هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-103
2022

Program Specification

Program Name:	**BIOLOGY**
Program Code (as per Saudi university ranking):	(051102)
Qualification Level:	6
Department:	BIOLOGY
College:	SCIENCE
Institution:	JAZAN UNIVERSITY
Program Specification:	New ☐ updated* ☒
Last Review Date:	Second Semester 2022

*Attach the previous version of the Program Specification.

Content:

Program learning outcomes*	Assessment Methods
1. Knowledge and Understanding	
Display a broad knowledge and understanding of the principal, theories and concepts of Biology, in addition to the basic principles of chemistry, physics, and mathematics that form the foundation on which all of biology rests.	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practica Midterm (Theory and Practica Final (Theory and Practical)
Demonstrate significant knowledge and understanding of the processes, techniques, mechanisms, functions, practices, conventions and terminology of Biology.	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practica Midterm (Theory and Practica Final (Theory and Practical).
Express in-depth knowledge and understanding of research methodology and inquiry techniques in the field of Biology	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practica Midterm (Theory and Practica Final (Theory and Practical).
2.Skills	
Apply broad integrated underlying theories, principles, and concepts in various contexts in Biology.	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practica Midterm (Theory and Practica Final (Theory and Practical).
Practice methods of inquiry, investigation and research for complex issues and problems in Biology	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practica

		Midterm (Theory and Practic Final (Theory and Practical). Research project. Individual and group project report.
S3	Carry out various complex practical tasks and procedures related to Biology.	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practic Midterm (Theory and Practic Final (Theory and Practical). Research project. Individual and group pr report. Assignments (Theory Practical) Oral exam
S4	Communicate in main forms and use of specialized digital technology and ICT tools to demonstrate an understanding of theoretical knowledge and transfer specialized knowledge, skills and complex ideas to a variety of audiences.	Research project. Individual and group project report. Assignments (Theory and Practical) Oral exam
3.Values, Autonomy and Responsibility		
V1	Show confidence and potential for leadership, long life learning and entrepreneurship.	Group Assignment. Observation. Group Discussion. Oral exam. Laboratory work.
V2	Consider risk assessment, and lab safety as a personal responsibility toward individuals and society.	Group Assignment. Observation. Group Discussion. Oral exam. Laboratory exams.
V3	Work collaboratively and constructively, and lead diverse teams to perform a wide range of tasks with responsibility, and play a major role in joint work planning and evaluation	Group Assignment. Observation. Group Discussion. Oral exam. Laboratory work.

A. Program Identification and General Information

1. Program's Main Location:
Jazan University (JU) Main Campus (Male + Female)
2. Branches Offering the Program (if any):
University College at Darb
3. Partnerships with other parties (if any) and the nature of each:
No Partnerships
4. Professions/jobs for which students are qualified

Career Opportunities:

- Education Sector (Ministry of Education: Teacher, Technician, and Instructor).
- Health Sector (Laboratory Technician).
- Microbiologists.
- Pharmaceutical sales representative.
- Genetic counselor.
- Biochemist.
- Environment, Water and Agriculture Sector (Laboratory Technician, Researcher).
- Industrial Sector (Food & Dairy Laboratories and Quality Control: Technician, Researcher).
- Wildlife Protection Authority (Researcher).
- Quality Laboratories (Technician).
- National Center for Disease Prevention and Control (NCDC), Technician, Researcher).
- Saudi Food and Drug Authority (SFDA), Technician, Researcher).
- Ministry of Interior (General Department of Criminal Evidence).
- The Saudi Grains Organization.
- King Abdul-Aziz City Science & Technology (KACST): Laboratories: Technician, Researcher.

5. Relevant occupational/ Professional sectors:

6. Major Tracks/Pathways (if any):		
Major track/pathway	**Credit hours** (For each track)	**Professions/jobs** (For each track)
1. **General Biology**	121	Teacher, Technician, Instructor, Researcher

7. Exit Points/Awarded Degree (if any):	
exit points/awarded degree	**Credit hours**
1. No Exit Points	

8. Total credit hours: (121 CH)

B. Mission, Objectives, and Program Learning Outcomes

1. Program Mission:

Providing distinguished academic programs to qualify students, and innovative scientific research to contribute in the requirements of development and community service.

2. Program Objectives:

3. **Program objectives:**

- Providing a high-quality program in biological sciences based on high quality educational strategies and develops it to become one of the main sources of biological science education in the Kingdom.
- Provide students with sufficient basic academic, technical and vocational skills through which they can practice biology to meet the requirements of the labor market.
- Provide graduates with modern theories, and develop new skills and techniques in biology and enhance their personal skills that enable them to enter the job market according to current and future needs in the Kingdom.
- Refining the personal skills of the department's students to improve their scientific and cognitive level.
- Graduating qualified students in the field of biology according to the national values and standards.
- Responds to the educational needs required by the community, and contributing to the community service activities through consultation and professional services in the field of biological sciences and environmental risk assessment.
- To conduct research in the field of biology that have a broad economic and social benefits that contributes directly to the Department's role in providing research experience to our students, encourages the intellectual development of faculty and meets the development requirements.

3. Program Learning Outcomes*

Knowledge and Understanding	
K1	Display a broad knowledge and understanding of the principal, theories and concepts of Biology, In addition to the basic principles of chemistry, physics, and mathematics that form the foundation on which all of biology rests.
K2	Demonstrate significant knowledge and understanding of the processes, techniques, mechanisms, functions, practices, conventions and terminology of Biology.
K3	Express in depth knowledge and understanding of research methodology an d inquiry techniques in the field of Biology
Skills	
S1	Apply broad integrated underlying theories, principles, and concepts in various contexts in Biology.
S2	Practice methods of inquiry, investigation and research for complex issues and problems in Biology
S3	Carry out various complex practical tasks and procedures related to Biology.
S4	Communicate in main forms and use of specialized digital technology and ICT tools to demonstrate an understanding of theoretical knowledge and transfer specialized knowledge, skills and complex ideas to a variety of audiences.
Values, Autonomy, and Responsibility	
V1	Show confidence and potential for leadership, long life learning and entrepreneurship.

