Al-Baha University

Faculty of Science

Bachelor's Degree in Biology

Program Handbook

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Introduction

The Faculty of Science at Al-Baha University was established by Royal Decree No. 9682/M, dated 5/8/1426 H. It began its academic activities in 1427 H with the aim of effectively contributing to expanding the higher education base in the Kingdom of Saudi Arabia in the fields of basic and applied sciences and meeting the needs of the public and private sectors' job market. Currently, the Faculty of Science at Al-Baha University has developed study programs to equip students with scientific and practical skills and knowledge, primarily focusing on the use of modern technology in four main departments: Biology, Mathematics, Physics, and Chemistry. These programs aim to qualify graduates for employment in governmental and private institutions in the provinces.

The Biology Department offers a bachelor's degree in biology and provides numerous career opportunities in teaching, healthcare, agricultural research centers, industrial research centers, and environmental sectors. Students also have the opportunity to pursue postgraduate studies and conduct research in various areas of life sciences. We are pleased to present to you the Student Handbook, which contains the guidelines and information that will assist you in your academic journey.

The educational experience at the university level is an important period filled with challenges and educational and skills opportunities. Thus, the administrators of the biology bachelor's degree are excited to offer this handbook to students in order to give them the necessary knowledge to contribute to the accomplishment of the program's vision, mission, and goals. The handbook also includes a range of detailed information and guidelines that contribute to meeting your needs and helping you achieve your academic goals.

Faculty Vision

A distinguished faculty in basic sciences education and scientific research to serve the community.

Faculty Mission

Providing distinguished educational and research programs in basic sciences to prepare graduates that contribute the community service through motivating academic environment and efficient use of the resources.

Faculty Objectives

1. Creating an excellent academic environment to enhance the competitiveness of faculty students.
2. Achieving excellence among the faculty staff.
3. Developing and improving the faculty's scientific research infrastructure
4. Establishing postgraduate programs that are in line with labor market demands.
5. Developing and improving faculty community service activities.
6. Contributing to the development of the university's resources.

Program Vision

Distinguished biological program in education and scientific research to serve the community.

Program Mission

Providing distinguished educational and research program in biological sciences to prepare graduates that contribute the community service through motivating academic environment and efficient use of the resources.

Program Objectives

1. Improving the quality of teaching and learning of the biology program.

2. Providing graduates with modern theories, skills and techniques in biology that meet the current and future needs.

3. Developing an adequate environment for continuous education and learning in biological sciences.

4. Conducting scientific research in the field of biology.

5. Creating effective partnerships with the community.

5. Creating effective partnerships with the community.

Program Learning Outcomes

Knowledge and understanding

1. Elucidate the basic principles and theories associated with biology and other sciences.

2. Outline the processes, materials, and techniques used in the identification, classification, structure, functions, behavior, and natural environments of living organisms.

3. Explain the scientific methods and techniques used in biological sciences.

Skills

1. Employ scientific methods to solve problems related to biology.

2. Utilize laboratory equipment, tools, and techniques in scientific investigation.

3. Apply written and oral communication skills effectively and efficiently to convey information to others.

Values, autonomy, and responsibility

1. Participate effectively in teamwork by taking the initiative to search for the resources and information required to carry out tasks.

2. Demonstrate leadership, independence, and responsibility in communication, self-learning, and task completion.

3. Adhere to the principles and ethics of contemporary citizenship by protecting the environment, preserving wildlife, and appreciating national wealth.

