



Annual Program Report 2020/2021

Northern Border University

Annual Program Report

Program Name:	Computer Science
Qualification Level:	Bachelor
Department:	Computer Science
College:	College of Science
Institution:	Northern Border University
Academic Year:	2020/2021
Main Location:	College of Science – Arar
Branches offering the Program:	NA

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A. Implementation of Previous Action Plan

Considering the recommendations of previous year annual report, list the planned actions and their status.

Planned Actions	Responsibility of Action	Planned Completion Date	Level of Completion		If Not Completed	
			Completed	Not Completed	Reasons	Proposed Actions
Formally appointing coordinators for each subject	Program Head	15/09/2020	√			
Standardization of content in all sections where the program is taught	Course coordinators	15/09/2020	√			
Organizing skill development workshop for the faculty regarding the measurement of learning outcomes; assessment methods and course portfolio	Quality Assurance Committee	Sep 2021	√			
Forming different department committees like Curriculum committee to achieve the program tasks.	Program Head	30/09/2020	√			
Improve the courses' specifications	Course coordinators	30/12/2020	√			
Develop a students' project guideline	Projects' Committee	30/12/2020	√			
Get the staff trained for quality and accreditation aspect to improve the level of work in the department	Development deanship	During the year	√			
Establish a student body like club or association	Student affair committee	30/12/2020	√			
Increase the number of assistant professor staff female in girl section.	Department Chairman and Recruitment Committee	30/12/2020		√		
Prepare for NCAAA accreditation	Quality Committee	30/05/2021	√			

B. Program Statistics

1. Students Statistics (in the year concerned)

No.		Male	Female	Results
1	Number of students who started the program	43	101	144
2	Number of students who graduated	39	52	91
3	Number of students who completed major tracks within the program (if applicable)	NA	NA	NA
4	a. Number of students who completed the program in the minimal time	26	44	70
5	a. Percentage of students who completed the program in the minimal time (Completion rate)	66.7%	84.6%	77%

6	Number of students who completed an intermediate award specified as an early exit point (if any)	NA	NA	NA
7	Percentage of students who completed an intermediate award specified as an early exit point (if any)	NA	NA	NA
Comment on any special or unusual factors that might have affected the completion rates: - The Percentage of students who completed the program in the minimal time is satisfied. It is recommended to investigate the reasons faced the student who couldn't complete in time.				

2 . Cohort Analysis of Current Graduate Batch

Student Categories		Total cohort enrollment	Withdrawn	Retained till year end	Not passed	Passed	Passing rate
Years							
Three Years Ago (2017/2018)	M	36	0	36	3	33	92%
	F	51	0	51	2	49	96%
	Total	87	0	87	5	82	94%
Two Years Ago (2018/2019)	M	33	2	31	2	29	94%
	F	49	0	49	0	49	100%
	Total	82	2	80	2	78	98%
Last Year (2019/2020)	M	29	1	28	0	28	100%
	F	49	2	47	0	47	100%
	Total	78	3	75	0	75	100%
Current Year (2020/2021)	M	28	2	26	0	26	100%
	F	47	2	45	1	44	98%
	Total	75	4	71	1	70	99%
Comments on the results: - The enrolment of student in the program is increasing every year, this required more staff, class rooms and labs.							

3. Analysis of Program Statistics

(including strengths, areas for improvement, and priorities for improvement)

Strengths : <ul style="list-style-type: none"> Learning Resources and Facilities are available and variate like: <ul style="list-style-type: none"> Laboratory , class room, e-learning, The instructors were available to assist during office hours and in every free time
Areas for Improvement: <ul style="list-style-type: none"> Improve the program plan Improve the courses specification and update the references Further improvement of the academic supervision
Priorities for Improvement: <ul style="list-style-type: none"> Get the program accreditation like APET or NCAAA

C. Program Learning Outcomes Assessment

1. Program Learning Outcomes Assessment Results.

* Include the results of measured learning outcomes during the year of the report according to the program plan for measuring learning outcomes

** Attach a separate report on the program learning outcomes assessment results for male and female sections and for each branch (if any)

#	Program Learning Outcomes	Assessment Methods (Direct and Indirect)		Performance Target	Results
Knowledge					
		Direct	Indirect	Direct Assessments	
k1	Demonstrate knowledge of mathematical, statistical, and relevant sciences and the ability to use them in the field of Computing.	<ol style="list-style-type: none"> 1. Mid-term exams. 2. Final-exams. 3. Quizzes. 4. Oral Exams. 5. Class discussion 6. Exit exams. 	<ol style="list-style-type: none"> 1. Program evaluation surveys for graduates. 2. Student's course evaluation survey. 5. statistical data . 	70%	97.3%
K2	Demonstrate detailed knowledge and understanding of the core areas of Computing concepts and principles to different Computing functions and the underlying principles and theories associated with it.			70%	91.6%
K3	Demonstrate technical, analytical, and creative skills in the Computing discipline that are fundamental to problem solving and decision-making within a variety of organizational settings and real-world scenario.			70%	96.3%
S1	Apply computer science theory and software development fundamentals to produce computing-based solutions.	<ol style="list-style-type: none"> 1. Mini-Projects. 2. Assignments. 3. Teamworks. 4. Presentations. 5. Field Training reports. 6. Graduation Projects. 7. practical exams. 	<ol style="list-style-type: none"> 1. Program evaluation surveys for graduates. 2. Student's course evaluation survey. 3. Academic advising feedback. 4. statistical data 5. group debates. 6. Student participations in active learning. 	70%	
S2	Solve relatively complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions.			70%	
S3	Design, implement, and evaluate a computing-based solution to meet a given set of computing			70%	

	requirements in the context of the program's discipline.				
Competence					
C1	Communicate effectively in a variety of professional contexts.	1. Mini-Projects. 2. Assignments. 3. Graduation Projects. 4. Field Training reports. 5. Teamworks. 7. practical exams.	1. Program evaluation surveys for graduates. 2. Student's course evaluation survey. 3. Academic advising feedback. 4. Graduate program evaluation surveys. 5. statistical data 6. Student participations in active learning. 8. Field Training feedback.	70%	
C2	Function effectively as a member or leader of a team engaged in activities appropriate to the program's discipline..			70%	
C3	Show professional responsibilities and make informed judgments in computing practice based on legal and ethical principles.			70%	

Comments on the Program Learning Outcome Assessment results.

The Computer Science program always strives to harmonize its program learning outcomes, Assessment Methods, and teaching strategies.

We created a direct assessment plan as well as an indirect assessment plan to assess the program's learning outcomes.

- **According to direct assessment plan:**

The program head has appointed a coordinator for each course, who oversees the process of assessment of the course's learning outcomes in collaboration with the rest of the faculty members who teach the course.

The course coordinator assigns a proportion of the 100 course marks to each of the course's learning outcomes, dispersed across all tests and class activities, in agreement with the rest of the colleagues as the following CLO's matrix (figure x).

Assessment Methods	Course Learning Outcomes (CLOs) مخرجات تعلم المقرر									Total
	1. Knowledge المعرفة			2. Skills المهارات			3. Competence الكفاءات			
	K1	K2	K3	S1	S2	S3	C1	C2	C3	
Quiz	5									5
Assignments				5						5
Presentation										0
Participation	10						10			20
Project										0
Reports										0
Mid Theory	8			12						20
Mid Practical				10						10
Final Theory	10			20						30
Final Practical				10						10
Total	33	0	0	47	0	0	10	0	0	100

(Figure x)

After unifying the mid and final exams between the various sections of the program: male section, and female section, each test question was linked to one of the course learning outcomes through a test matrix.