V2	Consider risk assessment, and lab safety as a personal responsibility toward individuals and society.
V3	Work collaboratively and constructively, and lead diverse teams to perform a wide range of tasks with responsibility, and play a major role in joint work planning and evaluation

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

C. Curriculum

1. Curriculum Structure

Program Structure	Required/ Elective	No. of courses	Credit Hours	Percentage
Institution Requirements	Required	3	6	5%
	Elective	-	-	-
College Requirements	Required	7	24	20%
	Elective	-	-	-
Program Requirements	Required	38	89	73.5%
	Elective	-	-	-
Capstone Course/Project		1	2	1.5%
Field Training/ Internship		-	-	-
Residency year		-	-	-
Others		-	-	-
Total		49	121	100%

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

2. Program Courses

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 1	BIOL 101	General Biology	Required	None	4	College
	ENGL 104	English Language	Required	None	3	College
	ISLM 101	Islamic Culture (1)	Required	None	2	Institution
	ARAB 102	Arabic Editing	Required	None	2	Institution
Level 2	CHEM 101	General Chemistry	Required	None	4	College
	MATH 101	General Mathematics	Required	None	3	College
	ENGL 105	English Language (2)	Required	ENGL 104	3	College
Level 3	PHYS 101	General Physics	Required	None	4	College
	ENGL 106	English Language (3)	Required	ENGL 105	3	College
	BIOL 211	Cell Biology	Required	BIOL 101	3	Program
Level 4	ISLM 102	Islamic Culture (2)	Required	None	2	Institution
	CHEM 203	Organic Chemistry	Required	CHEM 101	3	Program
	MICR 231	Bacteriology	Required	BIOL 101	2	Program
	BOTN 241	Plant Morpho. & Anatomy	Required	BIOL 101	3	Program
Level 5	MATH 205	Biostatistics	Required	MATH 101	2	Program
	ZOOL 251	Invertebrates	Required	BIOL 101	3	Program
	ZOOL 254	Chordates	Required	BIOL 101	3	Program
	MICR 232	Virology	Required	BIOL 101	2	Program
Level 6	BIOL 222	General Genetics	Required	BIOL 211	2	Program
	MICR 333	Mycology & Plant Pathology	Required	BOTN 241	3	Program
	ZOOL 252	Histology	Required	BIOL 211	2	Program
	MICR 331	Phycology	Required	BIOL 101	2	Program
	BOTN 242	Archegoniates	Required	BOTN 241	2	Program
Level 7	CHEM 204	Biochemistry	Required	CHEM 203	3	Program
	BIOL 301	Fundamentals of Ecology	Required	BIOL 101	2	Program
	BIOL 311	Specimen Techniques	Required	ZOOL 252	2	Program
	ZOOL 351	Animal Physiology	Required	ZOOL 252	3	Program

Level	Course Code	Course Title	Required or Elective	Pre-Requisite Courses	Credit Hours	Type of requirements (Institution, College, or Program)
Level 8	ZOOL 353	Marine Biology	Required	ZOOL 254 & ZOOL 251	3	Program
	BOTN 341	Plant Water and Soil relationships	Required	BOTN 241	2	Program
	MICR 334	Microbial Physiology	Required	MICR 231& MICR 333	3	Program
	BIOL 411	Molecular Biology	Required	BIOL 222	2	Program
Level 9	ZOOL 352	Parasitology	Required	ZOOL 251	2	Program
	ZOOL 354	Immunology	Required	ZOOL 351& MICR 232	2	Program
	BOTN 342	Taxonomy of Flowering Plants	Required	BOTN 241	2	Program
	ZOOL356	General Entomology	Required	ZOOL 251	3	Program
	BOTN 344	Plant Hormones	Required	BOTN 341	2	Program
Level 10	MICR 431	Industrial Microbiology	Required	MICR 334	2	Program
	MICR 433	Medical Microbiology	Required	MICR 334	2	Program
	BOTN 441	Plant Physiology	Required	BOTN 341	3	Program
	BIOL 412	Biotechnology	Required	BIOL 411	2	Program
Level 11	BOTN 443	Plant Ecology	Required	BIOL 301	2	Program
	MICR 432	Environmental Microbiology	Required	MICR 334& BIOL 301	2	Program
	ZOOL 451	Endocrinology	Required	ZOOL 351	2	Program
	BIOL402	Biodiversity in the Kingdom	Required	BIOL 301	2	Program
	BIOL 491	Graduation Project	Required	Dep. Approv	2	Program
Level 12	ZOOL 452	Embryology	Required	ZOOL 351	2	Program
	ZOOL 454	Animal Ecology & Behavior	Required	BIOL 301	2	Program
	ZOOL 456	Medical & Economic Entomology	Required	ZOOL 356	3	Program
	BOTN 442	Economic Botany	Required	BOTN 344	2	Program

* Include additional levels (for three semesters option or if needed.
** Add a table for the courses of each track (if any)

3. Course Specifications:

Insert hyperlink for all course specifications using NCAAA template (T-104)