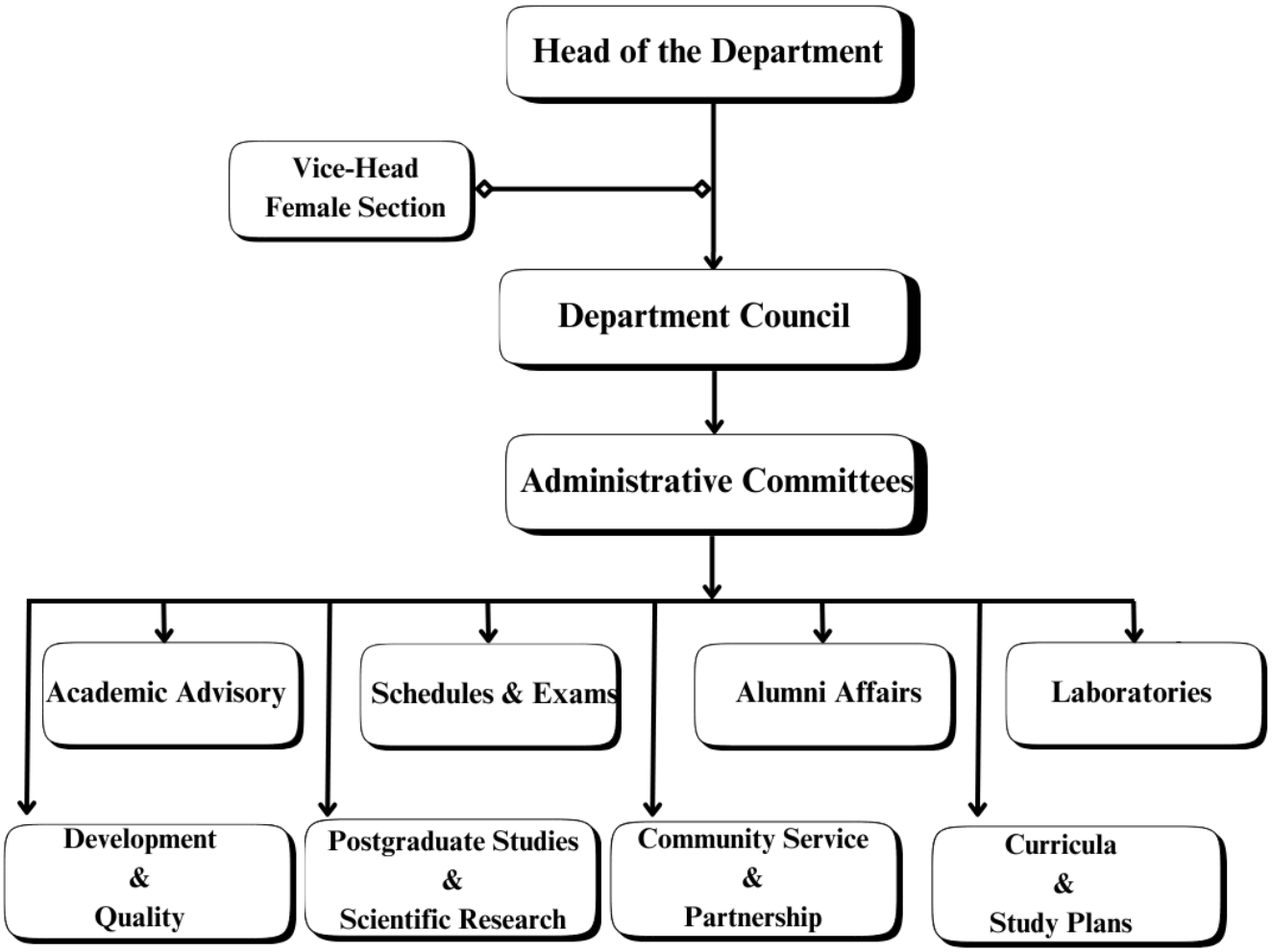
Program's Graduate Attributes

Biology program adopted same university's graduate attributes. The following table illustrates University Graduate Attributes with correspondent codes.

Program's Graduate Attributes	
Code	Description
PGA1	Critical Thinking and Problem Solving التفكير النقدي وحل المشكلات
PGA2	Creativity and Innovation الإبداع والابتكار
PGA3	Collaboration and Teamwork التعاون والعمل الجماعي
PGA4	Communication مهارات الاتصال
PGA5	Information Technology and Proficiency Skills كفاءة التقنية والمهارات التقنية
PGA6	Information Skills الكفاءة المعلوماتية
PGA7	Flexibility and Adaptability المرونة والتكيف
PGA8	Initiative sand Self-Direction Skills المبادرة وإدارة الذات
PGA9	Productivity Skills مهارات الإنتاجية
PGA10	Social skills المهارات الاجتماعية ومهارات التعامل مع الآخرين