The process of the program's learning outcome assessment began at the level of each section. The course instructor evaluates students' educational attainment through class activities, practical exams, and assignments. The second level involves assessing the course's learning outcomes at the level of each course at the end of the semester, when each student's grades have been collected. The course learning outcomes measurement matrix is used to assess the course's learning outcomes as a final result.

- **According to indirect assessment**

Students participate in the program with their views through a series of questionnaires, from assignment to the program until graduation from it.

A department statistics committee has been established responsible for :

- Measurement and reporting of Program learning outcomes.
- Measuring and generating performance indicator reports.
- publishing, and analyzing questionnaires.

-
- **The Action plan for the next academic year 2021-2022 will be :**
Improving the indirect assessment plan and getting the indirect performance results.

2. Analysis of Program Learning Outcomes Assessment

(including strengths, Areas for Improvement:, and priorities for improvement)

Strengths :

Student`s evaluation surveys present effective measuring tool for PLOs

Areas for Improvement:

The program Quality assurance committee must focus more on Program Key performance indicators for each program learning outcome.

Priorities for Improvement:

Creating sub- Quality assurance committee responsible of PLOs assessment plan

D. Summary of Course Reports

1. Teaching of Planned Courses / Units

List the courses / units that were planned and not taught during the academic year, indicating the reasons and compensating actions.

Course	Units/Topics	Reasons	Compensating Actions
First Semester			
All the courses were taught according to the plan			
Second Semester			
All the courses were taught according to the plan			

2. Courses with Variations

List courses with marked variations in results that are stated in the course reports, including: (completion rate, grade distribution, student results, etc.), and giving reasons for these variations and actions taken for improvement.

Code& Course Name	variation	Reasons for variation	Actions taken
First Semester			
All results are satisfied			
Second Semester			
All results are satisfied			

a. Analyze the completion rates, grade distributions by section

Tables 1,2,3,4,5,6 show that most students have passed their courses registered at the end of each semester for the academic year 2020/2021 in different sections offering the Program.

All the results are normally distributed except the courses shown in the above (Courses with Variations)

Table 1 : Grade distribution in First Semester 2020/2021 (Male Section)

Course. no	A	A+	B	B+	C	C+	D	D	DN	F	T.N of student	T.N of Passing	AVG
1105486	0	0	0	0	9	2	1	5	0	0	17	17	100.
1105281	0	1	2	1	2	0	2	4	0	3	15	12	80.00
1105232	0	0	2	0	5	5	6	4	0	1	23	22	95.65
1105481	1	0	2	2	5	7	6	7	1	0	31	30	96.77
1105315	3	0	1	6	3	2	1	3	0	0	19	19	100.
1105313	4	1	1	4	0	1	0	0	2	0	13	11	84.62
1105462	2	0	4	1	8	10	2	5	0	0	32	32	100.
1105463	0	0	0	1	1	0	7	0	0	0	9	9	100.
1105314	3	0	2	3	1	3	0	0	1	0	13	12	92.31
1105491	0	1	0	0	0	0	0	0	0	0	1	1	100.

Course. no	A	A+	B	B+	C	C+	D	D	DN	F	T.N of student	T.N of Passing	AVG
1105221	1	3	1	2	2	2	5	3	0	5	24	19	79.17
1105222	0	0	2	2	6	1	3	7	0	1	22	21	95.45
1105212	3	1	4	2	5	4	1	1	0	1	22	21	95.45
1105488	2	1	2	0	1	2	0	0	3	0	11	8	72.73
1105333	0	0	1	0	0	0	0	1	1	0	3	2	66.67
1105351	1	0	6	2	6	1	0	2	0	1	19	18	94.74
1105231	0	0	1	0	3	1	1	1	1	15	23	7	30.43
1105371	0	0	1	0	0	0	1	0	0	1	3	2	66.67
1105472	0	1	7	5	10	8	1	4	0	0	36	36	100.
1105492	3	0	3	0	0	0	0	0	0	0	6	6	100.
1105323	0	1	2	1	1	2	0	2	2	0	11	9	81.82
1105211	1	2	0	2	3	1	5	0	0	11	25	14	56.00
1105101	3	3	10	7	4	4	10	8	10	18	77	49	63.64
1105102	1	1	3	2	2	5	0	0	0	3	17	14	82.35
1105102	1	53	0	0	0	0	0	0	0	1	55	54	98.18
1105102	3	4	2	3	2	1	0	0	0	2	17	15	88.24
1105102	7	30	1	1	1	1	1	0	1	10	53	42	79.25
1105361	0	0	1	0	1	2	1	0	1	0	6	5	83.33
1105473	0	0	1	0	1	1	0	1	0	0	4	4	100.
1105342	1	0	1	0	1	1	3	4	1	0	12	11	91.67
1105443	1	0	2	2	5	7	5	10	0	1	33	32	96.97
1105241	1	0	5	2	7	6	0	0	1	1	23	21	91.30
Total	42	103	70	51	95	80	62	72	25	75	675	575	85.19
ratio	6.22	15.2 6	10.3 7	7.56 7	14.0 7	11.8 5	9.19	10.6 7	4.35	11.1 1			

Table 2: Grade distribution in First Semester 2020/2021 (Female Section 1)

Course. no	A	A+	B	B+	C	C+	D	D	D N	F	T.N of student	N of Passing	Avg
1105486	2	5	5	1	1	6	3	3	0	2	28	26	92.86
1105281	1	3	4	2	4	6	3	2	3	4	32	25	78.13
1105232	9	7	9	7	7	4	8	6	3	0	60	57	95.00
1105481	1	0	0	2	1	4	4	3	0	0	15	15	100.00
1105315	0	2	7	3	4	2	6	4	1	2	31	28	90.32
1105313	0	2	2	2	5	2	1	3	0	0	17	17	100.00
1105462	1	0	1	0	0	0	7	1	2	2	14	10	71.43
1105463	3	4	1	3	2	0	5	3	0	0	21	21	100.00
1105314	2	1	3	4	0	2	0	2	0	0	14	14	100.00
1105221	1	1	0	3	0	3	7	3	3	11	32	18	56.25
1105222	12	4	6	2	9	9	7	8	1	2	60	57	95.00
1105212	5	8	5	3	7	8	6	9	1	2	54	51	94.44
1105488	0	4	3	3	0	0	3	0	0	0	13	13	100.00
1105333	3	1	2	3	3	2	0	0	0	0	14	14	100.00
1105351	2	2	5	3	2	2	6	5	0	0	27	27	100.00
1105231	1	3	4	0	0	4	5	5	3	8	33	22	66.67