https://www.jazanu.edu.sa/en/colleges/sci/bio/course-specification-version-2022

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, Autonomy, and Responsibility		
code	Course Title	K1	K2	K3	S1	S2	S3	S4	V1	V2	V3
BIOL 101	General Biology	I	I	I	I						
ENGL 104	English Language	I	I	I	I						
ISLM 101	Islamic Culture 1	I	I	I	I						
ARAB 102	Arabic Editing	I	I	I	I						
CHEM 101	General Chemistry	I	I	I	I						
MATH 101	General Mathematic	I	I	I	I						
ENGL 105	English Language 2	P	P	P	P						
PHYS 101	General Physics	I	I	I	I						
ENGL 106	English Language 3	P	P	M	M						
BIOL 211	Cell Biology	I	I	I	I	I	I		I	I	
ISLM 102	Islamic Culture 2	P	P	P	P						
CHEM 203	Organic Chemistry	I	I	I	I						
MICR 231	Bacteriology	I	I		I		I			I	
BOTN 241	Plant Morphology & Anatom	I	I	I	I	I			I		
MATH 205	Biostatistics	I	I	I	I						
ZOOL 251	Invertebrates	I	I		I		I			I	
ZOOL 254	Chordates	I	P	I	I						I
MICR 232	Virology	I	I	I	I	P	I		I		
BIOL 222	General Genetics	I	I	P		I	I		I		
MICR 333	Mycology & Plan Pathology	I	I		P	I			I		
ZOOL 252	Histology	P	I	P			I	P	I		
MICR 331	Phycology	I	I		P		I			P	
BOTN 242	Archegoniates	I	P	I	P						P
CHEM 204	Biochemistry	I	I	I	I						
BIOL 301	Fundamental of Ecology	P	I		P	I			P		
BIOL 311	Specimen Tech.	I	P	I	I	P	P			I	
ZOOL 351	Animal. Physiology		P	P	P	P		P	I		
ZOOL 353	Marine Biology	P	P		P	P			I		
BOTN 341	Plant Water relationship	I	P	P	P	P	P		P		
MICR 334	Microbial Physiology	P	P	P	I	P	P		I		
BIOL 411	Molecular Biology	P	P	I	P	I	P		I	P	
ZOOL 352	Parasitology	I	P	P	P	P				I	
ZOOL 354	Immunology	I	I	P	P	I	P		I	P	
BOTN 342	Taxonomy of Flower. Plant	P		P	P	P		I			I
ZOOL356	General Entomology	I	P		P	P	I		P	I	
BOTN 344	Plant Hormones	P	P		P	P				P	
MICR 431	Industrial Microbiology	M*	P	M	M	P	M		P		
MICR 433	Medical Microbiology	M	M*	M	P		M*		M*		
BOTN 441	Plant Physiology	M*	M		M*	M			P		
BIOL 412	Biotechnology	M	M*	M	M	M*	M	P			
BOTN 443	Plant Ecology	M	P	M	M		M	P	M		
MICR 432	Environmental Microbiology	M	M	M	P	M	M		M		
ZOOL 451	Endocrinology	M	M*	P		M	M*		P		
BIOL402	Biodiversity in Kingdom	M	P	M	M*	M					M*
BIOL 491	Graduation Project			M*	M*	M*	M*	M*	M*		M*
ZOOL 452	Embryology	M	M	M	M	M	P	P			M*
ZOOL 454	Animal Ecology Behavior	M	M	M*	M	M	P			M*	
ZOOL 456	Med. Econ. Entomology	M	M	M	M	M*	M		M*		
BOTN 442	Economic Botany	M	M*	M	M		M*	M	M		

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

5. Teaching and learning strategies applied to achieve program learning outcomes.

Describe teaching and learning strategies, including curricular and extra-curricular activities, to achieve the program learning outcomes in all areas.

Program learning outcomes*		Teaching strategies
1. Knowledge and Understanding		
K1	Display a broad knowledge and understanding of the principal, theories and concepts of Biology, in addition to the basic principles of chemistry, physics, and mathematics that form the foundation on which all of biology rests.	Interactive lectures. Classroom discussions Tutorials. Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos.
K2	Demonstrate significant knowledge and understanding of the processes, techniques, mechanisms, functions, practices, conventions and terminology of Biology.	Interactive lectures. Classroom discussions Tutorials. Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos.
K3	Express in-depth knowledge and understanding of research methodology and inquiry techniques in the field of Biology	Interactive lectures. Classroom discussions Tutorials. Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos.
2.Skills		
S1	Apply broad integrated underlying theories, principles, and concepts in various contexts in Biology.	Interactive lectures. Classroom discussions Tutorials. Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos. Field trips.
S2	Practice methods of inquiry, investigation and research for complex issues and problems in Biology	Interactive lectures. Classroom discussions Tutorials. Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos. Field trips.

S3	Carry out various complex practical tasks and procedures related to Biology.	Interactive lectures. Classroom discussions Tutorials. Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos. Field trips.
S4	Communicate in main forms and use of specialized digital technology and ICT tools to demonstrate an understanding of theoretical knowledge and transfer specialized knowledge, skills and complex ideas to a variety of audiences.	Interactive lectures. Classroom discussions Tutorials. Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos. Field trips.
3.Values, Autonomy and Responsibility		
V1	Show confidence and potential for leadership, long life learning and entrepreneurship.	Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos. Field trips. Micro-Project Presentation (individual and teamwork)
V2	Consider risk assessment, and lab safety as a personal responsibility toward individuals and society.	Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos. Field trips. Micro-Project Presentation (individual and teamwork)
V3	Work collaboratively and constructively, and lead diverse teams to perform a wide range of tasks with responsibility, and play a major role in joint work planning and evaluation	Individual assignments. Group discussion. Lab-work. Self-learning activities. E-Videos. Field trips. Micro-Project Presentation (individual and teamwork)

6. Assessment Methods for program learning outcomes.

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

The program should devise a plan for assessing Program Learning Outcomes (all learning outcomes should be assessed at least twice in the bachelor program's cycle and once in other degrees).

Program learning outcomes*		Assessment Methods
1. Knowledge and Understanding		
K1	Display a broad knowledge and understanding of the principal, theories and concepts of Biology, in addition to the basic principles of chemistry, physics, and mathematics that form the foundation on which all of biology rests.	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practical) Midterm (Theory and Practical) Final (Theory and Practical)
K2	Demonstrate significant knowledge and understanding of the processes, techniques, mechanisms, functions, practices, conventions and terminology of Biology.	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practical). Midterm (Theory and Practical). Final (Theory and Practical).
K3	Express in-depth knowledge and understanding of research methodology and inquiry techniques in the field of Biology	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practical). Midterm (Theory and Practical). Final (Theory and Practical).
2.Skills		
S1	Apply broad integrated underlying theories, principles, and concepts in various contexts in Biology.	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practical). Midterm (Theory and Practical). Final (Theory and Practical).
S2	Practice methods of inquiry, investigation and research for complex issues and problems in Biology	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practical). Midterm (Theory and Practical). Final (Theory and Practical). Research project. Individual and group project report.