Program Organizational Structure

Organizational Structure



Administrative committee tasks

Development and quality committee

- Overseeing the execution of the program's work plan.
- Completing all academic accreditation requirements in the department in accordance with the standards of the National Authority (NCAAA).
- Reviewing study plans, course, and program descriptions.
- Follow up and coordinate with the faculty Development and Quality Committee, and present reports to them.
- Reviewing the program's mission and objectives and their conformity with the mission and objectives of both the faculty and the university.
- Supervise, follow up, prepare, and collect (program description - program report - course descriptions - course report) and comprehensive reports for the respective departments.
- Supervising the follow-up of self-study preparation (SSR) for the biology program.
- Providing a periodic report on the extent of completion of academic accreditation requirements.
- Supervising the availability of teaching and learning methods for students in consultation with the department's relevant committees.
- Develop, manage and follow up on quality control processes in the department.
- Supervising and following up on the department’s future development and planning plans.
- Follow up on modern trends in teaching methods, methodology and techniques.
- Identifying training programs in the department to develop teaching, research and technical skills.
- Preparing, distributing and collecting student questionnaires about the extent of benefit from the program during the years of study, the suitability of the courses for practical life, and their suggestions for maximizing benefit from them.

Curricula and study plans committee

- Reviewing the department’s study plans and submitting the necessary reports to higher authorities and having them approved by the department council
- Updating study plans based on similar specializations in universities with academic accreditation
- Reviewing the learning outcomes of various programs according to labor market requirements
- Proposing external and internal academic references to evaluate study plans.
- Proposing the activation of new programs and building their study plans according to the requirements of the labor market.

Academic advisory committee

- Collaborate with the faculty's committee to develop and implement a guidance and orientation plan for the department or faculty.
- Developing a guide for the Guidance and Counseling Committee in collaboration with the faculty committee
- Spreading awareness among students about the role of the guidance and counseling committee.
- Supervising student guidance programs in coordination with the faculty’s committee.

- Contributing to solving the psychological, social, behavioral and academic problems of students in coordination with the faculty's committee.
- Providing social, psychological, and professional guidance in collaboration with the faculty's committee, the Deanship of Student Affairs for Community Service, the Admission and Registration Agency, graduates, the medical center, and specialists.
- Identifying gifted, creative, outstanding and struggling students and developing appropriate programs to care for each category in coordination with the faculty's committee.
- Preparing periodic reports on guidance and counseling in coordination with the faculty's committee.

Schedules and exams committee

- Setting study schedules in the department and coordinating with the rest of the faculty's departments and other faculty's that have courses taught in the department.
- Follow up on deletions and additions.
- Coordination with the guidance, guidance and academic advising committee.
- Study requests for transfer to the department and course equivalency.
- Follow up on failure cases (failure and warnings).
- Scrutinize the study schedules and additional hours before submitting them to the higher authority.
- Follow up on whether periodic, midterm, and final exams meet the test quality standards in each semester.
- Preparing midterm and final exam schedules.
- Resolving conflicts in exam schedules
- Submitting reports on the committee's work at the end of each semester

Laboratories committee

- Ensure the availability of all laboratory equipment and student services for the program.
- Ensure the availability of maintenance plans for laboratories, equipment, and student services.
- Submitting a periodic report to the department head at the end of each academic year to make the necessary reforms/amendments.
- Supervising the availability of security and safety procedures in laboratories and classrooms before studying and submitting a report on them to the department head.
- Spreading awareness, preparing and distributing guidance publications to students regarding security and safety procedures for various risks (chemical - electrical - radiation) at the beginning of the academic year.
- Placing signs with security and safety procedures in a prominent place in every laboratory and classroom, and emergency phone numbers.

Postgraduate studies and scientific research committee

- Following up on postgraduate studies (master's) programmers, which includes preparing lecture schedules and exam schedules
- Developing postgraduate programs.
- Develop a system to monitor, document, and publish scientific research data and participate in conferences.

- Encouraging scientific publishing in internationally ranked scientific journals.
- Carrying out the tasks referred to it by the faculty's Graduate Studies and Scientific Research Committee.
- Follow up on scholarships from the department's employees.
- Providing consultations for scholarships for teaching assistants and lecturers.

Alumni affairs committee

- Creating a database for faculty graduates to facilitate communication after graduation, track employment rates, and explain reasons for non-employment.
- Establishing clear methods for communicating with graduates to support their transition into the work market and postgraduate studies.
- Propose programs of training to help recent graduates develop professionally and enter the workforce.
- Follow up on a questionnaire that employers evaluate the competency of program graduates, which is related to completing the performance indicator. KPI-P-09
- Providing the data required to complete the calculation of the KPI-P-07 performance indicator (employment of graduates and their enrollment in graduate programs)
- Collecting data on employers and their means of communication and developing a program to strengthen contact with graduates and employers.
- Establishing training and qualification programs, and holding special courses and meetings for graduates; To suit the requirements of the labor market.