Course no	A	A+	B	B+	C	C+	D	D	D N	F	T.N of student	N of Passing	Avg
1105371	3	0	3	1	2	1	4	2	0	4	20	16	80.00
1105472	2	2	1	1	5	5	2	1	0	0	19	19	100.00
1105492	1	3	7	3	2	5	0	0	0		21	21	100.00
1105323	1	0	5	2	4	5	2	4	0	0	23	23	100.00
1105211	1	0	4	0	1	3	11	2	3	12	37	22	59.46
1105101	6	6	18	13	24	16	21	20	3	9	136	124	91.18
1105102	3	7	3	2	0	2	1	0	0	0	18	18	100.00
1105102	0	55	0	0	0	0	0	0	0	0	55	55	100.00
1105102	2	4	3	3	5	1	0	2	0	0	20	20	100.00
1105102	9	56	3	3	0	3	0	0	1	1	76	74	97.37
1105102	3	2	2	2	2	3	2	0	1	0	17	16	94.12
1105361	4	1	4	0	1	5	6	4	0	3	28	25	89.29
1105473	1	2	6	5	3	3	0	1	0	0	21	21	100.00
1105342	0	1	1	4	3	4	1	4	0	1	19	18	94.74
1105443	1	0	4	1	7	0	8	2	0	1	24	23	95.83
1105241	2	2	5	2	6	6	17	6	6	5	57.00	46	80.70
Total	82	188	126	83	110	116	146	105	31	69	1056.00	956	
Ratio	7.7 7	17.8 0	11.9 3	7.8 6	10.4 2	10.9 8	13.8 3	9.9 4	2.9 4	6.5 3			

Table 3 : Grade distribution in First Semester 2020/2021 (Female Section 2)

Courses.no	A+	A	B+	B	C+	C	D+	D	F	T.N of Passing	T.N of Student	AVG
1105-101				5	4	4	4			17	17	100.00
1105-212			4	6	1			1		12	12	100.00
1105-222		1		4	2	1	2	2		12	12	100.00
1105-232	1	7	3	1						12	12	100.00
1105-241	8	3	1							12	12	100.00
1105-315	2	4	1	3			1			11	11	100.00
1105-351	3	2	2	1	3					11	11	100.00
1105-361		2	1		3	2	2	1		11	11	100.00
1105-371	5	2	1	1	1	1				11	11	100.00
1105-443	3	1	2	2	1	1	1			11	11	100.00
1105-462	2	1	1	2	4			1		11	11	100.00
1105-463							2	2		4	4	100.00
1105-472		1								1	1	100.00
1105-473		1			1	1	1			4	4	100.00
1105-481			1					1		2	2	100.00
1105-486				1				2		3	3	100.00
1105-487		1						2		3	3	100.00
1105-491		1					2			3	3	100.00
1105-492				1				2		3	3	100.00
Total	24	27	17	26	19	10	15	14		154	154	

Courses.no	A+	A	B+	B	C+	C	D+	D	F	T.N of Passing	T.N of Student	AVG
Ratio	15.5 8	0.18	11.6 9	16.8 8	12.9 9	6.49	9.74	9.0				

Table 4 : Grade distribution in Second Semester 2020/2021(Male Section)

Course.no	A	A+	B	B+	C	C+	D	D	DN	F	T.N of Student	T.N of Passing	Avg
1105486	15	6	2	5	0	0	1	0	0	0	29	29	100.00
1105281	22	11	6	5	1	0	0	1	1	0	47	46	97.87
1105232	3	2	1	1	0	0	0	0	0	0	7	7	100.00
1105481	1	4	1	4	1	0	0	0	0	0	11	11	100.00
1105315	1	0	4	6	0	0	0	0	0	0	11	11	100.00
1105313	10	5	1	4	0	1	0	0	2	0	23	21	91.30
1105462	0	0	0	2	0	1	0	0	0	1	4	3	75.00
1105463	5	8	9	8	2	1	0	0	0	0	33	33	100.00
1105314	0	0	3	1	5	3	3	5	2	1	23	20	86.96
1105491	0	4	0	0	0	0	0	0	0	0	4	4	100.00
1105221	3	1	6	5	11	1	7	5	1	1	41	39	95.12
1105222	4	1	4	1	3	3	1	1	0	0	18	18	100.00
1105212	6	7	0	2	0	0	0	0	0	0	15	15	100.00
1105488	4	2	0	1	0	0	0	0	0	0	7	7	100.00
1105487	1	0	2	1	4	2	2	2	0	0	14	14	100.00
1105333	8	2	6	9	1	0	0	1	1	0	28	27	96.43
1105351	4	0	3	3	1	2	0	0	0	1	14	13	92.86
1105231	8	1	11	3	7	10	1	5	1	6	53	46	86.79
1105371	1	0	4	3	0	1	0	0	0	1	10	9	90.00
1105472	0	0	2	1	0	3	0	0	0	0	6	6	100.00
1105492	7	3	1	6	4	2	0	2	0	0	25	25	100.00
1105323	1	0	5	8	4	1	1	1	2	0	23	21	91.30
1105211	1	2	2	2	3	2	11	1	2	21	47	24	51.06
1105101	19	8	17	8	6	9	14	6	2	24	113	87	76.99
1105361	9	10	1	4	0	0	0	0	0	0	24	24	100.00
1105473	9	6	4	6	4	7	0	0	0	0	36	36	100.00
1105342	0	0	8	3	2	7	1	0	1	0	22	21	95.45
1105241	6	2	2	4	0	0	0	0	1	0	15	14	93.33
Total	148	85	105	106	59	56	42	30	16	56	703	631	
Ratio	21. 05	12. 09	14. 94	15. 08	8.3 9	7.9 7	5.9 7	4.2 7	2.2 8	7.9 7			

Table 5: Grade distribution in Second Semester 2020/2021 (Female Section 1)

Course. no	A	A+	B	B+	C	C+	D	D	DN	F	T.N of Student	T.N of Passing	Avg
1105486	4	21	1	2	0	2	0	0	0	0	30	30	100.00
1105281	11	30	5	12	0	1	0	0	6	1	66	59	89.39
1105232	9	6	2	0	2	5	1	0	0	1	26	25	96.15

Course no	A	A+	B	B+	C	C+	D	D	DN	F	T.N of Student	T.N of Passing	Avg
1105481	20	3	5	2	0	0	0	1	0	0	31	31	100.00
1105315	4	0	5	6	1	4	0	0	0	0	20	20	100.00
1105313	5	4	12	13	4	12	0	1	0	0	51	51	100.00
1105462	4	3	8	8	3	4	1	2	0	0	33	33	100.00
1105463	0	0	2	1	3	2	2	5	0	0	15	15	100.00
1105314	11	0	8	9	7	6	1	2	1	0	45	44	97.78
1105491	2	0	0	0	0	0	0	0	0	0	2	2	100.00
1105221	18	11	7	15	5	6	1	3	6	0	72	66	91.67
1105222	5	0	9	2	1	4	0	0	0	0	21	21	100.00
1105212	4	1	3	2	2	7	1	5	0	1	26	25	96.15
1105487	0	0	4	1	0	2	0	0	1	0	8	7	87.50
1105333	9	11	2	9	2	0	0	2	0	0	35	35	100.00
1105351	7	1	2	4	1	1	0	1	0	0	17	17	100.00
1105231	10	15	4	14	2	9	3	3	6	2	68	60	88.24
1105371	3	0	9	10	1	2	0	0	0	0	25	25	100.00
1105472	8	5	1	2	0	0	0	0	0	0	16	16	100.00
1105492	1	3	5	1	2	0	0	0	0	0	12	12	100.00
1105323	3	2	14	11	7	4	2	10	0	3	56	53	94.64
1105211	2	0	8	7	12	6	15	9	7	8	74	59	79.73
1105101	60	39	22	41	6	11	3	1	3	3	189	183	96.83
1105361	7	2	6	5	2	2	0	1	0	0	25	25	100.00
1105473	1	1	2	1	3	3	0	5	0	0	16	16	100.00
1105342	3	3	2	0	9	7	15	7	0	6	52	46	88.46
1105443	2	2	4	5	3	3	0	1	0	0	20	20	100.00
1105241	1	1	7	4	5	9	2	2	0	0	31	31	100.00
Total	214	164	159	187	83	112	47	61	30	25	1082	1027	
Ratio	19.78	15.16	14.70	17.28	7.67	10.35	4.34	5.64	2.77	2.31			

