



Program Specification

Program Name: Bachelor in Biology
Qualification Level : 6
Department: Biology
College: Science
Institution: Jouf University

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A. Program Identification and General Information

1. Program Main Location:

College of Science, Main Campus (Male) - Sakaka – Jouf region, KSA

2. Branches Offering the Program:

Female campus - Laqaet- Sakaka, Jouf region, KSA

3. Reasons for Establishing the Program:

(Economic, social, cultural, and technological reasons, and national needs and development, etc.)

The program of Bachelor of Biology established for the following reasons

Economic reasons:

- 1 - The possibility of running young people through small projects in the field of their specialization as management Dates and olive production companies and their products or in control insects and rodents companies.
- 2 - Employment opportunities in the field of camels and pastures.
- 3- There is a need for specialists in the bioscience to fill many vacant positions in laboratories in Jouf region in particular and in the Kingdom in general.

Social reasons:

- 1 - The need of the people of the Jouf area for dates and olives products.
- 2 - The need to run young people after graduation to solve the problem of spinsterhood and delayed marriage.
- 3- The need for specialists to study the nature and environment of the region and propose scientific solutions to their biological problems.

Social or Cultural reasons:

- 1- The need for specialized representatives in the field of environment in national and international bodies.
2. The need for national representatives in international forums concerned with the protection of wildlife.

Political reasons:

In parallel with the goals of the National Transformation Program 2020 and Vision 2030 that is built on three pillars – a vibrant society, a thriving economy and an ambitious

nation:

- 1- The need to create employment opportunities for young people, which gives some kind of political satisfaction and social peace.
- 2 - Employment of young people for the benefit and benefit of their homeland strengthens their belonging to the homeland, and push them towards construction, protects them from drifting behind the owners of destructive ideas.
- 3 - Educating young people and keeping their time with useful knowledge protects them from intellectual distractions.

☒ Technical reasons:

- 1- Preparation of a group of graduates in the field of biology to meet the requirements of the Kingdom of well qualified to meet the requirements of development and the needs of the labor market in the areas of education and scientific research and work in the laboratories of some ministries and agencies and centers of Saudi Arabia.
- 2- Responds to the quick development in Information technology (IT) in general and in biological field in particular.

4. Total Credit Hours for Completing the Program: (134 h)

In biology program 134 hours required to earn Bachelor of Biology

5. Professional Occupations/Jobs:

For graduates of biology program, there are numerous employment opportunities, including:

- Field of education in the university cadre (demonstrator, lecturer, ... university professor)
- Ministry of Education (teacher - director - stage manager - school director - ... Director).
- Research centers (assistant researcher - researcher - Research Director).
- Private sectors involving laboratories (food- pharmaceutical companies)
- National Commission for the Protection of Wildlife (Assistant Researcher - Researcher - Research Director).
- Ministry of Agriculture and Environment (supervisor - Director ...).
- Laboratory technicians.
- Water and sanitation service (supervisor - technician - Director ...).
- The management of criminal evidence (assistant investigator - Researcher - Laboratory official -).
- National nurseries (supervisor - manager ...).
- Agricultural meteorological stations (assistant researcher - researcher - Research Director).
- Pesticide production companies and factories (research assistant, researcher, research

director)		
• Pest control companies (assistant researcher - researcher - supervisor - manager).		
6. Major Tracks/Pathways (if any):		
Major track/pathway	Credit hours (For each track)	Professional Occupations/Jobs (For each track)
NA		
7. Intermediate Exit Points/Awarded Degree (if any):		
Intermediate exit points/awarded degree	Credit hours	
NA		

B. Mission, Goals, and Learning Outcomes

1. Program Mission:		
Providing educational outputs to prepare qualified graduates meet the needs of the labor market and scientific research in biology to serve the community.		
2. Program Goals:		
<ol style="list-style-type: none"> 1. Implementation of academic quality standards in the field of biological sciences. 2. Preparing qualified graduates to meet the needs of the labor market. 3. Providing a distinct educational environment in the field of biological sciences. 4. Providing scientific outcomes in the field of biological sciences through scientific research. 5. Providing advice and services in the field of biological sciences to the Saudi community. 		
3. Relationship between Program Mission and Goals and the Mission and Goals of the Institution/College.		
Mission of Jouf university	Mission of college of science	Mission of bachelor of Biology program
Providing distinguished Education and Research Outcomes to Develop the Community.	To provide distinguished academic and research programs in the field of the Basic Sciences and related applications in a motivating environment for scientific research and innovation and to provide the community with knowledge and academic competencies that can meet the requirements of development.	Providing educational outputs to prepare qualified graduates meet the needs of the labor market and scientific research in biology to serve the community.
The biology program mission focuses on excellence in teaching, community service and scientific research which are aligned with the characteristics of Jouf university and college of science.		

Relationship between goals of the program, college, and the university

Goals of Jouf University	Goals of College of science	Goals of Biology Program
<p>1.1. Compatibility of University performance with NCAAA standards.</p> <p>2.1. Improving academic and scientific performance to meet market and community needs.</p> <p>2.4. Increasing research opportunities for undergraduate students</p> <p>2.6. Development of communication skills, group and leader work and information technology for students according to their specializations.</p> <p>2.8. Completion of lab equipment for undergraduate students.</p> <p>3.2. Availability of financial, technological requirements and infrastructure for undergraduate, postgraduate and faculty member research</p> <p>4.2. Creating community programs that meet community expectations.</p> <p>4.3. Signing and activating at least one social partnership every academic term to achieve university mission and vision and to serve the community.</p> <p>4.4. Identifying community needs and expectations</p>	<p>1- Providing educational programs capable of providing outputs that meet academic standards and suit the requirements of the labor market</p> <p>2- Supporting the Kingdom's needs of qualified cadres in the fields of basic sciences and their applications.</p> <p>3- Developing academic and research work for the college's contribution to community service and development.</p> <p>4- Developing the performance of the administrative and technical staff to support the educational and research process.</p> <p>5- Diversifying the sources of educational culture and linking the student's scientific concepts to the problems of society and the surrounding environment.</p> <p>6- Creation of postgraduate programs in various disciplines at the college.</p>	<p>1. Implementation of academic quality standards in the field of biological sciences.</p> <p>2. Preparing qualified graduates to meet the needs of the labor market.</p> <p>3. Providing a distinct educational environment in the field of biological sciences.</p> <p>4. Providing scientific outcomes in the field of biological sciences through scientific research.</p> <p>5. Providing advice and services in the field of biological sciences to the Saudi community.</p>

*We selected only the goals from the University that consisted with the goals of the Biology Program.

Alignment:

The goals of the biology program are consistent with the goals of the college and the university in terms of providing distinguished education and raising the efficiency of the faculty and laboratory equipment in a way that raises the efficiency of graduates and scientific research to serve the community. In parallel with the goals of the National Transformation Program 2020 and Vision 2030.

4. Graduate Attributes:

- Knowledgeable of theories, principles and concepts in the field of Biology that enable them to meet requirements of labor market.
- Knowledgeable of research methodologies and research instruments in the field of Biology.
- Able to critically analyze, evaluate and apply theories, principles and concepts related to different aspects of Biology
- Able to conduct simple research projects addressing different issues and problems related to Biology.
- Able to perform practical tasks and procedures in field of Biology.
- Able to communicate in different ways with individuals and groups to complete required tasks related to studying and researching in the field of Biology.
- Able to use various technological tools and applications in studying and researching in the field of Biology.
- Aware of the professional and academic ethical considerations related to the field of Biology.
- Aware of self-evaluation techniques and autonomous learning strategies.
- Active participator in community services through team work

Jouf University Graduate attributes		Biology program Graduate attributes	
Knowledge and understanding		1. Possess a comprehensive and reliable structure of knowledge and understanding of the underlying theories, principles and concepts in the field of specialization.	Knowledgeable of theories, principles and concepts in the field of Biology that enable them to meet requirements of labor market.
		2. Mastering accurate and advanced knowledge in the field of specialization, which qualifies graduate to meet the requirements of the labor market.	
		3. Knowing and understanding the research methodology and survey methods.	
Skills	Preceptual skills	4. Possess the ability to apply the knowledge, concepts and theories that graduate studied in his/her major to address issues and problems.	Able to critically analyze, evaluate and apply theories, principles and concepts related to different aspects of Biology
		5. Critical evaluation of complex knowledge and its use to provide innovative solutions to contemporary issues and problems.	