S3	Carry out various complex practical tasks and procedures related to Biology.	MCQs. Short answer questions. Written exam. True/False. Quizzes. (Theory and Practical). Midterm (Theory and Practical). Final (Theory and Practical). Research project. Individual and group project report. Assignments (Theory and Practical) Oral exam
S4	Communicate in main forms and use of specialized digital technology and ICT tools to demonstrate an understanding of theoretical knowledge and transfer specialized knowledge, skills and complex ideas to a variety of audiences.	Research project. Individual and group project report. Assignments (Theory and Practical) Oral exam
3.Values, Autonomy and Responsibility		
V1	Show confidence and potential for leadership, long life learning and entrepreneurship.	Group Assignment. Observation. Group Discussion. Oral exam. Laboratory work.
V2	Consider risk assessment, and lab safety as a personal responsibility toward individuals and society.	Group Assignment. Observation. Group Discussion. Oral exam. Laboratory exams.
V3	Work collaboratively and constructively, and lead diverse teams to perform a wide range of tasks with responsibility, and play a major role in joint work planning and evaluation	Group Assignment. Observation. Group Discussion. Oral exam. Laboratory work.

D. Student Admission and Support:

1. Student Admission Requirements

All requirements are alligned with JU admission requirements

1- The student applies to biology program must have the certificate of the high secondary school (scientific section).

2- School Recommendations of highly regarded ethics and accountability.

3- Be a student of a Saudi national or Saudi Arabia mother.

4- Must not have been on the receiving a high school or its equivalent for more than five years.

5- Be at least average in high school about 70%.

6- Should not be disconnected from Jazan University for academic reasons, disciplinary or disconnected from another university for disciplinary reasons.

The following figure show that our biology program is one of the program offered by the college of science and Jazan university

Source : Deanship of Admission and Registration, Jazan University.

The Admission of New Students (Article No (2):

The university council according to the college councils' proposal, as well as, proposal from other related bodies determines the number of students to be admitted next year.

Administrative Rules of Jazan University (Article No (3):

The Deanship of Admission and Registration according to the college councils' proposal submits a statement with the number of students to be admitted to the next semester or academic year in order to submit it to the university council.

Conditions necessary for admission in the university:

1. The student must have a certificate of general secondary school or its equivalent (from inside kingdom or outside it).

2. The certificate or its equivalent must not exceed 5 years since the graduation of the holder from secondary school. In this respect, the university council may have the right to make exception if there are other convincing reasons.

3. The student must have a good conduct.

4. The student must pass in all tests or private interview deemed necessary by the university council.

5. The student must be medically fit.

6. The student must get a letter of approval from his/her employer if he/she works in a public or private sector.

7. The student must satisfy any other condition identified by the university council.

Administrative Rules of Jazan University:

1. If a student has been dismissed from Jazan University or from any other university for disciplinary reasons, the admission is considered null and void unless otherwise proved later.

2. The student must not be registered in other university beside the University of Jazan, aiming to obtain a certain degree or he/she has already obtained it. Then the deanship of admission and registration has the right to cancel his/her admission if other thing is proved later. In this case, the University Council has the right to make exception if it deems necessary.

3. The university president has the right to make exception for the student if there are convincing reasons.

Article No 4:

From among all candidates wishing for admission, priority is to those who satisfy all conditions according to the marks they obtain in general secondary school certificate, and the interview as well as admission tests if any.

Administrative Rules of Jazan University:

The Deanship of Admission and registration upon recommendations from college councils shall prepare a presentation of the mechanisms of giving priorities to the students applied for admission to be submitted to the university council or to the competent authority.

- http://deanships.jazanu.edu.sa/sites/en/adm/Pages/AdmissionofFreshmanyearstudents.aspx
- http://deanships.jazanu.edu.sa/adm/PublishingImages/flge/%D8%AF%D9%84%D9%8A%D9%84%20%D8%A7%D9%84%D8%B7%D8%A7%D9%84%D8%A8%201.pdf
- http://deanships.jazanu.edu.sa/adm/Documents/%D8%AF%D9%84%D9%8A%D9%84%20%D8%A7%D9%84%D8%B7%D8%A7%D9%84%D8%A8%20%D9%84%D9%84%D8%AE%D8%AF%D9%85%D8%A7%D8%AA%20%D8%A7%D9%84%D8%A5%D9%84%D9%83%D8%AA%D8%B1%D9%88%D9%86%D9%8A%D8%A9.pdf

2. Guidance and Orientation Programs for New Students

(Include only the exceptional needs offered to the students of the program that differ from those provided at the institutional level).

Student Orientation Programs:

Student Orientation Programs for new students are Introduction to the university life; becoming familiar with the new environment, Starting college can cause much anxiety in the new college student. New student orientation programs are designed to guide students 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, academic advising team the orientation programs within the college.

The Orientation program is designed to help students get acquainted with the following:

• Vision, mission and objectives of the department, college and university.
• University and college regulations and code of conduct.
• Tips on leading a successful college life in line with their potential career goals.
• Department and college facilities and places.
• Plan of the study review course.
• Methods of evaluation.
• Wellness, self-care.
• Faculty expectations.
• Certification and licensure information.

The main objectives in orientation programs are:

1) Introducing students to college life:

Introducing students to college life requires presenting as full a view as possible of all the university has to offer. Therefore, academics as well as extracurricular activities should be presented. During orientation, students should be made aware of opportunities to be socially integrated into the college culture. Orientation programs begin before classes start; therefore students usually will need to register for classes during orientation. Because new students need

some direction and guidance in enrolling for classes, faculty members should have an opportunity to provide academic advising at orientation.

2) Acclimating students to their new surroundings:

After moving into a new neighborhood, one would ideally like a few days to learn one's way around the new neighborhood. Likewise, orientation should allow students to get their bearings in their new home.

3) Providing an opportunity for the college to meet the newest members of the community. The college community should not only be involved in the preparation and implementation of orientation programs but also have an opportunity to meet the new students; orientation requires the cooperation and the resources including faculty, facilities management, and student activities groups.

College Orientation: Dean Meeting with newcomers.

Department Orientation: Head of Department Meeting with newcomers and staff.

Student Counseling Orientation: Student Counseling Committee Coordinator Meeting students

3. Student Counseling Services

(Academic, professional, psychological and social)
(Include only the exceptional needs offered to the students of the program that differ from those provided at the institutional level).