Table 6 : Grade distribution in Second Semester 2020/2021 (Female Section 2)

Course no	A	A+	B	B+	C	C+	D	D+	F	T.N of Student	T.N of Passing	Avg
1105-101	9	22	3	6	1	1	1	1		44	44	100
1105-211	7	13		2						22	22	100
1105-221	10	12								22	22	100
1105-231	9	9		3		1				22	22	100
1105-281	3		10	8		1				22	22	100
1105-313	5	6		1		1				13	13	100
1105-314	2	4		6			1			13	13	100
1105-323	1	10		1		1				13	13	100
1105-333	1	9		2		1				13	13	100
1105-342	1	9		2	1					13	13	100
1105-463	5	3		3						11	11	100
1105-472	5	2	1	2		1				11	11	100
1105-473		11								11	11	100

Course no	A	A+	B	B+	C	C+	D	D+	F	T.N of Student	T.N of Passing	Avg
1105-483	3	4		4						11	11	100
1105-486	2	9								11	11	100
1105-487		8		3						11	11	100
1105-491	2	3	1	3		2				11	11	100
1105-492	3	3		2		3				11	11	100
Grand Total	68	137	15	48	2	12	2	1		285	285	
Ratio	0.18	15.58	16.88	11.69	6.49	12.99	9.09	9.74				

b. Analyze the completion rates, grade distributions For computer sciences program.

Table 7 shows the distribution of the degrees obtained by students and also shows the number of students withdrawing from courses for the first semester 2020-2021. The completion rate of students is 100%.

Table 7: Grade distribution in First Semester 2020/2021 (Computer sciences program)

Section	A	A+	B	B+	C	C+	D	D+	DN	F
Male section	42	103	70	51	95	80	62	72	25	75
Female Section 1	82	188	126	83	110	116	146	105	31	69
Female Section 1	24	27	18	26	20	10	15	14	0	0
Total	148	318	214	160	225	206	223	191	56	144
Ratio	7.85	16.87	11.35	8.49	11.94	10.93	11.83	10.13	2.97	7.64

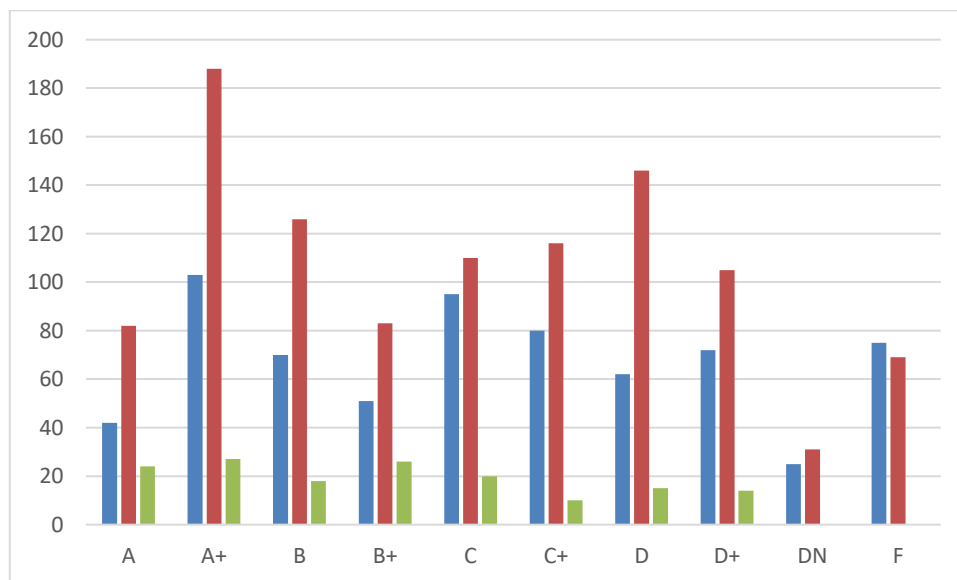


Figure1. Grade distribution in First Semester 2020/2021 (Computer sciences program)

Table 8 shows the distribution of the degrees obtained by students and also shows the number of students withdrawing from courses for the first semester 2020/2021.

The completion rate of students is 97.77% .

Table 8: Grade distribution in Second Semester 2020/2021 (Computer sciences program)

Section	A	A+	B	B+	C	C+	D	D+	DN	F
Male section	148	85	105	106	59	56	42	30	16	56
Female Section 1	214	164	159	187	83	112	47	61	30	25
Female Section 1	137	68	48	15	12	2	1	2	0	0
Total	499	317	312	308	154	170	90	93	46	81
Ratio	24.11	15.31	15.07	14.88	7.44	8.21	4.35	4.49	2.22	3.91

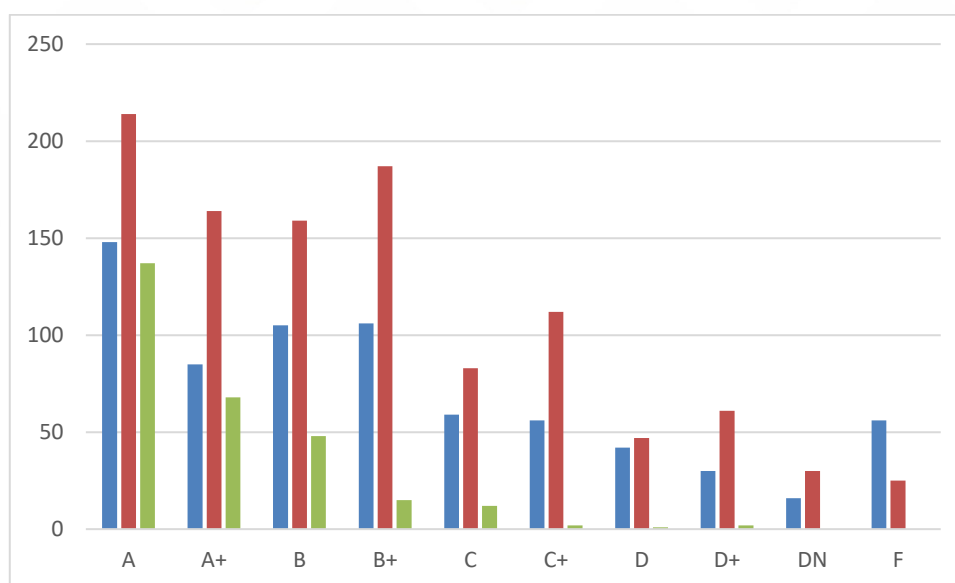


Figure2. Grade distribution in Second Semester 2020/2021 (Computer sciences program)

Table 7 and 8 above show grade distribution per semester for the last academic year for all courses.

According to the grade distribution for First Semester academic year 1441-1442, showed in table 7 : 1885 students are enrolled in all courses 16.87 % form student get A+, 7.85% get A , 8.49% get B+, 11.35% get B , 10.93% get C+, 11.80 get C , 11.13 get D+ , 11.83% get D , 7.64% Fail and 2.97% Denial.

Table 8 shows the grade distribution for second Semester academic year 1441-1442: 2070 students are enrolled in all courses 15.31% form student get A+, 24.11% get A , 14.88% get B+, 15.07% get B , 8.21% get C+, 7.44% get C , 4.49% get D+ , 4.35% get D , 3.91% Fail and 2.22% Denial.