		6. Practicing methods of investigation, verification and research on issues and problems.	Able to conduct simple research projects addressing different issues and problems related to Biology.
	Practical and physical skills	7. The use of advanced and specialized tools, machines, materials and devices in dealing with practical activities related to specialization, work and profession.	Able to perform practical tasks and procedures in field of Biology.
		8. Performing a set of complex practical tasks and procedures in a specific field, related to the field of specialization, work or profession.	
	Communication and IT skills	9. Communicate in different ways with individuals and groups to share knowledge of specialized skills.	Able to communicate in different ways with individuals and groups to complete required tasks related to studying and researching in the field of Biology.
		10. The ability to choose and use various technological tools and applications to serve the field of specialization and support and promote research and specialized projects.	Able to use various technological tools and applications in studying and researching in the field of Biology.
Values		11. Representation of integrity, professional and academic ethics, and commitment to responsible citizenship.	Aware of the professional and academic ethical considerations related to the field of Biology.
		12. Self-evaluation of the level of learning and way of thinking and dealing with issues related to aspects of specialization and society.	Aware of self-evaluation techniques and autonomous learning strategies.
		13. Mastering self-learning skills, and taking responsibility for professional development in the field of specialization	
		14. Ability to socially adapt and work in a team flexibly and effectively	Active participator in community services through team work
		15. Serving the community	

	through active involvement in community issues, which consolidate state values and its principles.	
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The graduate attributes of Biology program is aligned with Jouf University graduate attributes as clarified in the table above. The graduate attributes of the program cover all the domains mentioned in the university graduate attributes.

5. Program learning Outcomes*

Knowledge and Understanding

By the end of the program, student will be able to:

K1	Demonstrate integrated the principles, main concepts, theories and terminology of Biology disciplines.
K2	Demonstrate the recent scientific developments in the fields of biology including techniques and applications of advanced fields of biology.

Skills:

By the end of the program student will be able to

S1	Formulate, and solve broadly defined scientific problems by applying knowledge of science to areas relevant to Biology.
S2	Formulate or design a system, process, procedure or program to meet desired needs in biology.
S3	Evaluate, develop and conduct biological experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions and make a criticism.
S4	Examine microscopic specimens in laboratories basic experiments of biology in safe and effective way.
S5	Communicate effectively with a range of audiences, work effectively with information technology, and library resources in related to the required biology disciplines.

Values:

By the end of the program student will be able to

V1	Sustain effectively Islamic values, ethical and professional responsibilities and the impact of scientific solutions in global, economic, environmental, and societal contexts.
V2	Collaborate effectively within teams via establishing goals, planning tasks, meeting deadlines, and analyzing risk and uncertainty.

* Add a table for each track and exit Point (if any)

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	8	19	14.2%
	Elective	5 (select 3)	6	4.5%
College Requirements	Required	8	25	18.6%
	Elective	0	0	0
Program Requirements	Required	27	74	55.2%
	Elective	15 (select 5)	10	7.5%
Capstone Course/Project	Required	6	17	Calculated in Program Requirements
Field Experience/ Internship	Required	1	3	Calculated in Program Requirements
Others	--	--	--	--
Total			134	100%

* Add a table for each track (if any)

2. Program Study Plan

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 1	BIO 101	General Biology	Required	---	3	College
	CIS 101	Computer Skills	Required	---	3	Institution
	EDU 101	University Life Skills	Required	---	2	Institution
	ENGL 103	English Language I	Required	---	3	Institution
	ISL 101	Fundamentals of Islamic culture	Required	---	2	Institution
	MTH 101	Introductory Mathematics	Required	---	3	College
Level 2	ARB 100	Language Skills	Required	---	2	Institution
	CHM 101	General Chemistry (1)	Required	---	4	College
	ENGL 104	English Language II	Required	ENGL 103	3	Institution
	ISL 100	Studies in the Biography of Prophet	Required	---	2	Institution
	MTH 102	Differential Calculus	Required	MTH 101	3	College
	PHS 101	General Physics (1)	Required	---	4	College
Level 3	ARB 102	Editing	Required	ARB 100	2	Institution
	BIO 211	General Zoology	Required	BIO 101	3	Departme nt
	BIO 221	General Botany	Required	BIO 101	3	Departme nt
	BIO 231	Microbiology	Required	BIO 101	3	Departme nt

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
	CHM 213	Organic Chemistry	Required	CHM 101	3	Outside Department
	MTH 271	General Statistics	Required	MTH 101	2	College
	ISL xxx	Elective course from University requirement*	Elective	---	2	Institution
Level 4	BIO 212	Chordata	Required	BIO 211	3	Department
	BIO 222	Plant Morphology and Anatomy	Required	BIO 221	3	Department
	BIO 241	Fundamental Ecology	Required	BIO 101	3	Department
	BIO 251	Cell Biology	Required	BIO 101	2	Department
	CHM 342	Biochemistry	Required	CHM 213	3	Outside Department
	ISL xxx	Elective course from University requirement*	Elective	-	2	Institution
Level 5	BIO 313	Invertebrates	Required	BIO 211	3	Department
	BIO 314	Animal Physiology	Required	BIO 211 CHM 342	3	Department
	BIO 315	Animal Histology	Required	BIO 251	2	Department
	BIO 323	Plant Physiology	Required	CHM 342	3	Department
	BIO 332	Viruses and Bacteria	Required	BIO 231	3	Department
	BIO 352	Microtechniques	Required	BIO 251	2	Department
	EDU 102 or BUS 101	Elective course from University requirement**	Elective	-	2	Institution
Level 6	BIO 316	Entomology	Required	BIO 313	3	Department
	BIO 317	Embryology	Required	BIO 315	3	Department
	BIO 324	Taxonomy of Flowering plants	Required	BIO 222	3	Department
	BIO 342	Pollution and Environment Protection	Required	BIO 241	3	Department
	BIO 353	Genetics	Required	BIO 251 MTH 271	3	Department
	BIO xxx	Elective course (List A)	Elective	BIO xxx	2	Department
Level 7	BIO 433	Phycology	Required	BIO 332	2	Department
	BIO 434	Mycology	Required	BIO 332	2	Department
	BIO 443	Desert Ecology	Required	BIO 342	2	Department
	BIO 454	Molecular Biology	Required	BIO 353	3	Department
	BIO 498	Field Training	Required	Pass 90	3	Department

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
				units		
	BIO xxx	Elective course (List B)	Elective	BIO xxx	2	Department
	BIO xxx	Elective course (List B)	Elective	BIO xxx	2	Department
Level 8	BIO 418	Parasitology	Required	BIO 316	3	Department
	BIO 419	Comparative Anatomy	Required	BIO 212	3	Department
	BIO 444	Flora of KSA	Required	BIO 443	2	Department
	BIO 499	Research Project	Required	Pass 100 units	3	Department
	BIO XXX	Elective course (List C)	Elective	BIO XXX	2	Department
	BIO xxx	Elective course (List C)	Elective	BIO xxx	2	Department

* Include additional levels if needed

** Add a table for each track (if any)

*The student has the right to choose 2 courses from: The Role of Women in Development (ISL 109), Professional Ethics (ISL 107) or Contemporary Issues (ISL 108).

** The student has the right to choose a course from: Volunteer Work (EDU 102), and Entrepreneurship (BUS 101)

Elective course (A)

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 6	BIO 361	Animal Physiology - Advance	Elective	BIO 314	2	Department
	BIO 362	Archegoniates	Elective	BIO 221	2	Department
	BIO 363	Immunology	Elective	BIO 314	2	Department

*The student has the right to choose one course from three

Elective course (B)

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 7	BIO 471	Medical and Economic Arthropods	Elective	BIO 316	2	Department
	BIO 472	Histochemistry	Elective	CHM 342	2	Department
	BIO 473	Plant Tissue Cultures	Elective	BIO 323	2	Department
	BIO 474	Stress Physiology	Elective	BIO 323	2	Department
	BIO 475	Plant Diseases	Elective	BIO 332	2	Department
	BIO 476	Biotechnology	Elective	CHM 342	2	Department

*The student has the right to choose two courses from six

Elective course (C)

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College or Department)
Level 8	BIO 481	Animal Behaviour	Elective	BIO 443	2	Department
	BIO 482	Bioinformatics	Elective	BIO 454	2	Department
	BIO 483	Economic Plants of KSA	Elective	BIO 324	2	Department
	BIO 484	Plant Communities	Elective	BIO 324	2	Department
	BIO 485	KSA Fauna	Elective	BIO 443	2	Department
	BIO 486	Microbial Environment	Elective	BIO 332	2	Department

