

Attachment 2 (a)

Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

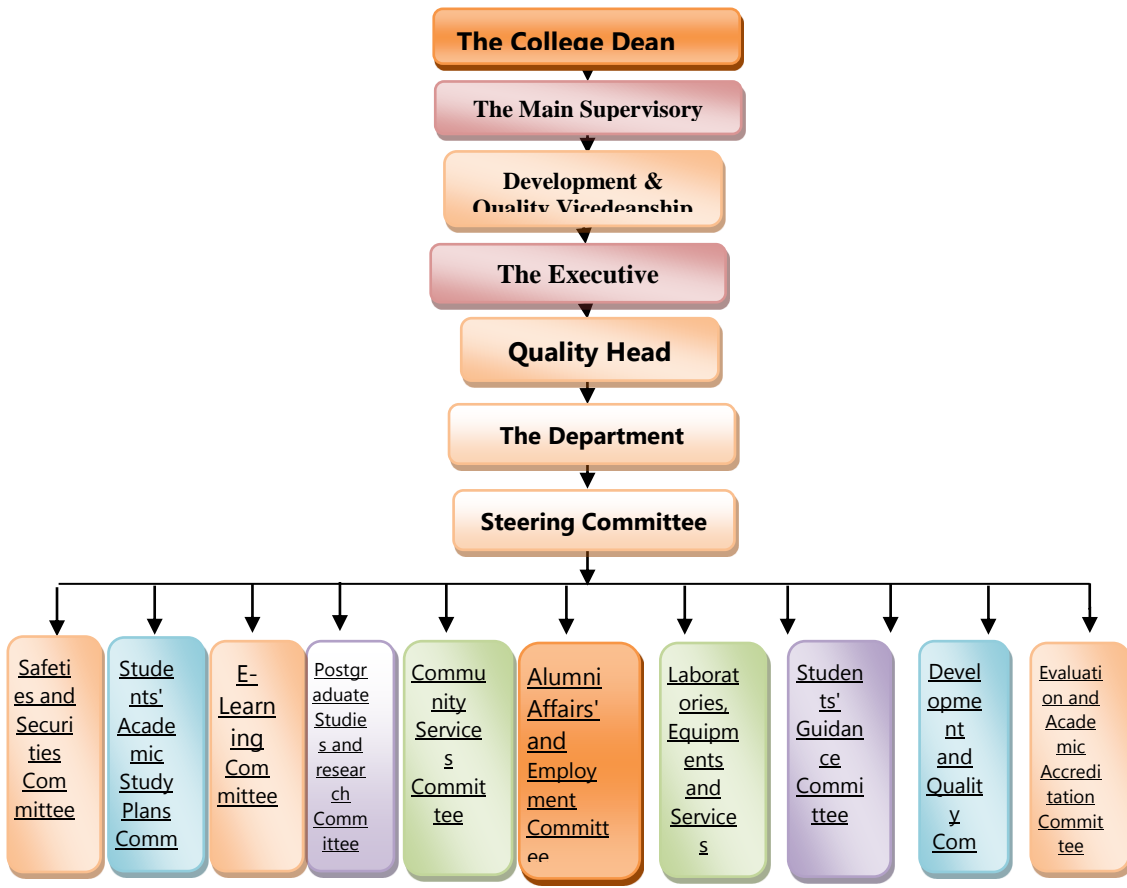
**Program Specifications
(PS)**

**Zoology Program
College of Science
King Saud University**

National Commission for Academic Accreditation & Assessment

Program Specifications

For guidance on the completion of this template, please refer to NCAAA guidebooks.

1. Institution	King Saud University	Date of Report	20/11/1436H
2. College/Department	College of Science / Department of Zoology		
3. Dean	Prof. Nasser M. Aldaghri		
4. Insert program administrative flowchart	 <pre> graph TD A[The College Dean] --> B[The Main Supervisory] B --> C[Development & Quality Vicedeanship] C --> D[The Executive] D --> E[Quality Head] E --> F[The Department] F --> G[Steering Committee] G --> H[Safeties and Securities Committee] G --> I[Students' Academic Study Plans Committee] G --> J[E-Learning Committee] G --> K[Postgraduate Studies and Research Committee] G --> L[Community Services Committee] G --> M[Alumni Affairs' and Employment Committee] G --> N[Laboratories, Equipments and Services] G --> O[Students' Guidance Committee] G --> P[Development and Quality Committee] G --> Q[Evaluation and Academic Accreditation Committee] </pre>		

5. List all branches/locations offering this program

Branch/Location 1. University Campus at Diriyah for male students

Branch/Location 2.

Branch/Location 3.

Branch/Location 4.

A. Program Identification and General Information

1. Program title and code	Zoology (ZOO)
2. Total credit hours needed for completion of the program	136 Credit hours
3. Award granted on completion of the program	BSc of Zoology
4. Major tracks/pathways or specializations within the program (eg. transportation or structural engineering within a civil engineering program or counselling or school psychology within a psychology program)	None
5. Intermediate Exit Points and Awards (if any) (eg. associate degree within a bachelor degree program)	None
6. Professional occupations (licensed occupations, if any) for which graduates are prepared. (If there is an early exit point from the program (eg. diploma or associate degree) include professions or occupations at each exit point)	<p>There is no an early exit point from the program</p> <p>At the end of the program, students will be prepared for the following professions and occupations:</p> <p>1) Biology teachers in the general education schools.</p>

- 2) Demonstration at the universities and academic institutions.
- 3) Research Assistants/Researchers at the Saudi Wildlife Authority Saudi Wildlife Authority
- 4) Scientific researchers at the research centers and Universities.
- 5) Laboratory Technician at the schools of the general education, Ministry of Health, Ministry of Agriculture, Commission of Specifications and Standards, Presidency of Weather and Environment Monitoring.

