



المركز الوطني للتقويم والاعتماد الأكاديمي  
National Center for Academic Accreditation and Evaluation

## **ATTACHMENT 5.**

# **T6. COURSE SPECIFICATIONS (CS)**

## Course Specifications

Institution: <b>University of Tabuk</b>	Date: 15/8/1440
College/Department : Science/Biology	

### A. Course Identification and General Information

1. Course title and code: <b>General Biology II (BIO202)</b>	
2. Credit hours: <b>4</b>	
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs) <b>BIOLOGY</b>	
4. Name of faculty member responsible for the course	
5. Level/year at which this course is offered: 3	
6. Pre-requisites for this course (if any): <b>General Biology 1(BIO 101)</b>	
7. Co-requisites for this course (if any): <b>None</b>	
8. Location if not on main campus: <b>N.A</b>	
9. Mode of Instruction (mark all that apply):	
a. traditional classroom	<input checked="" type="checkbox"/> What percentage? <input type="text" value="75"/>
b. blended (traditional and online)	<input type="checkbox"/> What percentage? <input type="text"/>
c. e-learning	<input type="checkbox"/> What percentage? <input type="text"/>
d. correspondence	<input type="checkbox"/> What percentage? <input type="text"/>
f. other (Lab work)	<input checked="" type="checkbox"/> What percentage? <input type="text" value="25"/>
Comments:	

## B Objectives

<p>1. What is the main purpose for this course?</p> <ul style="list-style-type: none"> <li>• Explain the animal and plant hormones and their functions.</li> <li>• Explain the circulatory system in animals and transporting system in plants.</li> <li>• Identify the basic features of general ecology (animal and plant ecology).</li> <li>• Students will be able to explain the Immune system in animals and plants.</li> </ul>
<p>2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)</p> <ul style="list-style-type: none"> <li>• Computer based programs have been utilized to support the lecture course material to demonstrate more of general biology.</li> <li>• Care well is taken in the class for student.</li> <li>• Toll to be established for student to introduce them self in the field of medicine.</li> <li>• See newer scientific research in the context of decision.</li> <li>• Follow the latest websites in the field of scientific study</li> <li>• Updating the course with latest curriculum developments in the field.</li> <li>• Updating course curriculum using internet materials.</li> <li>• Annual review of the laboratory sessions and re-developed with recent.</li> </ul>

## C. Course Description (Note: General description in the form used in Bulletin or handbook)

<p>Course Description:</p> <ul style="list-style-type: none"> <li>▪ The course covers topics on animal and plant hormones, circulation in animals and plants, transporting system in plants and immune response in animals, taxonomic principals, animal nervous system, principles in general ecology and sensation in plants.</li> </ul>
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1. Topics to be Covered		
List of Topics	No. of Weeks	Contact hours
Animal hormones 1	1	4
Animal hormones 2	1	4
Control Systems in Plants (Major plant hormones). 1	1	4
Control Systems in Plants (Major plant hormones). 2	1	4
Circulatory system in animals	1	4
Transporting system in Plants (Xylem and phloem)	1	4

Animal immunology	1	4
Revision and Pre Final Exam		
Mid Term Vacation		
Principals of taxonomy, Five major Kingdoms.	1	4
The nervous system in animals (Central)	1	4
The nervous system in animals (Peripheral)	1	4
Principals of General Ecology (Population, Community and ecosystem).	1	4
Plant sensation	1	4
Revision	1	4
Final Exam		

2. Course components (total contact hours and credits per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours		39			26		65
Credit		3			1		4

3. Additional private study/learning hours expected for students per week. 8

- A brief summary of the knowledge or skill the course is intended to develop.
- A description of the teaching strategies to be used in the course to develop that knowledge or skill.
- The methods of student assessment to be used in the course to evaluate learning outcomes in the domain concerned.

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

Course 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, assessment, and teaching.

The *National Qualification Framework* provides five learning domains. Course learning outcomes are required. Normally a course has should not exceed eight learning outcomes which align with one or more of the five learning domains. Some courses have one or more program learning outcomes integrated into the course learning outcomes to demonstrate program learning outcome alignment. The program learning outcome matrix map identifies which program learning outcomes are incorporated into specific courses.