*The student has the right to choose two course from six

3. Course Specifications

Insert hyperlink for all course specifications using NCAAAA template

https://drive.google.com/drive/u/1/folders/1axDIUpdE_d9O_1WgsOGVu8eauRHdIDJ9

4. Program learning Outcomes Mapping Matrix

Align the program learning outcomes with program courses, according to the following desired levels of performance (**I = Introduced P = Practiced M = Mastered**)

Course code & No.	Program Learning Outcomes											
	Knowledge and understanding				Skills						Values	
	K1	K2			S1	S2	S3	S4	S5		V1	V2
BIO 101	I							I			I	
CIS 101	I					I			I			
EDU 101									I		I	I
ENGL 103	I								I		I	
ISL 101									I		I	I
MTH 101	I				I	I						
ARB 100									I		I	I
CHM 101	I	I			I		I					I
ENGL 104	P								P			P
ISL 100											I	I
MTH 102	P				P	P						
PHS 101	I	I			I		I					
ARB 102									P		P	
BIO 211	I					I			I		I	
BIO 221	I					I		I				I
BIO 231	I					I	I					
CHM 213	P				P		P					

Course code & No.	Program Learning Outcomes											
	Knowledge and understanding				Skills						Values	
	K1	K2			S1	S2	S3	S4	S5		V1	V2
MTH 271		P			P		P					
ISL 107									I		I	
ISL 108									I		I	
ISL 109									I		I	I
BIO 212	P					P			P			
BIO 222	P					P		P				P
BIO 241	P						P					P
BIO 251	P					P			P			
CHM 342	P	P					P	P				
BIO 313	P							P			P	
BIO 314	P						P		P		P	
BIO 315	P						P		P			
BIO 323	P				P						P	
BIO 332	P					P	P					
BIO 352	P						P					P
BUS 101									I		I	I
EDU 102									I		I	I
BIO 316	P					P		P			P	
BIO 317	P						P				P	
BIO 324	P				P						P	
BIO 342	P						P					P
BIO 353	P				P				P			
BIO 361	P						P		P			P
BIO 362	P					P		P				P
BIO 363	P				P		P				P	
BIO 433	M					M						M
BIO 434	M					M						M
BIO 443	M					M						M
BIO 454	M				M						M	
BIO 498		P			P		P		P			P
BIO 471	M							M	M		M	
BIO 472	M						M		M		M	
BIO 473	M						M					
BIO 474	M				M							M
BIO 475	M					M	M					
BIO 476		M			M						M	
BIO 418	M					M			M		M	
BIO 419	M						M				M	
BIO 444	M						M		M		M	

Course code & No.	Program Learning Outcomes											
	Knowledge and understanding				Skills					Values		
	K1	K2			S1	S2	S3	S4	S5		V1	V2
BIO 499		M			M	M	M	M	M		M	
BIO 481	M						M		M			
BIO 482		M							M			
BIO 483	M				M						M	
BIO 484	M						M					M
BIO 485	M					M					M	
BIO 486	M								M		M	

* Add a table for each track (if any)

5. Teaching and learning strategies to achieve program learning outcomes

Describe policies, teaching and learning strategies, learning experience, and learning activities, including curricular and extra-curricular activities, to achieve the program learning outcomes.

The graduates should possess the knowledge, skills and values to enable them to cope with employment opportunities, they must also understand, through the benefits and constraints of their disciplinary perspectives, who they are and how they might contribute positively to the heterogeneity they will encounter in their local, regional and global communities.

High quality learning is not possible without high quality teaching. In Biology program, we use different teaching strategies.

Program Learning Outcomes and Teaching Strategies work together and are aligned. They are joined together as one, coherent, unity that collectively articulate a consistent agreement between student learning and teaching

	Program learning outcomes	Teaching and learning strategies	Assessment methods
Learning domains	Knowledge and understanding		
	Demonstrate integrated the principles, main concepts, theories and terminology of Biology disciplines.	Lecture Discussion and dialogue Interactive lectures Self-learning Brainstorming Presentations e-learning and distance education -Use of library and internet resources	-Written exams - Written and oral quizzes. -- Homework -Assignments, Practical exam Written presentation (essay, reflective paper, etc.) /Oral presentation [Rubrics-based] -Final training report [Rubrics-based] - Attendance and participation - weekly report
	Demonstrate the recent scientific developments in the fields of biology including techniques and applications of advanced	Lecture Interactive lectures Self-learning Practical lessons Training in the use of	-Written exams - Written and oral quizzes Practical exam . -- Homework -Assignments,

fields of biology.	library and information resources on the Internet. Individual and group duties and assignments	Reports [Rubrics-based] - Attendance and participation
Skills		
Formulate, and solve broadly defined scientific problems by applying knowledge of science to areas relevant to Biology.	Lecture Laboratories, Practical performance Presentations Strategy of presenting reports Projects - Discussion and dialogue	-Written exams - Written and oral quizzes. -- Homework - Assignments - Practical tests. Written presentation (essay, reflective paper, etc.) /Oral presentation [Rubrics-based] Final training report [Rubrics-based] - weekly report
Formulate or design a system, process, procedure or program to meet desired needs in biology.	Lecture Laboratories, Practical performance - Discussion and dialogue	-Written exams - Written and oral quizzes. -- Homework Practical tests. -Observations
Evaluate, develop and conduct biological experiments or test hypotheses, analyze and interpret data and use scientific judgment to draw conclusions and make a criticism.	Lecture Laboratories, Practical performance Workshops, Presentations - Discussion and dialogue	Written exams - Practical tests. -Quizzes (Written and oral quizzes) -Final training report [Rubrics-based] - Attendance and participation - weekly report -Final presentation
Examine microscopic specimens in laboratories basic experiments of biology in safe and effective way.	Lecture Laboratories, Practical performance - Discussion and dialogue	-Written exams - Quizzes (Written and oral quizzes) - Practical tests. -Observations
Communicate effectively with a range of audiences, work effectively with information technology, and library resources in related to the required biology disciplines.	Self-learning Collaborative learning Workshops, Seminars Presentations Self-learning, Guided learning. Strategy of presenting reports Projects	▪ Reports (Rubrics-based) Projects [Rubrics-based] -Final presentation

Values		
Sustain effectively Islamic values, ethical and professional responsibilities and the impact of scientific solutions in global, economic, environmental, and societal contexts.	Lecture Laboratories, Seminars Teamwork Projects Discussion and dialogue Individual and group duties Collaborative learning	-Practical exam. Reports [Rubrics-based] Projects [Rubrics-based]
Collaborate effectively within teams via establishing goals, planning tasks, meeting deadlines, and analyzing risk and uncertainty.	Lecture Teamwork Seminars Projects Discussion and dialogue Self-learning Collaborative learning	Reports [Rubrics-based] Projects [Rubrics-based] Presentation Practical exam

Teaching and learning strategies are well planned and identified according to each course learning outcomes, which are aligned with PLOs. Further, these teaching strategies are chosen based on the domains of learning. These includes active learning strategies such as

- *Class discussion*
- *Group Project-based learning*
- *Self-learning / guided learning*
- *Presentation and reporting strategies*

These active learning strategies are practiced in the **Biology program** and their usability depends on the requirements in the Physics program courses.

Instructional strategies aimed at improving students' thinking include interactive learning in the form of class discussion and seminars. These use brainstorming, which encourages students to ask questions, discuss ideas, but also develop their own problem-solving. This will encourage students to participate in competitions which are of great importance in the student life. Other strategies include completing projects, writing reports, and giving presentations. Presentation and writing reports are chosen as strategies for developing communication skills. Group projects are commissioned to develop interpersonal skills and responsibility.

In addition, *extra-curricular activities* complement the academic **Biology program** curriculum by refining and developing interpersonal skills and behaviors, hence, enhancing students' experience. The impact of student engagement in extracurricular activities on achievement and employment is becoming evident nowadays.

The extra-curricular activities cover the following domains:

➤ **Sports**, which covers playing on the college and university sport teams. Many of high school and college students join sports programs every year. Being a member of your school's sports team can be a rewarding and enriching experience. Playing sports teaches you the importance of teamwork, leadership and working hard to achieve your goals. College of

Engineering and its departments have students' activities committees which organizes games and competitions throughout the academic year.

➤ **Community Service**, which covers any sort of volunteer work, either in your community, on a national scale, or abroad, most educational institutions offers regular opportunities for students to give back to the community. These activities take a variety of shapes, including participating in environmental cleanup efforts and mentoring students in elementary schools. Including volunteer work on the resume shows the degree of commitment to helping your community and the willingness to serve others.