7. (a) New Program	<input type="text" value="NO"/>	Planned starting date	<input style="width: 100%;" type="text"/>																		
(b) Continuing Program	<input type="text" value="Yes"/>	Year of most recent major program review	<input style="width: 100%;" type="text" value="2014"/>																		
<p>Organization involved in recent major review (eg. internal within the institution,</p> <p>Accreditation review by __ASIIN_____? Other____ QMS _____?</p>																					
<p>8. Name of program coordinator or chair. If a program coordinator or chair has been appointed for the female section as well as the male section, include names of both.</p> <p>Dr. Badr A. Aldhmash (Department Chairman)</p>																					
<p>9. Date of approval by the authorized body (MoH for private institutions and Council of Higher Education for public institutions).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Campus Branch/Location</th> <th style="width: 30%;">Approval By</th> <th style="width: 30%;">Date</th> </tr> </thead> <tbody> <tr> <td>Main Campus:</td> <td></td> <td></td> </tr> <tr> <td>1: Al-Diriyah</td> <td></td> <td></td> </tr> <tr> <td>2:</td> <td></td> <td></td> </tr> <tr> <td>3:</td> <td></td> <td></td> </tr> <tr> <td>4:</td> <td></td> <td></td> </tr> </tbody> </table>				Campus Branch/Location	Approval By	Date	Main Campus:			1: Al-Diriyah			2:			3:			4:		
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B. Program Context

1. Explain why the program was established.

a. Summarize economic reasons, social or cultural reasons, technological developments, national policy developments or other reasons.

Work in many areas needed in the various sectors of the country and its institutions, such as the Ministry of Health, hospitals, laboratories, Ministry of Agriculture, Ministry of Water, Ministry of Education and the Commission of Specifications and Standards, the Ministry of Interior labs, as well as working at institutions and private sector companies.

b. Explain the relevance of the program to the mission and goals of the institution.

Contribute to the educational process - Research - community service

2. Relationship (if any) to other programs offered by the institution/college/department.

a. Does this program offer courses that students in other programs are required to take?

Yes

If yes, what has been done to make sure those courses meet the needs of students in the other programs?

Courses are reviewed periodically to ensure the continuity of their relevance to the needs of students in the program through the departmental commission of plans and schedules, where they are reviewed in light of the mission and objectives of the Department. Also, to assess the Course / Courses by students (the survey) to provide feedback - the views of students enrolled in the Course / feedback from the concerned departments / Courses concerned - Compared to the Courses made in similar departments -External audit

b. Does the program require students to take courses taught by other departments?

Yes

If yes, what has been done to make sure those courses in other departments meet the needs of students in this program?

Through the official communication between Zoology program and other departments such as Biochemistry, course specification and relevant knowledge to serve the program objective are emphasized for student to acquire professional scientific information in that particular discipline of science, for instance Bio. 101

3. Do students who are likely to be enrolled in the program have any special needs or characteristics? (eg. Part time evening students, physical and academic disabilities, limited IT or language skills).

Yes ☒ No ☐

Weak English language skill needs to be improved.

4. What modifications or services are you providing for special needs applicants?

Coordination with departments and colleges to provide courses in English, Arabic and Islamic studies and identify educational outputs compatible with the mission and objectives of the Program.

C. Mission, Goals and Objectives

1. Program Mission Statement (insert)

To prepare highly qualified educators and technicians in life sciences, who can meet and respond to the needs of the employment market, through modern educational, research facilities and professional practice to serve the community.

2. List goals and objectives of the program within to help achieve the mission. For each goal and objective describe the major strategies to be followed and list the indicators that are used to measure achievement.

Goals and Objectives	Major Strategies	Measurable Indicators
Prepare highly qualified educators and technicians using all possible means. Develop a curriculum that is responsive to the needs of the employment market.	Focus on providing intensive training programs for students during the university study. Establish cooperative relationships with some joint government and private sectors.	Increase in job allocations for undergraduates
To be well connected with the community to provide all possible educational programs that can solve problems and increase	The participation of staff members and units of the department in providing information and services and the establishment of	Increase in lectures, symposia and meetings and working as part-time advisers, and/or any similar activities

their awareness.	lectures, symposia and meetings. The contribution of faculty members to work as part-time advisers to the public and private sectors.	
Prepare Pure and applied researches and publish them in well known and respected international journals.	Collaboration with research centers, local, regional and international, in biology to conduct joint research - communication of scientific researchers in the joint scientific journals - to support scientific research in the area	Increase in the number of publications and research projects with national and international collaboration

D. Program Structure and Organization

1. Program Description:

List the core and elective program courses offered each semester from Prep Year to graduation using the below Curriculum Study Plan Table (A separate table is required for each branch IF a given branch/location offers a different study plan).