Community service and partnership committee

- Evaluating beneficiaries' satisfaction with the community service plan (via questionnaire) and preparing an improvement plan based on that.
- Spreading awareness among faculty members and male and female students of the importance of participating in community service activities through various academic programs, seminars and workshops.
- Organizing conferences, scientific seminars and lectures aimed at community service and environmental development
- Documenting all activities and services carried out at the department level, with continuous evaluation of the quality of these services, and submitting reports to the quality management of the program and the faculty.
- Study plans, programs and requests related to community service and partnership, while identifying mechanisms and following up on their implementation.

Study plan

Year one	Level One	Total Credit Units 12	Number of courses 4

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1001	General Biology	4	3	2	_
CHEM	1001	General Chemistry	4	3	2	_
ISLM	1001	Islamic Culture (1)	2	2	_	_
ARAB	1001	Language Skills	2	2	_	_

Year one	Level Two	Total Credit Units 12	Number of courses 4

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
MATH	1001	Calculus (1)	4	3	2	_
PHYS	1001	General Physics	4	3	2	_
ISLM	1003	Recitation and Quranic Guidance	2	2	–	–
HIST	1001	History of Saudi Arabia Kingdom	2	2	_	_

Year one	Level Three	Total Credit Units 13	Number of courses 5

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
ENGL	1001	English language	3	3	_	_
BIO	1002	Plant Morphology	3	2	2	_
BIO	1003	Cytology	3	2	2	_
ISLM	1002	Islamic Culture (2)	2	2	_	_
CS	1001	Fundamentals of digital transformation	2	2	_	_

Year Two	Level Four	Total Credit Units 12	Number of courses 4

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1250	Invertebrates	3	2	2	_
BIO	1251	Histology	3	2	2	BIO1003
BIO	1252	Plant Anatomy	3	2	2	_
BIO	1253	Bacteriology	3	2	2	_

Year Two	Level Five	Total Credit Units 12	Number of courses 4

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1254	Fundamentals of Ecology	3	2	2	_
BIO	1255	Fundamentals of Genetics	3	2	2	BIO1003
BIO	1256	Mycology	3	2	2	_
CHEM	1262	Organic Chemistry	3	2	2	CHEM1001

Year Two	Level Sex	Total Credit Units 12	Number of courses 4

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1257	Chordates	3	2	2	_
BIO	1258	General Entomology	3	2	2	BIO1250
BIO	1259	Plant Physiology	3	2	2	BIO1252
BIO	1260	Phycology	3	2	2	_

Year Three	Level Seven	Total Credit Units 12	Number of courses 4

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1500	Animal Physiology	4	3	2	BIO1251
BIO	1501	Microbial Physiology	3	2	2	BIO1253
BIO	1502	Virology	3	2	2	_
STAT	1501	Biostatistics	2	2	_	_

Year Three	Level Eight	Total Credit Units 13	Number of courses 5

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1503	Archegoniates	3	2	2	_
BIO	1504	Flowering Plants Taxonomy	3	2	2	BIO1002
BIO	1505	Microbial Ecology	3	2	2	_
BIO	1506	Cytogenetics	2	2	_	BIO1255
BIO	1507	Animal Behaviour	2	2	_	_

Year Three	Level Nine	Total Credit Units 12	Number of courses 4

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1508	Parasitology	3	2	2	BIO1250
BIO	1509	Medical Microbiology	3	2	2	BIO1501
BIO	1510	Molecular Biology	3	2	2	BIO1255
CHEM	1512	Biochemistry	3	2	2	CHEM1262

Year Four	Level Ten	Total Credit Units 14	Number of courses 5

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1750	Biotechnology	3	2	2	BIO1510
BIO	1751	Industrial Microbiology	3	2	2	BIO1253 + BIO1256
BIO	1752	Plant Ecology	3	2	2	BIO1254
BIO	1753	Endocrinology	2	2	_	BIO1500
		Elective (1)	3	2	2	

Year Four	Level Eleven	Total Credit Units 14	Number of courses 5

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1754	Immunology	3	2	2	BIO1500
BIO	1755	Plant Hormones	2	2	_	_
BIO	1756	Graduation Project	3	2	2	Bass 92 C. H.
BIO	1757	Flora of Saudi Arabia	3	2	2	BIO1504
		Elective (2)	3	2	2	