➤ **Professional training and science club**, which show that the passionate about learning and gaining a competitive advantage. At the collegiate level, many high-performing students are invited to join professional societies. These are typically national associations that seek out members who are skilled in a particular field. Joining one of these societies shows the commitment to your chosen industry and the level of professional competency.

Extra-curricular activity	Program Learning Outcomes									
	K1	K2	S1	S2	S3	S4	S5	V1	V2	
Visiting academic and research resources (Central laboratory, Central lab, Hospital lab, ...)	✓	✓					✓			
Technological Skills (typing skills, online research skills, experience with commonly used software programs, and knowledge of online etiquette)		✓					✓	✓	✓	
Academic Teams and Clubs (Sciences club)							✓	✓	✓	
Sports (Football, Athletics...)									✓	
Volunteer & Community Organizations (associations concerned with preserving the environment)								✓	✓	

6. Assessment Methods for program learning outcomes.

Describe assessment methods (Direct and Indirect) that can be used to measure achievement of program learning outcomes in every domain of learning.

The Biology program uses different methods to assess and evaluate the extent to which its program learning outcomes are being attained. These methods are used to gather the data which is necessary for the assessments. Evaluation, in the form of interpreting the data, is then carried out in order to determine how well the outcomes are being attained. The results of both the assessment and evaluation processes are finally utilized for the continuous improvement of the program. The steps used for the assessment, evaluation and feedback to the continuous improvement of the program are:

1. Assessment methods for program learning outcomes can be direct assessment usually relies on the course work or indirect assessment methods (Course evaluation survey, Students survey on evaluating the biology program, Alumni survey, Employers survey) usually obtained by using surveys (includes designing forms of surveys and appropriate questions for the specific and applicable data).
2. The collected data is analyzed and compared to a pre-set performance indicator, which

constitutes the evaluation processes.

3. Checking the degree to which the data evaluation results meet the pre-set targets will be the force for the continuous improvement processes.

Assessment Methods for program learning outcomes.

Knowledge and understanding	Skills	Values
-Written exams - Written and oral quizzes. -- Homework -Assignments, Reports [Rubrics-based] Practical examWritten presentation (essay, reflective paper, etc.) /Oral presentation [Rubrics-based] -Final training report [Rubrics-based] - Attendance and participation - weekly report	-Written exams - Written and oral quizzes. -- Homework - Assignments - Practical tests. Written presentation (essay, reflective paper, etc.) /Oral presentation [Rubrics-based] ■ Reports (Rubrics-based) Projects [Rubrics-based] -Final training report [Rubrics-based] - Attendance and participation - weekly report -Observations	-Practical exam. Reports [Rubrics-based] Projects [Rubrics-based] -Final training report [Rubrics-based] - Final presentation

D. Student Admission and Support:

1. Student Admission Requirements

Acceptance of new students:

1. University council determines at the suggestion of college council and the relevant authorities in a number of university students to be admitted in the next academic year.
2. The applicant must apply a request of enrollment to the Deanship of Admission and Registration (electronic registration). Deadlines are announced in each academic year.
3. The applicant must meet the requirements to attend the university.
4. The applicant should have a secondary school certificate or equivalent from within the KSA or from abroad.
5. The success rate of students at the secondary level should be as determined by the university in the academic year that the student applies for admission.
6. It should not have been on receiving a high school or its equivalent for more than five years, The Council of the University exception to this requirement if compelling reasons available.
7. Successfully pass any test or personal interview held by the college or University.
8. The applicant must have good behavior.
9. Not be separated from the other University for Disciplinary Reasons.
10. Shall not accept those with a bachelor's degree, or equivalent to get a bachelor again, and the president exception to that.
11. To satisfy any other requirements prescribed by the University Council that is declare the time of submission.
12. The applicant must pass a medical examination to be medically fit and free of infectious diseases.
13. The student shall be available for full time study in the periods required by the study, whether morning or evening

A student may transfer from another college in the same university or another acknowledged university based on the following conditions:

1. A student should fulfill admittance requirements.
2. Applications for transference should be filled through internet during limited period in the academic year calendar.
3. A student should achieve a general evaluation or an accumulative average Excellent or Very Good.
4. A student is required to take the following courses as a prerequisite for transference: Chemistry, Biology, Physics and English language. In each course, he/she should be awarded an evaluation of a very good or higher.
5. A student should not have attended more than 50% of the requirements of his previous college, from which he is transferred.
6. A student should not be dismissed from university for educational or disciplinary causes. If it is found, after being admitted, that dismissal is for those causes admittance will be denied.
7. For students transferred from the college of medicine inside the Kingdom of Saudi Arabia; they should acquire a general evaluation or an accumulative average not less than good; on the condition that the courses achieved by the student should be equalized with those found in the college, and should not be less than good that in the first, second and third levels.

http://dar.ju.edu.sa/forms/regulations_JU_Final_Version-3.pdf

2. Guidance and Orientation Programs for New Students

New student orientation programs are designed to guide students in answering all their expected questions. Prior to the beginning of classes, students are given an overview of the complete realm of university life, from academics to social activities, through a period of days referred to as orientation. Typically, a staff member or team coordinates the orientation programs within the university and provides the leadership to bring the entire university together. Depending on the size and mission of the institution, the format of orientation will vary from a one-day program to a week-long event. However, regardless of the nature of the program, three objectives should be present in all orientation programs:

- 1) introducing students to college life
 - 2) acclimating students to their new surroundings
 - 3) providing an opportunity for the university to meet the newest members of the community.
- It is the duty of the coordinator of orientation to design a program that will bring these three goals together.

3. Student Counseling Services

(academic, career, psychological and social)

A meeting held at the beginning of each semester headed by the college dean, in which the agent and the heads of the departments shall participate, rights and duties of the students clarified.

Academic support:

Students are supported academically, social and psychological through their academic advisor, who deals with them through the academic advisor's work document.

- 1-Preparing a special file (paper or electronic) for each student who has been assigned the task of supervising them
- 2- Holding meetings with the guiding group students at the beginning of the semester and throughout the school year, and informing them of the guiding hours.
- 3- Introducing the guided students to the university's systems and regulations

- 4-Urging the guided students to commit to conducting all registration, deletion, addition, withdrawal, etc. according to their announced dates from the Deanship of Admission and Registration on the electronic portal.
 - 5-Ensuring that the student registers the curricula for the required number of hours according to his cumulative average and his study plan.
 - 6- Inform students who are guided by the decisions that have previous requirements in the study plan.
 - 7- Introduce the guided students to the university calendar, and ensure that they received their schedules on the electronic portal.
 - 8- Urging guided students to attend lectures, adhere to university systems and regulations, and listen to their problems and suggestions.
 - 9 - Helping students to adapt to and choose a major in case the student needs it, especially new ones, and work to overcome obstacles and problems facing them.
- Responding to student inquiries via blackboard, or other social media
- 10- In the event that the student receives a GPA of less than 2.00, he will be warned for the first time, and the guide must explain to the student what this is, its reason, and its consequences.
 - 11- Attention to struggling students, intensifying communication with them and urging them to improve their academic conditions, and help them solve their problems in their academic progress.

Psychological support

1. Creating a balanced and stable social and psychosocial atmosphere for the student throughout his academic years in the university.
2. Provide care to students through material and moral support.

Career support:

1. Provide students expected to graduate with information on the areas of graduate work, and how to prepare for the start of a career (career counseling).
2. Develop students' talents and tap them to serve their community.

Social support

1. Provide cultural, scientific, and social and sports services to students.
2. Consolidate ethical and behavioral values among students.

4. Special Support

(low achievers, disabled, gifted and talented)

Based on the system of care for the disabled issued by the Royal Decree No. (M / 37) dated 23/9/1421 AH, and in the belief of Jouf University that education is a legitimate right for all spectrums of society, male and female alike, has been formed a unit with special needs, as one of the units of the Deanship Students' Affairs is concerned with overcoming all the difficulties and challenges faced by the university students.

Low achievers

- College evaluating that profiles academic achievement of students and monitor their performance during the year.
- Early during the year, academic affairs committee prepares a list with names of students who are faltering and whose performance is below standard.
- The list is forwarded to the assigned academic advisor who initiates a remediation process.
- Academic advisors meet with students and provide immediate feedback.
- Recommendations for additional assistance of special cases are forwarded to the Dean of college.
- The system permits that failing students are given a second chance and are allowed to re-sit

the exam.

-The college council requests that a departmental investigation and action oriented review is triggered if the scores for a particular exam fall below college benchmark.

Disabled

-The college launches periodical awareness campaign to support people with special needs.