A program or department manual should be available for students or other stakeholders and a copy of the information relating to this program should be attached to the program specification. This information should include required and elective courses, credit hour requirements and department/college and institution requirements, and details of courses to be taken in each year or semester.

Curriculum Study Plan Table

Year	Course Code	Course Title	Required or Elective	Credit Hours	College or Department
Prep Year					
	ENGL 140	English Language	Required	8 (8+0)	Preparatory Year
	MATH 140	Mathematics (1)- Introduction to Mathematics	Required	2 (1+1)	Preparatory Year
	CI 140	Learning, thinking and research skills	Required	3 (3+0)	Preparatory Year
	CHS 150	Health and Fitness	Required	1 (1+0)	Preparatory Year
	ENGL 150	English Language (2)	Required	8 (8+0)	Preparatory Year
	MATH 150	Mathematics (2)- Calculus	Required	3 (2+1)	Preparatory Year
	CT 140	Information technology Skills (IT Skills)	Required	3 (3+0)	Preparatory Year
	MC 150	Communication Skills	Required	2 (2+0)	Preparatory Year
	ENT 101	Entrepreneurship		1(1+0)	Preparatory Year
1st Year Semester 1					
	IC	KSU General University Requirement			
	IC	KSU General University Requirement	Required	2(2+0)	
	CHEM 103	General Chemistry (1)	Required	3(3+0)	Chemistry Department
	GEOL 105	Geology	Required	2 (2+0)	Geology Department
	STAT 106	Biostatistics	Required	2 (1+1)	Statistics Department
	BOT 102	General Botany	Required	3 (2+1)	Botany Department
	ZOO 103	Principles of Zoology	Required	3 (2+1)	Zoology Department
1st Year Semester 2					

IC		KSU General University Requirement	Required	2 (2+0)	
BCH 101		General Biochemistry	Required	4(3+1)	Biochemistry Department
PHYS 205		Biophysics	Required	2 (2+0)	Physics Department
MIC 140		Microbiology	Required	3 (2+1)	Microbiology Department
ZOO 212		Parasitology	Required	3 (2+1)	Zoology Department
ZOO 242		Cell Biology and Physiology	Required	3 (2+1)	Zoology Department
2nd Year Semester 1					
	ZOO 245	Histology	Required	2 (2+0)	Zoology Department
	ZOO 262	Microscopic Preparatioas	Required	4(3+1)	Zoology Department
	ZOO 305	Modern Animal Taxonomy	Required	2 (2+0)	Zoology Department
	ZOO 320	Ichthyology	Required	3 (2+1)	Zoology Department
	ZOO 327	Herpetology	Required	3 (2+1)	Zoology Department
	ZOO 332	General Physiology	Required	3 (2+1)	Zoology Department
	ZOO 373	Wilderness Ecology	Required	2 (1+1)	Zoology Department
2nd Year Semester 2					
	IC	KSU General University Requirement	Required	2(2÷0)	
	ZOO 311	General Entomology	Required	3 (2÷1)	Zoology Department
	ZOO 325	Ornithology	Required	2(1+1)	Zoology Department
	ZOO 326	Mammalogy	Required	2(1+1)	Zoology Department
	ZOO 342	Molecular Biology	Required	2 (1+1)	Zoology Department
	ZOO 374	Aquatic Ecology	Required	2 (1+1)	Zoology Department
	ZOO 465	Completion of 34 specialized credit hours	Summer Course	3 (2+1)	Zoology Department
3rd Year Semester 1					
	ZOO 317	Medical Aithropodology	Required	3 (2+1)	Zoology Department
	ZOO 352	Fundamentals of Genetics	Required	2 (1+1)	Zoology Department
	ZOO 375	Pollution	Required	2(1+1)	Zoology Department
	ZOO 420	Comparative Vertebrate Anatomy	Required	2 (1+1)	Zoology Department
	ZOO 423	Fundamentals of Descriptive Embryology	Required	2 (1+1)	Zoology Department
	ZOO 432	Endocrinology	Required	2 (1+1)	Zoology Department
3rd Year Semester 2					

ZOO 424		Principles of Experimental Embryology	Required	2 (1+1)	Zoology Department
ZOO 425		Economic Fish and Crustaceans	Required	2 (1+1)	Zoology Department
zoo 433		Immunology	Required	2 (1+1)	Zoology Department
zoo 461		Laboratory Techniques	Required	2 (2+0)	Zoology Department
zoo 471		Animal Behavior	Required	2 (1+1)	Zoology Department
zoo 498		Graduation Project	Required	2 (2+0)	Zoology Department
Include additional years if needed					

**Elective courses from Zoology Department and Botany and
Microbiology Department**
Students are required to select (12 units)

