can be adopted.

- Written report evaluation form or rubric
- Oral presentation evaluation form or rubric
- Lab report evaluation form or rubric
- Teamwork evaluation form or rubric
- Term Project evaluation form or rubric
- Final Exam evaluation form or rubric

The instructors are encouraged to submit summary statistical data in addition to the copies of the completed forms.

APPENDIX B:
EXIT SURVEY RESULTS

For the Academic year 2019-2020

March 2021

Introduction

This report presents the College of Engineering and Petroleum Exit Survey Results for the academic year 2019-2020. The exit survey form, given in Appendix A, was provided to students online. Graduating students presenting their capstone projects during the engineering design day must provide proof of completing the survey to the Engineering Training and of Alumni Center (ETAC).

The survey is maintained and conducted by the Office of Academic Assessment (OAA). The overall college results are analyzed in the following pages. The data for individual departmental results is given in Appendices B-H, and they are provided accordingly for further analysis and reporting as part of their program assessment process.

Survey Statistics

The exit survey form contains five parts covering different aspects that the College of Engineering and Petroleum consider important for students to assess. The first part is about the assessment of engineering student skills where the first 15 questions are common among all departments, and the rest are customized by each program. The second part is about the assessment of the importance of educational objectives to the careers of graduating students. The third part is about the assessment of the learning environment. The fourth part covers the assessment of support services, and the fifth part is a general assessment that includes open ended questions.

A total of **183** students participated in the exit survey during the academic year 2019-2020. Table 1 shows the number of students participated in the survey according to program and gender.

Table 1 Exit survey participation breakdown

Department	Total Responses	Gender	Response	Percentage
CHEMICAL	0	Male	0	0%
		Female	0	0%
CIVIL	0	Male	0	0%
		Female	0	0%
COMPUTER	77	Male	13	17%
		Female	63	82%
ELECTRICAL	48	Male	10	21%
		Female	38	79%
IMS	0	Male	0	0%
		Female	0	0%
MECHANICAL	23	Male	5	22%
		Female	17	74%
PETROLEUM	35	Male	5	14%

		Female	30	86%
TOTAL	183	Male	33	18%
		Female	148	81%

Survey Results:

Table 2 shows students' intentions for their future plans. Most of the students (81%) expect to work for the government, 60% for the private sector, 31% of the students are planning or at least thinking of joining a graduate program, and 40% start their own business.

Table 3 shows students' feedback for the first group of questions in the exit survey, which is about the students' assessment for the outcome attributes acquired at Kuwait University. The table also shows the average rating and the satisfaction index (SI) out of 5 and as percentage for each item which is the percentage of the students who evaluated themselves as well prepared and very well prepared. An SI value lower than 50 % may be considered to indicate dissatisfaction.

1. **Table 2** Students Future Plans

Plans	N	%
Intend to work in the government sector.	148	81%
Intend to work in the private sector.	110	60%
Intend to go to graduate school.	57	31%
Intend to start my own business	73	40%
Intend to do other things	15	8%
-		
Review my learnings		
Volunteer/take online courses for more experience.		
business		
Koc		
Still figuring it out		
Study more		

Table 3 Assessment of the outcome attributes acquired at Kuwait University – Engineering programs

#	Outcome	5	4	3	2	1	0	Average	SI
1	Apply knowledge of mathematics, physics and engineering.	84	62	27	8	0	2	4.2	4
		46%	34%	15%	4%	0%	1%	84%	80%
2	Design and conduct experiments, as well as to analyze and interpret data.	72	64	37	5	2	3	4.1	3.8
		39%	35%	20%	3%	1%	2%	82%	76%
3	Design a system, component, or process to meet desired needs.	74	61	36	9	0	3	4.1	3.8
		40%	33%	20%	5%	0%	2%	82%	76%
4	Function effectively in teams.	109	45	23	3	0	3	4.4	4.3
		60%	25%	13%	2%	0%	2%	88%	86%
5	Identify, formulate, and solve engineering problems.	89	59	26	7	0	2	4.3	4.1
		49%	32%	14%	4%	0%	1%	86%	82%
6	Understand professional and ethical responsibilities.(e.g. safety, professional ethics, code of conduct).	112	42	17	10	0	2	4.4	4.3
		61%	23%	9%	5%	0%	1%	88%	86%
7	Communicate effectively (written reports).	95	58	22	6	0	2	4.3	4.2
		52%	32%	12%	3%	0%	1%	86%	84%
8	Communicate effectively (oral presentations).	88	52	33	6	2	2	4.2	3.9
		48%	28%	18%	3%	1%	1%	84%	78%
9	Understand and appreciate the impact of engineering in the societal and global contexts.	102	42	29	7	1	2	4.3	4
		56%	23%	16%	4%	1%	1%	86%	80%
10	Be aware of the need for, and improved my ability to engage in life-long learning (seeking further education, self learning, membership in professional societies).	94	54	24	7	1	3	4.3	4.1
		51%	30%	13%	4%	1%	2%	86%	82%
11	Be aware of contemporary issues(e.g. economics of engineering, environmental issues, etc�)	70	58	39	10	3	3	4	3.6
		38%	32%	21%	5%	2%	2%	80%	72%
12	Ability to use computing technology in communications.	91	55	28	4	1	4	4.3	4.1
		50%	30%	15%	2%	1%	2%	86%	82%
13	Ability to use computing technology in engineering analysis/design.	88	45	36	10	1	3	4.2	3.7
		48%	25%	20%	5%	1%	2%	84%	74%
14	Ability to use state of the art techniques, and tools in engineering practice.	78	49	39	11	2	4	4.1	3.5
		43%	27%	21%	6%	1%	2%	82%	70%
15	Apply the knowledge of probability and statistics.	63	42	50	22	2	4	3.8	2.9
		34%	23%	27%	12%	1%	2%	76%	58%

Transition to the New Student Outcomes (1-7)

The student outcomes were recently revised by ABET for programs seeking accreditation in 2019-2020 cycle and later. The proposed modifications changed the eleven student outcomes (a-k) to only seven student outcomes (1-7). A mapping framework is developed to properly implement these changes during the transition period.

Both the previous 11 (a-k) and new 7 student outcomes are shown below. The mapping is then presented:

Previous Student Outcomes (a-k)
1. an ability to apply knowledge of mathematics, science, and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data

3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multidisciplinary teams
5. an ability to identify, formulate, and solve engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

The New Student Outcomes (1-7) (Implemented, Fall 2018)

8. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
9. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
10. an ability to communicate effectively with a range of audiences
11. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
12. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
13. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
14. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

The mapping framework of student outcomes SOs is given below:

			2019-2020 cycle						
			1	2	3	4	5	6	7
Previous Student Outcomes	1	a	✓						
	2	b						✓	
	3	c		✓					
	4	d					✓		
	5	e	✓						
	6	f				✓			
	7	g			✓				
	8	h				✓			
	9	i							✓
	10	j				✓			
	11	k	(✓)	(✓)				(✓)	

$$SO_1 = 0.8 * \left(\frac{SO_1 + SO_5}{2}\right) + 0.2 * (SO_{11})$$
$$SO_2 = 0.8 * (SO_3) + 0.2 * (SO_{11})$$
$$SO_3 = SO_7$$
$$SO_4 = \left(\frac{SO_6 + SO_8 + SO_{10}}{3}\right)$$
$$SO_5 = SO_4$$
$$SO_6 = 0.7 * (SO_2) + 0.3 * (SO_{11})$$

Calculation of averages for the new outcomes based on the previous outcomes

113

$SO_7 = SO_9$

As mentioned before, additional outcome attributes were articulated by different programs to further examine specific aspects of students learning. Different departments typically use 15-17 SOs for that purpose. Therefore, another mapping framework is used to map the common 15 outcomes to the 11 SOs.

			Previous cycle										
			1	2	3	4	5	6	7	8	9	10	11
Student Outcomes Elements	1	a	✓										
	2	b		✓									
	3	c			✓								
	4	d				✓							
	5	e					✓						
	6	f						✓					
	7	g							✓				
	8	h							✓				
	9	i								✓			
	10	j									✓		
	11	k										✓	
	12	l											✓
	13	m											✓
	14	n											✓
	15	o	✓										

$$SO_1 = \left(\frac{SO_1 + SO_{15}}{2}\right)$$
$$SO_2 = SO_2$$
$$SO_3 = SO_3$$
$$SO_4 = SO_4$$
$$SO_5 = SO_5$$
$$SO_6 = SO_6$$
$$SO_7 = \left(\frac{SO_7 + SO_8}{2}\right)$$
$$SO_8 = SO_9$$
$$SO_9 = SO_{10}$$
$$SO_{10} = SO_{11}$$
$$SO_{11} = \left(\frac{SO_{12} + SO_{13} + SO_{14}}{3}\right)$$

Calculation of averages for the 11 outcomes based on the measurements of the 15 outcome elements

Following the mapping procedure outlined above, the statistics of Table 3 are shown in Table 4 according to the new student outcomes (1-7); acquired at Kuwait University – Engineering programs

Figure 1 shows the average rating and satisfaction index for the new student outcomes. As it can be seen, the students are satisfied by the outcomes acquired at the college and university.

Table 5 shows students' feedback for the group of questions about how important the educational objectives are to their careers. Figure 2 shows the average rating and satisfaction index for this group of questions.

Table 6 shows students' feedback for the group of questions about their level of satisfaction for the learning Environment at Kuwait University. Figure 3 shows the average rating and satisfaction index for this group of questions.

Notice that while the averages are at satisfactory levels the SIs are low, which indicates that students are generally not very satisfied with the learning Environment at Kuwait University. Looking at the results, we can see that the satisfaction index is low (mostly below 50%) for the following:

- Quality of instruction and support for learning provided by the faculty members in: science.
- Quality of advice by the staff with respect to: career planning
- Quality of the facilities: classroom, science laboratories, engineering laboratories, computing facilities, and libraries.

Table 7 shows students' feedback for the group questions about the students' assessment of the Support Services at Kuwait University. Figure 4 shows the average rating and satisfaction index for this group of questions. The table also shows the amount of interaction they had with each item. As it can be seen the students are generally not satisfied with:

- Other Services: food services, parking, recreation and athletics.

Tables 8-11 show the differences among departments for each of the four groups of questions mentioned above. Figures 5-8 show the average rating for each of the four groups of questions.

These results are somehow justified by the impact of growing number of students for the same facilities. In addition, currently the College is in transition to move to the new Sabah Al-Salem University City, with excellent facilities.

Table 4 Assessment of the Student Outcomes (1-7) acquired at Kuwait University – Engineering programs

#	Student Outcomes	Average	SI
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	4.1 82%	3.6 73%
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	4.1 76%	3.8 76%
3	an ability to communicate effectively with a range of audiences	4.2 77%	4 81%
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	4.2 77%	3.9 79%
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	4.4 80%	4.3 86%
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	4.1 76%	3.8 76%
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	4.3 78%	4.1 82%
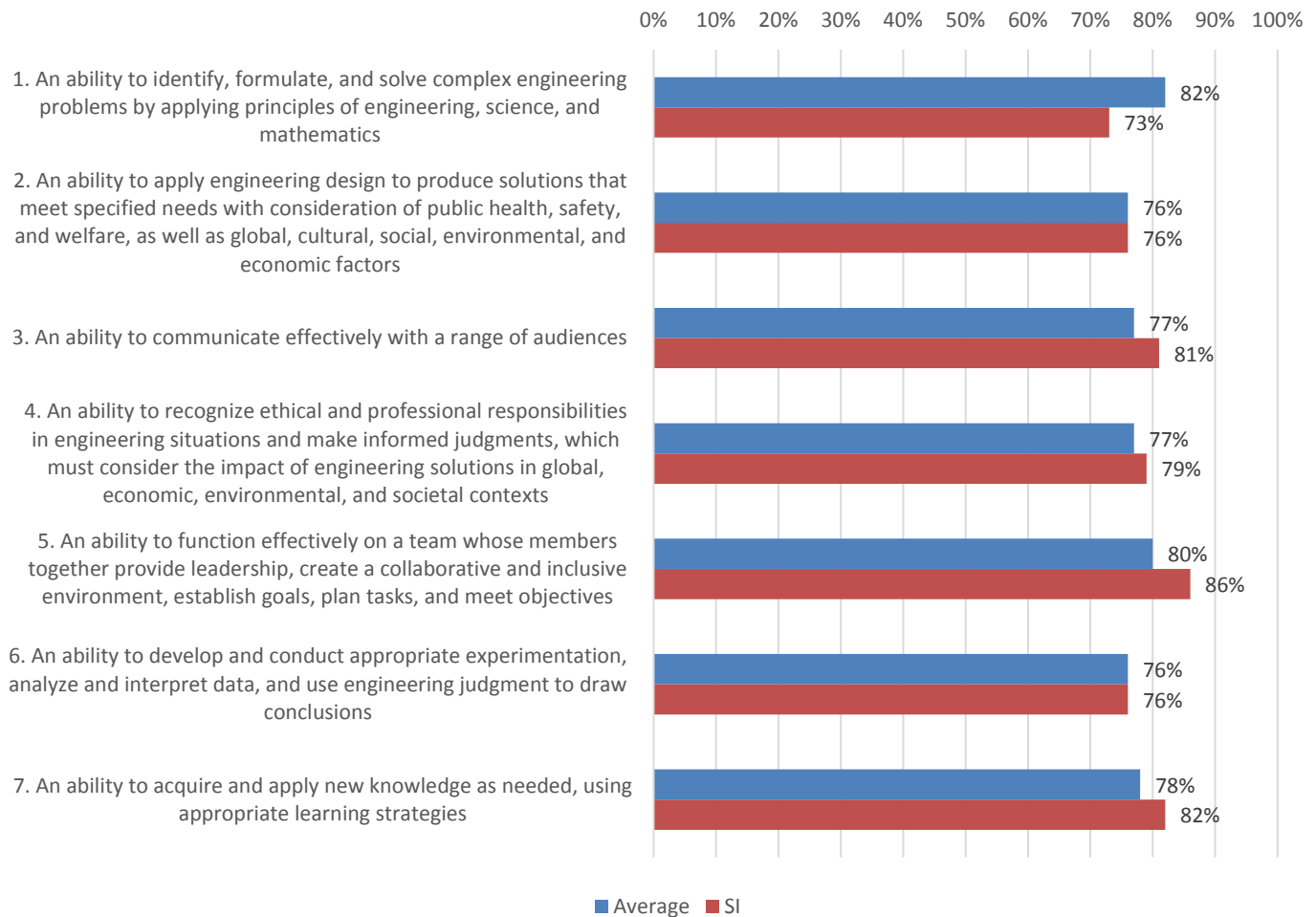
Figure 1 Assessment of the student outcomes acquired at Kuwait University

Table 5 Assessment of the relevance of Educational Objectives – Engineering programs

#	Outcome	5	4	3	2	1	0	Average	SI
1	Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction)	95	50	31	2	2	3	4.3	4
		52%	27%	17%	1%	1%	2%	86%	0%
2	Contribution to well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment).	88	63	22	6	1	3	4.3	4.2
		48%	34%	12%	3%	1%	2%	86%	0%
3	Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities)	88	52	29	7	1	6	4.2	4
		48%	28%	16%	4%	1%	3%	84%	0%
4	Degree advancement and continuing education. (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification)	80	52	33	6	6	6	4.1	3.7
		44%	28%	18%	3%	3%	3%	82%	0%
5	Staying current in profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies)	69	63	34	11	3	3	4	3.7
		38%	34%	19%	6%	2%	2%	80%	0%
6	Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities)	72	56	42	8	1	4	4.1	3.6
		39%	31%	23%	4%	1%	2%	82%	0%

Assessment of the relevance of educational objectives
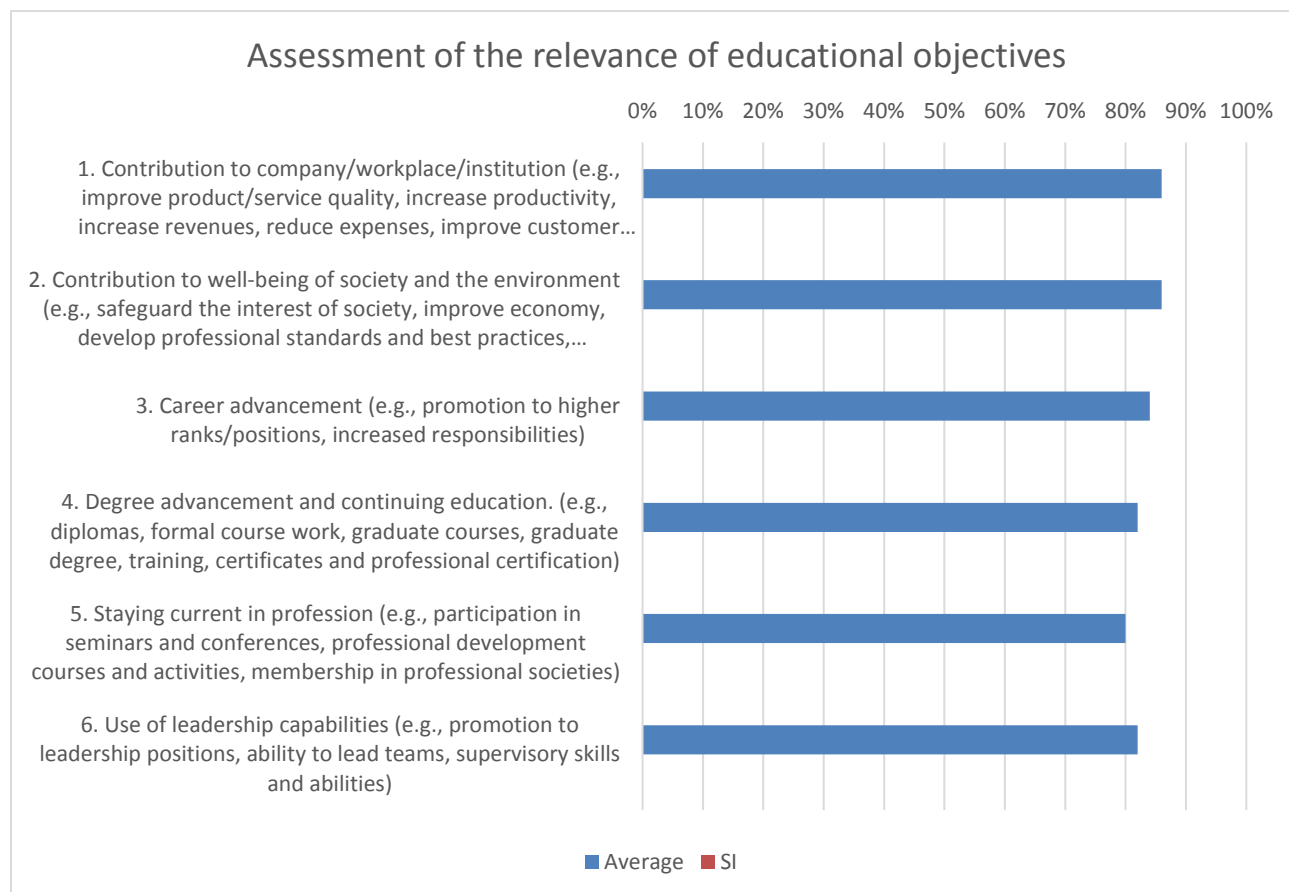
Figure 2 Assessment of the relevance of Educational Objectives at Kuwait University

Table 6 Assessment of the learning environment at Kuwait University - Engineering programs

#	Item	5	4	3	2	1	0	Average	SI
	A. Quality of instruction and support for learning provided by the faculty members in:								
1	- Sciences (Mathematics, Physics, Chemistry)	62	30	52	24	11	4	3.6	2.6
		34%	16%	28%	13%	6%	2%	72%	52%
2	- Computers (Programming and usage of software packages)	57	58	36	21	6	5	3.8	3.2
		31%	32%	20%	11%	3%	3%	76%	64%
3	- Humanities and Social sciences	57	48	50	17	3	8	3.8	3
		31%	26%	27%	9%	2%	4%	76%	60%
4	- General Engineering	57	68	40	11	2	5	3.9	3.5
		31%	37%	22%	6%	1%	3%	78%	70%
5	- Engineering within major	78	56	26	14	4	5	4.1	3.8
		43%	31%	14%	8%	2%	3%	82%	76%
	B. Quality of instruction and support for learning given by teaching assistants and engineers within major.	66	52	38	12	7	8	3.9	3.4
		36%	28%	21%	7%	4%	4%	78%	68%
	C. Quality of advise by the staff with respect to:								
7	- Academic planning	71	46	36	15	5	10	3.9	3.4
		39%	25%	20%	8%	3%	5%	78%	68%
8	- Career planning	63	37	37	18	11	17	3.7	3
		34%	20%	20%	10%	6%	9%	74%	60%
	D. Equity of treatment by:								
9	- Academic administrators	75	39	48	7	6	8	4	3.3
		41%	21%	26%	4%	3%	4%	80%	66%
10	- Faculty	68	43	48	12	6	6	3.9	3.1
		37%	23%	26%	7%	3%	3%	78%	62%
11	- Teaching assistants and engineers	78	41	41	12	6	5	4	3.3
		43%	22%	22%	7%	3%	3%	80%	66%
12	- Fellow students	73	48	43	9	3	7	4	3.4
		40%	26%	23%	5%	2%	4%	80%	68%
	E. Quality of the facilities:								
13	- Classrooms	52	38	41	34	14	4	3.4	2.5
		28%	21%	22%	19%	8%	2%	68%	50%
14	- Science laboratories	50	27	47	38	17	4	3.3	2.2
		27%	15%	26%	21%	9%	2%	66%	44%
15	- Engineering Laboratories	50	29	52	30	18	4	3.4	2.2
		27%	16%	28%	16%	10%	2%	68%	44%
16	- Computing facilities	53	37	41	35	13	4	3.5	2.5
		29%	20%	22%	19%	7%	2%	70%	50%
17	- Libraries	55	42	49	20	10	7	3.6	2.8
		30%	23%	27%	11%	5%	4%	72%	56%

Assessment of the learning environment at Kuwait University

A. Quality of instruction and support for learning provided by the faculty members in:

1. Sciences (Mathematics, Physics, Chemistry): Average 72%, SI 52%
2. Computers (Programming and software packages): Average 76%, SI 64%
3. Humanities and Social Sciences: Average 76%, SI 60%
4. General Engineering: Average 78%, SI 70%
5. Engineering within major: Average 82%, SI 76%

B. Quality of instruction and support for learning given by teaching assistants and engineers within major: Average 78%, SI 68%

C. Quality of advisment by staff with respect to:

7. Academic planning: Average 78%, SI 68%
8. Career planning: Average 74%, SI 60%

D. Equity of treatment by:

9. Academic dministrators: Average 80%, SI 66%
10. Faculty: Average 78%, SI 62%
11. Teaching assistants and engineers: Average 80%, SI 66%
12. Fellow Students: Average 80%, SI 68%

E. Quality of the facilities:

13. Classrooms: Average 68%, SI 50%
14. Science laboratories: Average 66%, SI 44%
15. Engineering laboratories: Average 68%, SI 44%
16. Computing facilities: Average 70%, SI 50%
17. Libraries: Average 72%, SI 56%

Legend: ■ Average ■ SI

Figure 3 Assessment of the learning Environment at Kuwait University

Table 7 Assessment of the Support Services at Kuwait University – Engineering programs

