## Continuous Improvement

The Program learning outcomes assessment process as well as the Program learning outcomes direct and indirect assessment results for the previous academic year. These results, along with other information gathered, are used as input to continuously improve the CS program as well as the program assessment process. All of the information gathered and used to continuously improve the program includes:

* The direct and indirect assessment results for Program Learning Outcomes (a) through (g)/ (1) through (7) as described in the previous section.
* Department Meetings
* Alumni Survey
* Employer Survey
* Advisory Board

This input was gathered and considered when seeking ways to improve the program or the assessment process.

## The direct and indirect assessment results for SOs

The following table summarizes the PLOs suggested improvement areas based on the instructors’ actions/suggestions for improvement, focus groups feedback, and department actions. It also shows the PLOs attainment level based on the direct assessment methods (We assumed that the attainment level of the indirect assessment methods was all satisfactory).

|  |  |
| --- | --- |
| Student Outcomes (SOs) | **Fall 2024-2025** |
| Attainment | Improvement Action(s) |
| PLO 1(a) |  |  |
| PLO 2(b) |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  |  |
| PLO 3(c) |  |  |  |  |
| PLO 4(d) |  |  |  |  |
| PLO 5(e) |  |  |  |  |
| PLO 6(f) |  |  |  |  |

## Alumni Survey

Alumni will be surveyed to assess the Program Education Objectives (PEO) and the outcomes of the CS program. A google form will be disseminated and all graduates have been accepted to fill-in the form. The surveyed graduates will be Females and Males. The age of the surveyed alumni is usually ranging from 23 to 35 years old. All alumni who will be employed will work in IT related jobs as shown in Figure 4.24 which combines a few charts together from the CS program.

Figure 4.24: Some Charts of the Alumni survey

Table 4.23 below shows the reflections from alumni to various Program Education Objectives. In general, the feedback was satisfactory. On the other hand, the CS program focused on addressing the low feedback from the first question. As a response, CS program changed the methodology of evaluating the graduation project to encourage students engaging to solve real-time problems and focusing on entrepreneurship instead of traditional problems.

Table 4.23: Alumni Survey (Program Education Objectives Attainment Analysis)

|  |  |  |
| --- | --- | --- |
|  | Agree or Strongly Agree | Neutral or disagree |
| Meet or exceed expectations by deploying principles learned from CS program courses and the theories of programming languages. | 75% | 25% |
| Utilize knowledge acquired in the CS program such as problem-solving techniques, critical | 87% | 13% |

|  |  |  |
| --- | --- | --- |
| thinking skills, and self-learning to makeinformed, responsible, and risk-aware decisions |  |  |
| Deploy new technologies, tools, paradigms, and design methodologies to make informed, responsible, and risk-aware decisions | 75% | 25% |
| Exhibit the ability to lead change and work as part of a team. | 75% | 25% |
| Pursue postgraduate studies and succeed in academic and research careers | 62% | 38% |
| Employ professional and educational skills taught in the CIS program to make a positive impact on society. | 75% | 25% |

Table 4.24 Alumni Survey (Curriculum Evaluation)

|  |  |  |
| --- | --- | --- |
|  | Agree or Strongly Agree | Neutral or disagree |
| General education: humanities / social sciences/Islamic Culture | 75% | 25% |
| Foreign language skills – English | 62% | 38% |
| Mathematics and Statistics | 87% | 13% |
| Core Computer Science and Information Technology | 87% | 13% |
| Core Computer Information Systems Specialized Topics | 75% | 25% |
| Graduation Project and Lab Courses | 87% | 13% |

Table 4.24 shows the feedback on curriculum, in which we believe that it is satisfactory. As a response to the first and fifth question, which receives the lowest grades, the CS program will consider changing the courses of General Education section to more connect to IT knowledge areas and to focus more on new core trending CS topics. These changes will take place in the next academic year.

Table 4.25 Alumni Survey (Overall Evaluation)

|  |  |  |
| --- | --- | --- |
|  | Agree or Strongly Agree | Neutral or disagree |
| The quality of teaching and the quality of faculty members was satisfying | 100% | 0 |
| The advising and mentoring were adequate | 87% | 13% |
| The facilities (Classrooms, labs, Hardware, Software) available were to my satisfaction | 75% | 25% |
| The quality of services offered by the administrative and managerial personnel was to my satisfaction | 87% | 13% |

|  |  |  |
| --- | --- | --- |
| The program prepared me well for my professional career - If Applicable | 75% | 25% |
| The program prepared me well to pursue graduate studies - If Applicable | 62% | 38% |
| Overall, I am satisfied with the education I received in the program | 75% | 25% |

Table 4.25 shows the overall evaluation; so far it is satisfactory, all respondents agreed to strongly agree on the overall of the program. The lowest grad was for if the program prepares you for to pursue higher graduate studies.

## Employer Survey

Two employers were accepting to fill-in the survey form. These employers hired 4 graduates from CS department at Yarmouk University. All surveyed employers relying in Amman (the capital city) and in IT development projects. As shown in Tables 26 and 4.27, the feedback from employers was satisfactory

Table 4.26: Employers Survey (Personality)

|  |  |  |
| --- | --- | --- |
|  | **Agree or Strongly Agree** | **Neutral or disagree** |
| Enthusiasm and interest in work | 100% | 0 |
| Quality of work output | 100% | 0 |
| Taking initiative to complete tasks | 100% | 0 |
| Ability to work independently | 100% | 0 |
| Maintaining effective relations with co-workers | 50% | 50% |
| Attendance | 100% | 0 |
| Punctuality | 100% | 0 |

Table 4.27: Employers Survey (Student Outcomes)

|  |  |  |
| --- | --- | --- |
|  | **Agree or Strongly****Agree** | **Neutral or Disagree** |
| Demonstrates analytical problem-solving skills | 100% | 0 |
| Communicates clearly in written form | 100% | 0 |
| Communicates clearly verbally | 100% | 0 |
| Demonstrates leadership and ability to work in a team | 100% | 0 |
| Demonstrates skills for lifelong learning | 100% | 0 |
| Demonstrates necessary technical knowledge | 100% | 0 |
| Demonstrates necessary computer skills | 100% | 0 |
| Demonstrates ability to design and implement systems | 100% | 0 |

## Advisory Board Meeting

The advisory board met formally in the Spring 2022. A total of 6 members participated and they were asked whether they agreed with the Program Educational Objectives via Zoom meeting. There were no issues or deficiencies identified. According to these findings, the PEOs are acceptable to the advisory board and do not require modification. The advisory boards were also asked to comment on the appropriateness of the curriculum to the PLOs and PEOs of the program. This is summary of their recommendations:

* + - Mission and vision are good
		- The syllabus is good covering most topics needed for CS
		- Communication skills should be covered in more detail and on more courses
		- Force the student to do his/her graduation project with the latest programming language being used in the market that semester.
		- Focus on soft skills, most students do not know how to present themselves at the market.

Thus, minor curriculum improvement is needed. In order to meet this demand, the IS department council agreed on those changes.

## Department Meetings

On Fall 2024, the IT faculty discussed and formally adopted the current Program PEOs. Since then, these PEOs have been assessed on a regular basis. Alumni, advisory board meetings, and faculty have all agreed that PEOs are appropriate and consistent with the missions of the YU, and that they serve all constituents. As a result, the PEOs have remained unchanged since their formal adoption in 2024.