(A) Elective courses from Zoology				
Course no.		Title	Prereq.	Units
Zoo	355	Animal Wildlife Genetics	Zoo 352	2 (2+0)
Zoo	366	Management of fish culture	Zoo 320	2 (1+1)
Zoo	381	Economics of Aquaculture	Zoo 320	2 (1+1)
Zoo	382	Entomofauna of Saudi Arabia	Zoo 311	2 (1+1)
Zoo	412	Parasite Immunology	Zoo 212	2 (1+1)
Zoo	413	Entomology and Environmental-Health	Zoo 311	2 (1+1)
Zoo	434	Renal Physiology	Zoo 332	2 (1+1)
Zoo	435	Neurophysiology	Zoo 332	2 (1+1)
Zoo	436	Reproductive Physiology	Zoo 332	2 (1+1)
Zoo	441	Histochemistry	Zoo 245 Zoo 262	2 (1+1)
Zoo	455	Genetic Engineering	Zoo 342 Zoo 352	2 (1+1)
Zoo	456	Bioinformatics	Zoo 342	2 (1+1)
Zoo	457	Cytogenetics and Cell Culture	Zoo 242 Zoo 352	3 (2+1)
Zoo	458	Human Genetics	Zoo 342 Zoo 352	2 (1+1)
Zoo	462	Experimental parasitology	Zoo 212	2 (1+1)
Zoo	464	Biotechnology	Zoo 424	2 (1+1)
Zoo	466	Industrial Environmental Pollution	Zoo 375	2 (1+1)
Zoo	480	Wildlife Protection	Zoo 373	2 (2+0)
Zoo	481	Venomous Animals	Zoo 327	2 (1+1)
Zoo	482	Organic adaptations of Chordates	Zoo 103	2 (1+1)
Total				41 Units

(B) Elective courses from Botany and Microbiology Department				
Course no.		Title	Prereq.	Units
Bot	212	Plant Anatomy	Bot 102	4 (2+2)
Bot	222	Principles of Flowering Plants Taxonomy	Bot 102	3 (2+1)
Bot	231	Economic botany	Bot 102	2 (2+0)
Bot	241	Plant ecological factors	Bot 102	3 (2+1)
Bot	263	Archegonate	Bot 102	2 (1+1)
Bot	345	Flora of Saudi Arabia	Bot 102	2 (1+1)
Bot	384	Phycology	Bot 102 or Mic 140	3 (2+1)
Bot	442	Hot desert ecology	Bot 102	1 (1+0)
Bot	444	Ecological resources	Bot 102	2 (1+1)
Bot	486	Phytoplanktone	Bot 102	2 (1+1)
Bot	488	Lichens	Mic 140	2 (1+1)
Mic	250	Virology	Mic 140	3 (2+1)
Mic	260	General Bacteriology	Mic 140	3 (2+1)
Mic	270	General Mycology	Mic 140	3 (2+1)
Mic	340	Microbial ecology	Mic 140	3 (2+1)
Mic	344	Sanitation and water microbiology	Mic 140	2 (1+1)
Total				42 Units

2. Required Field Experience Component (if any, e.g. internship, cooperative program, work experience).

Summary of practical, clinical or internship component required in the program. Note: see Field Experience Specification
<p>a. Brief description of field experience activity</p> <p>Field studies in environmental pollution, reptiles and amphibians, fish, invertebrates, birds and mammals.</p>
<p>b. At what stage or stages in the program does the field experience occur? (eg. year, semester)</p> <p>- During summer following level 6</p>
<p>c. Time allocation and scheduling arrangement. (eg. 3 days per week for 4 weeks, full time for one semester)</p> <p>8 Hours weekly - Summer Term</p>
<p>d. Number of credit hours (if any)</p> <p>5 Hours</p>

3. Project or Research Requirements (if any)

Summary of any project or thesis requirements in the program. (Other than projects or assignments within individual courses) (A copy of the requirements for the project should be attached.)
<p>a. Brief description</p> <p>Use of scientific journals to search for information, design and implementation of practical experiments, analyze the results and writing scientific reports.</p>
<p>b. List the major intended learning outcomes of the project or research task.</p> <ul style="list-style-type: none"> - Learn how to deal with modern scientific journals and search for appropriate articles. - Knowledge of a scheme to conduct research experiments. - Know how to deal with animal experiments and divided into groups (control and treated). - How to extract and interpret data. - How to present the results and writing scientific report. - How to write a scientific research and references.

c. At what stage or stages in the program is the project or research undertaken? (e.g. year, semester)
Level VII
d. Number of credit hours (if any) 3 Hours
e. Description of academic advising and support mechanisms for students. - Direct supervision by a member of the faculty for the students during the training process.(7 hours a week). - Providing equipment and reagents and access points to databases.
f. Description of assessment procedures (including mechanism for verification of standards) - Assessment of the skills to collect recent scientific information. - Assessment of the skills to conduct practical experiments. - Assessment of the final report. - Verification of the evaluation through a special committee, and presenting a copy of the final report.

4. Learning Outcomes in Domains of Learning, Assessment Methods and Teaching Strategy

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

The *National Qualification Framework* provides five learning domains. Learning outcomes are required in the first four domains and sometimes are also required in the Psychomotor Domain.

On the table below are the five NQF Learning Domains, numbered in the left column. For Program Accreditation there are four learning outcomes required for knowledge and cognitive skills. The other three domains require at least two learning outcomes. Additional learning outcomes are suggested.

First, insert the suitable and measurable learning outcomes required in each of the learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each program learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process.