#	Item	5	4	3	2	1	0	Average	SI	3	2	1
A. Academic Services:												
1	Admissions/Registrar	52	46	32	23	19	11	3.5	2.8	29	38	25
		28%	25%	17%	13%	10%	6%	70%	56%	16%	21%	14%
2	Training office	62	44	34	10	6	27	3.9	3.4	24	39	28
		34%	24%	19%	5%	3%	15%	78%	68%	13%	21%	15%
3	Libraries	63	69	25	9	4	13	4	3.9	21	45	26
		34%	38%	14%	5%	2%	7%	80%	78%	11%	25%	14%
4	Bookstores	60	62	25	17	4	15	3.9	3.6	24	43	24
		33%	34%	14%	9%	2%	8%	78%	72%	13%	23%	13%
B. Administrative Offices:												
5	Students� affairs office in your department	74	67	22	3	7	10	4.1	4.1	32	36	21
		40%	37%	12%	2%	4%	5%	82%	82%	17%	20%	11%
6	Administrative offices in the college	61	71	25	7	4	15	4.1	3.9	20	46	22
		33%	39%	14%	4%	2%	8%	82%	78%	11%	25%	12%
C. Other Services:												
7	Health services	57	51	31	10	10	24	3.8	3.4	12	37	39
		31%	28%	17%	5%	5%	13%	76%	68%	7%	20%	21%
8	Food services	57	36	42	26	16	6	3.5	2.6	43	33	12
		31%	20%	23%	14%	9%	3%	70%	52%	23%	18%	7%
9	Parking	35	11	27	25	71	14	2.5	1.4	43	21	25
		19%	6%	15%	14%	39%	8%	50%	28%	23%	11%	14%
10	Recreation and athletics	40	18	25	23	37	40	3	2	10	26	54
		22%	10%	14%	13%	20%	22%	60%	40%	5%	14%	30%
11	Others	38	16	12	7	6	104	3.9	3.4	8	16	34
		21%	9%	7%	4%	3%	57%	78%	68%	4%	9%	19%
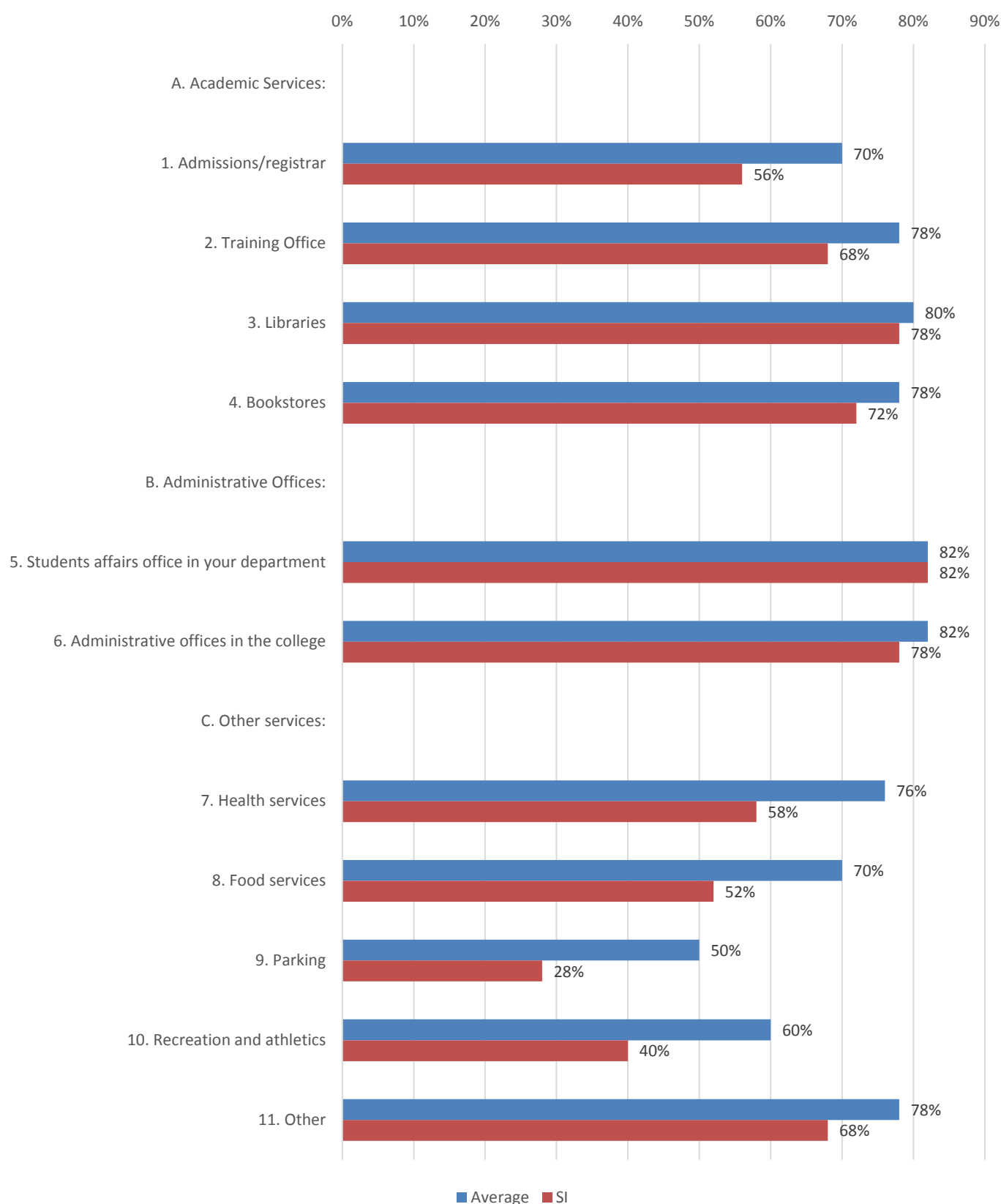
Figure 4 Assessment of the Support Services at Kuwait University

Table 8 Differences among engineering departments – outcome attributes

#	Outcomes		chemical	civil	computer	electrical	ims	mechanical	petroleum	College
1	Apply knowledge of mathematics, physics and engineering.	Average Rating	0%	0%	80%	88%	0%	90%	86%	84%
		Satisfaction Index	0%	0%	74%	84%	0%	96%	82%	80%
2	Design and conduct experiments, as well as to analyze and interpret data.	Average Rating	0%	0%	78%	86%	0%	84%	84%	82%
		Satisfaction Index	0%	0%	68%	82%	0%	86%	78%	76%
3	Design a system, component, or process to meet desired needs.	Average Rating	0%	0%	82%	82%	0%	82%	86%	82%
		Satisfaction Index	0%	0%	76%	72%	0%	78%	78%	76%
4	Function effectively in teams.	Average Rating	0%	0%	88%	86%	0%	92%	92%	88%
		Satisfaction Index	0%	0%	86%	78%	0%	90%	94%	86%
5	Identify, formulate, and solve engineering problems.	Average Rating	0%	0%	84%	84%	0%	92%	88%	86%
		Satisfaction Index	0%	0%	78%	80%	0%	90%	88%	82%
6	Understand professional and ethical responsibilities.(e.g. safety, professional ethics, code of conduct).	Average Rating	0%	0%	90%	84%	0%	88%	92%	88%
		Satisfaction Index	0%	0%	88%	76%	0%	86%	92%	86%
7	Communicate effectively (written reports).	Average Rating	0%	0%	84%	86%	0%	92%	92%	86%
		Satisfaction Index	0%	0%	82%	80%	0%	90%	94%	84%
8	Communicate effectively (oral presentations).	Average Rating	0%	0%	82%	82%	0%	90%	88%	84%
		Satisfaction Index	0%	0%	76%	70%	0%	86%	82%	78%
9	Understand and appreciate the impact of engineering in the societal and global contexts.	Average Rating	0%	0%	86%	86%	0%	84%	90%	86%
		Satisfaction Index	0%	0%	78%	76%	0%	82%	86%	80%
10	Be aware of the need for, and improved my ability to engage in life-long learning (seeking further education, self learning, membership in professional societies).	Average Rating	0%	0%	86%	86%	0%	84%	88%	86%
		Satisfaction Index	0%	0%	82%	82%	0%	78%	88%	82%
11	Be aware of contemporary issues(e.g. economics of engineering, environmental issues, etc�)	Average Rating	0%	0%	78%	80%	0%	80%	82%	80%
		Satisfaction Index	0%	0%	64%	78%	0%	72%	80%	72%
12	Ability to use computing technology in communications.	Average Rating	0%	0%	88%	82%	0%	86%	86%	86%
		Satisfaction Index	0%	0%	86%	72%	0%	82%	86%	82%
13	Ability to use computing technology in engineering analysis/design.	Average Rating	0%	0%	84%	82%	0%	82%	86%	84%
		Satisfaction Index	0%	0%	76%	68%	0%	68%	80%	74%
14		Average Rating	0%	0%	80%	82%	0%	80%	82%	82%

	Ability to use state of the art techniques, and tools in engineering practice.	Satisfaction Index	0%	0%	70%	70%	0%	62%	80%	70%
15	Apply the knowledge of probability and statistics.	Average Rating	0%	0%	72%	82%	0%	80%	76%	76%
		Satisfaction Index	0%	0%	46%	78%	0%	64%	56%	58%

Differences Among Engineering Departments- outcome attributes

Legend: Chemical, Civil, Computer, Electrical, IMS, Mechanical, Petroleum, College

1. Apply knowledge of mathematics, physics, and engineering.
2. Design and conduct experiments, as well as to analyze and interpret data.
3. Design an system, component, or process to meet desired needs.
4. Funtion effectively in teams.
5. Identify, formulate, and solve engineering problems.
6. Understand professional and ethical responsibilities (e.g. safety, professional ethics, code of conduct).
7. Communicate effectively (written reports).
8. Communicate effectively (oral presentations).
9. Understand and appreciate the impact of engineering in societal and global contexts.
10. Awareness of the need for life-long learning.
11. Be aware of contemporary issues (e.g. economics of engineering, environmental issues, etc.)
12. Ability to use computing technology in communications.
13. Ability to use technology in engineering analysis/design/
14. Ability to use state of the art techniques and tools in engineering practice.
15. Apply the knowledge of probability and statistics.

Figure 5 Differences among engineering departments – outcome attributes

Table 9 Differences among departments – Relevance of Educational Objectives

#	Outcomes		chemical	civil	computer	electrical	ims	mechanical	petroleum	College
1	Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction)	Average Rating	0%	0%	80%	88%	0%	90%	86%	84%
		Satisfaction Index	0%	0%	74%	84%	0%	96%	82%	80%
2	Contribution to well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment).	Average Rating	0%	0%	78%	86%	0%	84%	84%	82%
		Satisfaction Index	0%	0%	68%	82%	0%	86%	78%	76%
3	Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities)	Average Rating	0%	0%	82%	82%	0%	82%	86%	82%
		Satisfaction Index	0%	0%	76%	72%	0%	78%	78%	76%
4	Degree advancement and continuing education. (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification)	Average Rating	0%	0%	88%	86%	0%	92%	92%	88%
		Satisfaction Index	0%	0%	86%	78%	0%	90%	94%	86%
5	Staying current in profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies)	Average Rating	0%	0%	84%	84%	0%	92%	88%	86%
		Satisfaction Index	0%	0%	78%	80%	0%	90%	88%	82%
6	Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities)	Average Rating	0%	0%	90%	84%	0%	88%	92%	88%
		Satisfaction Index	0%	0%	88%	76%	0%	86%	92%	86%
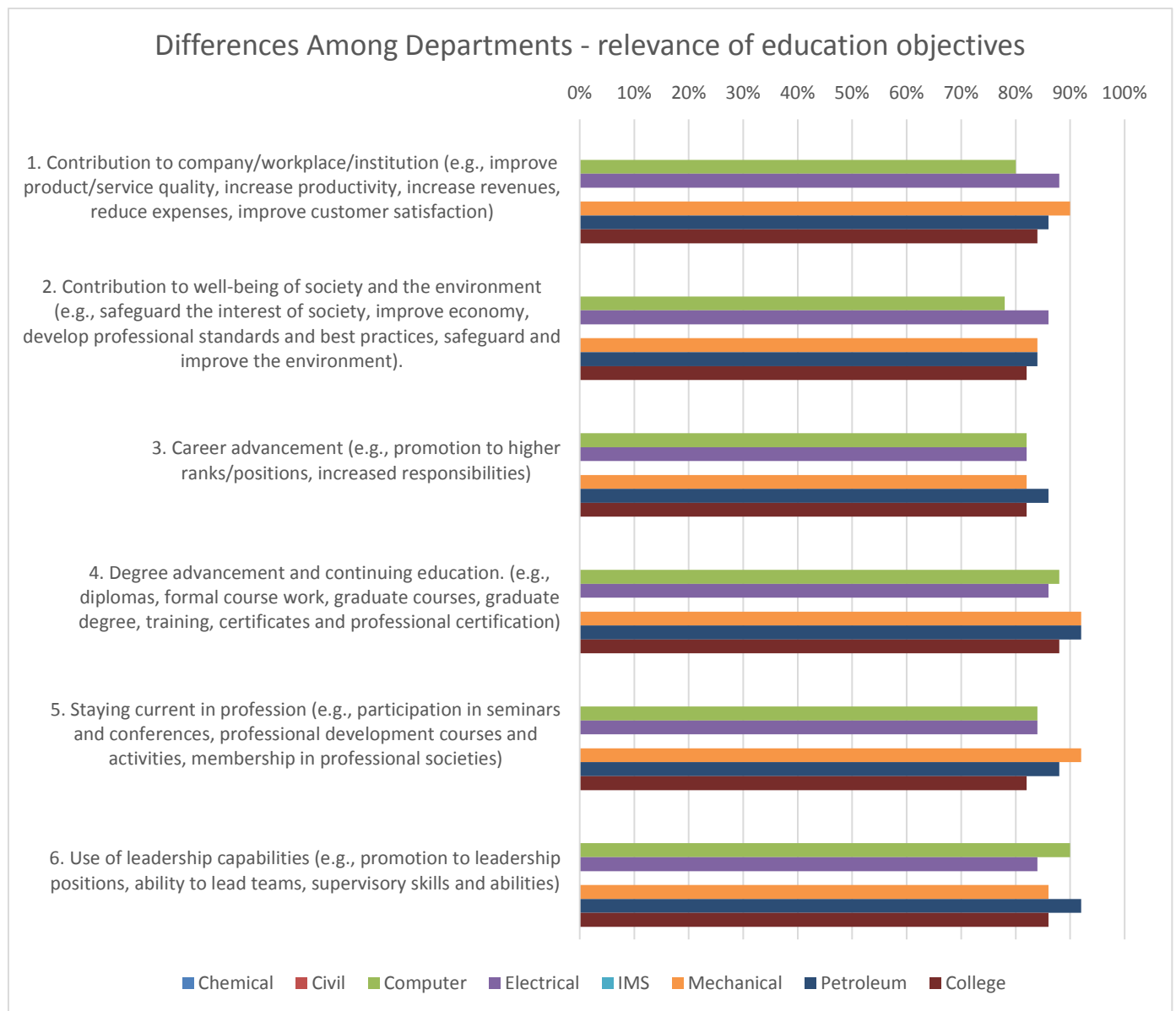
Figure 6 Differences among departments – Relevance of Educational Objectives

Table 10 Differences among departments – Learning environment

#	Outcomes		chemical	civil	computer	electrical	ims	mechanical	petroleum	College
A. Quality of instruction and support for learning provided by the faculty members in:										
1	- Sciences (Mathematics, Physics, Chemistry)	Average Rating	0%	0%	62%	82%	0%	72%	82%	72%
		Satisfaction Index	0%	0%	32%	68%	0%	50%	70%	52%
2	- Computers (Programming and usage of software packages)	Average Rating	0%	0%	76%	78%	0%	66%	78%	76%
		Satisfaction Index	0%	0%	70%	66%	0%	46%	64%	64%
3	- Humanities and Social sciences	Average Rating	0%	0%	74%	80%	0%	66%	78%	76%
		Satisfaction Index	0%	0%	58%	72%	0%	40%	58%	60%
4	- General Engineering	Average Rating	0%	0%	74%	84%	0%	78%	84%	78%
		Satisfaction Index	0%	0%	62%	80%	0%	64%	80%	70%
5	- Engineering within major	Average Rating	0%	0%	78%	82%	0%	82%	86%	82%
		Satisfaction Index	0%	0%	72%	78%	0%	76%	80%	76%
B. Quality of instruction and support for learning given by teaching assistants and engineers within major.		Average Rating	0%	0%	76%	80%	0%	72%	84%	78%
		Satisfaction Index	0%	0%	64%	70%	0%	58%	80%	68%
C. Quality of advise by the staff with respect to:										
7	- Academic planning	Average Rating	0%	0%	80%	80%	0%	76%	76%	78%
		Satisfaction Index	0%	0%	68%	70%	0%	64%	64%	68%
8	- Career planning	Average Rating	0%	0%	74%	78%	0%	70%	74%	74%
		Satisfaction Index	0%	0%	58%	70%	0%	46%	60%	60%
D. Equity of treatment by:										
9	- Academic administrators	Average Rating	0%	0%	80%	82%	0%	70%	80%	80%
		Satisfaction Index	0%	0%	70%	68%	0%	36%	64%	66%
10	- Faculty	Average Rating	0%	0%	78%	78%	0%	70%	82%	78%
		Satisfaction Index	0%	0%	66%	58%	0%	42%	72%	62%
11	- Teaching assistants and engineers	Average Rating	0%	0%	78%	84%	0%	70%	82%	80%
		Satisfaction Index	0%	0%	70%	70%	0%	40%	72%	66%

12	- Fellow students	Average Rating	0%	0%	80%	84%	0%	68%	84%	80%	
		Satisfaction Index	0%	0%	70%	72%	0%	42%	76%	68%	

13	- Classrooms	Average Rating	0%	0%	62%	76%	0%	60%	82%	68%	
		Satisfaction Index	0%	0%	38%	62%	0%	28%	74%	50%	
14	- Science laboratories	Average Rating	0%	0%	58%	76%	0%	56%	74%	66%	
		Satisfaction Index	0%	0%	30%	60%	0%	32%	54%	44%	
15	- Engineering Laboratories	Average Rating	0%	0%	62%	74%	0%	60%	72%	68%	
		Satisfaction Index	0%	0%	32%	54%	0%	40%	58%	44%	
16	- Computing facilities	Average Rating	0%	0%	66%	74%	0%	58%	74%	70%	
		Satisfaction Index	0%	0%	46%	60%	0%	32%	58%	50%	
17	- Libraries	Average Rating	0%	0%	66%	78%	0%	68%	84%	72%	
		Satisfaction Index	0%	0%	48%	56%	0%	46%	76%	56%	

Differences among departments - learning environment

A. Quality of instruction and support for learning provided by the faculty members in:

1. Sciences (Mathematics, Physics, Chemistry)

2. Computers (Programming and software packages)

3. Humanities and Social Sciences

4. General Engineering

5. Engineering Within major

B. Quality of instruction and support for learning given by teaching assistants and engineers within major.

C. Quality of advisment by staff with respect to:

7. Academic planning

8. Career planning

D. Equity of treatment by:

9. Academic dministrators

10. Faculty

11. Teaching assistants and engineers

12. Fellow Students

E. Quality of facilities:

13. Classrooms

14. Science laboratories

15. Engineering laboratories

16. Computing facilities

17. Libraries

Chemical Civil Computer Electrical IMS Mechanical Petroleum College

Figure 7 Differences among departments – Learning environment

Table 11 Differences among departments – Support Services

#	Outcomes		chemical	civil	computer	electrical	ims	mechanical	petroleum	College
A. Academic Services:										
1	Admissions/Registrar	Average Rating	0%	0%	68%	72%	0%	62%	76%	70%
		Satisfaction Index	0%	0%	50%	66%	0%	42%	66%	56%
2	Training office	Average Rating	0%	0%	76%	82%	0%	70%	84%	78%
		Satisfaction Index	0%	0%	58%	78%	0%	52%	82%	68%
3	Libraries	Average Rating	0%	0%	78%	84%	0%	80%	82%	80%
		Satisfaction Index	0%	0%	74%	82%	0%	76%	80%	78%
4	Bookstores	Average Rating	0%	0%	74%	82%	0%	74%	84%	78%
		Satisfaction Index	0%	0%	68%	80%	0%	58%	80%	72%
B. Administrative Offices:										
5	Students� affairs office in your department	Average Rating	0%	0%	82%	82%	0%	86%	82%	82%
		Satisfaction Index	0%	0%	80%	86%	0%	84%	80%	82%
6	Administrative offices in the college	Average Rating	0%	0%	80%	82%	0%	84%	82%	82%
		Satisfaction Index	0%	0%	78%	78%	0%	78%	80%	78%
C. Other Services:										
7	Health services	Average Rating	0%	0%	76%	78%	0%	72%	82%	76%
		Satisfaction Index	0%	0%	66%	72%	0%	56%	72%	68%
8	Food services	Average Rating	0%	0%	66%	72%	0%	66%	80%	70%
		Satisfaction Index	0%	0%	44%	58%	0%	42%	68%	52%
9	Parking	Average Rating	0%	0%	44%	58%	0%	36%	62%	50%
		Satisfaction Index	0%	0%	18%	38%	0%	14%	42%	28%
10	Recreation and athletics	Average Rating	0%	0%	52%	64%	0%	56%	72%	60%
		Satisfaction Index	0%	0%	26%	46%	0%	36%	62%	40%

11 Others	Average Rating	0%	0%	66%	86%	0%	96%	84%	78%
	Satisfaction Index	0%	0%	48%	82%	0%	100%	72%	68%
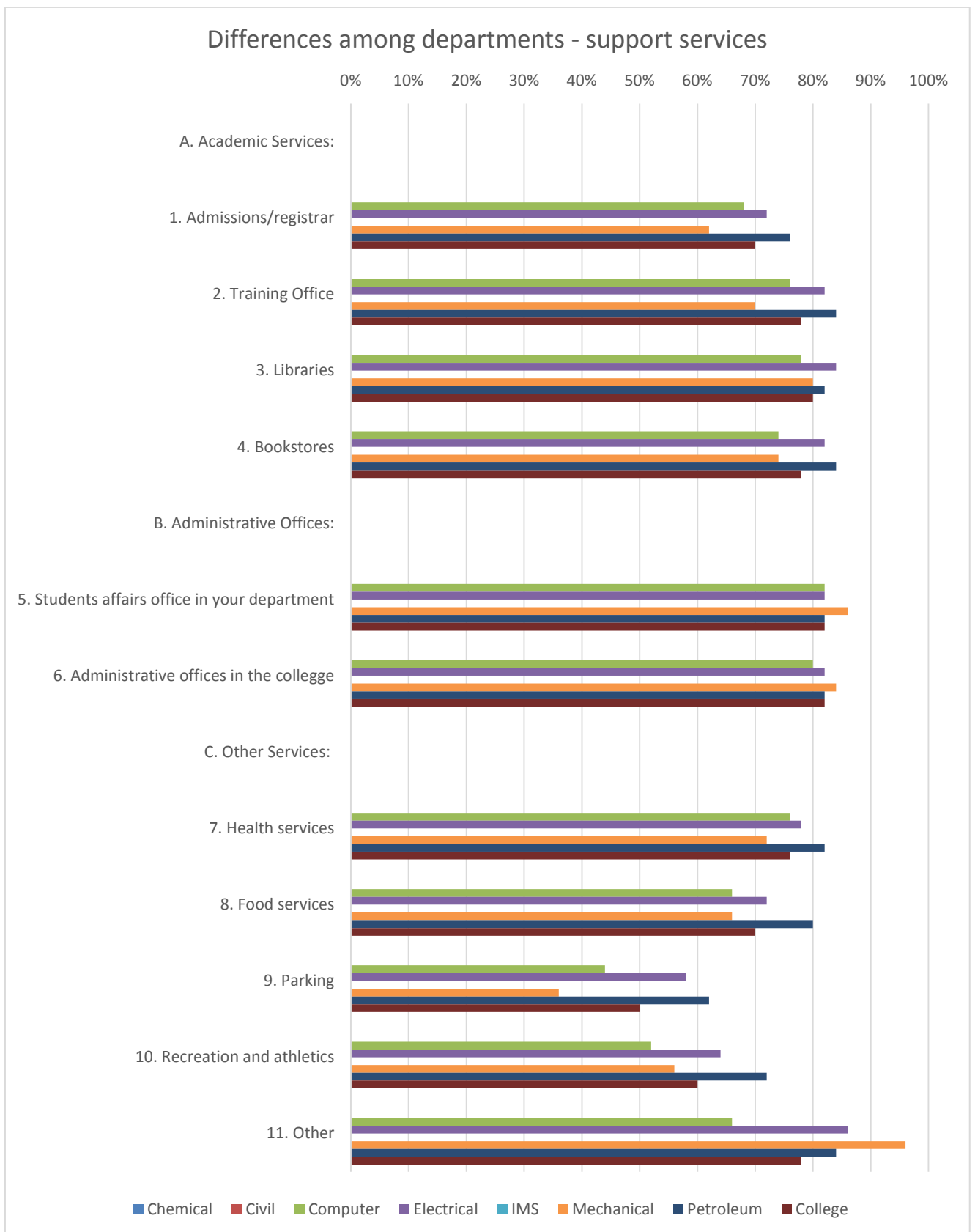
Figure 8 Differences among departments – Support Services

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Exit Survey Form

Kuwait University

College of Engineering & Petroleum

Office of Academic Assessment

EXIT SURVEY FORM

The faculty and students of Kuwait University are dedicated to the continuous improvement of undergraduate engineering programs. The information that you provide through this survey will be very helpful in this process. We appreciate your help in filling out this survey. Thank you for your cooperation and support.