Academic Counseling:

The academic advising unit offers courses designed to develop skills to help students succeed in college and make effective career and life choices. Special topics courses related to various areas of an academic career and personal development are also offered.
Each student in the biology program has an academic advisor whose job is to provide students with Consultation and academic support mainly during registration time but also any time during the semester.
Students may consult their advisor, as well as the Department Chair and the Dean of the College, for any issues or concerns concerning their academic life. Given the number of biology students, the students are divided among the college for advising. The process is as follow;

- Student Academic Counseling Committee is in charge of student counseling.
- Each Faculty is assigned a group of students for counseling.
- Faculty will be available for student counseling at specific office hours during on daily basis.
- Faculty should make a file for each student in his counseling group where student contact information, a copy of student timetable, a copy of student academic record is kept and updated every semester.

Career Counseling:

The alumni unit and academic advising provide opportunities for career exploration and evaluation of interests, aptitudes, skills and other characteristics related to vocational and pre-professional planning and job success.
This includes:

- Career Assessments and Interpretations.
- Career Workshops such as writing CV., interviewing assistance, researching occupations, labor market information, and career planning.
- College of science is going to plan to invite the stakeholders from the different authorities and ministries in program advisory committee as speakers in Alumni celebration and workshops.

Social Counseling:

Social programs in Jazan university focus on preparing students for a leadership role in all biological aspects, which can help in the developmental process and community services and problem solving of most ecological and biological difficulties.

Psychological Counseling:

There is no psychologist in college of science, but cases requiring psychological guidance are referred to the Academic Guidance Unit of the Deanship of Student Affairs at Jazan University.

4. Special Support

(Low achievers, disabled, gifted, and talented students).

Talented students:

Talented students are those whose skills are distinctly above average in one or more areas of human performance. He is who performs at or shows the potential for performing at a remarkably high level of accomplishment when compared to others of the same age, experience, or environment.
Gifted' learners are those with abilities in one or more academic subjects.
Talented' learners are those who have practical skills in areas such as creative and performing in nursing Skills and attributes such as leadership, decision-making and organization may also be taken into account.

Instructional strategies and activities used with gifted students:

1-Design lessons with Bloom's Taxonomy.
For gifted students, construct activities from the two upper levels: creating and evaluating. For example, activities could include conducting an experiment or writing an editorial about a current events topic.
2-Assign independent projects.
When gifted students finish class assignments early, allow them to work on special projects. Assign topics that are of special interest to our students and have them explore the topic in depth.

3-Ask intellectually stimulating questions.
When constructing our lesson plan, we write questions that are open-ended and require more thoughtful responses.
4-Find mentors.
Gifted students need guides just like other students. We Find an adult who can help our student explore a subject of interest more deeply. This mentor can serve as an advisor, counselor and role model to the student.
5-Organize cluster groups.
Research shows gifted students of the same grade benefit from being grouped together. As a way to combine resources, teachers can shift gifted students from different classrooms into one group to learn about a specific topic in more depth. This method works best with teachers who are specially trained to work with gifted students and have minimal distractions from other students in the class.

Low Achievers:

Slow learner is one whose performance is very dismal in the examination. They are on the lower rungs of intelligence scale. Slow learners – are low-achievers.
On the other hand The only problem with them is that they learn concepts and achieve developmental milestones at a pace slower than their peers.
To help slow learners, the teacher will able to:
1- Combine a variety of tasks to the learning even if it is not assigned such as painting a picture.
2-Ask questions of the student while they are working about the assignment
3- Applying "Three Transfer" form of learning in which the student must take information and do three things with it besides reading. For example, read it, explain it to someone else, draw a picture of it, and take notes on it.
4-Reward complete task.

Disabled Students:

Admission is not accepted for Disabled Students in the biology program.

E. Faculty and Administrative Staff:

1. Needed Teaching and Administrative Staff

Academic Rank	Specialty		Special Requirements / Skills (if any)	Required Numbers		
	General	Specific		M	F	T
Professor	Biology	Zoology, Botany and Microbiology		7	1	8
Associate Professor	Biology	Zoology, Botany and Microbiology		8	6	14
Assistant Professor	Biology	Zoology, Botany and Microbiology		19	14	33

Lecturer	Biology	Zoology, Botany and Microbiology		12	17	29
Teaching Assistant	Biology	Zoology, Botany and Microbiology		3	8	11
Technicians and Laboratory Assistant	Biology	Zoology, Botany and Microbiology		2	7	9
Administrative and Supportive Staff	Any	Any		2	5	7
Others (specify)	--	--		--	--	--

F. Learning Resources, Facilities, and Equipment:

1. Learning Resources

Learning resources required by the Program (textbooks, references, and e-learning resources and web-based resources, etc.)

Biology Department provides an environment of gaining knowledge through a mini department library in addition to the Jazan University main library. The Library contains a concentrated collection of zoology, botany and microbiology books.
College of science has larger, well equipped library serves all faculty departments containing a recent collection of books, indexes, videos and computer software supplementing the holdings of Jazan University main library. The faculty library is equipped with the most recent and updated collection of National and International Textbooks. The devoted staff is available for consultation and biology-related search. The departmental library is located on the second floor in biology department of the main the main college of science building. Also the college of science library is located in the second floor of the main the main college of science building

- Establish a library for a student that includes a lot of specific books related to biological subjects and it was opened daily from 8.30 am to 2.30 pm.
- Equip this library with a net connection to allow for web search.
- Equip it with computers to allow for web search and help student to attend distance learning.
- Student can borrow books from the library for one week and return it to allow it for another student.
- Membership with electronic and web-based resources for staff members and students.
- Digital library for all students is available and contains a lot of books and journals.
- A copy of electronic learning resources for each course is kept in the computer of the Q A committee.
- The list of learning resources is annually updated by teaching Faculty and gets approval by the department council.

The updated list of learning resources is then raised to Deanship for Library Affairs.

2. Facilities and Equipment

(Library, laboratories, classrooms, etc.)

Library:

In the second floor, the faculty library is there as well as the department library, this library contains books for all students in the faculty. Also, the central library of the university student may use besides the digital library of Saudi Arabia all students use their ID to enter its site http://deanships.jazanu.edu.sa/_layouts/Authenticate.aspx?Source=/lib/Pages/sdl.aspx

Teaching laboratories:

Biology Department provides Labs with all necessary equipment, tools, safety aids for undergraduate study.