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	Knowledge		
1.1	Identify the concepts and basic knowledge of specialization and its relationship to other disciplines.	Lecture	Written exams
1.2	Knowledge of theories and scientific facts in the sections of Zoology and interrelations among organisms and their biosphere.	Support readings	Practical exams
1.3	Learn laboratory bio-techniques and applications.	group discussions	Evaluating individual and group tasks
1.4	Knowledge of the concepts of laboratory management, organization and evaluation.	writing reports - preparing research papers	Evaluating presentations and talks.
1.5	Knowledge of management and concepts of bio-systems, organization and evaluation.	Conducting individual tasks - practical training	
1.6	Knowledge of policy and legislation of animal Science and ethics.	field training – Talks	
2.0	Cognitive Skills		
2.1	The ability to discover and identify, analyze and evaluate various scientific problems and suggesting solutions.	Testing and training process	Assessment of scientific experiments
2.2	Knowledge of the methods of scientific research and the ability to design and evaluation of scientific research.	field studies - a group discussion	evaluating individual and group tasks
2.3	Knowledge of the methods and procedures of research and information retrieval and the ability to build and design research strategies.	- how to resolve the problem	Written exams
2.4	The ability to select and evaluate different sources of information.	Individual and group tasks	
3.0	Interpersonal Skills and Responsibility		
3.1	Work in groups	Working in groups	Direct observation
3.2	acting as coordinator between members of the team	Attend workshops and seminars	Periodic reports on student
3.3	working as team leader	Self-learning	Independent evaluation
3.4	present scientific problems such as environmental pollution	Power point presentations	Assessment of group projects
3.5	interact and deal with the various academic, student activities	Performing field trips for specimen collection	Assessment of projects conducted individually
4.0	Communication, Information Technology, Numerical		
4.1	Computer use	Lectures	Theoretical and practical tests
4.2	Entry and use of databases	Use labs	Evaluation reports, presentations and

			tasks
4.3	Access and use information networks	Preparation and presenting tasks	Activities
4.4	Use of audiovisual	Writing reports and research papers	
4.5	Learn the principles of statistics	Class activities.	Estimating the laboratory written reports
4.6	Verbal communication	Lab work.	Laboratory written reports evaluation
4.7	Written communication	Writing reports.	Evaluation of class activities and assignments
4.8	Electronic communication	Promoting students to submit activities, homework and writing reports	Evaluating the laboratory written reports.
5.0	Psychomotor (if applicable)		
	None	None	None

NQF Learning Outcome Verb, Assessment, and Teaching Strategies and Suggestions

NQF Learning Domains	Suggested Verbs
Knowledge	list, name, record, define, label, outline, state, describe, recall, memorize, reproduce, recognize, record, tell, write
Cognitive Skills	estimate, explain, summarize, write, compare, contrast, diagram, subdivide, differentiate, criticize, calculate, analyze, compose, develop, create, prepare, reconstruct, reorganize, summarize, explain, predict, justify, rate, evaluate, plan, design, measure, judge, justify, interpret, appraise
Interpersonal Skills & Responsibility	demonstrate, judge, choose, illustrate, modify, show, use, appraise, evaluate, justify, analyze, question, and write
Communication, Information Technology, Numerical	demonstrate, calculate, illustrate, interpret, research, question, operate, appraise, evaluate, assess, and criticize
Psychomotor	demonstrate, show, illustrate, perform, dramatize, employ, manipulate, operate, prepare, produce, draw, diagram, examine, construct, assemble, experiment, and reconstruct

Suggested **verbs not to use** when writing measurable and assessable learning outcomes are as follows:

Consider	Maximize	Continue	Review	Ensure	Enlarge	Understand
Maintain	Reflect	Examine	Strengthen	Explore	Encourage	Deepen

Some of these verbs can be used if tied to specific actions or quantification.

Suggested assessment methods and teaching strategies are:

According to research and best practices, multiple and continuous assessment methods are required to verify student learning. Current trends incorporate a wide range of rubric assessment tools; including web-based student performance systems that apply rubrics, benchmarks, KPIs, and analysis. Rubrics are especially helpful for qualitative evaluation. Differentiated assessment strategies include: exams, portfolios, long and short essays, log books, analytical reports, individual and group presentations, posters, journals, case studies, lab manuals, video analysis, group reports, lab reports, debates, speeches, learning logs, peer evaluations, self-evaluations, videos, graphs, dramatic performances, tables, demonstrations, graphic organizers, discussion forums, interviews, learning contracts, antidotal notes, artwork, KWL charts, and concept mapping.

Differentiated teaching strategies should be selected to align with the curriculum taught, the needs of students, and the intended learning outcomes. Teaching methods include: lecture, debate, small group work, whole group and small group discussion, research activities, lab demonstrations, projects, debates, role playing, case studies, guest speakers, memorization, humor, individual presentation, brainstorming, and a wide variety of hands-on student learning activities.