-Urged the employees of the college not to use the facilities and equipment meant for people with special needs. Besides, the availability of facilities for people with special needs in all buildings of the college and parking.

Gifted and talented

-Rewarding of gifted, talented and outstanding students via factual, moral reward or facilities to participate in extra-curricular and recreational activities.

- Introducing an introductory module (Principles of Learning and Biology Education). It is specially constructed with the intent to help students transit from the dependent –teacher centered learning situation to the independent life-long self-directed approach to learning.

E. Teaching and Administrative Staff

1. Needed Teaching and Administrative Staff

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Professors	Zoology		--	1	1	2
	Botany		--	2	3	5
	Microbiology		--	1	2	3
Associate Professors	Zoology		--	3	4	7
	Botany		--	4	5	9
	Microbiology		--	3	3	6
Assistant Professors	Zoology		--	5	6	11
	Botany		--	2	3	5
	Microbiology		--	3	3	6
Lecturers	Biology	Biology	--	2	2	4
Teaching Assistants	Biology	Biology	--	2	2	4
Technicians and Laboratory Assistants	Biology	Biology	Laboratory Assistants	4	4	8

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Administrative and Supportive Staff	Biology	Biology	Supportive Staff	1	1	2
Others (specify)	---	---	---	---	---	---

2. Professional Development

2.1 Orientation of New Teaching Staff

Describe briefly the process used for orientation of new, visiting and part-time teaching staff

There are several induction programs designed to prepare new faculty members to understand their rights, tasks, responsibilities, and workload. Additionally, the package includes a welcome information package designed to assist new faculty members in assimilating into the academic community at Jouf University, as well as providing essential information regarding living and working in the area, as well as offering assistance to new faculty members and their families. These procedures can be summarized as following:

- 1-Introduce the internal regulations of the university and the higher education.
- 2- Introducing and explaining the mission and objectives of the scientific departments, explaining the philosophy of the program and the courses in which it is presented, and the social and social needs and contributions of the program.
- 3- Defining the rights and duties of the faculty member in the educational institution.
- 4- An advisory committee of faculty members that advises the new faculty members of the department.
- 5- Provide a training course in the design and construction of the course
- 6- A course in effective university teaching strategies
- 7- Course in the use of technology in teaching
- 8- Course assessment methods of learning outcomes and format, mechanism used for course and program evaluation
- 9- A course in effective presentation skills.

2.2 Professional Development for Teaching Staff

Describe briefly the plan and arrangements for academic and professional development of teaching staff (e.g., teaching & learning strategies, learning outcomes assessment, professional development, etc.)

The college units (quality assurance, e-learning, academic supervision) organize and train the teaching members about the following subjects.

Regarding college:

- 1) Advanced black board
- 2) Complete and write new template for course specification and reports.
- 3) Advanced workshop in student academic supervision

The university skills development center, academic supervision unit, and deanship of quality assurance organize and makes workshop and training for teaching members about the following topics or and skills

Regarding university:

- 1) Effective teaching strategies
- 2) Achievement tests in the university stage.

- 3) Modern trends in the design of courses.
 - 4) Funding for scientific research and scholarship
 - 5) Active learning strategies
 - 6) Plagiarism and scientific documentation of research.
 - 7) effective teaching strategies
 - 8) exam preparation skills
 - 9) construction and managing the research team
 - 10) EndNote X7
 - 11) Personal strategic planning
 - 12) Development of Leadership Skills
- Follow-up and implementation of the strategic plan

F. Learning Resources, Facilities, and Equipment

1. Learning Resources.

Mechanism for providing and quality assurance of learning resources (textbooks, references and other resource materials, including electronic and web-based resources, etc.)

Learning resources include hard and /or electronic copies of the text books, reference books, journals and educational materials provided by the teaching staff members or uploaded on Blackboard application. Teaching staff responsible for the program and for courses regularly provide guidance on the material requirements to support learning and teaching through their course reports.

Every year students take part in course and program evaluation survey (item number 11 for student survey) on a range of issues including resource material usage, allocation and service adequacy. The survey results help to compare, monitor trends and set targets.

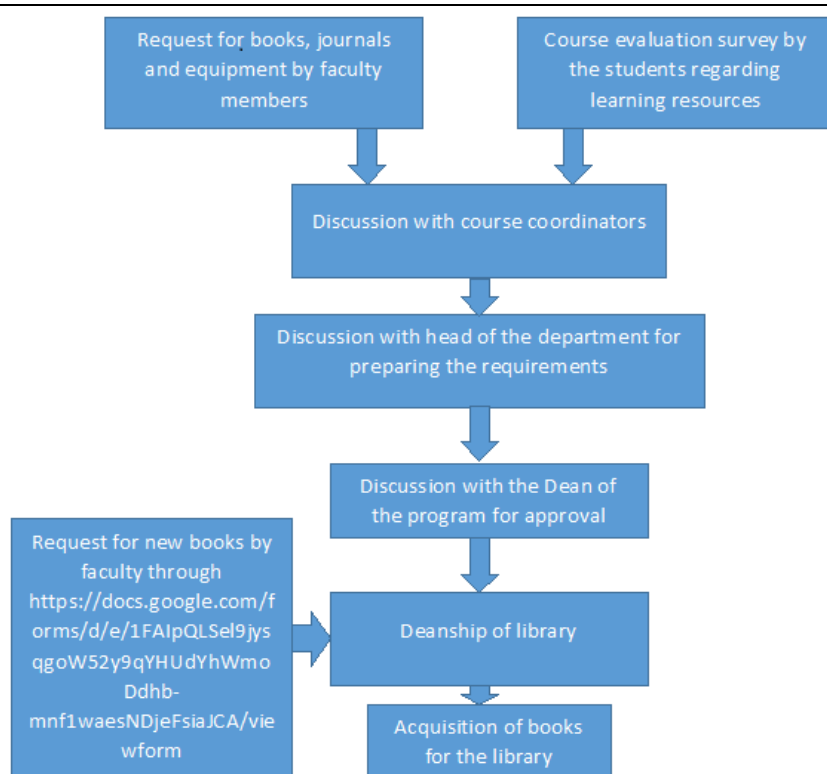
The teaching staff members were periodically asked to give the requirement for the learning resources, which gets approved by the course coordinator after discussing with the course team, the inputs from the student survey also taken into consideration.

Users are informed about acquisition of new materials, equipment, subscription to new database through college notice board and announcement in the blackboard.

The staff and student can visit the university website link

<https://www.ju.edu.sa/en/administrations/deanships/deanship-of-library-affairs/library-services/>, to access the library catalogue, updated information about the learning resources.

The process of acquisition is given in the following figure.



The process for providing and quality assurance of learning resources.

2. Facilities and Equipment

(Library, laboratories, medical facilities, classrooms, etc.).

University has central library holds over 23000 book titles in both Arabic and English, in addition to numerous journal subscriptions, government publications, dissertations, databases, and manuscripts with a fully automated retrieval and storage system. The library catering the needs of the faculty and student. There is facility to access digital library (<https://sdl.edu.sa/SDLPortal/ar/Publishers.aspx>) by the students and staff at any time.

A central instrument laboratory is available, which is equipped with modern instruments like thermal cycle PCR, Electrophoresis, etc. These laboratories are used for both academic and research purpose.

University has separate medical center for male and female to cater the emergency medical need of staff and student. One doctor, nurse, pharmacist and other supportive staffs are available in the medical center during the working hours of the college. Ambulance facility is also available with in the medical center in order to meet the emergency transfer of the patient to nearby medical facility.

College of Science (main campus) has 1 building, 32 classroom, 17 laboratory, 1 computer

lab. For biology program five class rooms for the male and ten for female are available (other faculty classrooms also available if needed). All the classrooms were equipped with overhead projectors and smart boards, having sitting capacity of 30 to 50 students for each class room.

Overall available facility and equipment's have been summarized in the following table

Facility	Male section	Female section
No. of laboratories	8	4
Medical center	1	1
No. of Class rooms	5	10

Faculty and staff members generally follow the procedures to acquire resources, which typically start by submitting their requests in appropriate forms through their department heads.

Carry out the model of the suitability of equipment, laboratories and halls for the educational process through a technical committee

- The Committee reviews the library, laboratories, classrooms, toilets and other facilities and ensures that they are met and identified deficiencies.
- The Committee prepares a report with its shortcomings.
- The Committee shall submit to the Deanship of the College to rise to the engineering department with shortcomings to be fixed and fit the educational process.