Engineering major:

☐ Civil   ☐ Chemical   ☐ Computer   ☐ Electrical

☐ Petroleum   ☐ Mechanical   ☐ Industrial & Management Systems

Name (optional): _____   Gender: ☐ M ☐ F

Year of Graduation: _____

Overall GPA: _____

Future plans (check all that apply)

☐ I intend to work in the government sector.

☐ I intend to work in the private sector.

☐ I intend to go to graduate school.

☐ I intend to start my own business.

☐ I intend to do other things (please specify): _____

Please fill in the tables in the next pages concerning the skills, abilities and attributes

that you have acquired while studying Engineering at Kuwait University.

1. Assessment of Abilities, Skills and Attributes Acquired at Kuwait University.

Please rate each of the following skills, abilities or attributes in terms of how well your education at Kuwait University prepared you for them.

Skills, abilities, and attributes	Level of preparation					
	Very well prepared	Well prepared	Prepared	Somewhat prepared	Not prepared	Cannot evaluate
1. Apply knowledge of mathematics, physics and engineering.	☐	☐	☐	☐	☐	☐
2. Design and conduct experiments, as well as to analyze and interpret data.	☐	☐	☐	☐	☐	☐
3. Design a system, component, or process to meet desired needs.	☐	☐	☐	☐	☐	☐
4. Function effectively in teams.	☐	☐	☐	☐	☐	☐
5. Identify, formulate, and solve engineering problems.	☐	☐	☐	☐	☐	☐
6. Understand professional and ethical responsibilities. *(e.g. safety, professional ethics, code of conduct).*	☐	☐	☐	☐	☐	☐
7. Communicate effectively (written reports).	☐	☐	☐	☐	☐	☐
8. Communicate effectively (oral presentations).	☐	☐	☐	☐	☐	☐
9. Understand and appreciate the impact of engineering in the societal and global contexts.	☐	☐	☐	☐	☐	☐
10. Be aware of the need for, and improve my ability to engage in life-long learning *(seeking further education, self-learning, membership in professional societies).*	☐	☐	☐	☐	☐	☐
11. Be aware of contemporary issues *(e.g. economics of engineering, environmental issues, etc...)*	☐	☐	☐	☐	☐	☐
12. Ability to use computing technology in communications.	☐	☐	☐	☐	☐	☐
13. Ability to use computing technology in engineering analysis/design	☐	☐	☐	☐	☐	☐
14. Ability to use state of the art techniques, and tools in engineering practice.	☐	☐	☐	☐	☐	☐
15. Apply the knowledge of probability and statistics.	☐	☐	☐	☐	☐	☐

2. Educational Objectives

Please rate the following educational objectives elements according to how important they are to you career plans.

Objectives Elements	Importance to career					
	Extremely important	Very important	Important	Somewhat important	Not important	Cannot rate
1. Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction)	☐	☐	☐	☐	☐	☐
2. Contribution to well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment).	☐	☐	☐	☐	☐	☐
3. Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities)	☐	☐	☐	☐	☐	☐
4. Degree advancement and continuing education. (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification)	☐	☐	☐	☐	☐	☐
5. Staying current in profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies)	☐	☐	☐	☐	☐	☐
6. Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities)	☐	☐	☐	☐	☐	☐

3. Assessment of the Learning Environment at Kuwait University

Please indicate your satisfaction with each of the following aspects of your experience at Kuwait University.

	Level of satisfaction					
	Extremely satisfied	*Very satisfied*	*Satisfied*	*Somewhat satisfied*	*Not satisfied*	*Cannot evaluate*
A. Quality of instruction and support for learning provided by the faculty members in:						
- Sciences (Mathematics, Physics, Chemistry)	☐	☐	☐	☐	☐	☐
- Computers (Programming and usage of software packages)	☐	☐	☐	☐	☐	☐
- Humanities and Social sciences	☐	☐	☐	☐	☐	☐
- General Engineering,	☐	☐	☐	☐	☐	☐
- Engineering within major	☐	☐	☐	☐	☐	☐
B. Quality of instruction and support for learning given by teaching assistants and engineers within major.	☐	☐	☐	☐	☐	☐
C. Quality of advice by the staff with respect to:						
- Academic planning	☐	☐	☐	☐	☐	☐
- Career planning	☐	☐	☐	☐	☐	☐
D. Equity of treatment by:						
- Academic administrators	☐	☐	☐	☐	☐	☐
- Faculty	☐	☐	☐	☐	☐	☐
- Teaching assistants and engineers	☐	☐	☐	☐	☐	☐
- Fellow students	☐	☐	☐	☐	☐	☐
E. Quality of the facilities:						
- Classrooms	☐	☐	☐	☐	☐	☐
- Science laboratories	☐	☐	☐	☐	☐	☐
- Engineering Laboratories	☐	☐	☐	☐	☐	☐
- Computing facilities	☐	☐	☐	☐	☐	☐
- Libraries	☐	☐	☐	☐	☐	☐

4. Assessment of Support Services

Please rate the quality of services provided by the listed offices. In addition, please indicate the amount of interaction that you had with each office.

	Quality of services							Amount of interaction		
	Very good	*Good*	*Adequate*	*Poor*	*Very poor*	*No opinion*		*Much*	*Some*	*Little or none*
A. Academic Services:										
Admissions/Registrar	☐	☐	☐	☐	☐	☐		☐	☐	☐
Training office	☐	☐	☐	☐	☐	☐		☐	☐	☐
Libraries	☐	☐	☐	☐	☐	☐		☐	☐	☐
Bookstores	☐	☐	☐	☐	☐	☐		☐	☐	☐
B. Administrative Offices:										
Students' affairs office in your department	☐	☐	☐	☐	☐	☐		☐	☐	☐
Administrative offices in the college	☐	☐	☐	☐	☐	☐		☐	☐	☐
C. Other Services:										
Health services	☐	☐	☐	☐	☐	☐		☐	☐	☐
Food services	☐	☐	☐	☐	☐	☐		☐	☐	☐
Parking	☐	☐	☐	☐	☐	☐		☐	☐	☐
Recreation and athletics	☐	☐	☐	☐	☐	☐		☐	☐	☐
Others (specify) _____	☐	☐	☐	☐	☐	☐		☐	☐	☐

5. General Assessment

Please answer the following questions:

A. Please list some very important skills that you think you had learned in the engineering program.

_____

_____

_____

B. Please list some very important or useful skills that you did not get the chance (or are not available) to learn while taking engineering courses at Kuwait University.

_____

_____

_____

C. Please write down any comments or suggestions that you think will improve the engineering programs at Kuwait University (use additional sheets if necessary).

_____

_____

_____

**Chemical Engineering Program
Exit Survey Results**

For the Academic year 2019-2020

March 2021

Survey Statistics:

No Data Available.

Civil Engineering Program
Exit Survey Results

For the Academic year 2018-2020

March 2021

Survey Statistics:

No Data Available.

Computer Engineering Program
Exit Survey Results

For the Academic year 2019-2020

March 2021

Survey Statistics:

* Major: Computer Engineering

* Number of Students participated in the survey:

COMPUTER	77	Male	13	17%
		Female	63	82%

Survey Results:

* Students' Future plans:

No. of students who:

Plans	N	%
Intend to work in the government sector.	60	78%
Intend to work in the private sector.	49	64%
Intend to go to graduate school.	23	30%
Intend to start my own business	33	43%
Intend to do other things	7	9%
-		
Review my learnings		
Volunteer/take online courses for more experience.		
business		
Still figuring it out		

* Table 1 shows students' feedback for the first group of question in the exit survey which is about the students' assessment for the outcome attributes acquired at Kuwait University. The table also shows the average score and the satisfaction index out of 5 and as percentage for each item. The results are presented in **Table 2** and the associate figure according to the new student outcomes as outlined previously in the college section.

*Table 3 shows students' feedback for the second group of questions about how important is the educational objectives to their careers.

* Table 4 shows students' feedback for the third group of question about their level of satisfaction for the learning Environment at Kuwait University.

* **Table 5** shows students' feedback for the fourth group about the students' assessment of the Support Services at Kuwait University. The table also shows the amount of interaction they had with each item.

Table 1 Assessment of the outcome attributes acquired at Kuwait University

#	Outcome	5	4	3	2	1	0	Average	SI
1	Apply knowledge of mathematics, physics and engineering.	24	32	16	4	0	1	4	3.7
		31%	42%	21%	5%	0%	1%	80%	74%
2	Design and conduct experiments, as well as to analyze and interpret data.	25	26	21	3	1	1	3.9	3.4
		32%	34%	27%	4%	1%	1%	78%	68%
3	Design a system, component, or process to meet desired needs.	29	28	13	6	0	1	4.1	3.8
		38%	36%	17%	8%	0%	1%	82%	76%
4	Function effectively in teams.	45	19	10	1	0	2	4.4	4.3
		58%	25%	13%	1%	0%	3%	88%	86%
5	Identify, formulate, and solve engineering problems.	33	26	15	2	0	1	4.2	3.9
		43%	34%	19%	3%	0%	1%	84%	78%
6	Understand professional and ethical responsibilities.(e.g. safety, professional ethics, code of conduct).	49	18	7	2	0	1	4.5	4.4
		64%	23%	9%	3%	0%	1%	90%	88%
7	Communicate effectively (written reports).	33	29	10	4	0	1	4.2	4.1
		43%	38%	13%	5%	0%	1%	84%	82%
8	Communicate effectively (oral presentations).	33	25	15	2	1	1	4.1	3.8
		43%	32%	19%	3%	1%	1%	82%	76%
9	Understand and appreciate the impact of engineering in the societal and global contexts.	42	18	13	3	0	1	4.3	3.9
		55%	23%	17%	4%	0%	1%	86%	78%
10	Be aware of the need for, and improved my ability to engage in life-long learning (seeking further education, self learning, membership in professional societies).	39	23	11	3	0	1	4.3	4.1
		51%	30%	14%	4%	0%	1%	86%	82%
11	Be aware of contemporary issues(e.g. economics of engineering, environmental issues, etc�)	27	21	25	3	0	1	3.9	3.2
		35%	27%	32%	4%	0%	1%	78%	64%
12	Ability to use computing technology in communications.	41	24	11	0	0	1	4.4	4.3
		53%	31%	14%	0%	0%	1%	88%	86%
13	Ability to use computing technology in engineering analysis/design.	35	23	15	3	0	1	4.2	3.8
		45%	30%	19%	4%	0%	1%	84%	76%
14	Ability to use state of the art techniques, and tools in engineering practice.	30	23	18	4	1	1	4	3.5
		39%	30%	23%	5%	1%	1%	80%	70%
15	Apply the knowledge of probability and statistics.	22	13	27	13	1	1	3.6	2.3
		29%	17%	35%	17%	1%	1%	72%	46%
16	A knowledge of mathematics through differential and integral calculus, and basic, computer, and engineering sciences, necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components, as appropriate to computer engineering.	20	33	16	4	3	1	3.8	3.5
		26%	43%	21%	5%	4%	1%	76%	70%
17	A knowledge of discrete mathematics.	23	36	11	6	0	1	4	3.9
		30%	47%	14%	8%	0%	1%	80%	78%

Table 2 Assessment of the Student Outcomes (1-7) – Computer Engineering

#	Student Outcomes	Average	SI
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	3.9 78%	3.3 67%
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	4.1 82%	3.8 76%
3	an ability to communicate effectively with a range of audiences	4.2 83%	4 79%
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	4.2 85%	3.8 77%
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	4.4 88%	4.3 86%
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	4.0 80%	3.6 71%
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	4.3 86%	4.1 82%

Figure 1 Assessment of student outcomes – Computer Engineering

Table 3 Assessment of relevance of Program Educational Objectives

#	Objective elements	5	4	3	2	1	0	Average	SI
1	Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction)	19	30	16	4	0	19	3.9	**3.6**
		22%	34%	18%	5%	0%	22%	78%	**72%**
2	Contribution to well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment).	23	29	13	4	0	19	4	**3.8**
		26%	33%	15%	5%	0%	22%	80%	**76%**
3	Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities)	20	26	19	3	0	20	3.9	**3.4**
		23%	30%	22%	3%	0%	23%	78%	**68%**
4	Degree advancement and continuing education. (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification)	15	25	17	10	2	19	3.6	**2.9**
		17%	28%	19%	11%	2%	22%	72%	**58%**
5	Staying current in profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies)	11	24	19	7	4	23	3.5	**2.7**
		13%	27%	22%	8%	5%	26%	70%	**54%**
6	Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities)	20	26	13	8	0	21	3.9	**3.4**
		23%	30%	15%	9%	0%	24%	78%	**68%**

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Table 4 Level of satisfaction for the learning Environment at Kuwait University

#	Item	5	4	3	2	1	0	Average	SI
A. Quality of instruction and support for learning provided by the faculty members in:									
1	- Sciences (Mathematics, Physics, Chemistry)	14	11	28	15	8	1	3.1	1.6
		18%	14%	36%	19%	10%	1%	62%	32%
2	- Computers (Programming and usage of software packages)	22	30	13	8	2	2	3.8	3.5
		29%	39%	17%	10%	3%	3%	76%	70%
3	- Humanities and Social sciences	20	23	24	5	2	3	3.7	2.9
		26%	30%	31%	6%	3%	4%	74%	58%
4	- General Engineering	17	29	19	7	2	3	3.7	3.1
		22%	38%	25%	9%	3%	4%	74%	62%
5	- Engineering within major	27	27	11	8	2	2	3.9	3.6
		35%	35%	14%	10%	3%	3%	78%	72%
B. Quality of instruction and support for learning given by teaching assistants and engineers within major.		25	21	18	5	4	4	3.8	3.2
		32%	27%	23%	6%	5%	5%	76%	64%
C. Quality of advise by the staff with respect to:									
7	- Academic planning	30	18	16	3	3	7	4	3.4
		39%	23%	21%	4%	4%	9%	80%	68%
8	- Career planning	24	14	16	7	5	11	3.7	2.9
		31%	18%	21%	9%	6%	14%	74%	58%
D. Equity of treatment by:									
9	- Academic administrators	29	24	17	2	3	2	4	3.5
		38%	31%	22%	3%	4%	3%	80%	70%
10	- Faculty	22	28	20	2	3	2	3.9	3.3
		29%	36%	26%	3%	4%	3%	78%	66%
11	- Teaching assistants and engineers	28	24	17	1	5	2	3.9	3.5
		36%	31%	22%	1%	6%	3%	78%	70%
12	- Fellow students	30	22	18	2	2	3	4	3.5
		39%	29%	23%	3%	3%	4%	80%	70%
E. Quality of the facilities:									
13	- Classrooms	12	17	18	21	8	1	3.1	1.9
		16%	22%	23%	27%	10%	1%	62%	38%
14	- Science laboratories	10	13	24	21	8	1	2.9	1.5
		13%	17%	31%	27%	10%	1%	58%	30%
15	- Engineering Laboratories	15	10	30	12	9	1	3.1	1.6
		19%	13%	39%	16%	12%	1%	62%	32%
16	- Computing facilities	19	15	19	15	7	2	3.3	2.3
		25%	19%	25%	19%	9%	3%	66%	46%
17	- Libraries	12	23	20	11	7	4	3.3	2.4
		16%	30%	26%	14%	9%	5%	66%	48%

Table 5 Assessment of the Support Services at Kuwait University

#	Item	5	4	3	2	1	0	Average	SI	3	2	1
A. Academic Services:												
1	Admissions/Registrar	15	22	20	11	5	4	3.4	**2.5**	19	24	16
		19%	29%	26%	14%	6%	5%	68%	**50%**	25%	31%	21%
2	Training office	20	16	20	5	1	15	3.8	**2.9**	17	28	15
		26%	21%	26%	6%	1%	19%	76%	**58%**	22%	36%	19%
3	Libraries	21	29	10	5	2	10	3.9	**3.7**	14	26	20
		27%	38%	13%	6%	3%	13%	78%	**74%**	18%	34%	26%
4	Bookstores	14	31	12	8	1	11	3.7	**3.4**	15	27	18
		18%	40%	16%	10%	1%	14%	74%	**68%**	19%	35%	23%
B. Administrative Offices:												
5	Students� affairs office in your department	28	29	12	2	1	5	4.1	**4**	24	21	15
		36%	38%	16%	3%	1%	6%	82%	**80%**	31%	27%	19%
6	Administrative offices in the college	22	31	10	3	2	9	4	**3.9**	15	27	18
		29%	40%	13%	4%	3%	12%	80%	**78%**	19%	35%	23%
C. Other Services:												
7	Health services	16	26	16	3	3	13	3.8	**3.3**	8	24	28
		21%	34%	21%	4%	4%	17%	76%	**66%**	10%	31%	36%
8	Food services	17	16	20	14	7	3	3.3	**2.2**	29	21	10
		22%	21%	26%	18%	9%	4%	66%	**44%**	38%	27%	13%
9	Parking	6	6	12	13	31	9	2.2	**0.9**	27	12	21
		8%	8%	16%	17%	40%	12%	44%	**18%**	35%	16%	27%
10	Recreation and athletics	7	6	12	12	15	25	2.6	**1.3**	7	17	36
		9%	8%	16%	16%	19%	32%	52%	**26%**	9%	22%	47%
11	Others	8	6	5	6	4	48	3.3	**2.4**	6	10	26
		10%	8%	6%	8%	5%	62%	66%	**48%**	8%	13%	34%

A. Please list some very important skills that you think you had learned in the engineering program.

Computer Programming skills

I have learned how to search for anything that I want to learn from the internet. I have learned Programming. I have learned how to implement machine learning algorithms to my needs I have learned why mathematics is beautiful and understand some concepts and the real world use of them. i have learned so much from the university.

- Presentation skills - Communication skills - Programming skills - Self-learning skills - Leader skills - Economics skills

Group work, programming, writing reports, oral presentation, self learning

Learned Java - C++ languages and Assembly Language

Gained some time management skills. Learned how to teach myself things I have not learnt.

1. communication skills 2. presentation skills 3. coding skills 4. report writing skills

I became good in oral presentations, writing reports, programming and coding, solving problems became easier with time, and I learned how to be patient to solve problems and communicate with different personalities.

I had a lot of skills in programming language.

Thinking.

-programming languages (C++, Java, Assembly language, Matlab, SQL) - skills (Management, Problem solving, Software experience, Mathematics, Communication, DBMS)

Thinking.

-programming languages (C++, Java, Assembly language, Matlab, SQL) - skills (Management, Problem solving, Software experience, Mathematics, Communication, DBMS)

- skills (Management, Problem solving, Software and hardware experience, Mathematics, algorithms techniques, Communication, DBMS, Presentation, Coding, interacted with micro-controller) -programming languages learned (Java, C++, Assembly language, MatLab, SQL)

- skills (Management, Problem solving, Software and hardware experience, Mathematics, algorithms techniques, Communication, DBMS, Presentation, Coding, interacted with micro-controller) -programming languages learned (Java, C++, Assembly language, MatLab, SQL)

Java code - design

Computer skills , project management , workflow development

some writing skills

writing skills

The basics of programming languages such as C++, Java and python Basics of Networks and Network Security

Formal report writing Understanding the fundamentals of my major

To be able to work in team.

Design and analysis

I learned many new skills like working in a team being a leader in a team how to deal with team problems, writing a report, and doing a presentation. I learned how to work under pressure and how to organize my time. I learned many new topics of computer and its aspect especially the elective courses they were really interesting I wish I can attend them all. I experience also how having a career would look like in a training course. I learned a lot from our CPE which they brought to us different type of courses like web development, IOS development, and WordPress, and java.

Patients, Expecting good things, no matter how many calamities.

Presentation Skills, Enhanced my English Language, Team work, Engineering Skills, Computer Skills, Mathematic & solving problems

Programming languages, web development, networking, experience in the job field from training course, communication (writing and oral presentations)

Group work

Group work

Creativity , writing report and documentation , software , hardware , programming language , solving problems .. etc

The most important skill that I have gained through the tough and the tense courses in Kuwait university was probably the ability to teach my self efficiently, as well as the ability to multitask. Right now, I'm very confident that I can complete any task or learn any skill if I was given the chance to do so.

for the (TECHNICAL SKILLS): C++ , Java , HTML and , assembly language programming , python and, Database management systems developer. for the (PERSONAL SKILLS): Able to work under pressure, Good in conflict resolution and, Always on time

team work - oral presentation - programing skills

- Presentation - Coding - Problems analyses - Communications skills

I learned so many skills such as: presentation skills, fast learning of any program or application, working in teams, social skills, working under pressures, and to do volunteer work (with in the major or outside).

I learned a lot of new skills like being a leader in a team being a member of a team, how to handle team problems, writing a report, and doing a presentation. I learned how to manage and organize my time under the pressure. I learned a lot of new skills from the courses CPE make like Wordpress, web development and IOS development.

Problem solving , programming , network communications and enter net communications, The important of safety

Programming Skills Teamwork skill Leadership

programming skills leader ship skills

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Team work and collaboration, critical thinking, problem solving, patience, self-learning, hard work, communication skills, and applying work ethics.