Program Learning Outcome Mapping Matrix

Identify on the table below the courses that are required to teach the program learning outcomes. Insert the program learning outcomes, according to the level of instruction, from the above table below and indicate the courses and levels that are required to teach each one; use your program's course numbers across the top and the following level scale. Levels: I = Introduction P = Proficient A = Advanced

Course Offerings	Zoo 103	Zoo 145	Zoo 212	Zoo 242	Zoo 245	Zoo 262	Zoo 305	Zoo 311	Zoo 317	Zoo 320	Zoo 325	Zoo 326	Zoo 327	Zoo 332	Zoo 342	Zoo 352	Zoo 355	Zoo 366	Zoo 373	Zoo 374	Zoo 375	Zoo 381	Zoo 382	Zoo 412	Zoo 413
NQF Learning Domains and Learning Outcomes																									
Knowledge																									
Facts	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Concepts, theories	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Procedures	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Cognitive Skills																									
Apply skills when asked	x	x	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Creative thin king and problem solving	x	x	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Interpersonal Skills & Responsibility																									
Responsibility for own learning	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Group participation and leadership	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Act responsibly- personal and professional situations	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Ethical standards of behavior	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Communication, Information Technology, Numerical																									
Oral and written communication	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Use of IT	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Basic maths and statistics	x	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Psychomotor Skills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Course Offerings	Zoo 420	Zoo 423	Zoo 424	Zoo 425	Zoo 432	Zoo 433	Zoo 434	Zoo 435	Zoo 436	Zoo 441	Zoo 455	Zoo 456	Zoo 457	Zoo 458	Zoo 461	Zoo 462	Zoo 464	Zoo 465	Zoo 466	Zoo 471	Zoo 480	Zoo 481	Zoo 482	Zoo 497	Zoo 498
NQF Learning Domains and Learning Outcomes																									
Knowledge																									
Facts	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Concepts, theories	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Procedures	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Cognitive Skills																									
Apply skills when asked	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Creative thinking and problem solving	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Interpersonal Skills & Responsibility																									
Responsibility for own learning	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Group participation and leadership	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Act responsibly- personal and professional situations	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Ethical standards of behavior	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Communication, Information Technology, Numerical																									
Oral and written communication	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Use of IT	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Basic maths and statistics	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Psychomotor Skills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

5. Admission Requirements for the program

Attach handbook or bulletin description of admission requirements including any course or experience prerequisites.

6. Attendance and Completion Requirements

Attach handbook or bulletin description of requirements for:

- Attendance.
- Progression from year to year.
- Program completion or graduation requirements.

E. Regulations for Student Assessment and Verification of Standards

What processes will be used for verifying standards of achievement (eg check marking of sample of tests or assignments? Independent assessment by faculty from another institution) (Processes may vary for different courses or domains of learning.)

- department council- specifies mark of from (40%) to (60%) of the final grade of the course.
- The semester work mark of a course is calculated in one of the following two methods:
- Oral or practical tests, research or other types of classroom activity or from all or some of them in addition to at least one a written test .
- Two written exams at least. It is permissible for the council of the department that
- teaches the course – due to the recommendation of the course professor - to allow the student to complete the requirements of any course in the following semester and to give the student a grade of I (incomplete) in his academic record and not to be included in the GPA or cumulative. Only the grades received by the student after completing the requirements of that course are considered.
- If ever one-semester did not change the grade incomplete (I), the student is given an F and it is calculated in the GPA and cumulative.
- The grades obtained by the student in each course are recalculated according to the schedule mentioned above.

F Student Administration and Support

1. Student Academic Counselling

Describe the arrangements for academic counselling and advising for students, including both scheduling of faculty office hours and advising on program planning, subject selection and career planning (which might be available at college level).

Academic advisors are meant to provide educational counseling for students. The academic advisor's primary responsibility is to evaluate the student's study plan to ensure it will satisfy university requirements while it meets each student's specific needs. The academic advisor's duties are:

- The advisor is expected to deal with students academic, career, and personal problems.
- The academic advisor helps his/her advisee students examine the course offerings in their major and understand their graduation requirements.
- The academic advisor helps the student explore the career fields within his/her major, and obtain related career information and survey job opportunities.
- The academic advisor serves as a link between the student and the administration by counseling the student on matters of failure, on the procedures for dropping and adding courses, course scheduling, and academic progress.
- The academic advisor must alarm students of the exclusion procedure well in advance, and of any subsequent changes that might be enforced during the course of their studies.

The student has to meet with his/her academic advisor every semester prior to his registration for the next semester. The goal of this meeting is to review with the student academic requirements. Another meeting with the academic advisor should be held during the eighth week of each semester in order to review the student progress in different courses. At any time, the student can take an appointment to meet individually with his/her academic advisor to discuss his/her overall program of study, his/her career plans, or any problems he/she encounters in the program.

2. Student Appeals

Attach the regulations for student appeals on academic matters, including processes for consideration of those appeals.

Your department may decide, based on your poor progress throughout the year, to require you to withdraw from College. You are entitled to appeal against this decision, but you should read the Appeals Guidance Note for Students before you do so.

To make your appeal you should complete a Student Appeal Form and return this to Records within 4 weeks of being formally asked to withdraw.

G. Learning Resources, Facilities and Equipment

1a. What processes are followed by faculty and teaching staff for planning and acquisition of textbooks, reference and other resource material including electronic and web based resources?

- Submitting a special form by staff member of the faculty to identify references and sources of its own and adoption by the Council of the department.
- Visit the library or information center for the content of information that is related to the course.
- Submit a request to reserve library materials of relevant courses.
- Reading of available bulletins.
- Use of the scientific databases provided by the central library (King Salman Library)

1b. What processes are followed by faculty and teaching staff for planning and acquisition resources for library, laboratories, and classrooms.

- Use of web based databases and downloading required materials.
- Use of specific textbooks for preparing materials for practical sessions.
- Use of specific textbooks and authentic resources for preparing lectures.