3. Arrangements to Maintain a Healthy and Safe Environment (According to the nature of the program)

<https://drive.google.com/drive/u/1/folders/14pW9GLUenmTiah7NAqx0IMo46nTFdkrc>

The University requires laboratory supervisors and research project leaders to take responsibilities to control risk. Laboratory worker has responsibility to observe the basic safety rules that have been established help to create a safe and healthy working environment.

Safety Guideline has been constructed to provide practical guidance to persons-in-charge and other laboratory users on how to implement health and safety measures as required under the safety policies.

1. Departmental Health, Safety and Environmental Committee are formed in the beginning of each academic year.
2. The above-mentioned committees meet regularly as required for discussing health and safety matters as well as environmental protection issues, and for promoting the awareness of those issues among staff and students within the department.
3. This committee is responsible for releasing a booklet in each laboratory for maintain safety and health issues
4. Departmental head should revise all course plans and confirm that the first topic in each practical course will cover safety issues carefully.

5. According to the University's Laboratory Safety Management Policy, the Head of Department should also appoint a staff member to be in charge of each individual laboratory. The person-in charge should:

- assess risks of work activities, work environment and usage of plants and substances under their jurisdiction
- inspect the laboratory to identify and evaluate workplace hazards and unsafe work practices
- inform users of the laboratory about health and safety matters
- establish and maintain good health and safety practices
- follow established guidelines and assist others to meet safety requirements
- report promptly on all accidents/incidents and maintain an up-to-date record of documents as required by legislation and by the University

G. Program Management and Regulations

1. Program Management

1.1 Program Structure

(including boards, councils, units, committees, etc.)

The management of the Program depends on the different committees and units of the program. The complete organizing structure of the program is as follow

1.2 Stakeholders Involvement

Describe the representation and involvement of stakeholders in the program planning and development. (students, professional bodies, scientific societies, alumni, employers, etc.)

Stakeholders involved in the program planning and development are:

1. **Students** currently enrolled in the program. Through the course evaluation questionnaire and the regency questionnaire, your opinions are taken into the program planning and also through your questionnaire in the Availability of harbor and test.
2. **Graduates** of the program.
3. **Employment diagrams:** Through the employment diagrams questionnaires and analysis of their results, as well as through your training in the program advisory committees
4. **Course Coordinators** — teaching staff responsible for preparation of course specifications, plan, intended learning outcomes, materials, final exams and reports as well as the dissemination of the relevant materials to students, other instructors, and program administration.
5. **Program Coordinator** — the head of the department.
6. **Quality Unit** — the quality unit coordinator and quality coordinators of the biology program.

7. **Program Advising Committee** — the program coordinator, quality unit coordinator and two specialized external members; Holds two meeting per year.

2. Program Regulations

Provide a list of related program regulations, including their link to online version: admission, study and exams, recruitment, appeals and complaint regulations, etc.)

A. Student admission regulations:

1. The applicant must be a Saudi national or from Saudi mother.
2. He must have a high school diploma or equivalent from inside or outside the Kingdom.
3. That he has not passed his secondary school diploma or its equivalent for a period of more than five years.
4. To be medically fit.
5. To successfully pass any test or personal interview set up by the University Council.
6. To submit an approval from his work authority to study if he works in any governmental or private body.
7. To fulfill any other conditions decided by the University Council and announced at the time of application.
8. Not be dismissed from Jouf University for academic or disciplinary reasons or any other university for disciplinary reasons.
9. Holders of a Bachelor's degree or its equivalent will not be accepted for obtaining another Bachelor's degree.
10. It is not permissible to accept a student who is registered for another university degree, whether at the same university or not.
11. Should have obtained the National Center for Assessment test (General Aptitude Test + achievement).
12. The tests of the National Center for Assessment should not be less than (50).

These criteria can also be accessed through the Deanship of Admissions and Registration Affairs homepage (http://dar.ju.edu.sa/forms/regulations_JU_Final_Version-3.pdf).

B. Study regulations:

- A. Policies and regulations of study in the program including: attendance rules, progression from year to year, academic warnings, academic probation, transfer of credits, academic leave, course registration, program completion and graduation requirements are in accordance with the policies and regulations of the university. Jouf University policies and regulations are outlined in the student handbook/guide “Study and exams operational rules” also can be accessed through the Deanship of Admissions and Registration Affairs homepage

http://dar.ju.edu.sa/forms/regulations_JU_Final_Version-3.pdf

C. Student evaluation:

- A. The students are graded according to the following system:

B. Courses without practical part

- a. Activities (Quiz, assignments and blackboard) : 40%
- b. Midterm exams : 20%
- c. Final exam : 40 %

C. Courses with practical part

- a. Activities (Quiz, assignments and blackboard) : 20%
- b. Midterm exams : 20%
- c. Practical exams : 20%
- d. Final exam : 40%

D. The midterm and final exams are written exams.

E. The final exam is unified for all sections.

F. The final exam is prepared by the course coordinator

G. The practical exam usually involves a written part and a lab experiment

H. The written exams consist of diverse questions and measures intended learning outcomes.

I. The midterm exams are typically administered in Weeks 6 and 12.

J. Practical exams are typically administered in Week 14.

K. Graduation research projects are evaluated (by a temporary committee of college faculty members) in Week 14.

L. The final exam is administered in Weeks 15 and 16.

M. The grades of students are distributed as follows:

S.N.	Letter Grade	Mark	Grade
1	A+	95-100	Highly excellent
2	A	90-94	Excellent
3	B+	85-89	Highly very good
4	B	80-84	Very good
5	C+	75-79	Highly good
6	C	70-74	Good
7	D+	65-69	Average
8	D	60-64	Passed
9	F	Lower than 60	Failed

D. Staff recruitment:

Appointment of new staff is managed by a Recruitment Committee through the following mechanism:

- A. The committee determines the shortage in staff of different specialties based on the

information provided by the heads of the departments.

- B.** The committee announces vacant academic jobs through the university website, newsletters and Saudi Arabian cultural missions.
- C.** The committee screens applications for the selection of potential candidates.
- D.** The committee schedules interviews for the selected candidates via video conferences and/or face to face meetings in Saudi Arabian cultural missions.
- E.** Final selections are done through internal voting of the members of the committee.
- F.** Criteria for selection involve:
 - a. If the candidate specialty is relevant to the position
 - b. Candidate's education background
 - c. Candidate's work experience
 - d. Candidate's teaching philosophy and strategies
 - e. Candidate's publication record
 - f. Candidate's fluency in English language (written and spoken)
- G.** The selection process is neutral to gender, religion, race, and nationality.

E. Student appeals:

Policies and regulations of student appeal on academic matters including: final grade appeal, academic probation and transfer are outlined in the student handbook/guide "Study and exams operational rules" also can be accessed through the Deanship of Admissions and Registration Affairs homepage. The policy describes criteria for appeal, timeline and personnel involved (http://dar.ju.edu.sa/forms/regulations_JU_Final_Version-3.pdf).

F. Student complaints:

- A.** Student complaints/suggestions (academic/non-academic) are handled by a Complaint Processing Committee.
- B.** The committee is formed of the dean, vice-dean and department heads.
- C.** If the complaint concerns a member of the committee, his/her membership is suspended to avoid alleged conflict of interest.
- D.** Student complaints/suggestions are handled with complete seriousness, transparency, and indifference irrespective of any personal considerations.
- E.** Student complaints/suggestions are handled according to the following mechanism:
 - The student fills a complaint form.
 - The student submits the form to the coordinator of the Complaint Processing Committee by hand or through email.
 - The committee coordinator assigns a serial number to the form and records its number and details in a log book.
 - During committee scheduled meetings, the members scrutinize and discuss the complaint/suggestion to determine:
 - a. The seriousness and relevance of the complaint/suggestion.
 - b. The party (department, unit, administration) to whom the

complaint/suggestion should be directed.

- c. The time frame required to resolve the issues reported in the complaint or implement the suggestions provided by the student.

-The committee forwards a summary of the complaint/suggestion to the relevant party to take appropriate actions.

-The committee processes the actions taken by the relevant party and informs the student with the reply of the party and the measures taken to address the student's complaint/suggestion.

The student shall receive a reply to his/her submitted complaint/suggestion from the committee coordinator within 5 working days of the initial submission of the complaint form.