Web development ethics software tools

i learned to be more confident in my work and skills

software skills analyzing problems

I never planned to work in team to accomplish tasks but I learned from the program in general after involve working in a 395 and 495 team : The ability to deal with students of all kinds and their impressions The ability to learn and complete tasks under pressure the ability to learn and design phone apps Knowing one or two programming languages gives the ability to learn and know other languages Ability to read and understand articles about the major Great interest in network courses

Technical writing (report, etc.), group work

Programing , Teamwork , Thinking skills.

communications with others , An interest in time

Think out of the box Creativity

Patient

-Working with a team. -Self learning specially in the programming field. -Communicating with team members. -Time management in attendance.

communication and presentation, maths, programming, organized thinking

Networking/ Excel Microsoft/ Project Management / Economic things

Time management, team work, Self learning , Analyzing problems

Hardware . Math . Some software

1-group work 2-push myself to the limits 3-learn how to use my knowledge into applications

how to deal with problems

Creativity, patience and ethics.

communication skills, time management

team work , developing learning skills and searching for more than one source to understand the material, good coding and programming skills

Team Work, Critical Thinking, Leadership Skills, Problem Solving

-how to deal with big project - accuracy

java, c++, swift

How to manage my time and be responsible for any assignment assigned for me

Mathematics skills Physics skills Chemistry skills Programming skills Hardware and software computer skills

- presentation - team work - report writing - general knowledge in computer engineering - Calculus

learning programming language

From my studies in computer engineering, I learned many programming languages, which are Java, Data and other languages

Team communication.

Patience

Multiple lang.

Multiple programing languages

B. Please list some very important or useful skills that you did not get the chance (or are not available) to learn while taking engineering courses at Kuwait University.

Presentation skills

how GPUs work. How to fully integrate my own machine learning code. How to code my own game.

- Self-confident - Good programer skills

Python - HTML

Didn't get the chance to learn another language (as an elective course).

some coding skills.(IOS)

programming new languages that were not included in the major sheet.

Some skills in Python .

practice, how we apply what we learn.

AI and machine learning, Python, swift

practice, how we apply what we learn.

AI and machine learning, Python, swift

Artificial intelligent and machine learning, swift for iOS, Ada language, C language

Artificial intelligent and machine learning, swift for iOS, Ada language, C language

Xcode

Database

Never got the chance to enhance the skills I learned in my major, therefore my confidence in them is minimal

Career training

I'm sure there are always new things to learn every day, significantly as for university. but about the courses maybe the new major sheet like python.

Many life skills

Database, swift programming language.

Intership

Intership

study of modern technology

As a computer engineer, thinking out of the box to solve a problem or writing an efficient code is very important. however, I don't think that the program has given me the enough chances to improve these point.

- self study / self learning - Labor market - Practical side

Prepare the student for the work environment and nature.

I wish i could take all the elective courses, they are really interesting. but I'm sure I learned a lot from Kuwait university.

practicing engineering in the Fields

Internship Tutoring for student

practical training in work fields, side projects/volunteer jobs for students portfolio, training students to teach and help other students (like TAs).

database swift machine learning

i would've loved the chance to learn more about different and more contemporary fields in computer engineering like the development video games but unfortunately it was not included in the program.

time management

Network courses: Cisco Certified Network Network Security Azure Virtual Networks, VPNs, and Gateways others. programming courses: PHP, C#, MATLAB , Swift , Python and JavaScript

Application of learned subjects in real life, creating full mobile application/projects with help of doctors, python & machine learning

Nothing.

business, communications with others

Learning

-Public speeches and relations. -Writing scientific papers (that are ready to be published).

we need more practical work

Operating Research thinking / Financial with Engineering problems / Operation Management thinking

practical aspect

Data bias

real experiment outside the collage

Art skills.

Business analysis

not having enough practicing on real life projects to make our study actually useful

Robotics, Ethical Hacking, Security

Having more opportunity to join programs

Python, MATLAB, and I wish I was able to physically inspect internal computer parts.

Swift programming language

- Machine Learning - More depth in programming

I wanted to learn how to program a robot, and I didn't have the opportunity

Nothing.

C lang

C language

C. Please write down any comments or suggestions that you think will improve the engineering programs at Kuwait University (use additional sheets if necessary):

Giving students more realistic tasks to perform related to course, Exams marked by the doctors should be double checked by the committee as some bias decisions take place by some professors.

I think that the university portal is so old and outdated, it gets really weird when I say that it does not represent the knowledge of the computer science and engineering facility members. You guys can create the best website ever but you somehow think it does not matter. The portal needs a fresh start and should be built from scratch. Thank you

- Updating the major sheets based on the market requirements(New tech.). - Using new technologies that could help student to visualize what they have been learned

Get better quality instruction material and better instructors.

1. make the courses more practical is very important as we are going to be engineers. 2. we need sport activities.

I will be happy if I took the Master's Degree in Kuwait University.

Students should be accustomed to programming practice.

put data base and other elective subjects as a basic subjects.

-subjects are more theoretical and lacking the practical part which help understand the subject. -Some elective courses are very important and should be one of the main department requirements.

put data base and other elective subjects as a basic subjects.

-subjects are more theoretical and lacking the practical part which help understand the subject. -Some elective courses are very important and should be one of the main department requirements.

-Most of the Courses in Computer engineering lack the practical part of the subject which leads to misunderstanding the theoretical part of the subject. -Elective courses have a lot of important knowledge that should be placed as one of the main requirements of the computer engineering department

-Most of the Courses in Computer engineering lack the practical part of the subject which leads to misunderstanding the theoretical part of the subject. -Elective courses have a lot of important knowledge that should be placed as one of the main requirements of the computer engineering department

make sure that all the (TAs) and faculty members update their knowledge because some of them lack it

make sure that all the (TAs) and faculty members update their knowledge because some of them lack it

The computer engineering department should apply the lectures taught into actions so that the students may have better knowledge about the concept

There is no

concentrate on quality more than quantity. thank you

adding new courses that are highly needed nowadays like database, python, and swift.

developing academic curricula to match the age of technology

I have really learned a lot during your program but, as I have mentioned the program didn't give me the chance to think out of the box or to improve my problem-solving skill, and it is not really something that I can gain through a written curriculum in how to code or how to solve a problem. Instead I have witness a significant improvement in my college skills when there was no curriculum to follow, that happened two times during the program. One was on a "Robotics Competition" and the other was during the design project course. My suggestion is to give the student the chance to compete among themselves: Each year DO a problem solving competition a one for those who like me, have the desire to learn more.. Propose a problem, Ask for the best result design, NO restriction on the coding language, hardware or software.. let us be free. I bet you will be surprised of the competition effect in improving the student skills.

Having an electronic libraries license (such as IEEE)

focus on quality more than quantity. thank you.

It will be great if there were a student community supported by the college to guide the student to improve their skills to be prepared for the real work-life.

encourage more volunteering activities within the department and encourage students to help each other by making a program for students who would like to help. And encourage students to do side projects and build an electronic portfolio.

some of the electives must me essential courses

improve the way of teaching programing course

I hope you will update the major sheet and programming languages so that students will be able to develop iPhone Android applications before graduation Also, make algorithms course before studying programming courses, so that students can understand and analyze the program before programming it I hope to make the study more practical than theoretical Thank you

Teach more up to date subjects

Nothing.

every thing

Programming language

Everything needs to improve

-Please enhance the way students evaluate the professors, because in the current way there are a lot of questions with a large number of professors/TA's to evaluate which make the evaluation simply selecting choices with out reading them just to get done. -Some doctors specially the ones that are in a contract with the university are not that good at teaching and yet they get renewed contracts every year.

Organizing the site so the students consider it as a good reference instead for the important information. Publish English class (no grades) so the students need to improve their English language and presentation skills register and get efficient practice. But efforts on sports club in the colleges, so a student refresh himself/herselfe inside his/her college during the study day. Administrations need more organization, to take less efforts and time from a student to finish a work, (Ex. why should a student travel between 2 different areas, ex hkaldia and KhuwaKh, for some deals in the era of technology and west manu time. thank you for proving this chance to improve our university

more choices for elective classes from other majors in college/ No 0 credit for labs

I hope to minimize total number of credits and start giving new materials that is used for nowadays technologies

I suggest setting up laboratories for more learning

more labs, more number of students in classes

Focusing more on ethics because it will flourish out the essence of engineering in many aspects in our lifes.

reduce the number of credits and try to focus on the Engineering training as much as they can

putting more real life projects, changing the criteria of evaluating the students as the most important thing is not about knowing the information it is about how to use it and make it useful

Treat the students better.

In my personal opinion, recording the class can improve the educational status of students, especially in these current circumstances in Covid-19.

Replenishment of material content as technology changes

- give more attention to making students apply their skills in real life examples

Improving the registration system

Add application programming course.

Thank you for every thing

Electrical Engineering Program
Exit Survey Results

For the Academic year 2019-2020

March 2021

Survey Statistics:

* **Major: Electrical Engineering**

* **Number of Students participated in the survey:**

ELECTRICAL	48	Male	10	21%
		Female	38	79%

Survey Results:

* **Students' Future plans:**

 No. of students who:

Plans	N	%
Intend to work in the government sector.	42	88%
Intend to work in the private sector.	24	50%
Intend to go to graduate school.	16	33%
Intend to start my own business	17	35%
Intend to do other things	4	8%
Study more		

* **Table 1** shows students' feedback for the first group of question in the exit survey which is about the students' assessment for the outcome attributes acquired at Kuwait University. The table also shows the average score and the satisfaction index out of 5 and as percentage for each item. The results are presented in **Table 2** and the associate figure according to the new student outcomes as outlined previously in the college section.

***Table 3** shows students' feedback for the second group of questions about how important is the educational objectives to their careers.

* **Table 4** shows students' feedback for the third group of question about their level of satisfaction for the learning Environment at Kuwait University.

* Table 5 shows students' feedback for the fourth group about the students' assessment of the Support Services at Kuwait University. The table also shows the amount of interaction they had with each item.

Table1 Assessment of the outcome attributes acquired at Kuwait University

#	Outcome	5	4	3	2	1	0	Average	SI
1	Apply knowledge of mathematics, physics and engineering.	30	10	6	2	0	0	4.4	4.2
		63%	21%	13%	4%	0%	0%	88%	84%
2	Design and conduct experiments, as well as to analyze and interpret data.	20	19	8	0	0	1	4.3	4.1
		42%	40%	17%	0%	0%	2%	86%	82%
3	Design a system, component, or process to meet desired needs.	18	16	12	1	0	1	4.1	3.6
		38%	33%	25%	2%	0%	2%	82%	72%
4	Function effectively in teams.	25	12	11	0	0	0	4.3	3.9
		52%	25%	23%	0%	0%	0%	86%	78%
5	Identify, formulate, and solve engineering problems.	21	17	7	3	0	0	4.2	4
		44%	35%	15%	6%	0%	0%	84%	80%
6	Understand professional and ethical responsibilities.(e.g. safety, professional ethics, code of conduct).	26	10	6	6	0	0	4.2	3.8
		54%	21%	13%	13%	0%	0%	84%	76%
7	Communicate effectively (written reports).	25	13	8	2	0	0	4.3	4
		52%	27%	17%	4%	0%	0%	86%	80%
8	Communicate effectively (oral presentations).	21	13	10	4	0	0	4.1	3.5
		44%	27%	21%	8%	0%	0%	82%	70%
9	Understand and appreciate the impact of engineering in the societal and global contexts.	26	10	10	2	0	0	4.3	3.8
		54%	21%	21%	4%	0%	0%	86%	76%
10	Be aware of the need for, and improved my ability to engage in life-long learning (seeking further education, self learning, membership in professional societies).	27	12	6	2	1	0	4.3	4.1
		56%	25%	13%	4%	2%	0%	86%	82%
11	Be aware of contemporary issues(e.g. economics of engineering, environmental issues, etc�)	22	15	3	5	3	0	4	3.9
		46%	31%	6%	10%	6%	0%	80%	78%
12	Ability to use computing technology in communications.	22	12	10	2	1	1	4.1	3.6
		46%	25%	21%	4%	2%	2%	82%	72%
13	Ability to use computing technology in engineering analysis/design.	21	12	12	3	0	0	4.1	3.4
		44%	25%	25%	6%	0%	0%	82%	68%
14	Ability to use state of the art techniques, and tools in engineering practice.	22	12	10	4	0	0	4.1	3.5
		46%	25%	21%	8%	0%	0%	82%	70%
15	Apply the knowledge of probability and statistics.	20	17	4	6	0	1	4.1	3.9
		42%	35%	8%	13%	0%	2%	82%	78%
16	Knowledge of advanced mathematics, typically including differential equations, linear algebra, complex variables, and discrete mathematics.	23	13	9	3	0	0	4.2	3.8
		48%	27%	19%	6%	0%	0%	84%	76%
17	An ability to analyze, design, and implement systems containing hardware and software components.	20	15	8	5	0	0	4	3.6
		42%	31%	17%	10%	0%	0%	80%	72%

Table 2 Assessment of the Student Outcomes (1-7) – Electrical Engineering

#	Student Outcomes	Average	SI
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	4.3 85%	4.0 79%
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	4.1 82%	3.7 72%
3	an ability to communicate effectively with a range of audiences	4.2 84%	3.8 75%
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	4.2 83%	3.8 77%
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	4.4 86%	4.0 78%
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	4.2 85%	3.9 78%
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	4.3 86%	4.1 82%

Assessment of Student Outcomes (1-7) - Electrical Engineering
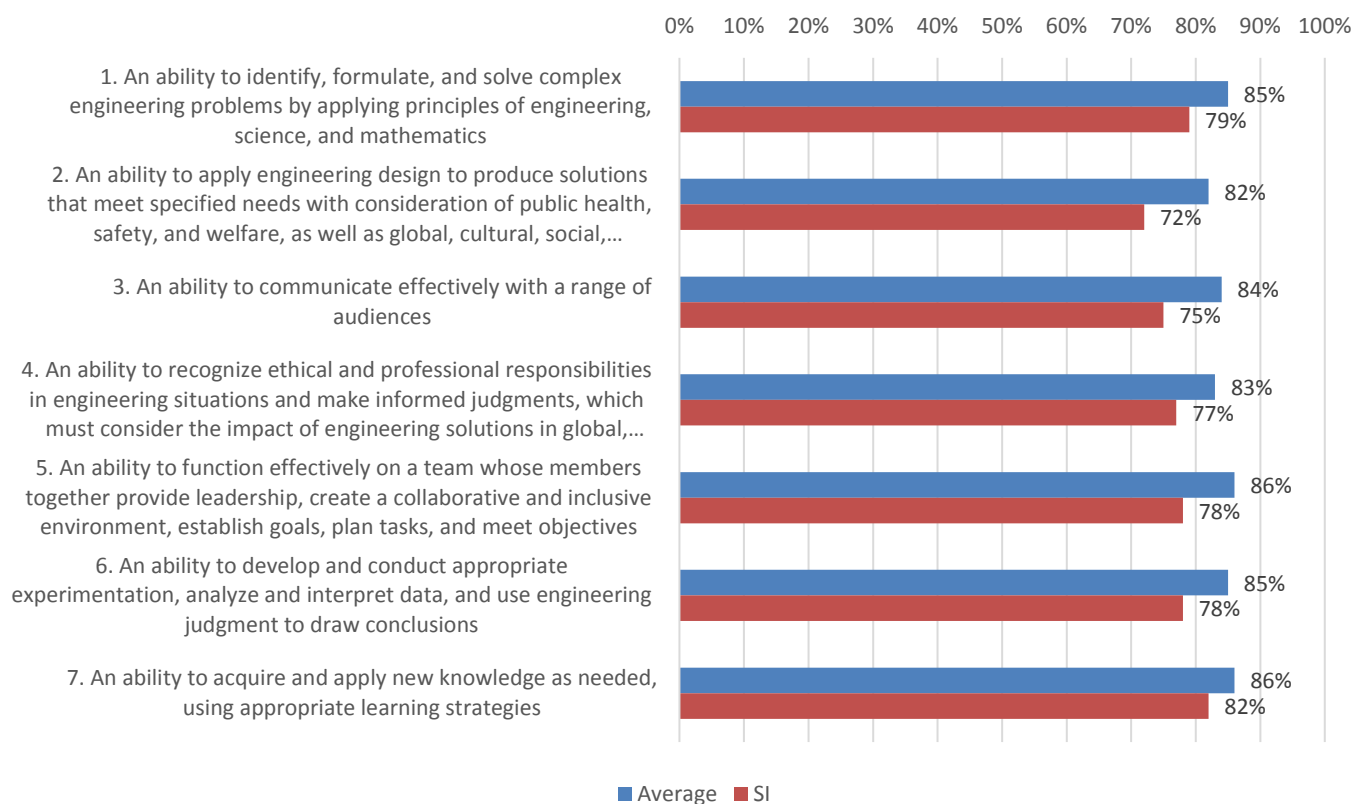
Figure 1 Assessment of student outcomes – Electrical Engineering

Table 3 Assessment of relevance of Program Educational Objectives

#	Outcome	5	4	3	2	1	0	Average	SI
1	Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction)	22	14	10	1	1	0	4.1	3.8
		46%	29%	21%	2%	2%	0%	82%	76%
2	Contribution to well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment).	23	17	7	1	0	0	4.3	4.2
		48%	35%	15%	2%	0%	0%	86%	84%
3	Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities)	21	17	7	2	0	1	4.2	4
		44%	35%	15%	4%	0%	2%	84%	80%
4	Degree advancement and continuing education. (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification)	25	12	7	2	2	0	4.2	3.9
		52%	25%	15%	4%	4%	0%	84%	78%
5	Staying current in profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies)	21	15	9	2	1	0	4.1	3.8
		44%	31%	19%	4%	2%	0%	82%	76%
6	Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities)	22	15	9	2	0	0	4.2	3.9
		46%	31%	19%	4%	0%	0%	84%	78%

Table 4 Level of satisfaction for the learning Environment at Kuwait University

#	Item	5	4	3	2	1	0	Average	SI
A. Quality of instruction and support for learning provided by the faculty members in:									
1	- Sciences (Mathematics, Physics, Chemistry)	23	9	12	2	1	1	4.1	3.4
		48%	19%	25%	4%	2%	2%	82%	68%
2	- Computers (Programming and usage of software packages)	18	13	11	3	2	1	3.9	3.3
		38%	27%	23%	6%	4%	2%	78%	66%
3	- Humanities and Social sciences	19	15	9	3	1	1	4	3.6
		40%	31%	19%	6%	2%	2%	80%	72%
4	- General Engineering	20	18	8	2	0	0	4.2	4
		42%	38%	17%	4%	0%	0%	84%	80%
5	- Engineering within major	22	15	7	2	2	0	4.1	3.9
		46%	31%	15%	4%	4%	0%	82%	78%
B. Quality of instruction and support for learning given by teaching assistants and engineers within major.		20	13	9	4	1	1	4	3.5
		42%	27%	19%	8%	2%	2%	80%	70%
C. Quality of advise by the staff with respect to:									
7	- Academic planning	21	13	7	7	0	0	4	3.5
		44%	27%	15%	15%	0%	0%	80%	70%
8	- Career planning	21	12	7	4	3	1	3.9	3.5
		44%	25%	15%	8%	6%	2%	78%	70%
D. Equity of treatment by:									
9	- Academic administrators	26	6	11	3	1	1	4.1	3.4
		54%	13%	23%	6%	2%	2%	82%	68%
10	- Faculty	23	5	14	5	1	0	3.9	2.9
		48%	10%	29%	10%	2%	0%	78%	58%
11	- Teaching assistants and engineers	26	8	11	3	0	0	4.2	3.5
		54%	17%	23%	6%	0%	0%	84%	70%
12	- Fellow students	25	10	9	4	0	0	4.2	3.6
		52%	21%	19%	8%	0%	0%	84%	72%
E. Quality of the facilities:									
13	- Classrooms	19	11	10	6	2	0	3.8	3.1
		40%	23%	21%	13%	4%	0%	76%	62%
14	- Science laboratories	22	7	11	5	3	0	3.8	3
		46%	15%	23%	10%	6%	0%	76%	60%
15	- Engineering Laboratories	19	7	12	8	2	0	3.7	2.7
		40%	15%	25%	17%	4%	0%	74%	54%
16	- Computing facilities	18	11	9	8	2	0	3.7	3
		38%	23%	19%	17%	4%	0%	74%	60%
17	- Libraries	21	6	16	5	0	0	3.9	2.8
		44%	13%	33%	10%	0%	0%	78%	56%

Table 5 Assessment of the Support Services at Kuwait University

#	Item	5	4	3	2	1	0	Average	SI	3	2	1
A. Academic Services:												
1	Admissions/Registrar	19	12	3	6	7	1	3.6	3.3	4	7	2
		40%	25%	6%	13%	15%	2%	72%	66%	8%	15%	4%
2	Training office	20	15	6	2	2	3	4.1	3.9	3	5	4
		42%	31%	13%	4%	4%	6%	82%	78%	6%	10%	8%
3	Libraries	22	17	6	2	1	0	4.2	4.1	3	7	3
		46%	35%	13%	4%	2%	0%	84%	82%	6%	15%	6%
4	Bookstores	23	15	5	3	2	0	4.1	4	2	8	2
		48%	31%	10%	6%	4%	0%	82%	80%	4%	17%	4%
B. Administrative Offices:												
5	Students� affairs office in your department	19	21	3	1	3	1	4.1	4.3	2	8	1
		40%	44%	6%	2%	6%	2%	82%	86%	4%	17%	2%
6	Administrative offices in the college	18	19	7	2	1	1	4.1	3.9	3	6	1
		38%	40%	15%	4%	2%	2%	82%	78%	6%	13%	2%
C. Other Services:												
7	Health services	19	13	5	2	5	4	3.9	3.6	2	4	4
		40%	27%	10%	4%	10%	8%	78%	72%	4%	8%	8%
8	Food services	19	9	7	8	5	0	3.6	2.9	6	4	0
		40%	19%	15%	17%	10%	0%	72%	58%	13%	8%	0%
9	Parking	15	2	7	4	17	3	2.9	1.9	4	5	1
		31%	4%	15%	8%	35%	6%	58%	38%	8%	10%	2%
10	Recreation and athletics	15	6	8	5	11	3	3.2	2.3	1	3	6
		31%	13%	17%	10%	23%	6%	64%	46%	2%	6%	13%
11	Others	15	7	3	1	1	21	4.3	4.1	1	2	4
		31%	15%	6%	2%	2%	44%	86%	82%	2%	4%	8%

* Open-ended questions (unedited student comments)

A. Please list some very important skills that you think you had learned in the engineering program.

-Be a good leader -Improve in social skills

Critical thinking

More than a paragraph

work under pressure study with others study fast

Problem Solving, Leadership

improved my math skills.

teamwork

make account in social media to all students know about you

Leadership/ability to think faster and smarter /gropwork

Writing reports and presentations

Patience

team work

Work in groups, time management, solve problems

time management , presentation skills

time management , presentation skills

Electrical engineering - Time management

- group work - engineering in general (math) - engineering in major

I learned to be a very supportive leader. I learned to manage the cost of a project and to deal with the budgets. I learned to overcome my fear of doing an oral presentation infront of my colleagues.

professionalism, group work, ethics.

Teamwork

Team work

programing, teamwork, writing reports, making presentations.

i have learned how to think more reality's analytically and strategic in my life and how to deal with any problem

function effectively in teams

English speaking, team working

How to make reports and presentation well. How to solve problems. Dealing with teams.

Improve creativity, team work and thinking out of the box

design a system,cooding

design a system and improved my team's work

Just how to solve equations

Simulation

Matlab, tinkercad, autocad,edsim

Patience, positive

B. Please list some very important or useful skills that you did not get the chance (or are not available) to learn while taking engineering courses at Kuwait University.

I wish it was allowed to take the senior design with different departments Such as (I need a mechanical and a programmer hand in my

PCB board design, VLSI, more hands on skills

Programming skills and coping with high tech and modern aspects especially programming that is the leading element in every specialization. Not participating with scientific programs and researches because those are not encouraged by the college. No internships to learn how to deal with people or learn about the work environment which is very important for experience.

linking the studies with the actual life systems.