Biology department Laboratories:

Botany lab.(1) (G 601) Science College Building **Capacity: 30 Student**

Instruments and equipment's	Spectrophotometer, Growth chamber, Oven, pH-meter, Muffle, Water bath, Heater, Microscopes, Balance, Magnetic stirrer.
Practical courses	General Biology, Plant water relationship, Plant physiology, Plant Hormones, Economic Botany, Biodiversity.
Botany lab.(1) (G 611) Science College Building Capacity: 30 Student	
Instruments and equipment's	Spectrophotometer, Growth chamber, Oven, pH-meter, Water bath, Heater, Microscopes, Balance, Magnetic stirrer.
Practical courses	General biology, Plant taxonomy, plant hormones, Plant morphology and anatomy, Economic botany, Biodiversity.
Microbiology lab.(1) (G 608) Science College Building Capacity: 20 Student	
Instruments and equipment's	Colony counters, Oven, pH-meter, shaker Water bath, Heater, Microscopes, Balance, Magnetic stirrer, Autoclave, Centrifuge
Practical courses	Molecular biology, General biology, Microbial physiology, Micro-techniques, Medical biology, Virology, bacteriology
Microbiology lab.(2) (G 604) Science College Building Capacity: 25 Student	
Instruments and equipment's	Colony counters, Oven, pH-meter, Shaker Water bath, Water bath, Heater, Microscopes with camera, Microscopes, Balance, Magnetic stirrer, Autoclave, Spectrophotometer, Distillatory, Incubator
Practical courses	General biology, Medical biology, Mycology, Plant pathology, Fundamentals of ecology, Medical biology
Biotechnology Lab. Science College Building Capacity: 20 Student	
Instruments and equipment's	Colony counters, Oven, pH-meter, Shaker Water bath, Water bath, Heater, Microscopes with camera, Microscopes, Balance, Magnetic stirrer, Autoclave, Incubator
Practical courses	Molecular biology, Industrial microbiology, Medical microbiology, Micro-technique
Zoology Lab 1. (G 705) Science College Building Capacity: 25 Student	

Instruments and equipment's	Microtome, Oven, pH-meter, Spectrophotometer, Water bath, Heater, Microscopes, Balances
Practical courses	Animal physiology, invertebrates, Parasitology, Economic and medical entomology, Miro-technique
Zoology Lab 2. (G 707) Science College Building Capacity: 25 Student	
Instruments and equipment's	Oven, pH-meter, Spectrophotometer, Water bath, Heater, Microscopes, Balances
Practical courses	Animal physiology, invertebrates, Parasitology, Economic and medical entomology.
Genetics Lab. (G 706) Science College Building Capacity: 20 Student	
Instruments and equipment's	Slides staining device, Deep freezer, oven, Water bath, Heater, Microscopes, Balances
Practical courses	Animal physiology, invertebrates, cytology, Genetics.
Herbarium (G 708) Science College Building Capacity: 10 Student	
Instruments and equipment's	Oven, Water bath, Heater, Microscope
Practical courses	Plant taxonomy, Biodiversity
Lab 1. (G 708) Faculty of Arts Capacity: 30 Student	
Instruments and equipment's	Microscope
Practical courses	General biology, Medical biology
Lab 2. (G 707) Faculty of Arts Capacity: 30 Student	
Instruments and equipment's	Microscope
Practical courses	General biology, Medical biology

Herbarium:

Jazan University Herbarium was established at Biology Department in 1435H. It was awarded Prince Mohammad Bin Nasser Excellence and Innovation Award for Environmental Protection

in 1437H. The Herbarium also achieved international recognition of International Herbarium Union (USA) and gained Herbarium Code of (JAZUH) in 1438H. The Herbarium is the only one of its kind in the Southern Region and one of five internationally recognized herbaria in the Kingdom. It contains accessions of more than 5000 specimens representing flora of Jazan Region and the Kingdom. It also possesses the most comprehensive collection of succulent plant species in Saudi Arabia. Research carried out by herbarium team resulted in several scholarly articles describing flora of Jazan and Wadi Lagab. Research endeavours also resulted in discovery new plant species as additions to Saudi Flora and as species new to science.
http://sweetgum.nybg.org/science/ih/herbarium-details/?irn=244821

Medical facilities:

Inside each Lab and other places, first aid boxes are available for emergency. In college provide health clinic.

Classroom Supplies:

Each classroom is fitted with a white board, an overhead projector, writing pens and dusters. Also, other classroom supplies are available.

Textbooks and Course Materials:

A scheduled course has a designated textbook, which has been approved by the department council. Therefore the students may freely adopt other references to supplement teaching material, which may include prepared lecture notes. There are several study open places on all floors, computer rooms, Sports activities Room, Cafeteria, and theatre.

3. Procedures to ensure a healthy and safe learning environment

(According to the nature of the program)

College of science and all of its departments is committed to providing a safe and healthy campus environment. Among its highest priorities are the health and safety of all faculty, staff, students, the visiting public, and members of the neighboring community.in order to implement environmental and occupational health and safety programs and to ensure compliance with all relevant governmental laws and regulations.

A variety of health care services to students, faculty, staff and community members. The faculty has a wide range of health insurance plans.

- There is a clinic for students, faculty adminstation and staff members is located inside the faculty main campus.
- Smoking is prohibited in any University facility and on any University colleges.
- First aids boxes are located in almost all rooms.
- The purpose of the Safety Program is to ensure the proper handling of hazardous equipment and tools, as well as hazardous waste management and disposal. Exposure to hazardous is kept at a minimum by using the appropriate Personal Protective Equipment.
- The Security and Safety Committee oversees lab safety issues and reviews information regarding pertinent regulations and requirements.
- Fire prevention guidelines are listed in all places
- Emergency Exit doors in all parts with sufficient Signboards in all places.
- The Security and Safety instructions are announced at the laboratories and the places where students gather.
- Workplace Health and Safety area in college of science are:
  - ☒ Fire Alarm.
  - ☒ Fire extinguisher.
  - ☒ Infection control Policy.
  - ☒ Safe lifting.
  - ☒ Physical Fitness.
  - ☒ Handling Workplace Hazardous Materials.
  - ☒ Accidents, Injuries and Work Related Incidents.
  - ☒ Hospital Codes Section.