3. Result Analysis of Course Reports

(including strengths, Areas for Improvement:, and priorities for improvement)

Strengths :
<ul style="list-style-type: none"> - -The policies are focused according to the learning objective. - -The vision, mission and goals are aligned to the learning objectives.
Areas for Improvement:
<ul style="list-style-type: none"> - Unifying the evaluation and assessment in all sections. - Elective courses need to be updated periodically. - Enhancing students ' programming skills. - Enhance students ' English writing and speaking skills.
Priorities for Improvement:
<ul style="list-style-type: none"> - Update the content of some courses - Reduced lab hours from two hours and forty minutes to two hours - Unifying the subject material.

E. Program Activities

1. Student Counseling and Support

Activities Implemented	Brief Description *
Follow and encourage the students to improve their academic level	Monthly meeting between academic supervisor and their students
Academic member has office hours reserved to help the students	Every academic member has four office hours reserved for this purpose in his time table
Lectures to improve student knowledge and skills	Department held many on-line lectures to improve student knowledge and skills
Other activities	<ul style="list-style-type: none"> – Workshop entitled: "Technology Ethics". As part of Google's Digital Days – Enriching knowledge through posters for software engineering and computer human interaction with computers courses
Comment on Student Counseling and Support **	
<ul style="list-style-type: none"> - The students counseling and support is considered as a strength point in the faculty specially in computer science program 	

* including action time, number of participants, results and any other statistics.

** including performance evaluation on these activities

2. Professional Development Activities for Faculty and Other Staff

Activities Implemented	Brief Description *
Academic counseling workshop	At the beginning of every academic year a professional member of academic staff gives a workshop cover a principals of academic counseling for the staff
Saudi Digital Library (SDL electronic training course	The SDL provide continuously electronic training course available for academic staff.
Periodic seminar	In the first semester monthly one of the program staff gives a seminar about a specific topic
Conferences and workshop	the program staff has the possibility to participate in the national or international conferences and workshop during the academic year
Comment on Professional Development Activities for Faculty and Other Staff **	
These activities are sufficient and can improve the staff skills	

* including action time, number of participants, results and any other statistics.

** including performance evaluation on these activities

Number of participants (1442)

Location	No. of publications	No. of conferences and meeting	No. of participants
In the university			
In the Kingdom	7	10	7
Aboard	25	6	14
Total	32	16	21

Seminar

Participant	date	Title
Asma Ahmed Ismail Al Hashmi	1 st Term	Five Principles for Meaningful Online Learning
Sultan Munadi Al-Anzi	2 nd Term	Robots, artificial intelligence and its applications
Asma Ahmed Ismail Al Hashmi Ashraf Mohammed bin Milad Abdul Basit Abdullah Darem Ali Ibrahim Ali Al-Abed	2 nd Term	Prepare to visit the academic accreditation committees

List of staff who participated in Seminars or workshops

1. Cyber Security Risks and Prevention Methods (Workshop)
2. Basics of Cyber Security and Methods of Prevention and Penetration (Workshop)
3. Digital transformation of faculty members at the university (training course)
4. Digital transformation of university employees (training course)
5. Managing a research team (training course)
6. Organizing conferences (training course)
7. Time and meeting management (training course)
8. Use of technology in teaching (training course)
9. Strategic Planning (training course)
10. Credit Hours System (Training Course)
11. Characteristics of graduates of academic programs (design, measurement) (training course)
12. Academic advising (models and indicators) (workshop)
13. (Scientific conference) Track Chair at Information Security track at "The first international conference of advanced computing and informatics" Morocco, 2020.
14. (Scientific Conference) The First International Conference on Artificial Intelligence & Data Analytics (CAIDA 2021)
15. A self-study course for academic programs (training course)
16. Five Principles for Meaningful Online Learning (seminar)
17. Report and description of the "course, program, field experience" (workshop)
18. Preparing to visit the academic accreditation committees (seminar)
19. Duties of the academic advisor (training course)
20. Electronic guidance and the use of the student's self-service (Multaqa)
21. A self-study course for academic programs (training course)
22. Website development (training course)
23. Report and description of the "course, program, field experience" (workshop).
24. Preparing to visit the academic accreditation committees (seminar)
25. Duties of the academic advisor (training course)
26. " (Workshop) The Journal Selection Webinar / Web of Science Group
27. (Training Course) CCNA Cybersecurity Operations
28. (Training Course) Cisco DevNet Associate
29. The ninth measurement of the electronic transactions program "Yesser" (training course)
30. Basics of Computer Networks (training course)

31. Introduction to Cybersecurity (Training Course)
32. A training program provided by Microsoft (training course)
33. Characteristics of graduates of academic programs (workshop)
34. Electronic guidance and the use of the student's self-service (Multaq)
35. (Scientific conference) Track Chair at Information Security track at "The first international conference of advanced computing and informatics" Morocco, 2020.
36. (Scientific conference) Session Chair at Information Security track at "The first international conference of advanced computing and informatics" Morocco, 2020.
37. The first scientific conference for heads and supervisors of scientific departments - King Abdulaziz University (a scientific conference)
38. Report and description of the "course, program, field experience" (workshop)
39. Preparing to visit the academic accreditation committees (seminar)
40. Duties of the academic advisor (training course)
41. (Scientific Conference) The First International Conference on Artificial Intelligence & Data Analytics (CAIDA 2021)
42. (Scientific conference)The National Conference of Saudi Computers' Colleges (NCCC 2021) held at Taif University 27-28 March 2021 sponsored by IEEE.
43. Academic Accreditation Reviewer Course for Academic Programs - National Center for Academic Accreditation and Assessment (training course)
44. Future Skills Course - King Abdulaziz University (training course)
45. Preparing self-study course for academic programs (training course)
46. Five Principles for Meaningful Online Learning (seminar)
47. Promoting active learning in e-learning (training course)
48. (Scientific Conference) 2020 International Conference on Computer and Information Sciences (ICCIS)- sponsored by IEEE
49. Azura & Modern Workplace (workshop)
50. IEEE 2nd International Conference on Computer and Information Sciences (ICCIS)
51. The first scientific conference for heads and supervisors of scientific departments (a scientific conference)
52. Report and description of the "course, program, field experience" (workshop)
53. Excellence in the management of scientific departments (training course)
54. Class calendar (training course)
55. Important skills for distance teaching strategies (training course)
56. Training on evaluation methods in the e-learning system (training course)
57. Content and multimedia analysis (training course)
58. Training on the e-learning system and its tools (training course)
59. Duties of the academic advisor (training course)
60. Biodiversity problems and solutions (scientific lecture)
61. Azure and Microsoft 365 fundamentals (training course)
62. Characteristics of graduates of the academic programs "Design - Measurement" (workshop)
63. DATA BLOCK DESIGN EVISION BY NASSEJ (Training Course)
64. Managing and using the Outlook program in the work environment (training course)
65. Technical support and maintenance (training course)
66. Academic advising workshop (models and indicators) (workshop)
67. Requirements for preparing a self-study report for academic programs (workshop)
68. International arbitration standards for scientific research (workshop)
69. Characteristics of graduates of the academic programs "Design-Measurement" (workshop)
70. Artificial Intelligence course (training course)
71. Information Security (lecture)
72. Data Science (lecture)
73. Methods of responding to scientific journals - Deanship of Scientific Research - Northern Border University - 23/3/2021 corresponding to 10/8/1442 AH (training course)