No thing

there is no social activities or sport activities for such skills.

Writing codes in matlab

Talking English

more training course

more training course

Mental health

Real life work

I did not get the chance to know how to search for a certain book in the library.

Social

Practical work

to think critically.

machine learning, plc controller, AutoCAD for electrical, renewable energy

meditation

English language

Preparing us for applying our studies in real life institutions

..

...

Working in real life

Coding

.

How to handle real life tasks and day to day problems

C. Please write down any comments or suggestions that you think will improve the engineering programs at Kuwait University (use additional sheets if necessary):

Improving the design skills and classes (more classes like 297), and more emphasis on programming.

Encourage students to learn about their program to understand not only to pass and hold the degree. Update the books and the labs to cope up with all new technologies that are very advanced on what we learn. Provide more advising about how should students who want to continue with a graduate program and also who wants to just work to be familiar with work environment. Help students participate with papers and researches which is very important to me myself and many other student I know who are lost with this thing. Please monitor how teaching is being held between the advisor and the student and prevent the private tuition sections which destroy the learning outcome and just make the student pass without understanding. thank you

link the material with the acutal devices.

I hope that you will provide entertainment and educational programs for students

Looking forward to see good activities for students .

Everything is good

Some doctors dont know how to teach so they should change

Using the latest devices in the laboratory, and the newest books, promote practice aspects.

more course for improve the English langue

more course for improve the English langue

Nothing thanks

..

I think that they should give more importance to people with chronic diseases by giving them a card that allows them to leave the class whenever they feel tired and inform the doctors about their situation

More tutorials

Teach students to think critically instead of memorizing problems.

join every subject to real life problem and what is the new systems for future

Decrease the hard mathematical equations , and concentration On the understanding side.

Give chance o improve English language for those who graduated from government schools

More practical subjects

…

…

Thanks

.

Give a task that will help the student in engaging in daily life problem and how to solve them in terms of every student department

Industrial and Management Systems Engineering Program Exit Survey Results

For the Academic year 2019-2020

March 2021

Survey Statistics:

NO data Available.

Mechanical Engineering Program
Exit Survey Results

For the Academic year 2019-2020

March 2021

Survey Statistics:

* **Major: Mechanical Engineering**

* **Number of Students participated in the survey:**

MECHANICAL	23	Male	5	22%
		Female	17	74%

Survey Results:

* **Students' Future plans:**

No. of students who:

Plans	N	%
Intend to work in the government sector.	18	78%
Intend to work in the private sector.	16	70%
Intend to go to graduate school.	8	35%
Intend to start my own business	9	39%
Intend to do other things	1	4%

* **Table 1** shows students' feedback for the first group of question in the exit survey which is about the students' assessment for the outcome attributes acquired at Kuwait University. The table also shows the average score and the satisfaction index out of 5 and as percentage for each item. The results are presented in **Table 2** and the associate figure according to the new student outcomes as outlined previously in the college section.

***Table 3** shows students' feedback for the second group of questions about how important is the educational objectives to their careers.

* **Table 4** shows students' feedback for the third group of question about their level of satisfaction for the learning Environment at Kuwait University.

* **Table 5** shows students' feedback for the fourth group about the students' assessment of the Support Services at Kuwait University. The table also shows the amount of interaction they had with each item.

Table1 Assessment of the outcome attributes acquired at Kuwait University

#	Outcome	5	4	3	2	1	0	Average	SI
1	Apply knowledge of mathematics, physics and engineering.	12	9	1	0	0	1	4.5	**4.8**
		52%	39%	4%	0%	0%	4%	90%	**96%**
2	Design and conduct experiments, as well as to analyze and interpret data.	9	10	2	0	1	1	4.2	**4.3**
		39%	43%	9%	0%	4%	4%	84%	**86%**
3	Design a system, component, or process to meet desired needs.	8	9	4	1	0	1	4.1	**3.9**
		35%	39%	17%	4%	0%	4%	82%	**78%**
4	Function effectively in teams.	16	4	1	1	0	1	4.6	**4.5**
		70%	17%	4%	4%	0%	4%	92%	**90%**
5	Identify, formulate, and solve engineering problems.	16	4	2	0	0	1	4.6	**4.5**
		70%	17%	9%	0%	0%	4%	92%	**90%**
6	Understand professional and ethical responsibilities.(e.g. safety, professional ethics, code of conduct).	13	6	2	1	0	1	4.4	**4.3**
		57%	26%	9%	4%	0%	4%	88%	**86%**
7	Communicate effectively (written reports).	15	5	2	0	0	1	4.6	**4.5**
		65%	22%	9%	0%	0%	4%	92%	**90%**
8	Communicate effectively (oral presentations).	15	4	2	0	1	1	4.5	**4.3**
		65%	17%	9%	0%	4%	4%	90%	**86%**
9	Understand and appreciate the impact of engineering in the societal and global contexts.	12	6	2	1	1	1	4.2	**4.1**
		52%	26%	9%	4%	4%	4%	84%	**82%**
10	Be aware of the need for, and improved my ability to engage in life-long learning (seeking further education, self learning, membership in professional societies).	10	7	4	1	0	1	4.2	**3.9**
		43%	30%	17%	4%	0%	4%	84%	**78%**
11	Be aware of contemporary issues(e.g. economics of engineering, environmental issues, etc�)	8	8	5	1	0	1	4	**3.6**
		35%	35%	22%	4%	0%	4%	80%	**72%**
12	Ability to use computing technology in communications.	11	7	4	0	0	1	4.3	**4.1**
		48%	30%	17%	0%	0%	4%	86%	**82%**
13	Ability to use computing technology in engineering analysis/design.	12	3	5	2	0	1	4.1	**3.4**
		52%	13%	22%	9%	0%	4%	82%	**68%**
14	Ability to use state of the art techniques, and tools in engineering practice.	11	2	7	0	1	2	4	**3.1**
		48%	9%	30%	0%	4%	9%	80%	**62%**
15	Apply the knowledge of probability and statistics.	9	5	6	2	0	1	4	**3.2**
		39%	22%	26%	9%	0%	4%	80%	**64%**
16	An ability to assume responsibility at an entry level in the areas of Mechanical Engineering that are important to Kuwait and the region, such as the design, analysis and maintenance of machinery, refrigeration, air-conditioning and desalination systems.	12	4	3	2	0	2	4.2	**3.8**
		52%	17%	13%	9%	0%	9%	84%	**76%**

Table 2 Assessment of the Student Outcomes (1-7) – Mechanical Engineering

#	Student Outcomes	Average	SI
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	4.2 84%	4.0 81%
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	4.1 82%	3.7 77%
3	an ability to communicate effectively with a range of audiences	4.6 91%	4.4 88%
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	4.2 84%	4.0 80%
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	4.4 92%	4.3 90%
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	4.2 84%	4.1 82%
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	4.2 84%	3.9 78%
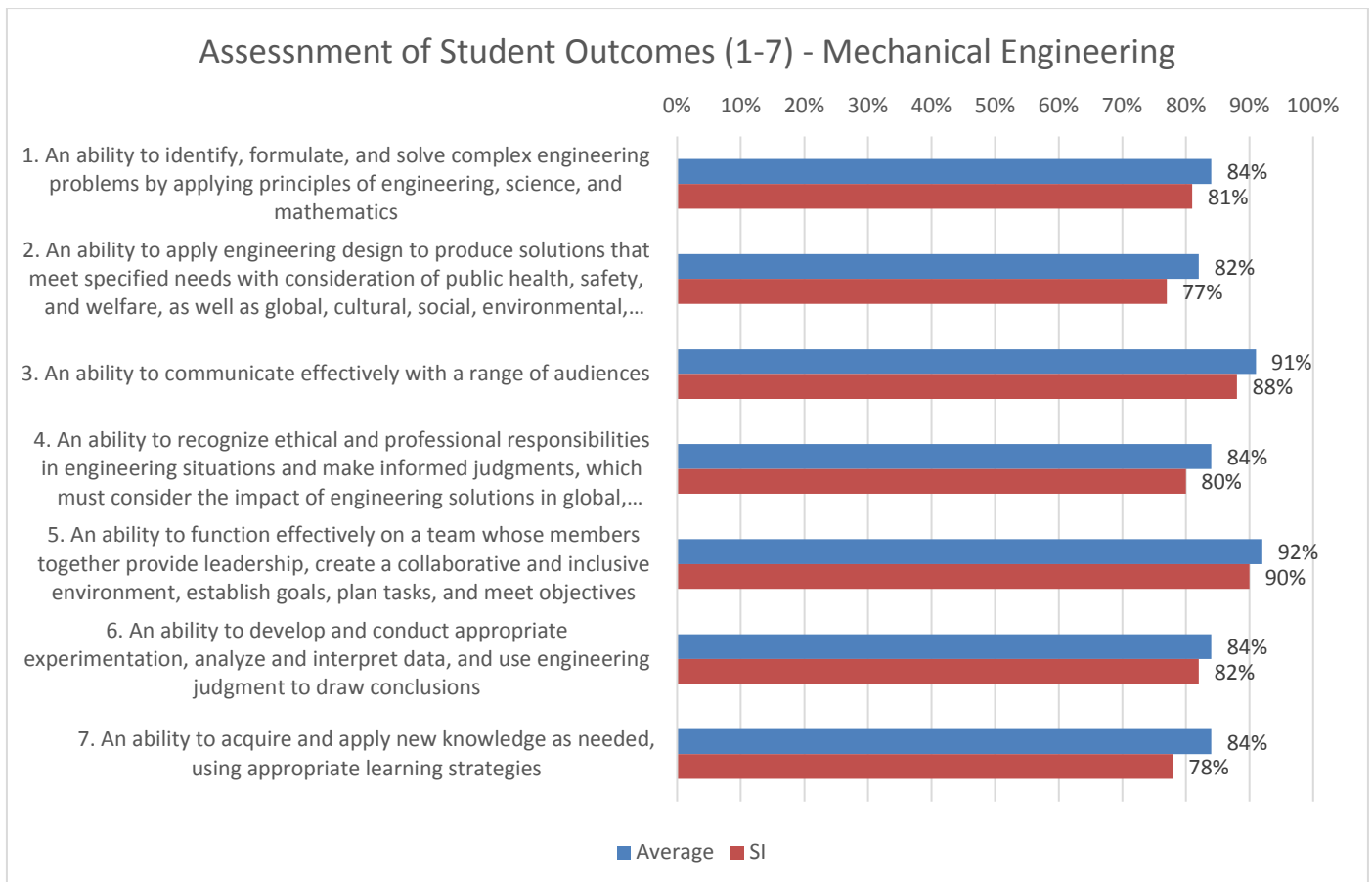
Figure 1 Assessment of student outcomes – Mechanical Engineering

Table 3 Assessment of relevance of Program Educational Objectives

#	Outcome	5	4	3	2	1	0	Average	SI
1	Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction)	13	6	3	0	0	1	4.5	**4.3**
		57%	26%	13%	0%	0%	4%	90%	**86%**
2	Contribution to well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment).	10	7	2	2	1	1	4	**3.9**
		43%	30%	9%	9%	4%	4%	80%	**78%**
3	Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities)	11	3	5	1	0	3	4.2	**3.5**
		48%	13%	22%	4%	0%	13%	84%	**70%**
4	Degree advancement and continuing education. (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification)	10	6	3	1	1	2	4.1	**3.8**
		43%	26%	13%	4%	4%	9%	82%	**76%**
5	Staying current in profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies)	7	8	4	3	0	1	3.9	**3.4**
		30%	35%	17%	13%	0%	4%	78%	**68%**
6	Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities)	9	6	4	2	0	2	4	**3.6**
		39%	26%	17%	9%	0%	9%	80%	**72%**

Table 4 Level of satisfaction for the learning Environment at Kuwait University

#	Item	5	4	3	2	1	0	Average	SI
A. Quality of instruction and support for learning provided by the faculty members in:								
1	- Sciences (Mathematics, Physics, Chemistry)	8	3	6	4	1	1	3.6	2.5
		35%	13%	26%	17%	4%	4%	72%	50%
2	- Computers (Programming and usage of software packages)	3	7	6	5	1	1	3.3	2.3
		13%	30%	26%	22%	4%	4%	66%	46%
3	- Humanities and Social sciences	3	5	6	6	0	3	3.3	2
		13%	22%	26%	26%	0%	13%	66%	40%
4	- General Engineering	6	8	7	1	0	1	3.9	3.2
		26%	35%	30%	4%	0%	4%	78%	64%
5	- Engineering within major	10	6	3	2	0	2	4.1	3.8
		43%	26%	13%	9%	0%	9%	82%	76%
	B. Quality of instruction and support for learning given by teaching assistants and engineers within major.	5	7	5	3	1	2	3.6	2.9
		22%	30%	22%	13%	4%	9%	72%	58%
C. Quality of advise by the staff with respect to:								
7	- Academic planning	7	7	5	3	0	1	3.8	3.2
		30%	30%	22%	13%	0%	4%	76%	64%
8	- Career planning	6	3	7	3	1	3	3.5	2.3
		26%	13%	30%	13%	4%	13%	70%	46%
D. Equity of treatment by:								
9	- Academic administrators	5	2	11	0	1	4	3.5	1.8
		22%	9%	48%	0%	4%	17%	70%	36%
10	- Faculty	7	2	7	4	1	2	3.5	2.1
		30%	9%	30%	17%	4%	9%	70%	42%
11	- Teaching assistants and engineers	8	1	6	7	0	1	3.5	2
		35%	4%	26%	30%	0%	4%	70%	40%
12	- Fellow students	4	5	9	2	1	2	3.4	2.1
		17%	22%	39%	9%	4%	9%	68%	42%
E. Quality of the facilities:								
13	- Classrooms	5	1	7	4	4	2	3	1.4
		22%	4%	30%	17%	17%	9%	60%	28%
14	- Science laboratories	6	1	3	7	5	1	2.8	1.6
		26%	4%	13%	30%	22%	4%	56%	32%
15	- Engineering Laboratories	6	3	3	5	5	1	3	2
		26%	13%	13%	22%	22%	4%	60%	40%
16	- Computing facilities	4	3	6	5	4	1	2.9	1.6
		17%	13%	26%	22%	17%	4%	58%	32%
17	- Libraries	6	4	7	3	2	1	3.4	2.3
		26%	17%	30%	13%	9%	4%	68%	46%

Table 5 Assessment of the Support Services at Kuwait University

#	Item	5	4	3	2	1	0	Average	SI	3	2	1
A. Academic Services:												
1	Admissions/Registrar	5	3	3	4	4	4	3.1	**2.1**	2	4	4
		22%	13%	13%	17%	17%	17%	62%	**42%**	9%	17%	17%
2	Training office	5	4	4	3	1	6	3.5	**2.6**	1	4	5
		22%	17%	17%	13%	4%	26%	70%	**52%**	4%	17%	22%
3	Libraries	6	9	4	1	0	3	4	**3.8**	2	6	2
		26%	39%	17%	4%	0%	13%	80%	**76%**	9%	26%	9%
4	Bookstores	6	5	4	4	0	4	3.7	**2.9**	4	3	3
		26%	22%	17%	17%	0%	17%	74%	**58%**	17%	13%	13%
B. Administrative Offices:												
5	Students� affairs office in your department	9	7	3	0	0	4	4.3	**4.2**	2	4	3
		39%	30%	13%	0%	0%	17%	86%	**84%**	9%	17%	13%
6	Administrative offices in the college	7	8	4	0	0	4	4.2	**3.9**	1	6	2
		30%	35%	17%	0%	0%	17%	84%	**78%**	4%	26%	9%
C. Other Services:												
7	Health services	7	3	3	4	1	5	3.6	**2.8**	1	4	4
		30%	13%	13%	17%	4%	22%	72%	**56%**	4%	17%	17%
8	Food services	6	3	6	3	3	2	3.3	**2.1**	4	4	1
		26%	13%	26%	13%	13%	9%	66%	**42%**	17%	17%	4%
9	Parking	3	0	2	2	15	1	1.8	**0.7**	7	1	1
		13%	0%	9%	9%	65%	4%	36%	**14%**	30%	4%	4%
10	Recreation and athletics	6	0	2	2	7	6	2.8	**1.8**	1	3	7
		26%	0%	9%	9%	30%	26%	56%	**36%**	4%	13%	30%
11	Others	4	1	0	0	0	18	4.8	**5**	0	2	2
		17%	4%	0%	0%	0%	78%	96%	**100%**	0%	9%	9%

* Open-ended questions (unedited student comments)

A. Please list some very important skills that you think you had learned in the engineering program.

Responsibility/ time management/ multi-tasking

Writing reports-oral presentation

I learned 1- how to use MATLAB, EES, ANSYS and AUTOCAD software. 2- how to write professional reports 3- how to present professional presentations.

Programming by software , written reports ,membership

I learned how to know the problem from the design before seeing the results

computer programs

Autocad,mathlap,powerpoint, excel ,EES

microsoft program-consmal-autocad

team work

Analytical skills

Problem solving skills, computer skills, social skills, time and stress management

Programming and designing

patience ,accuracy when searching , daring and memorization skill

Research, Using different methods of problems solving , self education

Programming Time management Analyzing data

Self-reliance and the ease of working with any group team

Critical thinking, leadership, engineering sense

Id have to mention the ability to work and function under high pressure and stress.

Group work - work hard

Team work, time management, Patience

B. Please list some very important or useful skills that you did not get the chance (or are not available) to learn while taking engineering courses at Kuwait University.

NA

Programming

I didn't get the chance to register in training courses or internships to get more experience about mechanical engineering major

Training course

Field training.

Computer applications was not used that often

matlab programmes

design logo, photograph

matlab-Ess

Deep computational skills that are important in the new generation

Field training, lab-based learning

technology

Programming

Advanced english courses

There were no training courses for mechanical engineering

Learning using a laboratory

The workshop course is weak and could be improved, i can solve a complicated engineering problem but probably not know how to drill a hole in a wall yet or build something i get from ikea.

Everything was good

C. Please write down any comments or suggestions that you think will improve the engineering programs at Kuwait University (use additional sheets if necessary):

NA

provide internships and training courses for all majors.

Adding a training course

Improve the registration system and teaching technics such as more labs or field trips that help to enhance scientific information.

They should add more computer applications and teach them will and give them some time.

improvement labs

Improving databases and changing computers

j

holding meetings with students to find out the states need for the major desired by the student

I recommend that they go more to the practical side in all departments of the college

thank you for your efforts

The register system must be adjust

Evaluate instructors strictly every course, take the students feedback about their experience with the instructors in consideration

Thanks

Petroleum Engineering Program
Exit Survey Results

For the Academic year 2019-2020

March 2021

Survey Statistics:

* Major: Petroleum Engineering

* Number of Students participated in the survey:

PETROLEUM	35	Male	5	14%
		Female	30	86%

Survey Results:

* Students' Future plans:

No. of students who:

Plans	N	%
Intend to work in the government sector.	28	80%
Intend to work in the private sector.	21	60%
Intend to go to graduate school.	10	29%
Intend to start my own business	14	40%
Intend to do other things	3	9%
Koc		

* Table 1 shows students' feedback for the first group of questions in the exit survey which is about the students' assessment for the outcome attributes acquired at Kuwait University. The table also shows the average score and the satisfaction index out of 5 and as percentage for each item. The results are presented in **Table 2** and the associate figure according to the new student outcomes as outlined previously in the college section.

*Table 3 shows students' feedback for the second group of questions about how important is the educational objectives to their careers.

* Table 4 shows students' feedback for the third group of question about their level of satisfaction for the learning Environment at Kuwait University.

* Table 5 shows students' feedback for the fourth group about the students' assessment of the Support Services at Kuwait University. The table also shows the amount of interaction they had with each item.

Table1 Assessment of the outcome attributes acquired at Kuwait University

#	Outcome	5	4	3	2	1	0	Average	SI
1	Apply knowledge of mathematics, physics and engineering.	18	11	4	2	0	0	4.3	4.1
		51%	31%	11%	6%	0%	0%	86%	82%
2	Design and conduct experiments, as well as to analyze and interpret data.	18	9	6	2	0	0	4.2	3.9
		51%	26%	17%	6%	0%	0%	84%	78%
3	Design a system, component, or process to meet desired needs.	19	8	7	1	0	0	4.3	3.9
		54%	23%	20%	3%	0%	0%	86%	78%
4	Function effectively in teams.	23	10	1	1	0	0	4.6	4.7
		66%	29%	3%	3%	0%	0%	92%	94%
5	Identify, formulate, and solve engineering problems.	19	12	2	2	0	0	4.4	4.4
		54%	34%	6%	6%	0%	0%	88%	88%
6	Understand professional and ethical responsibilities.(e.g. safety, professional ethics, code of conduct).	24	8	2	1	0	0	4.6	4.6
		69%	23%	6%	3%	0%	0%	92%	92%
7	Communicate effectively (written reports).	22	11	2	0	0	0	4.6	4.7
		63%	31%	6%	0%	0%	0%	92%	94%
8	Communicate effectively (oral presentations).	19	10	6	0	0	0	4.4	4.1
		54%	29%	17%	0%	0%	0%	88%	82%
9	Understand and appreciate the impact of engineering in the societal and global contexts.	22	8	4	1	0	0	4.5	4.3
		63%	23%	11%	3%	0%	0%	90%	86%
10	Be aware of the need for, and improved my ability to engage in life-long learning (seeking further education, self learning, membership in professional societies).	18	12	3	1	0	1	4.4	4.4
		51%	34%	9%	3%	0%	3%	88%	88%
11	Be aware of contemporary issues(e.g. economics of engineering, environmental issues, etc�)	13	14	6	1	0	1	4.1	4
		37%	40%	17%	3%	0%	3%	82%	80%
12	Ability to use computing technology in communications.	17	12	3	2	0	1	4.3	4.3
		49%	34%	9%	6%	0%	3%	86%	86%
13	Ability to use computing technology in engineering analysis/design.	20	7	4	2	1	1	4.3	4
		57%	20%	11%	6%	3%	3%	86%	80%
14	Ability to use state of the art techniques, and tools in engineering practice.	15	12	4	3	0	1	4.1	4
		43%	34%	11%	9%	0%	3%	82%	80%
15	Apply the knowledge of probability and statistics.	12	7	13	1	1	1	3.8	2.8
		34%	20%	37%	3%	3%	3%	76%	56%