Adopting regulations and guideline of **JU Administration of Security and Public Health**
https://www.jazanu.edu.sa/sites/en/Administrations/ss-admin/Pages/default.aspx

G. Program Quality Assurance:

1. Program Quality Assurance System

Provide a link to quality assurance manual.

https://www.jazanu.edu.sa/en/colleges/sci/bio/qms-manual-biology

1. Planning, Development and Quality Management.
2. Communicating with all academic and administrative entities (senior leaders, heads of department and units, staff, faculty, students, etc.) inside the SRCs (via email, formal letters, etc.) for any matter related to planning, development or quality assurance requirements.
3. Periodic review of strategy and suggestion of modification and required changes as well as providing assistance to departments in preparation of their strategic and operational plans and ensuring alignments with strategy.
4. Institutionalizing continuous improvement mechanisms in all departments through advising on institution-wide strategic priorities and strategic plans for quality improvement, and assisting internal academic and administrative units in the development of quality improvement strategies within their own areas.
5. Review critical incidents, and perform root cause analysis as required in collaboration with the concerned departments and facilitating adaptation of needed remedial actions.
6. Coordinating and leading the preparation of periodic self-studies for consideration within the institution and for use in external reviews.
7. Implementing adequate processes to ensure that the design of students' intended learning outcomes on course and program levels meets the SAQF requirements, and that students' achievements of intended learning outcomes are at least equal to those achieved elsewhere by comparable institutions and programs; and reporting this to the Central Quality Assurance Committee.
8. Disseminating the culture of Quality Assurance among administrative and academic leaders, faculty, staff and students within the institution via training, advice and support as required in addition to other promotional activities (e.g. posters, fairs, lectures, conferences, seminars, etc.).
9. Ensuring establishment, implementation and compliance of policies and procedures with quality standards (e.g. EEC -formerly NCAAA- standards) and benchmarks through quality audits. This also involves establishing and monitoring self-assessment processes and reporting requirements.
10. Conducting quality evaluations and surveys, providing analysis and improvement implications, and implementing follow-up mechanisms for maximum use of assessment and evaluation processes in order to develop detailed, periodic reports and executive plans for improvement.
11. Developing a procedures manual describing the institution's structure and processes for quality assurance; specifying criteria for selection and formats for indicators, benchmarks, and objectives; preparing standard forms for matters such as student and graduate surveys; and advising on operational procedures for the planning and implementation of quality processes.
12. Developing Criteria for assessing the quality of inputs, processes and outcomes, (with a particular focus on outcomes) and maintaining systematic collections of reports on performance including data on indicators and benchmarks that will be required for analysis and reporting on trends in performance and changes in the environment within which the institution is operating.

13. Maintaining statistical data of the institutional and programmatic KPIs (including mark distribution, progress rates, completion rates, etc.) in accessible databases, reviewing the KPIs regularly and including them in periodic reports.
14. Making sure that self-evaluation processes of quality of performance depend on different types of relevant evidence, including- but not limited to- feedback from stakeholders (e.g. students, staff, faculty, graduates, employers, government bodies); and reporting this to the Central Quality Assurance Committee.
15. Verifying the interpretations of evidence, analysis, conclusions and plans for improvement through consultation with well informed, independent reviewer/ and reporting this to the Central Quality Assurance Committee.

2. Procedures to Monitor Quality of Courses Taught by other Departments

For courses that are taught outside the program and include the first year courses and general courses such as Arabic, Islamic culture and English language courses

1- The scientific department concerned with teaching these courses shall prepare the course description and specification according to NCAAA format 2022.

2 - The course is taught by the teaching staff of these scientific departments of the university.

3 - The teaching staff after the final exam prepares a complete course file of the course and send it to our department via the vice dean of development in college of science.

4- The Program Assessment Committee reviews the course reports of all courses.

Components of course file:

- Course Description (Course syllabus).
- Course Specification on 2022 format.
- Course Report. (For each individual group and comprehensive one).
- Course Teaching Plan (Topics decided for each lecture).
- Assessment tools (Quizzes, midterm, practical and final with model answers).
- Direct Assessment of Course Learning Outcomes for Quiz 1& 2, midterm exam, final exam theory and Practical.
- Mark distribution format and undertaking.
- The Practical action plan.
- Student feedback (samples of activities, research papers, project etc.).
- Three Samples of students' scripts (high, medium and low scoring)
- An excel sheet for all marks and graph which was prepared by A. Affairs.
- Analysis of student experience surveys and program surveys and original papers.
- Your students' final scores (edugate).
- Summary of course evaluations (CES) (edugate).

All teaching materials, including theoretical and practical presentations.

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

- One QA unit monitoring quality of teaching and learning in main campus (male and female) and branches.
- Some of program accreditation requirements which prepared by the main campus coordinator are send to the branches.
- There is a monthly meeting of the QA committee which include members from both main campus (male & Female) and Al-darb branch.
- A meeting is held between the head of the students affairs unit, the head of the biology department and the coordinators of the program (both main campus (M&F) and Al-darb branch at the beginning of the first semester to distribute of the academic calendar of the department, indicating the dates of the periodic tests, mid-term and the final theoretical and practical tests.
- Weekly contact between the main campus and the branch to discuss the transactions related to the program.
- There is a list containing mobile numbers and e-mail for both main branch (M & F) and the branch in Al-darb for easy communication between the coordinators in the program.
- Unification of lectures that give students in the program in the main campus and the branch.
- Unification of the final exams and its dates in the program for both male and female students in main campus. Next academic year it will be with the branch also (Now there is a committee for making the final exam is similar between the main campus and the branch (similarities will be in measuring the same learning outcomes between main campus and branch).
- Same units that serve students to achieve parity between the two parts of the program, represented by the coordinator of male and female students in main campus, as well as coordinator of Al-darb branch, such as the academic guidance unit - Quality Assurance Unit and Academic Development - Student Affairs Unit - Student Activity Unit – Student Services Unit.
- All regulations and rules that applied to main campus are applied also to Al-darb branch with the same mechanism to ensure parity among them such as excuses and deprivation..... etc.