3. Research and Innovation

Activities Implemented	Brief Description *
Publication	<ol style="list-style-type: none"> 1. Smart Tourism and Location-Based Services Architectural Model 2. An Integrated Conceptual Model for m-Government Acceptance in Developing Countries: The Case Study of Jordan

	<ol style="list-style-type: none"> 3. Smart Hand Gestures Recognition using K-NN based Algorithm for Video Annotation Purposes 4. A Novel Pending Interest Table Sharing Scheme Using Neuro Fuzzy Logic for Named Data Networking Communication 5. Modeling Ground-to-Air Path Loss for Millimeter Wave UAV Networks 6. Efficient Placement of an Aerial Relay Drone for Throughput Maximization 7. Binary particle swarm optimization-based T-S fuzzy predictive controller for nonlinear automotive application 8. Feature Subset Selection for Malware Detection in Smart IoT Platforms 9. Digital Forgery Detection of Official Document Images in Compressed Domain 10. MRI Images Analysis Method for Early Stage Alzheimer's Disease Detection 11. A comprehensive survey of load balancing techniques in software-defined network 12. Planar Pyramid Shaped UHF RFID Tag Antenna With Polarisation Diversity for IoT Applications Using Characteristics Mode Analysis 13. Triaxial accelerometer-based falls and activities of daily life detection using machine learning 14. CDP: A content discovery protocol for mobile p2p systems 15. Encryption-based Image Steganography Technique for Secure Medical Image Transmission During the COVID-19 Pandemic 16. Enhanced Security of Home Registration in the Hierarchical Mobile IPv6 Protocol for IoT Applications 17. Energy Efficient Cluster based Routing Protocol with Secure IDS for IoT Assisted Heterogeneous WSN 18. Theory-Based Model and Prediction Analysis of Information Security Compliance Behavior in the Saudi Healthcare Sector 19. Security assessment of large-scale IT infrastructure 20. Feature Subset Selection for Malware Detection in Smart IoT Platforms 21. Digital Forgery Detection of Official Document Images in Compressed Domain 22. Glaucoma Detection Using Novel Perceptron Based Convolutional Multi-Layer Neural Network Classification 23. Software project failures prediction using logistic regression modeling 24. Pairwise Test Suite Generation Based on Hybrid Artificial Bee Colony Algorithm 25. Phishing Website Detection: Forest by Penalizing Attributes Algorithm and Its Enhanced Variations 26. AI Meta-Learners and Extra-Trees Algorithm for the Detection of Phishing Websites 27. Detecting Generic Network Intrusion Attacks using Tree-based Machine Learning Methods 28. New Hybrid Proposed Solution for Video Steganography Based on Clustering Algorithm”, International Journal of Security and Privacy in Pervasive Computing Volume 12, Issue 2, April-June 2020.
Review	<ol style="list-style-type: none"> 1- Dr. Abdulbasit Darem: <ul style="list-style-type: none"> - IEEE Access Journal- (Q1) IEEE Publisher - Applied Intelligence Journal – (Q1) Springer Nature Publisher - Scientific Reports journal - (Q1) Nature Publisher - journal, Electronic Commerce Research– Springer Nature Publisher - PLOS one Journal- (Q1) Public Library Science, 2- Dr. Asma Alhashmi: <ul style="list-style-type: none"> - Computer and security Journal -(Q1) Elsevier Publisher
Editorial Board Members and reviewers	<ul style="list-style-type: none"> • Dr.Marwa Amara (reviewer): The 10th International Conference on Electronics, Communications and Networks (CECNet2020)
Comment on Research and Innovation**	
<ul style="list-style-type: none"> - Computer Science Program has an active research staff, some of them has an international research collaboration which lead to an excellent publication. There are a good number of 	

publications most of them in high impact journals. The staff also participated as an editorial board and reviewers in several journals and conferences.

* including action time, number of participants, results and any other statistics.

** including performance evaluate on these activities

4. Community Partnership

Activities Implemented	Brief Description *
Community service	The academic staff participate in different community services in each academic term
Field training	The program cooperates with the community for training the student after finishing the sixth level
Comment on Community Partnership **	
Community Partnership is sufficient and appropriate	

* including action time, number of participants, results and any other statistics.

** including performance evaluation on these activities

Community services

Location	Date	Title
Arar	1/1/1442	Cloud Computing course
ON-Line	11/7/1442	Principles of MS word

5. Analysis of Program Activities

(including strengths, Areas for Improvement:, and priorities for improvement)

Strengths :
<ul style="list-style-type: none"> – Academic supervision has an important role in following and advising the students – Service community has a import and good effect in the society – Training courses improve the students skills
Areas for Improvement:
<ul style="list-style-type: none"> – The need to compel students to study English language courses and get certificates from world authorities for programs such as TOEFL and IELTS and not accepting students with low rates in mathematics. – The need to provide the necessary number of administrative and technical staff to do managerial and technical jobs instead of faculty members – The necessity to give access to program coordinators to get into admission databases to acquire the necessary information from them. – The necessity of providing the sufficient number of faculty doctoral graduates who are highly qualified and giving them sufficient salaries to do their jobs in the best way.
Priorities for Improvement:

Encourage the academic staff to publish more articles

F. Program Evaluation

1. Evaluation of Courses

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
1101101	General Physics 1	Yes		
1104101	Calculus 1	Yes		
1104131	Statistics	Yes		
1100101	Scientific Terminology	Yes		
1601101	Islamic Culture 1	Yes		
1102101	General Chemistry 1	Yes		
1103101	General Biology 1	Yes		
1602101	Arabic Language	Yes		
1105101	Introduction to Computer Science	Yes		<ul style="list-style-type: none"> - Improve the course content to cover Artificial Intelligence and Database Systems - Reduce the number of students in the lab not more than 24 students.
1601201	Islamic Culture 2	Yes		
1105211	Int. to Programming	Yes		<ul style="list-style-type: none"> - Improve the course content to focus on problem solving rather than teaching C++ language. - In theory classes, the focus must be on algorithms and flowcharts rather than direct code. - Programming in C++ can be done in lab
1105221	Digital Logic Design	Yes		<ul style="list-style-type: none"> - Provide the lab with more training kits - Provide the lab with advanced training kits - Provide the lab with more connection wires
1105281	Ethical and Professional Practices	Yes		<ul style="list-style-type: none"> - More simplifying the English terms in the course materials. - improve the course contents.
1105231	Discrete Mathematics	Yes		<ul style="list-style-type: none"> - Add more exercise and home work
1601xxx	Elective (1) Islamic Culture	Yes		
1105212	Programming Applications	Yes		<ul style="list-style-type: none"> - make available lab for students to practice any time during their free time - Improve the course with more C++ programs