H. Program Quality Assurance

1. Program Quality Assurance System

Provide online link to quality assurance manual

https://drive.google.com/drive/u/1/folders/1PfXk633mWwaYFJ-1UZKty_GC9ZkWW0CI

2. Program Quality Monitoring Procedures

1. Preparing the program Specification once at the beginning of the plan.
2. Preparing course Specification, taking into consideration the correlation of course Specification with the mission and goals of the program.
3. Reviewing the student's regular evaluation of the courses and academic program
4. Reviewing the graduating students' evaluation of the academic courses and the academic program
5. Review employers' evaluation of graduates performance
6. Attaching faculty members to training courses and workshops to provide them with the necessary teaching skills (introducing them to learning theories and teaching and learning strategies).
7. Comments and opinions of faculty members.
8. Students work (homework, presentation,...) checked well to ensure that it is done by student themselves.
9. Students informed the feedback of their works and their marks to can improve their works.
10. The internal verification of student achievement standards is carried out, the correction of the students 'assignments and tests is reviewed by a faculty member who is not teaching the course from the same program, to make sure that all parts of the work have been awarded grades, and that the grades have been collected Correctly.
11. The accuracy of the correction Verified on a random sample, as the exams and evaluation committee of the academic program selects a random sample not less than 10% of the courses for each semester from the students 'answers, with an emphasis that they include (the highest and lowest grades and failure cases).

The names of students are hidden from the papers, photocopied, and then handed over to the reviewing member. Research, projects and oral tests are not re-corrected if more than one faculty member participates in their conduct.

12. Preparing the course report every semester. Improvements and additions to course specification can be made based on the feedback from the course report in each semester.
13. Preparing the program report annually, improvements and amendments can be made to the courses and program specification based on the feedback from the program report annually.
14. At the end of the four years, a self-study report for the program is prepared, and the program's mission, goals, Learning outcomes of program to development are reviewed.

3. Arrangements to Monitor Quality of Courses Taught by other Departments.

- 1- The course specifications that are taught through other specific departments are accordance with the program specification, and taking correlation of these programs specification with the mission and goals of the program.
- 2- Program management is provided with courses reports taught through other scientific departments. Improvements and additions to course specification can be made based on feedback from the course report in each semester.
- 3- Review the results of the evaluation of the courses of students and respond to their observations.
- 4- Presenting the results of the evaluation of the decisions of the students and faculty members to the plans committee to develop the curricula so as to help the quality of learning outcomes
- 5- Reviewing the courses periodically to ensure continuity of relevance to the needs of students in the programs offered through the Quality, Development and Academic Accreditation Unit in the faculty where they are reviewed in the light of the mission and objectives of the department, assessment of the course (s) through students (questionnaires) to provide feedback
- 6- Meetings with students enrolled in the course / courses concerned
- 7- Make reference comparisons with similar courses in a similar program in other colleges

4. Arrangements Used to Ensure the Consistency between Main Campus and Branches (including male and female sections)

1. Staff members in both male and female sections share in program council.
2. Staff members in both male and female sections share in program internal specialized committees.
3. Following the same program specification and courses specifications.
4. Standardization of quarterly and final exams for male and female students.

5. Preparing the course report for all the courses in a grouped manner, in which the male and female students are explained every semester.
6. Preparing the program report in a grouped manner in which the male and female students are explained annually.
7. Preparing the performance indicators report for the program.
8. Preparing an improvement plan to achieve consistency between the two parts.
9. Monitoring and follow-up.

5. Arrangements to Apply the Institutional Regulations Governing the Educational and Research Partnerships (if any).

N/A

6. Assessment Plan for Program Learning Outcomes (PLOs), and Mechanisms of Using its Results in the Development Processes

Program learning outcomes Assessment Plan

Mechanisms of Using its Results in the Development Processes: The Assessment and Evaluation

The BSc. of Biology program uses different tools and processes to assess and evaluate the extent to which its PLOs are being attained. These processes are used to gather the data which is necessary for the assessments. Evaluation, in the form of interpreting the data, is then carried out to determine how well the outcomes are being attained. The results of both the assessment and evaluation processes are finally utilized for the continuous improvement of the program. The steps used for the assessment, evaluation, and feedback to the continuous improvement of the program follow the following three steps:

1. Assessment tools of the PLOs (i.e., collecting data) can be direct or indirect. Direct assessment of PLOs usually relies on the course work, whereas indirect assessments of PLOs are usually obtained by using surveys. This step includes designing forms of surveys and appropriate questions for the specific and applicable data.
2. The collected data is analyzed and compared to a pre-set performance indicator, which constitutes the evaluation processes.
3. Checking the degree to which the data evaluation results meet the pre-set targets will be the force for the continuous improvement processes.

Course Mapping of PLOs:

To set the stage for the assessment process, the material covered in each course, together with its expected course learning outcomes (CLOs), are used to identify the certain number of program learning outcomes that are most probably be covered by the course. It is important to mention here that each of the course CLOs should be associated with one of the chosen PLOs. Thus, the PLO with a single CLO implies that this CLO statement may be identical to that of the PLO.

To this end, each course has identified some specific number of measurable Course Learning Outcomes (CLOs) and these CLOs are mapped to the chosen different PLOs. This process of course-PLO mapping is carried out for each Department/College course. It is also important to

mention here that we have chosen not to map university requirements or the basic science courses (Math, Physics, Chemistry, and Statistics) to the outcomes. These do automatically satisfy the program learning outcomes. The mappings are made by each course team (involving course coordinator(s) and instructors, for the course) in consultation with the Program Quality Assurance Committee.

Program Learning outcomes:

To assess and evaluate the extent to which the PLOs are being attained, BSc. of Biology program uses various processes. These processes are defined to keep data gathering efficient and effective, and the evaluation pertinent to the process of continuous improvement. To achieve these goals, two types of assessments, direct and indirect are performed. The indirect assessment is performed using surveys while the direct assessment results are obtained from student coursework-based evaluations. In its planning for the present and future expanded assessment processes.

Table-1 describes how the Program Learning Outcomes are assessed. It contains the method of assessment, data sources with which these assessment processes are carried out, and how the data is collected.

Table-1 Program Learning Outcomes Assessment Tools

Method of Assessment	Data Sources	How collected	Performed by	Collected By	Evaluated By
Direct Assessment Method	Course Assessment Report based on student marks	Electronic Copy	Program staff Members	Assessment and Analysis committee	Assessment and Analysis committee

Indirect Assessment Method	Course Evaluation		Students	Assessment and Analysis committee	
	Program Evaluation		Students level 7 and 8		
	Student Experience		Students form level 4 up to 8		
	Alumni Survey		Alumni		
	Employer Survey		Employers		

Direct Assessment:

The direct assessment of the outcomes usually relies on the coursework and based a variety of tools that include combinations (as defined in the articulation matrix at the beginning of academic year) of final exam, midterm tests, quizzes, homework, laboratory works, assignments, practical, projects, presentations, etc. The assessment tools do however vary from course to course.

Indirect Assessment:

For our indirect assessment, different surveys are conducted:

Student Experience Survey (SES): is conducted mid-way through the second semester of the second year. The survey deals with the student's life at the institution including both major elements of the program in which they are enrolled and a number of general items relating to services and facilities. As for the SES the final question is intended as a summary question that might be used as a general quality indicator.

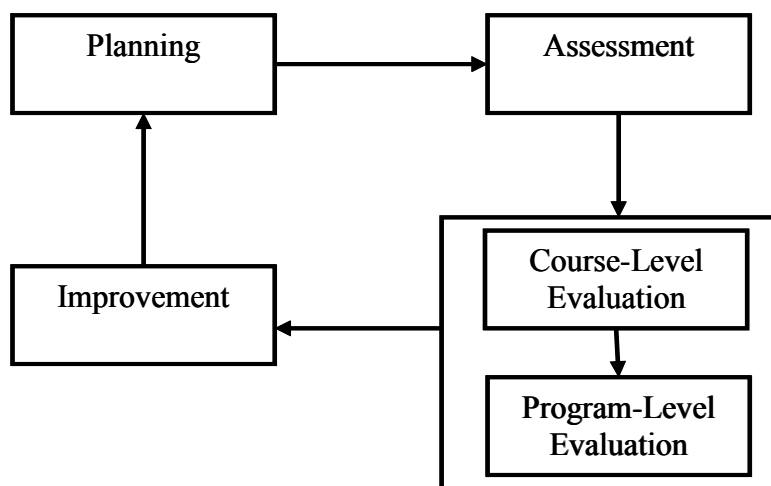
Course Evaluation Survey (CES): is conducted towards the end of a course. In this regard, formal written surveys targeting the program learning outcomes are solicited from students at the end of the BSc. of Biology program courses.

Program Evaluation Survey (PES): is filled in by the graduates at the end of their graduation semester. The graduate survey contains questions that directly target each one of the Program Learning Outcomes.

Alumni survey and employer survey are filled in by the alumni and employers respectively that directly target each one of the Program Learning Outcomes.