- Quality assurance unit in the college of science circulate all the requirements of quality and accreditation for both main campus and branch.
- Course files that are processed by the end of the final exam to complete the quality requirements. Both the students' sections at the head office as well as the program branches in the governorates, including the course reports, as well as the comprehensive report for each course prepared by the coordinators of the courses.

Finally, Biology Program insists on unified regulations, processes, specifications, assessment, and exams Therefore, the Program has unified Program Specifications, Corse(s) Specifications, Learning Resources, Exams, Assessment Methodology, and Verification of Standards by NCAAA Questionnaires.

4. Assessment Plan for Program Learning Outcomes (PLOs), Biology Program (PLOs) Assessment Plan Link: https://www.jazanu.edu.sa/en/colleges/sci/bio/assessment-plan-plos-bio

Program assessment is an essential procedure of academic programs accreditation review. As such, it is a cornerstone of quality, enhanced education. At the biology program, the process of assessing and evaluating courses to enables the measurement of the level of achievement of each learning outcome to identify areas for improvement in students' performance and suggest remedial actions in consultation with faculty concerned. The results of program assessment are used to suggest changes to curricula and courses structure and content.

Assessment of PLOs includes:

1. Direct methods:

Essays/Papers, Lab work, Exam questions, Capstone projects, Performances/Presentations and Portfolios of student work

2. Indirect methods:

Feedback from Student Assessment of Quality of Teaching and Student Assessment of Quality of Program questionnaires is used to evaluate and improve quality of teaching/teaching, Strategies/learning resources/Faculty performance/student affairs/student services.

Feedback from Faculty Assessment of Quality Program questionnaires is used to evaluate and improve quality of teaching/teaching strategies/learning resources/student affairs/student services.

Surveys from Alumni, Employer and exit interviews.

- Feedback from Student Assessment of Quality of Teaching questionnaires.

- Feedback from Graduate Assessment of Quality of Teaching questionnaires.

- Periodic assessment of student learning achievements.

5. Program Evaluation Matrix

Evaluation Areas/Aspects	Evaluation Sources/References	Evaluation Methods	Evaluation Time
Alumni Survey-NCAAA	Alumni	Surveys	End of academic semester
Employer Survey-NCAAA	Stakeholders	Surveys	End of academic semester
Employer Survey – Jazan University	Stakeholders	Surveys	End of academic semester
Faculty Satisfaction Survey (FSS)	All Faculty Members	Surveys	End of academic year
Program Evaluation Survey (PES)	Students	Surveys	End of academic semester
Student Experience Survey (SES)	Students	Surveys	End of academic semester
Course Evaluation Survey (PES)	Students	Surveys	End of academic semester
Program Learning Outcomes Survey	Students, Alumni, Faculty Members, Stakeholders	Surveys, interview	End of academic semester, advisory committee meeting
Curriculum Satisfaction Survey	Students, Alumni, Faculty Members, Stakeholders	Surveys, interview	5 Years
Assessment of the quality of services and student activities	Students	Surveys	End of academic semester
Survey students' views on the services of registration and academic advising	Students	Surveys	End of academic semester
Mission and goals of biology program	Students, Alumni, Faculty Members, Stakeholders, community	Surveys, interview	When conducting the program strategic plan every 4 years and in the self-study of 1-2 years
Biology Program Graduate Attributes	Alumni, Faculty Members, Stakeholders	Surveys	After any changes to the graduates attributes at the Jazan University or Saudi qualifications framework.
Satisfaction of faculty members with the services provided by the university	Faculty Members	Surveys	End of academic semester
Learning Resources Survey	Students	Surveys	End of academic semester
Course learning outcomes surveys	Students	Surveys	End of academic semester

Evaluation Areas/Aspects (e.g., leadership, effectiveness of teaching & assessment, learning resources, services, partnerships, etc.)
Evaluation Sources (students, graduates, alumni, faculty, program leaders, administrative staff, employers, independent reviewers, and others.

Evaluation Methods (e.g., Surveys, interviews, visits, etc.)
Evaluation Time (e.g., beginning of semesters, end of the academic year, etc.)

6. Program KPIs*

The period to achieve the target (5) year(s).

No.	KPIs Code	KPIs	Targeted Level	Measurement Methods	Measurement Time
1	P-01	Percentage of achieved indicators of the program operational plan objectives	90 %	Questionnaire / QA Committee	Every Year
2	P-02	Students' Evaluation of quality of learning experience in the program	4	Questionnaire / QA Committee	Every Year
3	P-03	Students' evaluation of the quality of the courses	4.5	Questionnaire / QA Committee	Every Year
4	P-04	Completion rate	4	Students Affairs / Program Report	Every Semester
5	P-05	First-year students retention rate	4.5	Students Affairs / Program Report	Every Year
6	P-06	Students' performance in the professional and/or national examinations	4	Graduates Affairs Committee	Every Year
7	P-07	Graduates' employability and enrolment in postgraduate programs	70 %	Graduates Affairs Committee	Every Year
8	P-08	Average number of students in the class	25	Timetables Committee / Students Affairs Committee	Every Semester
9	P-09	Employers' evaluation of the program graduates proficiency	4	Questionnaire / Graduates Affairs Committee	Every Year
10	P-10	Students' satisfaction with the offered services	4	Questionnaire	Every Year
11	P-11	Ratio of students to teaching staff	1:15	Time table comm	Every Year
12	P-12	Percentage of teaching staff distribution		Time table comm	Every Year
13	P-13	Proportion of teaching staff leaving the program	%	Head of department	Every Year
14	P-14	Percentage of publications of faculty members	%	Scientific Research comm	Every Year
15	P-15	Rate of published research per faculty member	1	Scientific Research comm	Every Year
16	P-16	Citations rate in refereed journals per faculty member		Scientific Research comm	Every Year
17	P-17	Satisfaction of beneficiaries with the learning resources	4	Questionnaire	Every Semester

*including KPIs required by NCAAA

H. Specification Approval Data:

COUNCIL / COMMITTEE	**BOARD OF BIOLOGY PROGRAM**
REFERENCE NO.	**( ) MEETING OF THE BOARD OF BIOLOGY DEPARTMENT 1444**
DATE	**Updated/Revised March 25, 2023**