Table 2 Assessment of the Student Outcomes (1-7) – Petroleum Engineering

#	Student Outcomes	Average	SI
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	4.2 83%	3.8 75%
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	4.1 86%	3.9 79%
3	an ability to communicate effectively with a range of audiences	4.5 90%	4.4 88%
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	4.3 88%	4.2 86%
5	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	4.4 92%	4.3 94%
6	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	4.2 84%	4.0 79%
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	4.4 88%	4.4 88%
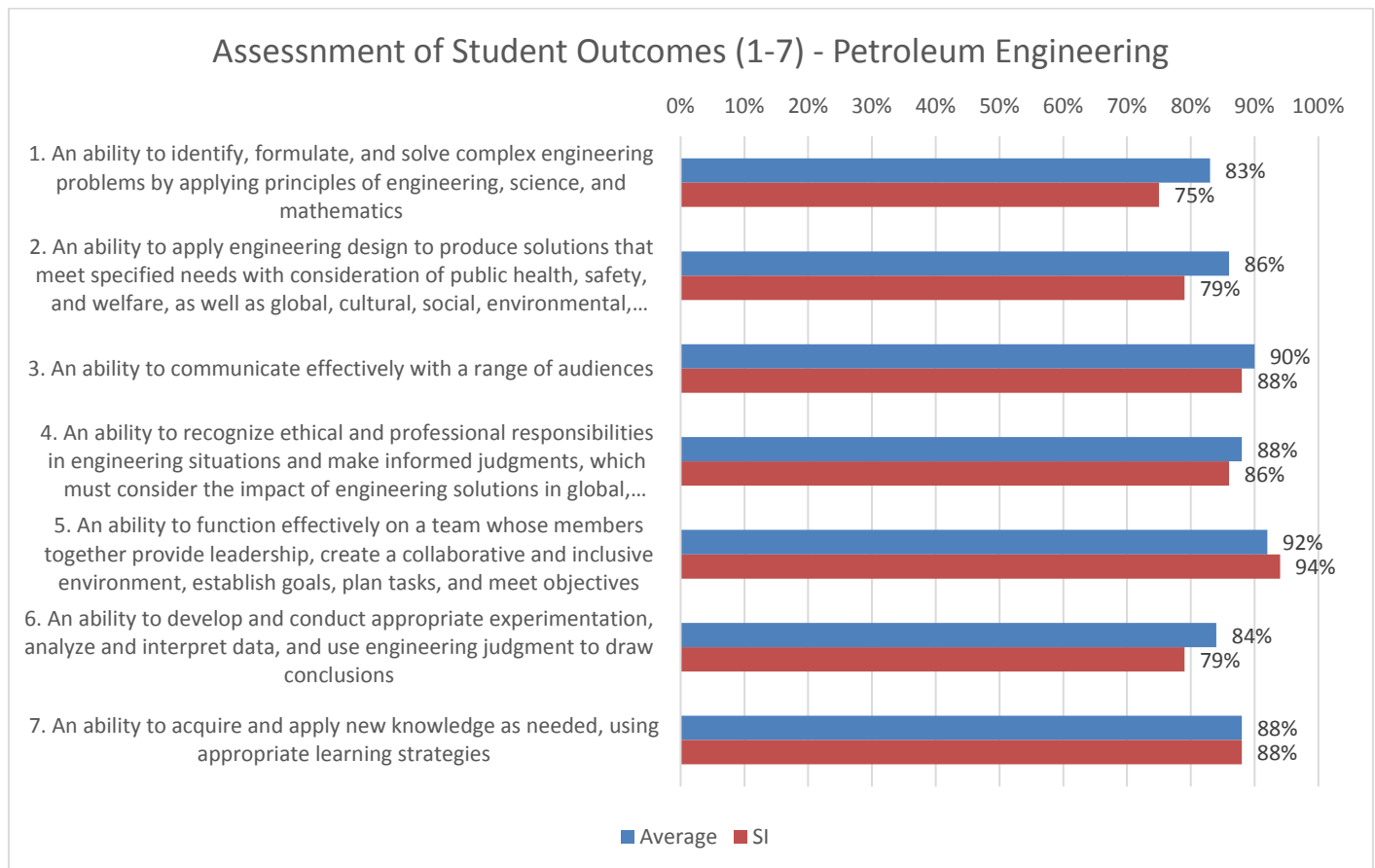
Figure 1 Assessment of student outcomes – Petroleum Engineering

Table 3 Assessment of relevance of Program Educational Objectives

#	Outcome	5	4	3	2	1	0	Average	SI
1	Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction)	25	6	2	1	0	1	4.6	**4.6**
		71%	17%	6%	3%	0%	3%	92%	**92%**
2	Contribution to well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment).	20	11	2	1	0	1	4.5	**4.6**
		57%	31%	6%	3%	0%	3%	90%	**92%**
3	Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities)	18	7	8	1	0	1	4.2	**3.7**
		51%	20%	23%	3%	0%	3%	84%	**74%**
4	Degree advancement and continuing education. (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification)	19	9	5	1	0	1	4.4	**4.1**
		54%	26%	14%	3%	0%	3%	88%	**82%**
5	Staying current in profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies)	18	11	4	1	0	1	4.4	**4.3**
		51%	31%	11%	3%	0%	3%	88%	**86%**
6	Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities)	16	11	4	2	1	1	4.1	**4**
		46%	31%	11%	6%	3%	3%	82%	**80%**

Table 4 Level of satisfaction for the learning Environment at Kuwait University

#	Item	5	4	3	2	1	0	Average	SI
A. Quality of instruction and support for learning provided by the faculty members in:									
1	- Sciences (Mathematics, Physics, Chemistry)	17	7	6	3	1	1	4.1	3.5
		49%	20%	17%	9%	3%	3%	82%	70%
2	- Computers (Programming and usage of software packages)	14	8	6	5	1	1	3.9	3.2
		40%	23%	17%	14%	3%	3%	78%	64%
3	- Humanities and Social sciences	15	5	11	3	0	1	3.9	2.9
		43%	14%	31%	9%	0%	3%	78%	58%
4	- General Engineering	14	13	6	1	0	1	4.2	4
		40%	37%	17%	3%	0%	3%	84%	80%
5	- Engineering within major	19	8	5	2	0	1	4.3	4
		54%	23%	14%	6%	0%	3%	86%	80%
B. Quality of instruction and support for learning given by teaching assistants and engineers within major.	16	11	6	0	1	1	4.2	4
		46%	31%	17%	0%	3%	3%	84%	80%
C. Quality of advise by the staff with respect to:									
7	- Academic planning	13	8	8	2	2	2	3.8	3.2
		37%	23%	23%	6%	6%	6%	76%	64%
8	- Career planning	12	8	7	4	2	2	3.7	3
		34%	23%	20%	11%	6%	6%	74%	60%
D. Equity of treatment by:									
9	- Academic administrators	15	7	9	2	1	1	4	3.2
		43%	20%	26%	6%	3%	3%	80%	64%
10	- Faculty	16	8	7	1	1	2	4.1	3.6
		46%	23%	20%	3%	3%	6%	82%	72%
11	- Teaching assistants and engineers	16	8	7	1	1	2	4.1	3.6
		46%	23%	20%	3%	3%	6%	82%	72%
12	- Fellow students	14	11	7	1	0	2	4.2	3.8
		40%	31%	20%	3%	0%	6%	84%	76%
E. Quality of the facilities:									
13	- Classrooms	16	9	6	3	0	1	4.1	3.7
		46%	26%	17%	9%	0%	3%	82%	74%
14	- Science laboratories	12	6	9	5	1	2	3.7	2.7
		34%	17%	26%	14%	3%	6%	74%	54%
15	- Engineering Laboratories	10	9	7	5	2	2	3.6	2.9
		29%	26%	20%	14%	6%	6%	72%	58%
16	- Computing facilities	12	8	7	7	0	1	3.7	2.9
		34%	23%	20%	20%	0%	3%	74%	58%
17	- Libraries	16	9	6	1	1	2	4.2	3.8
		46%	26%	17%	3%	3%	6%	84%	76%

Table 5 Assessment of the Support Services at Kuwait University

#	Item	5	4	3	2	1	0	Average	SI	3	2	1
A. Academic Services:												
1	Admissions/Registrar	13	9	6	2	3	2	3.8	**3.3**	4	3	3
		37%	26%	17%	6%	9%	6%	76%	**66%**	11%	9%	9%
2	Training office	17	9	4	0	2	3	4.2	**4.1**	3	2	4
		49%	26%	11%	0%	6%	9%	84%	**82%**	9%	6%	11%
3	Libraries	14	14	5	1	1	0	4.1	**4**	2	6	1
		40%	40%	14%	3%	3%	0%	82%	**80%**	6%	17%	3%
4	Bookstores	17	11	4	2	1	0	4.2	**4**	3	5	1
		49%	31%	11%	6%	3%	0%	84%	**80%**	9%	14%	3%
B. Administrative Offices:												
5	Students� affairs office in your department	18	10	4	0	3	0	4.1	**4**	4	3	2
		51%	29%	11%	0%	9%	0%	82%	**80%**	11%	9%	6%
6	Administrative offices in the college	14	13	4	2	1	1	4.1	**4**	1	7	1
		40%	37%	11%	6%	3%	3%	82%	**80%**	3%	20%	3%
C. Other Services:												
7	Health services	15	9	7	1	1	2	4.1	**3.6**	1	5	3
		43%	26%	20%	3%	3%	6%	82%	**72%**	3%	14%	9%
8	Food services	15	8	9	1	1	1	4	**3.4**	4	4	1
		43%	23%	26%	3%	3%	3%	80%	**68%**	11%	11%	3%
9	Parking	11	3	6	6	8	1	3.1	**2.1**	5	3	2
		31%	9%	17%	17%	23%	3%	62%	**42%**	14%	9%	6%
10	Recreation and athletics	12	6	3	4	4	6	3.6	**3.1**	1	3	5
		34%	17%	9%	11%	11%	17%	72%	**62%**	3%	9%	14%
11	Others	11	2	4	0	1	17	4.2	**3.6**	1	2	2
		31%	6%	11%	0%	3%	49%	84%	**72%**	3%	6%	6%

* Open-ended questions (unedited student comments)

A. Please list some very important skills that you think you had learned in the engineering program.

Coding, simulator, design and network

Design

Many things

Coding / Design / Network Simulation / Economics

Learning how to operate different softwares.

Analytical thinking, learn the concept behind designing a project and the important factors that involves designing in general, the use of reservoir simulators and being able to combine both economical aspects with the engineering aspects of project and being able to evaluate projects based on it

Communication , team work , some engineering skills

Managing the time

Accomplishing the work in a short time.

Team work / programming skills

Oral Presentation / Team work

I learned to be cooperative with my team members and to think out of the box also I learned to finish all my work early and to work under pressure.

problem solving Oral/written communication Teamwork Time Management

Patience

Team cooperation - better communication

Discipline, hard-work, patience, critical thinking

Analytical thinking, integrated design, reservoir simulation & presentation skills.

Work under pressure

I have many skills i got it from studying in Kuwait university such as mange time and make schedule for work of materials and work with teams cooperation and many skills

Numrical coding by MATLAB program/ CMG software/ PIPESIM soft were

Teamwork

Work under pressure

Team work , learning different programs and softwares also doing presentations with team members infront of multiple doctors and prof.

Excel program , pipesim, presentations , writing reports

Pipsem, escal, word, otcad

Learning new software

Communication Computer technology in communicate Computer technology in engineering analysis Leadership

Contributions Work hard Time respect Team work

engineering skills and ethics

Matlab, Excel skills

Engineering skills generally, skills related to my major, presentation , report design

B. Please list some very important or useful skills that you did not get the chance (or are not available) to learn while taking engineering courses at Kuwait University.

N/A

Learning different languages other than English and french

Feild training due to coronavirus. Work ethic course.

Time management

Athletic skills

To learn different language

advanced computer skills

Time management - leading

Field training, practical courses in general.

There is no skill not available, all skills we are learned

I learn all skills and thanks for all doctors and engineers

…

The right way to study.

Robotics, speaking English very well

sports and creativity / arts

new software and new Technology learning, social skills , social communication skills , Field skills and similarity related to any engineering major hand working skills also related to any major and learn what is real work other than just studying

C. Please write down any comments or suggestions that you think will improve the engineering programs at Kuwait University (use additional sheets if necessary):

Thanks

Thanks

N/A

Tutorials on every programs even if its not important for our subject but its important as we are petroleum enigneers.

Adding more majors

Generally the lack of practical courses in Kuwait university, Involving team work, presentations and any interactive activities Students need to be more interactive and be able to communicate with one another to be able to share their knowledge and understanding of the coursework and I think this is the way!

More Social engineering events

Promote the teamwork among students and create an atmosphere for creativity

No opinions thank you

Involve the student and have faith in them and support them

Appreciate the hard work of the students and never give a HW or anything a grade of 0 Assuming that the student is a cheater because of a mistake in the hw before communicate with the student and check what is the reason behind that mistake

Focus on the practical part of studying by improving the laboratories

I think we as students need to be able to communicate and share our knowledge and understanding of the courses with one another and this may be done through incorporating more practical courses to enhance the understanding of the education enquiry. suggestions: Reservoir/production simulation tools should be more incorporated (preferably) before the theoretical courses. why not give the students time to make sense out of things? before providing them with the answer?

Keep the language at the first as preliminary

Time limits for the exams for questions and improve that i can return to any questions i want edits any thing and thank you

Education is not about quantity

Specializations should be more diverse and complement the vision of Kuwait 2035

Too much quizes ,hw and midterms will kill the students. Grading scale is baaaaaaaad !!!!!

The best university

focus more on the students, listen to their needs, focus on their hobbies and sports, let student be creative let them do research and studies, thank you.

Improve the social relationship through the whole university and focus more to teach students working fields skills other than just engineering information

APPENDIX C:
CAC Meeting Minutes

College of Engineering and Petroleum
Office of Academic Assessment
MOM No.1 2020/2021

CAC No.1 2020/2021		
20.01.2021	12:30 PM	MS Teams
Meeting Chair	Dr. Muhammad Tariq Chaudhary	
Type of Committee	CAC	
Note takers	Ms. Rincy George & Eng. Freya Saldanha	
Attendees	Dr. Osamah Al Omair, Dr. Raed Bourisli, Prof. Mousa Abu-Arabi, Prof. Humayun Kabir, Dr. Anastasios Dimitriou, Prof. Nabil Khachab, Prof. Ali Allahverdi, Dr. Suhailah Al-Mutawa, Dr. Mohammad Aldousari, Eng. Maali Al-Yousufi, Eng. Zainab Akbar, Eng. Freya Saldanha, Ms. Rincy George	
Absent with excuse	-	

The meeting started at 12:30 pm. The Dean, Dr. Osamah, welcomed the attendees to the first CAC meeting of AY 2020-21.

Before addressing the items on the agenda, Dr. Tariq congratulated all members of CAC for hosting a successful ABET visit in Fall 2019 and securing accreditation for the programs from 2020 to 2026. He told the attendees that the next target is ABET visit in 2025 and we shall start preparing for it now. In order to achieve this objective, he clarified the roles of Office of Academic Assessment (OAA) and the Departments as follows:

- OAA role is advising, reminding and assisting in data collection (student exit survey, alumni survey, employer survey), facilitating with criteria 1 (enrolment, graduation data, common aspects of student advising), 5 (related to common courses), 7 (common facilities, safety) and 8.
- Departments (UPC[1]+AC[2]+TAGs[3] as applicable) are responsible for preparing and implementing the curricular requirements, outcome assessment activities and criteria 1 (dept. student advising), 2, 3, 4, 5, 6 and 7 (labs) plus Program criteria, liaison with industry & student advisory boards.

[1]UPC = Undergraduate Program Committee, [2]AC = Assessment Committee, [3]TAG=Teaching Area Group

Afterwards, items in the agenda were addressed as described below.

1. Student Exit Survey – online learning addition	
Discussion	1) Dr. Souhaila and Prof. Nabil suggested reducing the number of questions in this part of the exit survey from the proposed 10 to about 4-5.
	2) Dr. Souhaila said the survey questions are to be focus around three main categories:

1

	i. Opinion of online assessment (tools, quizzes, etc.) ii. Group work (labs, projects, capstones etc.) iii. Overall online class lecture experience
Conclusion	It was concluded that it is important to add this part in the student exit survey. However, the number of questions are to be reduced. The modified version of the survey questions will be circulated to the CAC members for review and approval by email.

Action Items	Person Responsible	Deadline
Reduce the number of questions	Dr. Tariq	31 Jan. 2020

2. Collection of assessment data a) ICEF		
Discussion	1) Dr. Tariq presented the data for ICEF submission for three semesters of AY 2019-20 and showed concern on the low numbers of participation rate. 2) Prof. Nabil and Prof. Mousa stated that it is very difficult to motivate the faculty members to complete the online ICEF form due to lack of interaction with faculty members during the online teaching phase.. 3) Dr. Raed suggested to look into the possibility of reducing the required numbers of assessment folders and ICEFs. He suggested to limit the number of course evaluations for each faculty member to two (2) per academic year. He also stressed on persuading the faculty members individually to complete this task. 4) Prof. Ali also shared his concerns that due to insufficient number of course evaluations, it will be very difficult to assess certain student outcomes and to prepare the annual assessment report. He suggested to have some administrative compulsion for the faculty members to furnish this data. 5) Dr. Tariq said that the departments are free to adopt the courses they would like to include in their assessment process during an academic year but they should inform OAA so that the collected data is appropriately summarized. He also suggested putting up standardize comments to help the faculty in filling out the ICEF.		
Conclusion		

Action Items	Person Responsible	Deadline
Encourage faculty participation in ICEF submission.	CAC members from each department	Ongoing

2.	**Collection of assessment data**
	b) Annual Assessment Activity report by each department

Discussion	1. Dr. Tariq thanked the CAC members from the following departments for submitting the Annual OA Reports for AY 2018-19:
	  i. Civil Engineering
	  ii. Computer Engineering
	  iii. Industrial Engineering
	  iv. Mechanical Engineering
	
	2. Dr Tariq asked the CAC members to kindly add the following summary sections in the Department annual assessment reports:
	  a) Assessment committee's concerns
	  b) Faculty concerns (From instructor comments in ICEF)
	  c) Student concerns (Gathered from Free response section of Exit survey)
	  d) Key achievements/implementation of continuous improvement (CI) measures etc. during the academic year.

Conclusions	The attendees agreed that collection of sufficient and representative assessment data is the first step in the continuous improvement process. Departments to take appropriate steps to encourage faculty participation in assessment activities.

Action Items	Person responsible	Due Date
Encourage faculty members to participate in assessment activities. Adopt a targeted assessment data collection strategy.	CAC members	Ongoing

3.	Program criteria
Discussion	1. Dr. Tariq stated the Program criteria is an important part of the EAC criteria. The program criteria items are stipulated by the lead engineering society responsible for the program and include items related to the curriculum and faculty competencies. Department UPC is responsible for ensuring that the curriculum related items are addressed in relevant required courses while AC is to coordinate collection of evidences. However, not all programs have faculty related program criteria. Program Criteria items need not to be assessed and need to be covered in the curriculum only. This is a collaborative effort between

	the department UPC and AC with UPC leading it. 2. It was suggested to include a section in the annual department assessment report on the activities related to the program criteria. 3. Dr. Souhaila said that ME is aware of it and has included the program criteria items in the curriculum. 4. Dr. Tassos said that CpE also is also aware of the program criteria requirements and have included these items in the CpE curriculum..
Conclusion	Program criteria items are important part of EAC criteria. All departments need to ensure compliance with the latest Program criteria.

Action Items	Person Responsible	Deadline
Circulation of Program Criteria for each program.	Dr. Tariq	31 Jan. 2021

4.	Revisit outcome assessment plan	
Discussion	1. Dr. Raed stated that collection of data is not for the sake of collecting but we need to collect it for a certain goal and to work around that goal will make the data collection more easier and may be less data will suffice to meet requirements and needs of continuous improvement. 2. Dr. Tariq urged the CAC members to revisit the department outcome assessment plans with the goal of how to optimize data collection for outcome assessment and curricular coverage evidence. 3. **Moving towards only digital evidence for ABET visit in 2025** It was suggested by Dr. Tariq to collect and arrange assessment evidences (i.e. student outcome assessment and curricular coverage evidences) only in the digital format for the next ABET visit in 2025. Logistics, hardware and manpower requirements are to be assessed before moving forward in this direction. Prof. Nabil and Dr. Tassos volunteered to share their experience regarding digital collection of assessment related data and documents with OAA so that a simple yet comprehensive strategy can be formulated in this regard.	
Conclusion	CAC members agreed that moving towards digital archiving of assessment related data and evidences is the best way forward especially during the online teaching phase where collection of paper-based evidences is not feasible.	

Action Items	Person Responsible	Deadline
Prof. Nabil and Dr. Tassos to share their experiences of digital assessment data	Prof. Nabil and Dr. Tassos.	6 February 2021

collection in EE and CpE department respectively.		

5.	Alumni Survey Form modification		
Discussion	OAA is in the process of updating the Alumni survey form and seeks suggestions for its improvement.		
Conclusion	It was agreed that the Alumni survey should be revisited and revised as needed. Collected suggestions will be compiled and revised form will be circulated to CAC members by email for review and approval.		
Action Items		Person Responsible	Deadline
Provide suggestion(s) for revision of Alumni survey form.		CAC members	6 February 2021

The meeting adjourned at 1:30 pm.

Dr. Osamah Alomair
Acting Vice Dean for Academic Affairs

د. أسامة علي العمير
القائم بأعمال
عميد كلية الهندسة والبترول

CAC No.2 2020/2021		
07.06.2021	12:30 PM	MS Teams
Meeting Chair	Dr. Tariq Chaudhary	
Type of Committee	CAC	
Note taker	Ms. Rincy George & Eng. Freya Saldanha	
Attendees	Dr. Osamah Alomair (VDAA), Prof. Mousa Abu-Arabi, Prof. Humayun Kabir, Prof. Anastasios Dimitriou, Prof. Nabil Khachab, Prof. Ali Allahverdi, Dr. Suhailah Al-Mutawa, Dr. Mohammad Aldousari, Dr. Raed Bourisli, Eng. Freya Saldanha, Ms. Rincy George, Soud Alrashed.	
Absent with excuse	x	

The meeting started at 12:30 pm and agenda items were taken up as follows:

1. Follow up on Program Criteria	
Discussion	Dr. Tariq got feedback from each department as follows: 1. Chemical Engineering – Prof. Mousa told that application of statistics in Chemical Engineering curriculum is being double-checked. 2. Civil Engineering – No progress. Prof. Kabir was reminded that the Civil Engineering program has the most comprehensive Program Criteria and should be addressed seriously by the Department. 3. Computer Engineering – On query about application of probability in CpE courses, Prof. Tassos assured that it is properly covered. 4. Electrical Engineering- Prof. Nabil said that there is no issue with Program criteria compliance. 5. IMSE – Prof. Ali informed that the Program criteria items are properly covered in the curriculum. 6. Mechanical Engineering – Dr. Souhaila said that there is no compliance issue with Program criteria. 7. Petroleum Engineering – Dr. Mohammad said that they have major issues but right now they are working on the interim report and three major Program Criteria issues are being addressed. Dr. Tariq stated few points: • Guidance note sent to all departments on 24th January 2021. • Rigor of program criteria items varies. Civil, Petroleum, Chemical and Industrial need to pay more attention. • All items of the Program Criteria need to be covered in the required

	courses of the program. • All keywords included in the program Criteria language are to be included in the objectives of the required courses. • Assessment of program criteria items is not required unless it is included in Criterion 3 (student outcomes) by the program. • Evidence of coverage is to be from graded student work.		
Conclusion	There is good progress by all departments except Civil Engineering.		
Action Items		**Person Responsible**	**Deadline**
Follow-up with Civil Engineering		Ms. Rincy George	Fall 2021

2. Follow up on Continuous Improvement	
Discussion	Dr. Tariq noted that ABET compliance note on Criterion 4 was sent to all departments on 9 May 2021. Afterwards, he read out the ABET Criterion 4 emphasizing on the keywords in the Criterion: 1. It should be a <u>regular process</u>. 2. It should be according to a <u>documented process</u> (i.e. the department outcome assessment plan). 3. <u>Results of the evaluation must be systematically utilized</u> for continuous improvement. The following discussion followed: **Integrity of assessment evidence** Dr. Raed pointed out that integrity of the assessment evidence is very critical to the CI process. In order to ensure this integrity, the College has implemented a number of steps for the online student evaluation processes. He asked whether these steps can be considered as continuous improvement? Prof. Ali replied in the affirmative that such steps can be considered as an improvement in course administration. However, linking these steps to improvement in Student Outcomes will require further investigation. **Continuous improvement during the pandemic year** • Dr. Tariq kicked off the discussion by presenting the ICEF data for the Fall 2020 semester and noted low participation for all departments except the CpE department. He stressed that a gap in the CI process due to the pandemic is not an excuse and can hurt the departments during the next ABET review. • Prof. Ali stated that faculty members don't like to get help from others

	as they don't want to share their password and due to this the participation may be low. He suggested to have a secretary/engineer to help the faculty members in each department.
	• Dr. Souhaila said that the low participation in ICEF is not a pandemic problem but this how it usually is right after the ABET visit.
	• Prof. Nabil noted the low participation to be not a pandemic problem but a chronic problem and suggested for some action at the department Chairman level to resolve this issue. He further noted that to improve faculty participation, EE department has recently divided the courses to be assessed over two semesters instead of all being assessed in one semester.
	• Prof. Tassos was surprised why department rules regarding non-participation in course evaluation are ineffective in other departments?
	• Dr. Raed said even threatening does not work. Begging and bribing may work. Personal involvement from department chair is very important. VDAA and Dr. Raed agreed to bring up this topic in the upcoming meeting with department chairpersons.
	Continuous improvement – Worthy continuous improvement task (By Prof. Ali Allahverdi).
	    • Identify one student outcome (based on ICEFs and Exit survey data) that needs improvement.
	    • Implement the full CI procedure on it and close the loop during the current ABET accreditation cycle (2020-2025).
	Prof. Ali told to wait for a while before implementing this task as the ABET visit just got over and it is advisable to collect data for few years for identifying the target outcome.