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
1105222	Digital Systems Design	Yes		<ul style="list-style-type: none"> • Encourage self-learning teaching strategy - get original version of the software tool (ModelSim) used in this course practical part - Update course content and references - Add tutorial session
1105241	Data Structures	Yes		<ul style="list-style-type: none"> - more lecture in the programming language C ++ - Increase GPA for students which join the department
1105232	Computation Theory	Yes		---
1601xxx	Elective (2) Islamic Culture	Yes		
1105313	O.O.P.	Yes		<ul style="list-style-type: none"> • Add more examples - Give more exercises and home works - Encourage student for programming applications - install original programs in computer labs.
1105314	Analysis & Design of Algorithms	Yes		<ul style="list-style-type: none"> - Concentration on Recent algorithms and Techniques
1105323	Computer Architecture	Yes		<ul style="list-style-type: none"> - Proposing appropriate teaching strategies for the female section. - Implementation of training workshops for teaching strategies and training methods. - Proposing appropriate teaching strategies for distance learning during Covid-19 pandemic
1105342	Database Systems	Yes		-
	Free Course1	Yes		
1105315	Web Programming	Yes		<ul style="list-style-type: none"> - Improve the course materials with a new web technology, using intermediate code editor.
1105333	Artificial Intelligence	Yes		<ul style="list-style-type: none"> - More emphasis in Discussion - Add reading chapters - Make students write reports - Add to the course content SWI prolog online compiler
1105351	Computer Graphics	Yes		<ul style="list-style-type: none"> - Install OpenGL in lab - Improve the course materials with a mini game program to demonstrate the OpenGL routines interactively - We need to find a portable IDE that support OpenGL - Add reading chapters, write reports

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
1105361	Operating Systems	Yes		<ul style="list-style-type: none"> - Necessity to solve the practical part problem of the course - Improve the course materials with a mini game program to demonstrate the OpenGL routines interactively
1105371	Local Area Networks	Yes		<ul style="list-style-type: none"> - Encourage self-learning teaching strategy. - Reduce number of students in Laboratory session.
1105462	Computer Systems Programming	Yes		<ul style="list-style-type: none"> - Update course material - Develop a practical booklet consistent with the progression of the theoretical course - Update course reference - Improve the course of Recognize Assembly language programming and file management.
1105443	Software Engineering	Yes		<ul style="list-style-type: none"> - The students need to use software tool to represent the software systems using UML - English language of the students should be improved - Adding a practical part (i.e., lab) like in the well-known universities. - Reducing the number of students in the class so that it does not exceed 25 students in order to allow the course instructor to follow the students during the process and for the student to have more opportunity to follow up
1105472	Wide Area Networks	Yes		<ul style="list-style-type: none"> - Improve the lab. Content to focus more on practical part. - Network tools are essential to practice the lab. - Update the textbook for newer version
	Free Course2	Yes		
1105-(481-483)	Elective Specialization (1)	Yes		1105481 Modeling & simulation <ul style="list-style-type: none"> - Revision of the basic knowledge which the course needs it at the beginning of the course
1105491	Field Training	Yes		

Course Code	Course Title	Student Evaluation (Yes-No)	Other Evaluations (specify)	Developmental Recommendations
1105463	Compiler Construction	Yes		<ul style="list-style-type: none"> - This course need the theory of computation as a pre-request course - Encourage self -learning teaching strategy - Update the references - Encourage self -learning teaching strategy
1105473	Distributed Computing Systems	Yes		<ul style="list-style-type: none"> - Improve the lab content to focus more on practical part. - Network tools are essential to practice the lab. - Update the textbook for newer version
1105492	Graduation Project	Yes		-
1105-(484-486)	Elective Specialization (2)	Yes		<p>Data mining:</p> <ul style="list-style-type: none"> - Encourage innovation learning strategies - Update the references • Reduce number of students in Laboratory session - Add more exercise and home work
1105-(487-489)	Elective Specialization (3)	Yes		<p>Human Computer Interaction</p> <ul style="list-style-type: none"> - The book: (Alan Dix, Janet Finlay, Gregory Abowd, Russell Beale, “Human Computer Interaction”, Third Edition, Prentice Hall,2004. - is better and easier for students than the book: (Steven Heim, The Resonant Interface: HCI Foundations for Interaction Design, Addison-Wesley 2008) - Sharp, H. (2019). Interaction design: Beyond Human-Computer Interaction, 5th Edition, John Wiley & Sons. Can be added as essential references material. It also a better and easier for students than the book: (Steven Heim, The Resonant Interface

2. Students Evaluation of Program Quality

Evaluation Date :Semester 1, 2021-2020	Number of Responses: 3970 for all Courses
Students Feedback	Program Response

Strengths: <ul style="list-style-type: none"> - Qualified teaching staff . - Student services - guide services 	<ul style="list-style-type: none"> - The program always hiring a well-qualified teaching staff. - The student service and guidance are among important program's priorities.
Areas for Improvement:: <ul style="list-style-type: none"> - Learning resources - Extracurricular activities 	<ul style="list-style-type: none"> - The program has sufficient learning resource, even though the program is striving to increase it and maintain the existing resources. - Because of Covid19 the extracurricular activities has been affected, the program has a plan to increase the extracurricular activities like seminars workshops and training programs.
Suggestions for improvement: Indirect method to evaluations	<ul style="list-style-type: none"> - The Program trying to implement an Indirect method for evaluation like the result of exit exam, number of graduates who got a job. -

* Attach report on the students evaluation of program quality

3. Other Evaluations : Not applicable

(e.g. Evaluations by independent reviewer, program advisory committee, and stakeholders (e.g., faculty members, alumni, and employers))

Evaluation method :	Date:	Number of Participants :
Summary of Evaluator Review		Program Response
Strengths: <ul style="list-style-type: none"> • • 		
Points for Improvements:: <ul style="list-style-type: none"> • • 		
Suggestions for improvement <ul style="list-style-type: none"> • • 		

* Attach independent reviewer's report and stakeholders' survey reports (if any)

4. Key Performance Indicators(KPIs)

List the results of the program key performance indicators (including the key performance indicators required by the National Center for Academic Accreditation and evaluation)

No	KPI	Target	Actual	Internal	Analysis	New Target
1	Percentage of achieved indicators of the program operational plan objectives	75%	88.9%	60%	The target benchmarks goals for AY 2020-2021 is achieved .	90%
2	Students' Evaluation of quality of learning experience in the program	75%	80%	66.6%	It is noted that the target value was achieved .	85%
3	Students' evaluation of the quality of the courses	70%	76.4%	62.8%	A percentage scale was applied to calculate the average rating of students on overall evaluation of courses. The overall rating for the quality of courses showed that the target benchmark is achieved during AY 2020-2021.	75%
4	Completion rate	75%	76.39%	75%	The Percentage of students who completed the program in the minimal time is 76.39% which is somehow fulfilling the required target.	80%
5	First-year students retention rate	100%	99.18% %	99.31%	The students' retention rate was not achieved in AY 2020-2021.	100%
6	Students' performance in the professional and/or national examinations	N/A	N/A	N/A		N/A
7	Graduates' employability and enrolment in postgraduate programs	N/A	N/A	N/A		N/A
8	Average number of students in the class	20	19.33	20	The students' retention rate was not achieved in AY 2020-2021.	20
9	Employers' evaluation of the program graduates proficiency	N/A	N/A	N/A	86%	80%
10	Students' satisfaction with the offered services	75%	78.8%	69.2%	It is noted that the target value was achieved.	80%
11	Ratio of students to teaching staff	15:01	14:75:1	17:1	The ratio of students to teaching staff in the program differs between males and females. However, this ratio is better in male sections compared to female sections indicating the need of the program for female teaching staff at the female sections.	15:01
12	Percentage of teaching staff distribution	Male:70% Female:30%	Male:75% Female:25%	Male:75% Female:25%	The percentage of teaching staff distribution according to gender is not satisfactory	Male:70% Female:30%
13	Proportion of teaching staff leaving the program	<5%	3.10%	9%	It is noted that the target value was achieved .	0%
14	Percentage of publications of faculty members	40%	75%	30%	Full-time faculty staff members who published at least one research during the year to total	80%