Continuous improvement process:

The program objectives set a guideline for program learning outcomes, curriculum development, and teaching procedure. To ensure achievement of the program learning outcomes, a variety of assessment tools as discussed were used. The level of assessment and evaluation process is conducted at the end of every semester, and the results of this assessment process are used to improve the educational process to achieve the targeted program learning outcomes. The process is summarized below which depicts the assessment and evaluation process and hence closing the loop, of program learning outcomes. Note that evaluation is made at two different levels, course-level and program level. The outcome of the evaluation is utilized as feedback for improvement and incorporated into planning to enhance the overall attainment of Program Learning Outcomes.



Assessment and Evaluation Process for Closing the Loop Planning:

Course-level Evaluation/Improvement:

At the end of each semester, the faculty member is expected to assess the achievement of course learning outcomes (CLOs) as mentioned in the course specifications, and then the achievements of the relevant program learning outcomes according to the CLOs/PLOs mapping. Then, he should prepare a course assessment report where he reports outcomes achievement obtained by direct. If the assessment reveals any weaknesses in a specific program learning outcome, the faculty should carefully analyze the results to identify the reason(s) of that weakness and propose corrective action(s) that can be implemented during the next semester to improve that specific outcome achievement. The impact of the proposed corrective actions on the outcome achievement shall be assessed at the end of the next semester. In the other hand, if the faculty reveals any strengths in specific student outcomes, he can specify the reason(s) and suggest action(s) to maintain that strength(s). These reports also take into account the feedback of students acquired through Course

Evaluation surveys and the overall delivery of the course. In the subsequent semester, the suggested corrective measures are implemented which are the driving force for the continuous improvement process.

To this end, the Coordinator of the Quality Academic Accreditation at the Biology program collects the course portfolios and reports and the Assessment and Analysis committee reviews the course reports that include any suggestions and improvement by the faculty members. This process is held at the end of each semester. The Assessment and Analysis Committee meets to discuss comments and feedback from the students' attainment of outcomes, Student Course outcomes and Exit Surveys. The committee discusses areas of strength, areas for improvement, and decides on actions for improving program learning outcomes.

Program-level Evaluation/Improvement:

The Program council not only takes the course-level reports into account but also sheds light on the overall strengths and weaknesses of the Program and recommends the necessary actions to rectify such weaknesses. For this purpose, the council members meet from time to time to review and plan for the following semesters. During such meetings, the council also reviews feedbacks obtained from constituents and any other initiatives at the university or national level.

7. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Leadership	Students, graduates, alumni, faculty Staff, administrative staff, employers	Surveys	End of the academic year
Teaching effectiveness Effectiveness of teaching & assessment	Questionnaire to evaluate the course and the program and the experience of the students, graduates, alumni, program leaders	Surveys	End of the Academic Year
Assessment	Students, graduates, alumni, faculty	Surveys, interviews,	End of the Academic Year

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
	Staff, program leaders, independent reviewers	visits, independent reviewers	
Facilities and equipment	Questionnaires of faculty, students, staff.	Surveys	End of the Academic Year
Learning Resources	Questionnaires of faculty, students, graduates, alumni, faculty Staff.	Surveys	End of the Academic Year
- Effectiveness of guidance	Evaluation questionnaires	Survey students' opinions.	End of the Academic Year
Student Services	- Student opinions, - and independent reviewer	Student Opinion Survey - and independent reviewer opinion on the quality and method of service delivery	End of the Academic Year
Program management adopts key performance indicators that accurately measure program performance	Annual Report of the Program. - A copy of the performance indicators letter to the Deanship of Development	Analyze the results of the indicators and find out the strengths and weaknesses, recommendations and achievement plans	End of the Academic Year
Conduct a comprehensive periodic evaluation every 3/5 years	Program self-study - Periodic follow-up documents of plans stemming from self-study	By analyzing the results of the evaluation and scores of standards - and the opinion of the External Auditor	Every 3/5 years

Evaluation Areas/Aspects (e.g., leadership, effectiveness of teaching & assessment, learning resources, partnerships, etc.)

Evaluation Sources (students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, and others (specify))

Evaluation Methods (e.g., Surveys, interviews, visits, etc.)

Evaluation Time (e.g., beginning of semesters, end of academic year, etc.)

8. Program KPIs*

The period to achieve the target (4) year.

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
1	KPI-P-01	Percentage of achieved indicators of the program operational plan objectives	%90	Percentage of performance indicators of the operational plan	Academic year

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
				objectives of the program that achieved the targeted annual level to the total number of indicators targeted for these objectives in the same year	
2	KPI-P-02	Students' Evaluation of quality of learning experience in the program	4.6/5	Average of overall rating of final year students for the quality of learning experience in the program on a fivepoint scale in an annual survey	At the end of each semester, the end of the Academic year
3	KPI-P-03	Students' evaluation of the quality of the courses	4.6/5	Average students overall rating for the quality of courses on a five-point scale in an annual survey	At the end of each semester, the end of the Academic year
4	KPI-P-04	Completion rate	60%	Proportion of undergraduate students who completed the program in minimum time in each cohort	Academic year
5	KPI-P-05	First-year students retention rate	80%	Percentage of first-year undergraduate students who continue at the program the next year to the total number of first-year students in the same year	Academic year
6	KPI-P-06	Students' performance in the professional and/or national examinations	70%	Percentage of students or graduates who were successful in the professional and / or national examinations, or their score average and median (if any)	Academic year
7	KPI-P-07	Graduates' employability and enrolment in postgraduate program	50% 50%	Percentage of graduates from the program who within a year of graduation were: a. employed b. enrolled in postgraduate programs during the first year of their graduation to the total number of graduates in the	Academic year

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
				same year	
8	KPI-P-08	Average number of students in the clas	15	Average number of students per class (in each teaching session/activity: lecture, small group, tutorial, laboratory or clinical session)	Academic year
9	KPI-P-09	Employers' evaluation of the program graduates proficiency	4.2/5	Average of overall rating of employers for the proficiency of the program graduates on a five-point scale in an annual survey	Academic year
10	KPI-P-010	Students' satisfaction with the offered services	4.5/5	Average of students' satisfaction rate with the various services offered by the program (restaurants, transportation, sports facilities, academic advising, ...) on a five-point scale in an annual surve	Academic year
11	KPI-P-011	Ratio of students to teaching staff	1/12	Ratio of the total number of students to the total number of full-time and fulltime equivalent teaching staff in the program	Academic year
12	KPI-P-012	Percentage of teaching staff distribution	a. 45M:55F b. 45M:55F c.7%:11 % 19%:22 % 19%:22 %	Percentage of teaching staff distribution based on: a. Gender b. Branches c. Academic Ranking	Academic year
13	KPI-P-013	Proportion of teaching staff leaving the program	5	Proportion of teaching staff leaving the program annually for reasons other than age retirement to the total number of .teaching staff	Academic year
14	KPI-P-014	Percentage of publications of faculty members	100%	Percentage of full-time faculty members who published at least one research during the year to total	Academic year

No	KPIs Code	KPIs	Target	Measurement Methods	Measurement Time
				faculty members in the program	
15	KPI-P-015	Rate of published research per faculty member	5	The average number of refereed and/or published research per each faculty member during the year (total number of refereed and/or published research to the total number of full-time or equivalent faculty members during the year)	Academic year
16	KPI-P-016	Citations rate in refereed journals per faculty member	60	The average number of citations in refereed journals from published research per faculty member in the program (total number of citations in refereed journals from published research for full-time or equivalent faculty members to the total)research published	Academic year
17	KPI-P-017	Satisfaction of beneficiaries with the learning resources	4.2/5	Average of beneficiaries' satisfaction rate with the adequacy and diversity of learning resources (references, journals, databases... etc.) on a five-point scale in an annual survey	Academic year
18	KPI-P-018	Number of research groups in the program	5	Scientific Research Committee	The end of the 2nd semester
19	KPI-P-019	The number of supported research projects obtained by the program per year	20	Scientific Research Committee	The end of the 2nd semester
20	KPI-P-020	Percentage of students participating in extracurricular activities	75%	Scientific Research Committee	The end of the 2nd semester
21	KPI-P-021	Employers' satisfaction with the program's target, vision and mission	4.6	Alumni Affairs Committee	The end of the 2nd semester
22	KPI-P-022	Percentage of student graduation projects related to the surrounding community	100%	Scientific Research Committee	The end of the 2nd semester

* including KPIs required by NCAAA

I. Specification Approval Data

Council / Committee	Department Council Dept.
Reference No.	Minutes No. (3/1441)
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