Conclusion	Computer Engineering Department's rules regarding the ICEF should be used. Personal involvement of the chairman is very important for faculty participation in course evaluation. VDAA to take this into consideration.

Action Items	Person Responsible	Deadline

3. Annual Assessment Activities Report for AY 2020-21		
Discussion	Dr. Tariq reminded the departments to submit the annual assessment activities report by the deadline of 13 June 2021 and to include the following summary items: • Assessment coordinators concerns • Faculty concerns (From instructor comments in ICEF)	

	• Student concerns (Gathered from free response section of Exit survey). • Key achievement/implementation of continuous improvement (CI) measures etc. • Section on program criteria compliance. • Update to Outcome assessment plan.		
Conclusion	Due date for submission is June 13th 2021		
Action Items		**Person Responsible**	**Deadline**
Follow up with departments regarding report submission		Ms. Rincy George	27 June 2021

4. Other constituents			
Discussion	Dr. Tariq asked about participation of other constituents i.e. Industrial Advisory Board, Student Advisory Council and Alumni during AY 2020-21. All attendees told that there was no involvement of these constituents during this year and will try to have active participation next year.		
Conclusion			
Action Items		**Person Responsible**	**Deadline**
Reminder to departments		Ms. Rincy George	Fall 2021

5. Virtual Assessment Room			
Discussion	Dr. Tariq opened the discussion about the need for virtual assessment room and to retire the paper-based collection of course folders and outcome assessment evidences for the 2025 ABET visit. He noted that ABET is considering virtual assessment rooms more seriously after virtual visits in 2020-21 based on positive feedback from PEV's and programs. Furthermore, two Kuwait University programs in College of Science and College of Life Sciences have implemented virtual assessment rooms for 2021-22 ABET visit. He presented the following agenda: • Goal: Virtual Assessment Rooms during ABET Visit of 2025. • Platform: Sharepoint • Milestones: Basic framework – end of AY 2020-21 OAA check – end of Fall 2021 semester Fully operational –end of AY 2021-22.		

	➢ Approval / discussion
	   1. Prof. Ali – Approved the plan but suggested to add one year to all deadlines.
	   2. Dr. Souhaila – Agreed.
	   3. Prof. Mousa – Agreed.
	   4. Prof. Nabil – Agreed, but stressed the need for manpower, training and technical assistance. Dr. Tariq agreed that OAA will provide video tutorials and conduct a training workshop in Fall 2021.
	   5. Prof. Kabir – Agreed.
	   6. Dr. Mohammad – Agreed.
	   7. Prof. Tassos – Agreed and noted that a fully functional virtual assessment room is already functional in CpE department. He graciously offered to share the experience of CpE department.
	➢ Eng. Freya did a live demo on using Sharepoint as a virtual assessment room.		

Conclusion	All CAC members agreed to implement virtual assessment room in their departments using Sharepoint and to ensure that the virtual assessment room is fully functional for the 2025 ABET visit.		
Action Items		**Person Responsible**	**Deadline**
Workshop on implementing virtual assessment room using Sharepoint		OAA	Fall 2021

The meeting adjourned at 1:40 pm.

APPENDIX D:
Record of OAA Internal Meetings

Office of Academic Assessment

Academic Year 2020-2021

OAA Internal Meeting and Minutes

Agenda/Meeting Minutes

Meeting # 1: 15 December 2020

Meeting # 2 on 7 Jan 2021

Meeting # 3 on 19 Jan 2021

Meeting # 4 on 2 March 2021

Meeting # 5 on 24 March 2021

Meeting # 6 on 10 May 2021

Meeting # 7 on 2 June 2021

Item	Responsible person(s)	Action Taken with date
Meeting # 1		
Date: 15 December 2020 [11:30 AM to 12:15 PM]		
1- Regular items – Exit survey, ICEFs, reminder to department chairs, any other??	RG, SR CLOSED 16 March 2021	Alumni survey in Spring 2021 – need to review the survey form based on PEOs of each program. TC, RG, FS to coordinate. To be done by 2nd week of Jan 2021. 7 Jan 2021 RG: to be ready today. Employer survey in Fall 2021 – wait till next year for review of form. RG to prepare ICEF report for year 2019-20 for each department for circulation as hard copy through the Dean by the 4th week of December.

Item	Responsible person(s)	Action Taken with date
		DONE and sent to department. RG to update in records. Talk to VDSA for timely supply of section info. (TC to do). 19 Jan 2021 ICEF and exit survey report for department. SA and FS will do on Thursday, 21 Jan. will come to office. Will be ready in 2 weeks time. **2 March 2021** Exit report uploaded by Soud. Mapping of SOs, editing and breaking up the report for the departments. To be done by Freya. Send on Thursday. ICEF report ready by Freya. Send ICEF today. Exit report sent – 16 March 2021 CLOSED
2- Meeting with new OA coordinators and UPC Coordinators	RG, TC DONE 20 Jan 2021	Targeted date for the meeting: 2nd week of January. 7 Jan 2021: Meeting to be on 20 Jan (Wednesday). Need to send call for meeting by Sunday (10 Jan). RG to send sample call of meeting letter. 19 Jan 2021 Rincy and Freya to attend for helping out and taking meeting minutes. Rincy to send email reminder to coordinators.
Tasks:		
i- Find out the new persons in each dept.	RG DONE 2 March 2021	RG updated that departments have not yet finalized the new committee assignments. Will be done by the next week. RG to get updated list from Engr. Ma'ali. 7 Jan 2021 We have it. 2 March 2021 PE contact updated.
ii- Agenda		

Item	Responsible person(s)	Action Taken with date
a) Program criteria items – curricular coverage and assessment evidence	RG, FS, SR DONE	7 Jan 2021 Agenda for OA meeting: 　1- Student exit survey – part related to online learning experience 　2- Changes in Alumni survery 　3- Program criteria – coordination bet UPC and assessment – How is the process in the departments?
b) Capstone design – please make sure it conforms with ABET general criteria and program criteria.	RG, FS, SR	
c) Model curriculum for each program – reminder to ensure conformity	RG, FS, SR	FS has for electrical. FS and RG to get for computer and check for Mech, Idustrial, Chemical. 7 Jan 2021 FS: not available. This item to be taken up in another meeting with coordinators. TC has for PE. None for civil.
d) Remote teaching and its impact on student assessment and outcome assessment from instructor point of view – survey??? Please make questions and get approval from the Dean.	TC, FS	
e) Any other items????	SR	RG suggested to add: reminder for submission of annual OA report. TC suggested to add: Information about student guidance in coordination with student affairs and VDSA.
3- Student Exit Survey - need to add questions related to student experience and satisfaction regarding remote teaching of theory classes, lab classes, office hours (both instructor and TA), exams, etc. Need to prepare these questions and get approval from the Dean or VDAA. How much effort in coding is needed to modify the existing exit survey? If approved by the	FS, TC	All members to contribute sample survey questions by 24 Dec. 2020. 7 Jan 2021 DONE. 19 Jan 2021 Get the proposed survey addition on online teaching approved by CAC in the meeting. Freya to update the form afterwards.

Item	Responsible person(s)	Action Taken with date
Dean, we need to administer this modified exit survey by the end of this semester.		2 March 2021 What is the coding status? Wael needs to be reminded through the Dean. TC to do.
4- 6-year OAA Plan for the college - need to massage the existing plan, finalize it and circulate it to all departments by the end of January 2021. DONE 18 March 2021	RG, SR, TC	TC to review and finalize with RG. To be finalized by the end of 2020. 7 Jan 2021: RG will give today. 19 Jan 2021 Rincy will email today. 2 March 2021 Status? By Thursday. DONE on 18 March 2021
5- A seminar or talk on academic assessment for OA coordinators and interested faculty	TC, RG	FS suggested to hold on to seminars till we go back to campus.
Topic:		
a) Program criteria - ask each OA coordinator to present how this is being addressed in his department.		
b) Need of interaction and coordination between UPC and OA in each program – what is current state of practice in each department and how it can be improved.		
c) Any other topic????		
6- Engage with VDAA, Dean and VDSA regarding the need and possibility of adding a zero credit 4-6 week practical training as a requirement for graduation. Need to gather information from different Engineering programs in Kuwait and in the Gulf regions where this is done. This will be a proposal that should be backed up with data on its potential benefits. CLOSED Sent letter to VDAA on	TC, SR	SR to check about it and report back by first week of Jan. 2021. 7 Jan 2021 SR: Checked on it. Please make a summary and circulate to members by 14 Jan 2021. 19 Jan 2021

Item	Responsible person(s)	Action Taken with date
	8 March 2021	Soud submitted the report summarizing the universities in the region that has mandatory practical training PE dept and computer programs in KU has it as a mandatory. Will explore more. 2 March 2021 Need last employer survey, alumni survey and exit survey. Analyze how much percent is asking for internship/practical training? To be done within one week. TC will analyze employer. Alumni: SR, Exit: RG+Freya
7- Forgot Password option to faculty for ICEF site.	FS	According to FS, we need to wait for adding this feature till all of our data is move to the University server. Coordinate/update with Dr. Khalid Alzamil (E-services Director in the College). 19 Jan 2021 Forgot password. Freya will create a MS form that can be used. Freya will check 2 March 2021 Status? After taking care of Exit survey migration and new coding for the exit survey.
8- Any other item?	DONE	RG and FS to meet with SR and appraise him about the file structure of OAA on Dropbox.
Meeting #2		
Date:7 Jan 2021 [11:10AM to 11:50 AM]		
9- ICEF – not showing some departments for summer 2020	CLOSED	FS will check and fix and report back. 19 Jan 2021 Freya will check again. Working Now.
10- PE department website. Check the website for currency of graduation data, outcomes, objectives (PEOs). These should match the ones in self study.	RG, SR	FS will check and report back. 19 Jan 2021

Item	Responsible person(s)	Action Taken with date
Graduation and enrolment data should be current as of Fall 2020.		Behzad has changed and it is working. Will check again before submitting RFE. 2 March 2021 Check status of new website for other departments Rincy will make a checklist form and assign departments to all. Take two weeks to report back.
11- ICEF link working from the new site. Behzad is saying it is working.	DONE	FS: Yes. It is working. 2 March 2021 What is the link? Wrong link sent to departments? Correct link: http://kuweb.ku.edu.kw/COEP/OurCollege/index.htm sent link is for the coordinators and not for faculty. http://eng.ku.edu.kw/oaa/tools/reporting/
12- Name of degree in Arabic on diploma?	DONE	SR to check and report back. Needed for RFE submission. 19 Jan 2021 OK. Checked and it is fine.
Meeting #3 19 Jan 2021		
13- Coming to office	DONE	Agreed that everyone will come at least once a week. Soud: Tuesdays Rincy: Sundays Freya: will let me know (Thursdays)
14- Assessment report for AY 2018-19. Which departments submitted? What items need to be included?		Freya will check and report back. **2 March 2021** Status? Civil, Industrial, Mechanical, computer submitted. Reminder and thank you note early next semester. 2nd or 3rd week of April. Petroleum also submitted on 8 March 2021
Meeting # 4 2 March 2021		
15- Start preparing the OAA annual report 2020-21	RG, SR	To be submitted at the end of the spring semester.

Item	Responsible person(s)	Action Taken with date
16- Update alumni survey questionnaire and prepare to launch the survey. Coordinate with ETAC.	RG	Logistics to be sorted out by Rincy. Report back by first week of spring semester.
17- Printer cartridge. Black is needed.	TC	
Meeting # 5 24 March 2021		
18- Coming to office	ALL	Monday, Wednesday: SR
19- Task assignment per OAA plan	ALL	By end of day today (24 March) will be sent.
20- Currency of website – check for outdated items, make list and send to E-services. URGENT	RG+SR	Chemical , civil: SR IMSE, Electrical: RG Computer, Mechanical: FS Petroleum, plus general: TC By 28 March 2021
21- Exit survey – coding for new outcomes + online learning experience	FS	Sunday the code will be done. Monday will be up. Launching will be next semester.
22- Letter to departments reminding annual report + items to be included in the annual assessment report	RG	Monday (29 March) – draft will be ready
23- Migration status of alumni and employer survey	FS	Reminder to Wael today. Afterwards, we will take action through VDAA.
24- Logistics list for Alumni survey	RG	Sunday (28 March) – RG will give it to me.
25- Revision/update to alumni survey form	SR+TC	Duplication of questions – to be reviewed. By Sunday, 28 March, everyone should furnish their comments on Exit, Alumni and employer survey.
26- Outline for 2020-21 OAA annual report	SR+TC	SR will send by tomorrow (25 March).
Meeting # 6 – 10 May 2021		
27- CAC meeting # 2 in mid-June (7 or 14 June?). Agenda?	RG+TC+FS	RG to help in setting the agenda: Tentative items: Follow-up on program criteria, continuous improvement, annual report, virtual assessment room. FS to look for previous presentation on making virtual assessment room on sharepoint.
28- OAA annual report	SR FS, TC	Soud to provide draft within 2 weeks. Will ask FS and TC to write the sections on migration of surveys and Petroleum department IR respectively.
29- Exit survey form – set to launch	FS	Will be beta tested next week by TC and RG
30- Logistics for the alumni survey	RG	Need to use social media platform Need to contact ETAC

Item	Responsible person(s)	Action Taken with date
		RG to prepare the timeline
31- Alumni survey form revision	SR	First draft of revision next week. TC to incorporate comments/suggestions by computer engineering.
32- Forgot password option on ICEF page	FS	Will be done in a couple of weeks.
33- IR fee payment – reminder to Engr. Maali	FS	FS sent her whatsapp message.
Meeting # 7: 2 June 2021		

34- CAC meeting # 2 in 7 June
  a) Follow up on program criteria
  b) Follow up on outcome assessment plan and continuous improvement according to ABET guidelines
  c) Status of department annual assessment activities report
  d) Virtual assessment room using sharepoint
  e) Participation of other constituents
  f) Practical training course
		Item d – FS will present
		Item e – move to next semester

35- Send reminder for CAC meeting	RG	Send email reminder on Thursday.
36- OAA annual report	SR	Draft report??? Data for AY 2019-20 is updated in the report. Need the new parts related to IR of PE dept from TC and migrating the surveys and other IT issues from FS. By next Wednesday or Thursday. OAA operation plan plus Summary of admin activities based on the letters sent to different entities. By RG
37- Exit survey form – set to launch	FS	Functioning. FS will send screenshots.
38- Logistics for the alumni survey	RG	Mid-November is the launch time. Therefore, plan accordingly. VDSA, ETAC, departments, Public Relations department (Ask Maali to contact). We need to send a letter in first week of July. TC totalk to DR. Osamah about it as well.

Item	Responsible person(s)	Action Taken with date
39- Alumni survey form revision	TC	To be finalized by the end of semester.
40- Forgot password option on ICEF page	FS	????Lingering item for almost one year. Remove the phone number and replace with OAA email.
41- IR fee payment – reminder to Engr. Maali		Net week remind Engr. Maali to check.
42- Check implementation of changes on College website	FS, RG, SR	Rincy please share the document sent to Engr. Behzad and checkout each item. Report within a week with comments marked against each item. Please distribute the department among yourselves. In a weeks time, please report back on the status of the items so that we report back to the Dean.
43- Week of 12 June – send ICEF and Exit summary with reminder	RG	
44- Visit programs –	RG + TC	Chemical done, no response from Civil. Rincy to follow-up with Civil and if they are busy, then schedule visit to Computer on 9 June or 14th June.
45- Meeting minutes of visit to Chemical eng. Dept.	RG + TC	By tomorrow.

APPENDIX E:

Minutes of Meetings with Chemical, Computer and Civil Engineering Departments

3 June 2021

OAA Visit to College Departments AY 2020-21

Visit to Chemical Engineering Department
Spring 2021

<u>Minutes of Meeting</u>

Date : Monday, 31 May 2021.

Place : Virtual Meeting, MS Teams Platform, Team Title- OAA-Meetings.

Time : 12:30 PM – 1:30 PM

Attendees : Dr. Abdulwahab Almusallam   (Chairman, ChE Department)
Prof. Mousa Abu-Arabi   (UPC Coordinator, ChE Department)
Dr. Tariq Chaudhary   (Director, OAA)

CC: VDAA (by Email)

1- Introduction

Dr. Chaudhary welcomed the attendees to the meeting and explained the reason for the meeting as a goodwill visit from the Office of Academic Assessment (OAA) to the Chemical Engineering department to get first-hand knowledge of assessment activities in the department as well as to offer any assistance in clarifying the procedures and requirements of the assessment process.

2- Meeting Agenda

Dr. Chaudhary introduce the agenda of the meeting that included the following:
a) General overview of assessment activities in ChE Dept.
b) Any difficulties/problems, issues that need OAA help.
c) Faculty involvement in Assessment activities
d) Practical Training Course
e) Other issues.

3- Overview of Assessment Activities in the ChE Department

Prof. Mousa provided an overview of the assessment activities in the department and highlighted the following:

i- Last year, the department UPC and Assessment Committee decided to divide the core courses in the Chemical Engineering department into two groups with one group having 8 courses and the other having 7 courses. The purpose of this division was to divide collection of assessment data from each group in one semester of the academic year only. Prof. Mousa added that this arrangement was done to lessen the burden of assessment data collection on the faculty. Assessment data for the major design

course will, however, be collected every semester due to its overall important role in the assessment process.

ii- Faculty members are required to submit the online ICEF form for all courses in all semesters.

iii- Prof. Mousa pointed out that faculty participation was not very high during the past 2-3 semesters due to the Covid pandemic and remote teaching. Prof. Mousa asked the Department Chair, Dr. Abdulwahab, to help out in this matter.

iv- On query from Dr. Chaudhary, Prof. Mousa explained that currently sufficient data is available from the ICEF forms to assess all outcomes.

v- Prof. Mousa added that a new required course on Environmental Engineering is currently being planned with focus on outcome 2.

vi- Prof. Mousa also explained that the importance of each outcome (i.e. H, M, L) for each course will be revised once the College gives the green signal to revise the curriculum based on the new guidelines.

vii- On inquiry by Dr. Chaudhary, Prof. Mousa expressed satisfaction at the frequency of reminders and communication about assessment activities and news from the Office of Academic Assessment.

4- Viewpoints of the Department Chairman

Dr. Abdulwahab gave his views on the proposed new guidelines for curriculum revision by the College as follows:

i- Dr. Abdulwahab was of the opinion that the new proposed guidelines provide enough flexibility to the programs to accommodate new courses related to each discipline.

ii- Dr. Abdulwahab thought that it will be best to increase the number of credits from 132 to 136 to accommodate some important Engineering Tools courses like Workshop practice. With the current restriction of 132 credits, it seems that the courses with two sequences may have to be merged into one course for accommodating new topics in the curriculum.

iii- The Chairman also stressed on the need for better coordination for the delivery of common courses (e.g. Thermodynamics) to cater for the need of all departments which take that course.

iv- About the Numerical Analysis course (#307), Dr. Abdulwahab opined that the course is little rigorous as the students have to learn two different subjects (i.e. Matlab programming and numerical analysis) in one course.

5- Annual Assessment Activity Report

Dr. Chaudhary brought up the subject of Annual Assessment Activity report, whose submission date is coming close (13 June 2021), and asked the department representatives to include the following items in the report so that it will be helpful while writing the Self-Study Report in 2024:

i- Assessment coordinator's concerns

ii- Faculty concerns (From instructor comments in ICEF)

iii-　　Student concerns (Gathered from Free response section of Exit survey)

iv-　　Key achievements/implementation of continuous improvement (CI) measures etc.

v-　　Section on program criteria compliance.

6-　Program Criteria Compliance

Regarding the program criteria compliance, Dr. Chaudhary explained that the program needs to make sure that items mentioned in the Program Criteria are included in the required courses of the Program. He specifically emphasized to include all keyword from the Program Criteria statements in the objectives of the pertinent courses.

7-　 Practical Training course

Last item on the agenda was about the Practical Training course. Dr. Chaudhary presented the data from the latest employer, alumni and student exit surveys that indicated a strong to moderate need for offering this course on a regular basis. Dr. Abdulwahab agreed that the Practical Training course is an important course that should be offered more frequently. However, very few organizations offer this course in a structured manner that can satisfy the required learning objectives of the course. He was of the opinion that a mechanism of better Departmental oversight on the training process should be devised to improve the quality of the course. Additionally, the companies are not offering this training for the past 2-3 semesters due to the Covid pandemic.

8-　Closing

Dr. Chaudhary thanked Dr. Abdualwahab and Prof. Mousa for attending the meeting and providing an overview of Assessment and Academic Activities in the Chemical Engineering Department. The meeting was adjourned at 1:30 PM.

29 June 2021

OAA Visit to College Departments AY 2020-21

Visit to Computer Engineering Department
Spring 2021

<u>Minutes of Meeting</u>

Date   : Wednesday, 9 June 2021.

Place   : Virtual Meeting, MS Teams Platform, Team Title- OAA-Meetings.

Time   : 12:30 PM – 1:30 PM

Attendees : Dr. Mohammad Alfailakawi (Chairman, CpE Department)
      Prof. Tassos Dimitriou   (UPC Coordinator, CpE Department)
      Dr. Tariq Chaudhary   (Director, OAA)

CC: VDAA (by Email)

1- **Introduction**

Dr. Chaudhary welcomed the attendees to the meeting and explained the reason for the meeting as a goodwill visit from the Office of Academic Assessment (OAA) to the Computer Engineering department to get first-hand knowledge of assessment activities in the department as well as to offer any assistance in clarifying the procedures and requirements of the assessment process.

2- **Meeting Agenda**

Dr. Chaudhary introduce the agenda of the meeting that included the following:
a) General overview of assessment activities in CpE Dept.
b) Any difficulties/problems, issues that need OAA help.
c) Faculty involvement in Assessment activities
d) Practical Training Course
e) Other issues.

3- **Overview of Assessment Activities in the CpE Department**

Prof. Tassos stated that the course assessment activity in the Computer Engineering department is spread over two semesters. Only one half of the courses are assessed in each semester to ease load on the faculty. Reminder to the pertinent faculty members, who have to assess a course during a given semester, is given at the start of the semester along with guidelines for assessment. All assessment data and collection of evidences is done through an online system using Sharepoint. Dr. Mohammad explained that an engineer in the department is maintaining this system. On inquiry by Dr. Chaudhary, Dr. Mohammad expressed willingness to give a workshop to Assessment Coordinators / Engineers from other departments

on how to create and manage assessment data and evidence collection using Sharepoint. Prof. Tassos expressed satisfaction at faculty participation in assessment activities.