Year Four	Level Twelve	Total Credit Units 12	Number of courses 4

Course Code	Course No.	Course Title (English)	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1758	Environmental Pollution	3	2	2	BIO1254
BIO	1759	Fauna of Saudi Arabia	3	2	2	BIO1250+ BIO1257
BIO	1760	Embryology	3	2	2	BIO1257
		Elective (3)	3	2	2	

Elective Courses

Course Code	Course No.	Course Title	Credit Units	Lecture	Practical	Pre-requisite(s)
BIO	1761	Techniques and Laboratory Instruments	3	2	2	_
BIO	1762	Biological Control	3	2	2	_
BIO	1763	Bioinformatics	3	2	2	BIO1510
BIO	1764	Food Microbiology	3	2	2	BIO1501
BIO	1765	Plant Tissue Culture	3	2	2	BIO1259
BIO	1766	Economic and Medical Entomology	3	2	2	BIO1258
BIO	1767	Economic Plants	3	2	2	BIO1002
BIO	1768	Comparative Anatomy	3	2	2	BIO1257
BIO	1769	Soil-Plant Relationship	3	2	2	BIO1259

Academic staff list

No.	Name	Gender	Nationality	Degree	Academic Rank	General Specialty	Specific Specialty	Institution graduated from
1	Ghanm Mohamed Abdallah Alghamdi	M.	Saudi	PhD	Professor	Microbiology	Bacteriology	Minnesota USA
2	Mohamed Mousa Ibrahim Ahmed	M.	Egyptian	PhD	Professor	Zoology	Invertebrates & Parasitology	Suez canal Egypt
3	Abdulaziz Yahya Ahmed Alghamdi	M.	Saudi	PhD	Associate Professor	Microbiology	Bacteriology	King Saud KSA
4	Sami Asir Ahmed Al-Robai	M.	Saudi	PhD	Associate Professor	Botany	Plant Ecology	King Abdul Aziz KSA
5	Tariq Saeed Ghannam Alghamdi	M.	Saudi	PhD	Associate Professor	Zoology	Entomology	King Abdul Aziz KSA
6	Saleh Bakheet Alghamdi	M.	Saudi	PhD	Associate Professor	Microbiology	Medical Microbiology	University of Essex Uk
7	Ehab Mohamed Mohamed Abdella	M.	Egyptian	PhD	Associate Professor	Zoology	Genetics	Cairo Egypt
8	Sherif Mohsen Ali Elsherbini	M.	Egyptian	PhD	Associate Professor	Zoology	Molecular immunology	Paris France
9	Fatima Saeed Alomari Alzahrani	F.	Saudi	PhD	Associate Professor	Botany	Genetics	Nottingham
10	Fatehia Nasser Gharsan Alghamdi	F.	Saudi	PhD	Associate Professor	Zoology	Entomology	Princess Nora bint AbdulRahman KSA
11	Magbolah Salem Helal AL Zahrani	F.	Saudi	PhD	Associate Professor	Zoology	Animal Physiology	Riyadh
12	Khalid Salem Al-Zahrani	M.	Saudi	PhD	Assistant Professor	Zoology	Animal Physiology	New England Australia
13	Bandar Fahad Almiman	M.	Saudi	PhD	Assistant Professor	Biotechnology	Plant Microbiology	Bedfordshire UK