No	KPI	Target	Actual	Internal	Analysis	New Target
					faculty members in the program is 16 out of 28.	
15	Rate of published research per faculty member	0.5:1	1:1	0.34:1	It is noted that the target value was achieved .	1:1
16	Citations rate in refereed journals per faculty member	20:1	22.44:1	13.65 : 1	It is noted that the target value was achieved .	25:1
17	Satisfaction of beneficiaries with the learning resources	75%	75.6%	65%	The average value of satisfaction of beneficiaries with the learning resources is comparable for male and female sections during Ay2020-2021, showing the highest importance in both areas.	80%
<p>Comments on the Program KPIs and Benchmarks results : We seek to Develop detailed questionnaires to Measure satisfaction for students, staff, graduates, and employers in different areas (PLO's Clos, facilities,...)</p>						

5. Analysis of Program Evaluation

(including strengths, Areas for Improvement:, and priorities for improvement)

Strengths :
<ol style="list-style-type: none"> 1. The university provides sub-libraries that are distributed across the male and female sections. 2. The program uses electronic resources and systems to facilitate access to research materials and scientific journals. 3. There are enough books and scientific references in Arabic and English. 4. The university applies fair policies and procedures to recruiting qualified faculty members. 5. There are a number of rules, regulations, and procedures that define the general policy for recruitment operations. 6. . The program has approved and publicly disclosed criteria and requirements for the admission and registration of students that are appropriate to the nature of the program, and are applied fairly 7. The number of students admitted to the program is compatible with the available resources for the program (e.g., teaching staff, classrooms, labs, and equipment). 8. The computer science graduate program attributes are stable with the community and market needs. 9. The program uses direct and indirect evaluation methods that reflect alignment with SAQF requirements and specified key performance indicators to measure its learning outcomes. 10. The Program is governed by the College and Department Councils with defined tasks and authorities. 11. The Program has a sufficient number of qualified staff to perform its administrative, professional and technical tasks, and they have defined tasks and authorities. 12. The program's mission and goals are fully aligned with the Kingdom of Saudi Arabia's Vision 2030. 13. Vision 2030. 14. The program mission and goals are consistent with those of Northern Border University, College of Sciences and the Computer Science Department.

Areas for Improvement:

- Improve and automate mechanisms for compliance, grievance and disciplinary cases with program
- Improve role of student and faculty member in community service activates and research partnership
- confirm the value of scientific integrity, intellectual property rights, rules of ethical practices, and proper conduct in all academic, research, administrative, and service fields, and activities.

Priorities for Improvement:

- Improve role of student and faculty member in community service activates and research partnership
- confirm the value of scientific integrity, intellectual property rights, rules of ethical practices, and proper conduct in all academic, research, administrative, and service fields, and activities.

G. Difficulties and Challenges Faced Program Management

Difficulties and Challenges	Implications on the Program	Actions Taken
1- Student Academic Preparedness		
Duo to Covid-19 pandemic, many students face the realization that their previous academic preparation was not at the level it needed to be in order to perform academically at the college level. Perhaps the underprepared student may not have taken the appropriate college preparatory courses or have not taken academic courses for such a long period of time that the required information has not been retained. This means that the underprepared student will likely require remedial courses in order to regain or attain a base level of academic competency.	These challenges can be extremely stressful for students and can often be the reasons that lead to student attrition.	Identifying and understanding these challenges students face is a key component of the computer science program. Helping students work their way through these obstacles can be both rewarding and difficult.
Extreme weakness of students in English and mathematics as a direct result of the weakness of public education.	Has a severe impact on the level of graduates.	The need to encourage students to study English language courses and not accepting students with low rates in mathematics.
2- Teaching Staff		
- Male teaching staff has to handle classes in both boys section as well as girl section	The lack of an opportunity for female students to study face-to-face with the teacher and reduces the chances of effective communication.	Demand for more female teaching staff

Difficulties and Challenges	Implications on the Program	Actions Taken
<ul style="list-style-type: none"> - Most of the teaching faculty are occupied with administrative and official duty out the department, they engaged with different work other than teaching. 	<p>This will distract them and they will not get enough time to focus on teaching duties.</p>	<p>The need to provide the enough number to do the administrative and technical work.</p>
3- Learning Environment		
<ul style="list-style-type: none"> - Students are more likely to perform well in conditions that are conducive to learning, so colleges and universities that provide these kinds of environments will be more successful in attracting students. - The program doesn't have enough classrooms, laboratories, and lecture halls. - Few labs are available. - Female students study in a small building, and they don't have enough laboratories compared to the number of students. - Open lab is required 24x7 for students to be easy access at any time. - Lab should be set up to allow small-group discussions or collaborative learning. 	<p>It will affect students' performance and their academic level</p>	<p>We demand for wider classrooms and laboratories equipped with everything needed for the educational process</p>
4- Program study plan		
<ul style="list-style-type: none"> - The study plan needs to be updated and establish new tracks and specializations 	<ul style="list-style-type: none"> - It is not easy for student to get job. - It cannot keep up with modern technological developments 	<ul style="list-style-type: none"> - It is recommended to update the program plan to be aligned with the tremendous changes in the computer field and job market. - It is required to open many tracks or specialization inside the program to give the student the chance to select the spatialization that fit with their tendencies
<ul style="list-style-type: none"> - There is a great need to redistribute the courses in the study plan at different levels. 	<ul style="list-style-type: none"> - The program missed an important and recent subjects. Also there many unnecessary subjects in the program compare to the missing subjects. 	<ul style="list-style-type: none"> - Reconsideration of study plan is required.
<ul style="list-style-type: none"> - One semester is not sufficient for a graduation project. 	<ul style="list-style-type: none"> - The student could not complete their project in one semester. 	<ul style="list-style-type: none"> - Add tow credits course to 7th semester.

Difficulties and Challenges	Implications on the Program	Actions Taken
<p>- There are 7 practical courses in the program that the number of students should not exceed 15 students, namely:</p> <ul style="list-style-type: none"> • Introduction to programming • Programming applications • Object Oriented programming • Web programming • Databases • Data structures • Algorithms 	<p>- The students will not get sufficient attention and time to do well in practical.</p>	<p>- Divide the registered students in this course into many sections not more than 15 students in each section.</p>

*Internal and external difficulties and challenges

H. Program Improvement Plan

No.	Priorities for Improvement	Actions	Action Responsibility	Date		Achievement Indicators	Target Benchmark
				Start	End		
1.	Get the NCAA Accreditation	Prepare all the requirements	Quality Committee	18/08/2021	31/12/2021	85	100
2.	Conduct Advisory Committee twice in a year in order to discuss in more details about the continuous improvement plan and program development.	Invite the members of the program advisory committee	College and Department	Sep 2021	Sep 2022	Staff Satisfaction	
3.	Update the course specification	update	Curriculum Committee	01/09/2021	31/012/2021	100	100
4.	Update the study plan and start new tracks	Update	Curriculum Committee	01/01/2022	30/06/2022	70	100
5.	Getting more female staff	Recruitment	College	01/01/2022	30/06/2022	5	100

I. Report Approving Authority

Council / Committee	Department council
Reference No.	The fourteenth session of the academic year 1443-42 ah
Date	03/06/1443

J. Attachments :

- A report on the students evaluation of program quality
- Independent reviewer's report and other survey reports (if any)