On inquiry by Dr. Chaudhary, Prof. Tassos was satisfied at the frequency of reminders and communication about assessment activities and news from the Office of Academic Assessment.

4- Viewpoints of the Department Chairman

Dr. Mohammad was of the view that the College needs to emphasis on uniformity of assessment across multiple sections. Dr. Chaudhary agreed on the importance of a uniform criteria for assessment. However, the College can ensure this uniformity in the College core courses only. Additionally, these core courses are taken by students from various departments and in order to use the assessment results from these courses, the data has to be segregated for students of each department. Furthermore, these courses are basic engineering courses and may not be very suitable for assessment of a student outcome. However, data from these courses can be used to gauge improvement in student performance as they progress through their studies.

On the issue of the Engineering Training course, Dr. Mohammad stressed the need for a well-rounded Engineering Training course with input and oversight from the departments. Dr. Mohammad told that 14 students from the Computer Engineering department were taking the Engineering Training course this semester, which is close to 40% of the total graduating students in the semester. The Training course proves to be the gateway for employment for some students as well. He further said that MOM between ETAC and some reputed companies, where students can undertake the Engineering Training course, is being established. Prof. Tassos stated that the assessment of this course is managed by ETAC and is not supervised by the faculty. The student grade is based on assessment done by ETAC and the training company with a ratio of 60% and 40% respectively. Dr. Mohammad added that now students in the Computer Engineering department are also required to make a presentation in the Department.

Dr. Mohammad appreciated the freedom offered by the College in revising the curriculum. He noted that the departments should be given a choice of selecting the basic science courses based on the needs of the Departments. This proposal requires the expansion of pool of basic science courses. Dr. Chaudhary agreed with the suggestion but noted that the College of Science may be limited in resources for offering a new basic science course with a lab component which is a ABET requirement. Dr. Mohammad also noted that some College courses do not belong to the right category and should be moved to the other group. For example, the correct category for the Workshop and Computer Graphics courses is Engineering Tools while currently these are listed under Engineering Science courses.

Dr. Mohammad noted that the student Exit survey website is not working smoothly. During the last semester, the students could only access the survey form while being only on the campus while in this semester, students are unable to access some features of the form. Dr. Chaudhary explained that the old College website has been shut down due to some issues with the domain and this was the reason that the Exit survey was only accessible through the intranet while being on the campus. The Exit survey, along with other OAA survey tools, was shifted to the new College website hosted on University server in Shuwaikh during this semester. The access problem being faced by the students during this semester seems to be due to some integration issues and Engr. Freya is working on resolving it. Dr. Chaudhary assured Dr. Mohammad that he will be notified as soon as the problem is resolved in a couple of days.

5- Annual Assessment Activity Report

Dr. Chaudhary brought up the subject of Annual Assessment Activity report, whose submission date is coming close (13 June 2021), and asked the department representatives to include the following items in the report so that it will be helpful while writing the Self-Study Report in 2024:

i-   Assessment coordinator's concerns

ii-   Faculty concerns (From instructor comments in ICEF)

iii- Student concerns (Gathered from Free response section of Exit survey)

iv-   Key achievements/implementation of continuous improvement (CI) measures etc.

v-   Section on program criteria compliance.

6- Involvement of other constituents

Dr. Chaudhary brought up the subject of participation of the industrial advisory board, student advisory council and alumni during AY 2020-21. Prof. Tassos said that the last visit by the industrial advisory board was in 2019 and due to the Covid-19 pandemic, no activities were undertaken since then. He and Dr. Mohammad were hopeful that these activities will be restored in the next academic year.

7- Program Criteria Compliance

Regarding the Program Criteria compliance, Dr. Chaudhary explained that the program needs to make sure that items mentioned in the Program Criteria are included in the required courses of the Program. He specifically emphasized to include all keyword from the Program Criteria statements in the objectives of the pertinent courses. Prof. Tassos assured that the Computer Engineering department is aware of the program criteria requirements and all curricular topics specified in the program criteria are included in required courses of the Department.

8- Practical Training course

Last item on the agenda was about the Practical Training course. Dr. Chaudhary presented the data from the latest employer, alumni and student exit surveys that

indicated a strong to moderate need for offering this course on a regular basis in the Computer Engineering department. Dr. Mohammad and Prof. Tassos were appreciative of the compiled data and reiterated willingness of the Computer Engineering department to offer this training opportunity to as many students as possible.

Closing

Dr. Chaudhary thanked Dr. Mohammad and Prof. Tassos for attending the meeting and providing an overview of the assessment and academic activities in the Computer Engineering Department. The meeting was adjourned at 1:30 PM.

College of Engineering and Petroleum
Civil Engineering Department
Undergraduate Program Committee (UPC) MOM
No.6 2020/2021

UPC No.6 2020/2021		
28.06.2021	12:30 PM	MS Teams
Meeting Chair	Dr. Waleed Abdullah	
Type of Committee	Undergraduate Program Committee (UPC)	
Note taker	Eng. Fadi Al Masree	
Attendees	Dr. Waleed Abdullah, Dr. M. Chaudhary, Dr. Ahmad AlYousif, Dr. Duaij AlRukaibi, Prof. H. Kabir, Dr. Bandar AlMutairi Dr. Walid Eid, Dr. Abdulrahman Al Sulaili, Dr. Moetaz ElHawary	
Absent with excuse	Prof. Hashim AlTabtabaei, Dr. Mohammad AlYaqout	

The UPC Coordinator Dr. Waleed Abdullah, welcomed the attendees of the meeting.

Then Dr. Chaudhary, who was invited as representative of the College Office of Academic Assessment (OAA), started presenting the topics of the meeting as follows:

1. Discussion of:	
1.1. ABET Criteria & Civil Engineering Program Criteria	
Discussion	1) Dr. Chaudhary started the presentation about the ABET General Criteria & the Civil Engineering Program criteria. He mentioned that two items need to be addressed in the ABET general criteria i.e. a) Complex Engineering Problems b) Engineering Design. Dr. Chaudhary added that due to lack of time, these two issues will be addressed in the Fall semester of AY 2021-22. Focus of today's meeting will be on the Program Criteria. 2) Dr. Chaudhary stated that Civil Engineering has the most detailed program criteria and attention is needed to be devoted to cover all items in the Program Criteria in required courses of the curriculum. Dr. Chaudhary explained that the inclination to cover these items in the capstone design course should be avoided because the department has six sub-disciplines in which capstone design course is offered and it is difficult to ensure uniform implementation of these items in all capstone design course sections. 3) Dr. Chaudhary explained that the Civil Engineering program criteria comprises of two parts. One is related to the curricular topics and the other is related t faculty qualification for teaching courses that are primarily design course. 4) Dr. Chaudhary noted that the ABET Civil Engineering program criteria is undergoing a major revision which will be applicable from Fall 2022. He also pointed out that coincidentally, the College has given the go ahead for a major overhaul of the curriculum as well, which will take affect from AY 2022-23. It is therefore, very important for the Civil Engineering program to incorporate the Program Criteria changes in the revised curriculum.

5) Dr. Chaudhary noted that there was no evidence of coverage of the following curricular topics in the Program Criteria at the time of last ABET visit in Fall 2019:

(a) apply probability and statistics to address uncertainty.

(b) include principles of sustainability in design.

(c) explain basic concepts in business, public policy, and leadership.

(d) analyze issues in professional ethics.

(e) explain the importance of professional licensure.

Respective TAGs need to ensure coverage of these topics as well as to furnish evidence from student work.

6) Explaining the new items in the proposed program criteria, Dr. Chaudhary highlighted the following items that may require some addition to the current curriculum:

(a) First of all, the keywords in the program criteria need to be included in the course description as well as course objectives of the pertinent required courses.

(b) "*apply probability and statistics to address uncertainty and risk relevant to civil engineering*". This item may require some additional topics in the curriculum. Also need to identify the course(s) where this item can be addressed.

(c) "*apply material science and numerical methods to solve civil engineering problems*". This item requires application of material science, which needs to be explored in the current Civil Engineering Materials course. On the other hand, application of numerical methods in solving civil engineering problems should be covered in required courses of almost all seven sub-disciplines.

(d) "*apply principles of sustainability … in the formulation and solution of civil engineering problems*". Prof. Kabir suggested that the College should conduct a workshop for faculty members explaining how sustainability aspects can be included in civil engineering problem formulation, application and design. Dr. Chaudhary agreed to arrange such a workshop/seminar in Fall 2021 semester.

(e) "*solve complex problems in at least four technical areas appropriate to civil engineering*". Most probably, this is already covered in the curriculum. However, need to make sure that 'complex problems' are addressed in four areas of civil engineering. TAGs need to identify the problems that can be classified as 'complex' in their domain.

(f) "*apply the engineering design process to develop a system*". This will require to incorporate the design process and not only the element of designs in at least two civil engineering areas. The best way of complying with this is through a course project. Dr. Waleed Eid told

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that a course project is included in the Foundation Design course that can satisfy this requirement. Dr. Abdulrehman Alsulaili mentioned that it will be difficult to include a design project in the Environmental Engineering course. Dr. Bander AlMutairi was of the same view that design project cannot be included in the Water Recourses course. Dr. Moetaz said that there are elements of design in the Reinforced Concrete Design courses that can be made into a design process. However, this will require modification in the courses. Viewpoints of the Transportation and the Construction Management TAGs also need to be gathered through personal contacts as the TAG coordinators were not present. Dr. Chaudhary was of the view that this requirement should be met in three areas to have some redundancy.

(g) "*apply the ASCE Code of Ethics to an ethical dilemma*";

"*apply principles of leadership, diversity, equity and inclusion in the formulation and solution of civil engineering problems*";

"*explain the professional attitudes and responsibilities of civil engineer, including licensure and safety*".

The construction management TAG is to incorporate these item in the Legal and Professional Issues course along with necessary modification in the course description and objectives.

7) Dr. Walid Eid suggested to encourage the faculty members to register for a consultant engineer license from Kuwait Society of Engineers to fulfil the requirement for faculty teaching design courses.
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Conclusion	TAG coordinators were made aware of the civil engineering program criteria requirements and how to incorporate these in the required courses.

Action Items	Person Responsible	Deadline
Understand the program criteria items and where these are already included in the curriculum and where the new items can be incorporated in the required courses of the curriculum. Identify whether the course description/objectives include relevant keyword of the program criteria item(s).	TAG Coordinators UPC Coordinator	One month after the start of Fall 2021 semester

College of Engineering and Petroleum
Civil Engineering Department
Undergraduate Program Committee (UPC) MOM
No.6 2020/2021

Name	Signature
Dr. Waleed Abdullah UPC Coordinator	
Prof. H. Kabir	
Dr. Tariq Chaudhry	
Dr. Duaij AlRukaibi	
Dr. Ahmad AlYousif Coastal TAG Co.	
Prof. Hashim AlTabtabaei Construction TAG Co.	
Dr. Abdulrahman AlSulaili Environmental TAG Co.	
Dr. Bandar AlMutairi Water Resources TAG Co.	
Dr. Mohamad AlYaqout Transportation TAG Co.	
Dr. Walid Eid Geotechnical TAG Co.	
Dr. Moetaz El Hawary Structural TAG Co.	

APPENDIX F:
New Student Exit Survey Form

Kuwait University

College of Engineering & Petroleum

Office of Academic Assessment

EXIT SURVEY FORM

The faculty and students of Kuwait University are dedicated to the continuous improvement of undergraduate engineering programs. The information that you provide through this survey will be very helpful in this process. We appreciate your help in filling out this survey. Thank you for your cooperation and support.

Engineering major**:**

☐ Chemical   ☐ Civil   ☐ Computer   ☐ Electrical

☐ Industrial & Management Systems   ☐ Mechanical   ☐ Petroleum

Name (optional):_____ Gender: ☐ M   ☐ F

Year of Graduation: _____

Overall GPA: _____

Future plans (check all that apply)

☐ I intend to work in the government sector.

☐ I intend to work in the private sector.

☐ I intend to go to graduate school.

☐ I intend to start my own business.

☐ I intend to do other things (please specify): _____

Please fill in the tables in the next pages concerning the skills, abilities and attributes

that you have acquired while studying Engineering at Kuwait University.

1. Assessment of Abilities, Skills and Attributes Acquired at Kuwait University.

Please rate each of the following skills, abilities or attributes in terms of how well your education at Kuwait University prepared you for them.

Skills, abilities, and attributes	Level of preparation					
	Very well prepared	*Well prepared*	*Prepared*	*Somewhat prepared*	*Not prepared*	*Cannot evaluate*
1. Apply knowledge of mathematics, sciences and engineering to solve complex engineering problems.	☐	☐	☐	☐	☐	☐
2. Ability to use modern tools and technologies in engineering analysis/design	☐	☐	☐	☐	☐	☐
3. Apply the knowledge of probability and statistics in engineering analysis/design.	☐	☐	☐	☐	☐	☐
4. Design a system, component, or process to meet specified needs with consideration of public health, safety and welfare.	☐	☐	☐	☐	☐	☐
5. Identify, formulate, and solve engineering problems taking into account socio-economic, global, cultural and environmental factors	☐	☐	☐	☐	☐	☐
6. Effectively write a variety of items like short essays, memos, letters, reports etc.	☐	☐	☐	☐	☐	☐
7. Participate in class discussions with instructors & students and deliver oral presentations.	☐	☐	☐	☐	☐	☐
8. Ability to use technology for communication purposes (e.g. Word, Excel, Powerpoint, social media, etc.).	☐	☐	☐	☐	☐	☐
9. Understand professional and ethical responsibilities, (e.g. safety, professional ethics and code of conduct) in making informed judgement as applicable to engineering situations.	☐	☐	☐	☐	☐	☐
10. Understand and appreciate the impact of engineering solutions in the societal and global contexts.	☐	☐	☐	☐	☐	☐
11. Function effectively in a team in different roles (i.e. leadership, note taking, planning, and execution) for establishing goals, planning tasks and meeting objectives.	☐	☐	☐	☐	☐	☐
12. Develop and conduct experiments, as well as analyze and interpret data and draw conclusions	☐	☐	☐	☐	☐	☐
13. Ability to acquire and apply new knowledge through appropriate learning strategies	☐	☐	☐	☐	☐	☐

2. Educational Objectives

Please rate the following educational objectives elements according to how important they are to you career plans.

Objectives Elements	Importance to career					
	Extremely important	*Very important*	*Important*	*Somewhat important*	*Not important*	*Cannot rate*
1. Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction)	☐	☐	☐	☐	☐	☐
2. Contribution to well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment).	☐	☐	☐	☐	☐	☐
3. Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities)	☐	☐	☐	☐	☐	☐
4. Degree advancement and continuing education. (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification)	☐	☐	☐	☐	☐	☐
5. Staying current in profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies)	☐	☐	☐	☐	☐	☐
6. Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities)	☐	☐	☐	☐	☐	☐

3. Assessment of the Learning Environment at Kuwait University

Please indicate your satisfaction with each of the following aspects of your experience at Kuwait University.

	Level of satisfaction					
	Extremely satisfied	*Very satisfied*	*Satisfied*	*Somewhat satisfied*	*Not satisfied*	*Cannot evaluate*
A. Quality of instruction and support for learning provided by the faculty members in:						
- Sciences (Mathematics, Physics, Chemistry)	☐	☐	☐	☐	☐	☐
- Computers (Programming and usage of software packages)	☐	☐	☐	☐	☐	☐
- Humanities and Social sciences	☐	☐	☐	☐	☐	☐
- General Engineering,	☐	☐	☐	☐	☐	☐
- Engineering within major	☐	☐	☐	☐	☐	☐
B. Quality of instruction and support for learning given by teaching assistants and engineers within major.	☐	☐	☐	☐	☐	☐
C. Quality of advice by the staff with respect to:						
- Academic planning	☐	☐	☐	☐	☐	☐
- Career planning	☐	☐	☐	☐	☐	☐
D. Equity of treatment by:						
- Academic administrators	☐	☐	☐	☐	☐	☐
- Faculty	☐	☐	☐	☐	☐	☐
- Teaching assistants and engineers	☐	☐	☐	☐	☐	☐
- Fellow students	☐	☐	☐	☐	☐	☐
E. Quality of the facilities:						
- Classrooms	☐	☐	☐	☐	☐	☐
- Science laboratories	☐	☐	☐	☐	☐	☐
- Engineering Laboratories	☐	☐	☐	☐	☐	☐
- Computing facilities	☐	☐	☐	☐	☐	☐
- Libraries	☐	☐	☐	☐	☐	☐

	Level of satisfaction					
	Extremely satisfied	*Very satisfied*	*Satisfied*	*Somewhat satisfied*	*Not satisfied*	*Cannot evaluate*
F. Online Learning Experience						
- Instructor's preparation and clarity of online instructions	☐	☐	☐	☐	☐	☐
- Ease of communication with instructors during online learning	☐	☐	☐	☐	☐	☐
- Quality of learning in online laboratory classes	☐	☐	☐	☐	☐	☐
- Online capstone design experience and collaboration with team members	☐	☐	☐	☐	☐	☐
- Fairness of homework, quizzes, exams and other online assessment activities	☐	☐	☐	☐	☐	☐
- Overall satisfaction with attainment of knowledge and engineering skills through online learning	☐	☐	☐	☐	☐	☐

4. Assessment of Support Services

Please rate the quality of services provided by the listed offices. In addition, please indicate the amount of interaction that you had with each office.

	Quality of services						Amount of interaction		
	Very good	*Good*	*Adequate*	*Poor*	*Very poor*	*No opinion*	*Much*	*Some*	*Little or none*
A. Academic Services:									
Admissions/Registrar	☐	☐	☐	☐	☐	☐	☐	☐	☐
Training office	☐	☐	☐	☐	☐	☐	☐	☐	☐

Libraries	☐	☐	☐	☐	☐	☐		☐	☐	☐
Bookstores	☐	☐	☐	☐	☐	☐		☐	☐	☐
B. Administrative Offices:										
Students' affairs office in your department	☐	☐	☐	☐	☐	☐		☐	☐	☐
Administrative offices in the college	☐	☐	☐	☐	☐	☐		☐	☐	☐
C. Other Services:										
Health services	☐	☐	☐	☐	☐	☐		☐	☐	☐
Food services	☐	☐	☐	☐	☐	☐		☐	☐	☐
Parking	☐	☐	☐	☐	☐	☐		☐	☐	☐
Recreation and athletics	☐	☐	☐	☐	☐	☐		☐	☐	☐
Others (specify) _____	☐	☐	☐	☐	☐	☐		☐	☐	☐

5. General Assessment

Please answer the following questions:

A. Please list some very important skills that you think you had learned in the engineering program.

_____

_____

_____

B. Please list some very important or useful skills that you did not get the chance (or are not available) to learn while taking engineering courses at Kuwait University.

_____

_____

_____

C. Please write down any comments or suggestions that you think will improve the engineering programs at Kuwait University (use additional sheets if necessary).

_____

_____

_____

APPENDIX G:

New Alumni Survey Form

The College of Engineering and Petroleum at Kuwait University is dedicated to the continuous improvement of its undergraduate programs. Information you provide through this survey will be very helpful in this process and is much appreciated. All information will be confidential and your input/comments will be combined with those of other alumni for an anonymous analysis as a group. Thank you for your cooperation and support. Please note that this survey can be completed online at http://www.eng.ku.edu.kw/oaa/alumni

Major:
☐ Chemical   ☐ Civil   ☐ Computer   ☐ Electrical
☐ Industrial & Management Systems   ☐ Mechanical   ☐ Petroleum

Name: _____ Gender: ☐ Female   ☐ Male

Year of Graduation: _____

Employer: _____

Job Title: _____

Job Description: _____

Mailing Address: _____

E-mail: _____

Advanced Degrees (M.Sc./PhD if any): _____

University Honors/Recognitions (if any): _____

Employment Honors/Recognitions (if any): _____

Membership in Professional Societies (if any): _____

Have you attended any professional/technical society conferences or meetings since graduation?
☐ Yes   ☐ No

Have you participated in continuing education activities e.g. (short courses, seminars, conferences) since graduation?
☐ Yes   ☐ No

How connected do you feel to Kuwait University and your engineering department?
☐ Very well connected   ☐ Well connected   ☐ Little connected   ☐ Not connected

Please evaluate/rate the following elements of program educational objectives according to:

a) How important there are to your career
b) The level of your attainment

Element of Educational Objectives	*Importance to employment*					*Level of attainment*			
	Extremely important	*Very important*	*Important*	*Somewhat important*	*Not important*	*Significant*	*Satisfactory*	*Somewhat Satisfactory*	*Not Satisfactory*
1. Contribution to company/workplace/institution (e.g., improve product/service quality, increase productivity, increase revenues, reduce expenses, improve customer satisfaction, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
2. Contribution to the well-being of society and the environment (e.g., safeguard the interest of society, improve economy, develop professional standards and best practices, safeguard and improve the environment, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
3. Career advancement (e.g., promotion to higher ranks/positions, increased responsibilities, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
4. Degree advancement and continuing education (e.g., diplomas, formal course work, graduate courses, graduate degree, training, certificates and professional certification, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
5. Staying current in the profession (e.g., participation in seminars and conferences, professional development courses and activities, membership in professional societies, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐
6. Use of leadership capabilities (e.g., promotion to leadership positions, ability to lead teams, supervisory skills and abilities, etc.)	☐	☐	☐	☐	☐	☐	☐	☐	☐

Please answer the following questions:

1. Rate your overall preparation at Kuwait University with respect to the following:

	Very well prepared	Well prepared	Prepared	Somewhat prepared	Not prepared	Can't Evaluate
a) Be a technically competent engineer	☐	☐	☐	☐	☐	☐
b) Obtain your first job after graduation	☐	☐	☐	☐	☐	☐
c) Have the necessary professional skills to meet expectations of your job	☐	☐	☐	☐	☐	☐
d) Contribute to the society as an engineer	☐	☐	☐	☐	☐	☐
e) Be aware of your responsibility to consider sustainability in engineering solutions	☐	☐	☐	☐	☐	☐
f) Pursue advanced degree	☐	☐	☐	☐	☐	☐
g) Be an entrepreneur and start your own business	☐	☐	☐	☐	☐	☐

2. Would you recommend Engineering programs of Kuwait University to a friend or a relative?
   ☐ Strongly recommend   ☐ Recommend   ☐ Don't recommend

3. The performance of Kuwait University engineering graduates at your workplace is comparable to their peers from other institutions.
   ☐ Strongly agree   ☐ Agree   ☐ Neutral   ☐ Disagree   ☐ Strongly Disagree

4. Taking the engineering training course during your studies at Kuwait University prepares you well in getting or succeeding in your first job.
   ☐ Strongly agree   ☐ Agree   ☐ Neutral   ☐ Disagree   ☐ Strongly Disagree

5. In light of your professional experience, please list three of the most useful technical knowledge or professional skills that you acquired during your studies at Kuwait University.
   _____
   _____
   _____

6. Please list three technical knowledge or professional skills that you think should be taught in the engineering program that you attended at Kuwait University.
   _____
   _____
   _____

7. What improvements to facilities (classrooms, laboratories, library, computing resources, recreation etc.), faculty (science, social science, and engineering) or delivery mode (hands-on tutorials, video lectures, online lecturing etc.) are likely to enhance learning at Kuwait University?
   _____
   _____
   _____