19	Walid Ali Mohammed Abusheir	M.	Egyptian	PhD	Assistant Professor	Zoology	Experimental Zoology	Al-Azhar Egypt
20	Islam Ibrahim Fahim Lashin	M.	Egyptian	PhD	Assistant Professor	Botany	Plant tissue culture	Al-Azhar Egypt
21	Mohamed Al Said Abdelhady	M.	Egyptian	PhD	Assistant Professor	Botany	Plant Taxonomy	Al-Azhar Egypt
22	Abdulaziz Saad F Albogami	M.	Saudi	PhD	Assistant Professor	Botany	Biotechnology	Leicester UK
23	Ali Hassan Ayfan Alghamdi	M.	Saudi	PhD	Assistant Professor	Zoology	Molecular Genetics	University of Glasgow UK
24	Asmaa Mohammed Saleh ALghamdi	F.	Saudi	PhD	Assistant Professor	Microbiolog	Mycology	Nottingham UK
25	Rasha Mohammed Alnefaie	F.	Saudi	PhD	Assistant Professor	Zoology	Cellular &Molecular Biology	Colorado State USA
26	Samia Qasem Oudah Alghamdi	F.	Saudi	PhD	Assistant Professor	Zoology	Parasitology	liverpool UK
27	Fawzia Obid Allah Al Blady	F.	Saudi	PhD	Assistant Professor	Microbiology	Immunology	sheffield UK
28	Samiyah Saeed Hassan Al-Zahrani	F.	Saudi	PhD	Assistant Professor	Microbiology	Mycology	King Abdul-Aziz KSA
29	Haidar AbdAlGadir Mohamed Ahmed	M.	Sudanese	PhD	Assistant Professor	Botany	Plant Taxonomy	Sudan Academy
30	Abdalla Musa Ali Elimam	M.	Sudanese	PhD	Assistant Professor	Zoology	Entomology	Khartoum Sudan
31	Manal Mohammed Elhassan Awad Elkareem	F.	Sudanese	PhD	Assistant Professor	Zoology	Molecular Biology	El-Neelain Sudan
32	Houda Maaroufi Dguimi	F.	Tunisia	PhD	Assistant Professor	Botany	Molecular Genetics	Paris-Sud France
33	Sonia Mohamed Ridha Zaoui	F.	Tunisia	PhD	Assistant Professor	Botany	Plant Physiology	Tunis El Manar Tunisia
34	Touseef Amna Ghulam Haider	F.	Indian	PhD	Associate Professor	Microbiology	Microbiology	Aligarh Muslim University, India
35	Shaza Gamal Mohammed	F.	Sudanese	PhD	Assistant Professor	Microbiology	Microbiology	Khartoum Sudan
36	Amal mohammed Alzahrani	F.	Saudi	PhD	Assistant Professor	Zoology	Parasitology	King Abdul-Aziz KSA
37	Amira Taoufik MILI	F.	Tunisia	PhD	Assistant Professor	Zoology	Molecular Biology	Monastir Uni. Tunisia
38	Sameerh Soleman Alsahafi	F.	Saudi	PhD	Assistant Professor	Biological Sciences	Molecular Biology	Queens Uni. Belfast UK
39	Dlal Mohamed Al Shaar	F.	Saudi	Master	Assistant Lecturer	Biology	Botany	King Abdul-Aziz KSA
40	Road Ahmed Hassan	F.	Saudi	Master	Assistant Lecturer	Micobiology	Biotechnology	Florida Institute of Technology USA
41	Suad Hassan Saleh Alghamdi	F.	Saudi	PhD	Assistant Professor	Zoology	Embryology	Liverpool UK
42	Said Mohamed Hassan Alzahrani	M.	Saudi	Master	Assistant Lecturer	Zoology	Animal Physiology	King Saud KSA
43	Ali Mohamed Marzok Alzahrani	M.	Saudi	Master	Assistant Lecturer	Botany	Plant Diversity	University of Reading UK

44	Hyfa Ahmed Alzahrani	F.	Saudi	PhD	Assistant Lecturer	Biology	Immunology	University of Sheffield UK
45	Rasha Mohammed Mater Alzahrani	F.	Saudi	Master	Demonstrator	Microbiology	Mycology	King Saud KSA
46	Rana Abdullah Hassan ALzahrani	F.	Saudi	Master	Demonstrator	Zoology	Cells and Tissues in Zoology	King Abdul-Aziz KSA
47	Reem Awath A Alsalmi	F.	Saudi	Master	Demonstrator	Biotechnology	Biotechnology Bioengineering	Kent UK
48	Zahra Mohamed Abdallah	F.	Saudi	Bachelor	Demonstrator	Biotechnology	Biotechnology	Taif KSA
49	Saga Awad Aodah	F.	Saudi	Bachelor	Demonstrator	Biology	Genetics	Baha KSA
50	Abd alaziz Abdallah Alzahrani	M.	Saudi	Bachelor	Demonstrator	Biology	Biology	Taif KSA
51	Meshal Ali Mohammad Alghamdi	M.	Saudi	Master	Demonstrator	Biotechnology	Biotechnology	RMIT University
52	Fatimah Mohammed Ali Haddadi	F.	Saudi	PhD.	Assistant Professor	Biology	Microbial Genetics	King Abdulaziz KSA
53	Mohamed Elsayed Abdelhady Mahmoud	M.	Egyptian	PhD.	Assistant Professor	Biology	Plant community & Flora	Al-azhar Egypt

***M.: Male *F.: Female**