2. What processes are followed by faculty and teaching staff for evaluating the adequacy of textbooks, reference and other resource provisions?

- Examination of book forms and references for each individual course to determine the appropriateness of the book for course topics by the relevant staff member – how recent - (coverage).
- Evaluation of staff member books and match with the contents of the courses prior to their adoption.

3. What processes are followed by students for evaluating the adequacy of textbooks, reference and other resource provisions?

Students were asked during the classes if the references are adequate and if they covered the whole subject

4. What processes are followed for textbook acquisition and approval?

Each member of staff normally recommend specific book/s for his subject and such list will be sent to the library for obtaining the required books. List of books will be updated on a regular basis.

H. Faculty and other Teaching Staff

1. Appointments

Summarize the process of employment of new faculty and teaching staff to ensure that they are appropriately qualified and experienced for their teaching responsibilities.

- Deliver a lecture.
- Personal interview to verify general mental and physical capabilities.
- Verification of the applicability of the terms of appointment contained in the act of universities such as Saudi degree (Masters - PhD), equivalent certificate.
- Verification of the applicability of the terms of appointment contained in the terms of department such as age, experience and appropriate certificate for the program and the needs of the department.
- Discussion of the justification for appointments in the departmental council and the higher academic councils.

2. Participation in Program Planning, Monitoring and Review

a. Explain the process for consultation with and involvement of teaching staff in monitoring program quality, annual review and planning for improvement.

- Hold periodic meetings to discuss issues of quality.
- Encourage attend conferences, symposia, workshops and training courses.
- Advisory Committee constituted from staff members .
- Motivation and encouragement for entrepreneurship and competition.
- Invite specialists to spread the culture of quality among faculty members.
- Establishment of workshops on the subject.
- Distribution of brochures and educational publications on quality.
- Presenting successful experiences in the areas of quality in similar programs.
- Ongoing follow up.
- Provide facilities and necessary equipment.

b. Explain the process of the Advisory Committee (if applicable)

3. Professional; Development

What arrangements are made for professional development of faculty and teaching staff for:

a. Improvement of skills in teaching and student assessment?

- Encourage staff members to attend courses and workshops related to the development of their teaching skills.
- Audited, annually, teaching performance for faculty members.
- Provide advice and guidance to improve and enhance the performance of teaching.
- Incentives and rewards.

b. Other professional development including knowledge of research and developments in their field of teaching specialty?

- Encourage members to enroll in the training courses and workshops in other areas.
- Encourage faculty members to attend conferences and symposia.
- Promote scientific contact through visits and visiting professors.
- Scientific meetings and briefing ongoing and distribution of publications.
- Encourage faculty members to enroll in continuing education programs.

4. Preparation of New Faculty and Teaching Staff

Describe the process used for orientation and induction of new, visiting or part time teaching staff to ensure full understanding of the program and the role of the course(s) they teach as components within it.

- Preparation program (Department manual - meet with faculty members and the administrative at the department)
- Presenting objectives and mission of the Department and explain the philosophy of the program and the courses and financial and social needs of the program and where its contributions.
- Presenting the accomplishments of department and faculty members mainly academic and community contributions and transformations undergone by
- Presenting equipment and facilities available.
- Defined the rights and duties of faculty members at the institution.
- Presenting development opportunities available and the possibility of contribution.
- Field visit to the department, college and university.

5. Part Time and Visiting Faculty and Teaching Staff

Provide a summary of Program/Department/College/institution policy on appointment of part time and visiting teaching staff. (ie. Approvals required, selection process, proportion to total teaching staff, etc.)

When there is a deficiency in staff in a specific area a part time staff will be appointed. The appointed staff must be competent and experienced in the specific field. The CV of the staff to be appointed will be submitted to the Head of the department and will be discussed at the Department Council and approved.

I. Program Evaluation and Improvement Processes

1. Effectiveness of Teaching

<p>a. What processes are used to evaluate and improve the strategies for developing learning outcomes in the different domains of learning? (eg. assessment of learning achieved, advice on consistency with learning theory for different types of learning, assessment of understanding and skill of teaching staff in using different strategies)</p> <ul style="list-style-type: none"> - Reviewing the evaluation by enrolled students for curriculum and academic program. - Reviewing the evaluation by graduating students for curriculum and academic program. - Reviewing employer's evaluation of the performance of graduates. - Internal Audit (self-evaluation) - An external audit for courses and program. - Encouraging faculty members for training courses and workshops to provide them with the necessary teaching skills (defined learning theories and strategies for teaching and learning) - Comments and views of faculty members.
<p>b. What processes are used for evaluating the skills of faculty and teaching staff in using the planned strategies?</p> <ul style="list-style-type: none"> - Reviewing the evaluation by enrolled undergraduate students for curriculum and academic program. - Reviewing the evaluation by graduating students for curriculum and academic program. - Reviewing employer's evaluation of the performance of graduates. - Internal Audit (self-evaluation) - An external audit for courses and program.

2. Overall Program Evaluation

<p>a. What strategies are used in the program for obtaining assessments of the overall quality of the program and achievement of its intended learning outcomes:</p>
<p>(i) From current students and graduates of the program?</p> <ul style="list-style-type: none"> - Distribute questionnaires to potential graduate students to obtain feedback on the curriculum and the program in general. - Questionnaires distributed to the graduates to obtain feedback on the curriculum and the program in general. - Personal interview to a group of potential graduate students to identify their views on curriculum and the program in general. - Personal interview to a group of graduate students to identify their views on curriculum and the program in general.
<p>(ii) From independent advisors and/or evaluator(s)?.</p> <ul style="list-style-type: none"> - Recommendations of visiting professors on the curriculum and program. - Periodic review of the program by external auditors.

- Adherence to the standards of international bodies concerned.
(iii) From employers and/or other stakeholders.
<ul style="list-style-type: none"> - Questionnaires distributed to employers and other relevant social groups to ascertain their views on the level of performance of the graduates of the program. - Organizing periodic meetings with employers and community targeted by the program.

Complete the following two tables.

1. Program KPI and Assessment Table

2. Program Action Plan Table

Program KPI and Assessment Table

KPI #	List of Program KPIs Approved by the Institution	KPI Target Benchmark	KPI Actual Benchmark	KPI Internal Benchmarks	KPI External Benchmarks	KPI Analysis	KPI New Target Benchmark
1	The average ratings of the faculty members to the statement “mission statements guides decision-making processes and development of policies in the Department ”		93.33%	96%			
2	Proportion of the course reports conducted within a year time in which student evaluation inside the program		1	1			
3	Proportion of the course reports conducted within a year time in which student evaluation inside the program	QMS-KSU- Level 6: 0.8-1.00	1	1	-	QMS-KSU- Level 6: 0.80-1.00	Proportion of the course reports conducted within a year time in which student evaluation inside the program
4	Proportion of full time students in proportion of full time faculty members (mean average and level accomplished		1.31:1	48:1			

5	Ratio of students to administrative staff.		17:1	27:1			
6	The average rating by the students to the question: Learning resources of the course were available, in course evaluation survey		3.6	4.35			
7	Number of accessible computer terminals per student		0.56	0.37			
8	Number of publications in reviewed journals in the previous year per full time member of teaching staff.		2.31	1.85			
9	Proportion of full time teaching and other staff actively engaged in community service activities		0.1	0.38			

NOTE The following definitions are provided to guide the completion of the above table for Program KPI and Assessment.

KPI refers to the key performance indicators the programs used in the SSRP and are approved by the institution (if applicable at this time). This includes both the NCAAA suggested KPIs chosen and all additional KPIs determined by the program (including 50% of the NCAAA suggested KPIs and all others).

Target Benchmark refers to the anticipated or desired outcome (goal or aim) for each KPI.

Actual Benchmark refers to the actual outcome determined when the KPI is measured or calculated.

Internal Benchmarks refer to comparable benchmarks (actual benchmarks) from inside the program (like data results from previous years or data results from other departments within the same college).

External Benchmarks refer to comparable benchmarks (actual benchmarks) from similar programs that are outside the program (like from similar programs that are national or international).

KPI Analysis refers to a comparison and contrast of the benchmarks to determine strengths and recommendations for improvement.

New Target Benchmark refers to the establishment of a new anticipated or desired outcome for the KPI that is based on the KPI analysis.

Program Action Plan Table

Directions: Based on your “*Analysis of KPIs and Benchmarks*” provided in the above Program KPI and Assessment Table, list the recommendations identified below.

No.	Recommendations	Action Points	Assessment Criteria	Responsible Person	Start Date	Completion Date
1	Reformulating course Description, and the learning out comes (ILO's).			Committee of Study plan		
2	Programs curricula should be intensified, and project-oriented to practical skills and the experience needed. In addition, enhancing the competitiveness, and scientific/research aspects for Bachelors' projects to meet the international one.			Program Committee		
3	Enhancing international opportunities for the under graduate students' to continue their postgraduate studies abroad.			Post graduate Studies and research Committee		
4	Initiating an Inter disciplinary Bachelor degree programs: <ul style="list-style-type: none"> • Molecular Biology degree Program; jointed among Botany, Biochemistry, and Zoology programs. • Applied Biology and Biotechnology; jointed program among Zoology, Botany, Biochemistry, chemistry, and statistics Departments, as well as two departments in Pharmaceutical College. 			Program Committee		
5	Enhancing and augmenting the English language skills in the curriculum to compete internationally.			Preparatory Year		
6	The credit points do not reflect the actual size			Program Committee		

	of the modules in terms of working load as typical with European Credit Transfer System (ETCS). The Auditors have been suggested to implement the " Diploma Supplement" to provide a positive impact on our graduates' employment opportunities, and it will help in raising the international awareness of the actual level programs, especially in graduate project.					
7	Attaining of oral presentation and oral examination to increase students' communication skills as outlined in program educational objectives to reflect teaching and learning methods during the course of the study and before graduation project.			Academic staff		
8	Increasing Staff Publication and research opportunities			Academic staff		
Action Plan Analysis (List the strengths and recommendations for improvement of the Program Action Plan).						

Attachments:

1. Copies of regulations and other documents referred to in template preceded by a table of contents.
2. Course specifications for all courses including field experience specification if applicable.

Authorized Signatures

Dean / Program Chair	Name	Title	Signature	Date
Program Dean or Chair of Board of Trustees Main Campus	Dr. Badr Al- Dahmash			
Vice Rector				