On the table below are the five NQF Learning Domains, numbered in the left column.

**First**, insert the suitable and measurable course learning outcomes required in the appropriate 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 course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. **Fourth**, if any program learning outcomes are included in the course learning outcomes, place the @ symbol next to it.

Every course is not required to include learning outcomes from each domain.

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		
1.1	Describe and explain plant and animal hormones.	In-class lecturing where the previous knowledge is linked to the current and future topics.	Record MCQs quizzes (orally and written).
1.2	Identify, describe, and explain the structure and function of nervous and immunological system for animals and plants.	Able to write Tutorial discussions.	Major and final exams
1.3	Discuss the main differences between animal and plant ecology.	Practice the relationship between the plant and animal system.	Web site and computer assisted learning.
1.4	To indicate animal circulatory system and plant transporting system.	Able to tell and write their ideas about the techniques involved.	Home activities on the topics taught.
1.5		Able to describe the scientific discussion with day-to-day example.	
<b>2.0</b>	<b>Cognitive Skills</b>		
2.1	Summarize structure and functions of circulatory system	Students able to explain what they have learned.	In class short MCQs quizzes.
2.2	The ability to know the immune system in animals and plants	Oral Quiz in each lecture.	Major and final exams.
2.3	Evaluating performance of the functional efficiency of the organs.	Problem solving in the lecture	Checking the problems solved in the lecture.
2.4	Ability to explain the factors that stimulate or inhibit the physiological processes in the plant system.	Encouraging student to discuss, summarize and plan.	
2.5	Ability to analyze the physiology of two different functions at cellular level.		
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
3.1	Improve student acceptance skill from other during discussion.	Conducting discussion skill tutorial sessions	Grading oral and written quiz

3.2	Work independently and as part of a team. Manage resources, time and other members of the group.	Conducting group experiments and writing group reports.	
3.3	Manage and calculate resources, time and other members of the group; write results of work to others.		
3.4	Communicate results of work to others, demonstrate and develop interpersonal skill.		
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
4.1	Demonstration and use of internet and specifically MS office/ presenting small reports on various topics.	Incorporating the use and utilization of computer in the course requirements	Evaluating in class short MCQs quizzes (orally and written)
4.2	e-learning/Report writing/preparing research review etc	Demonstrating more diagrams on various topics	Major and final exams/Evaluating reports written by students
4.3	Demonstration and use of internet and specifically MS office/ presenting small reports on various topics.	Incorporating the use and utilization of computer in the course requirements	Evaluating in class short MCQs quizzes (orally and written)
<b>5.0</b>	<b>Psychomotor</b>		
5.1	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE

**Suggested Guidelines for Learning Outcome Verb, Assessment, and Teaching**

<b>NQF Learning Domains</b>	<b>Suggested Verbs</b>
<b>Knowledge</b>	list, name, record, define, label, outline, state, describe, recall, memorize, reproduce, recognize, record, tell, write
<b>Cognitive Skills</b>	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
<b>Interpersonal Skills &amp; Responsibility</b>	demonstrate, judge, choose, illustrate, modify, show, use, appraise, evaluate, justify, analyze, question, and write
<b>Communication, Information Technology, Numerical</b>	demonstrate, calculate, illustrate, interpret, research, question, operate, appraise, evaluate, assess, and criticize
<b>Psychomotor</b>	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

5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Activities and Short Quizzes	Distributed over 8 weeks	10%
2	Pre-Final Practical Exam	8	10%
3	Pre-Final Theoretical Exam	8	25%
4	Final-Practical Exam	15	15%
5	Final Theory Exam	16	40%

## D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)  
Office hours 6-8 hr/ week  
Help sessions 1hr/ week aided by two faculty members.

## E Learning Resources

1. List Required Textbooks  
**Gareth, P. (2006): Biology: An Illustrated Guide to Science. Chelsea House Publications. ISBN-10: 0816061629.**

2. List Essential References Materials (Journals, Reports, etc.)  
**Gareth, P. (2006): Biology: An Illustrated Guide to Science. Chelsea House Publications. ISBN-10: 0816061629**

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

**Websites on the internet that are relevant to the topics of the course**

[www.sciencedirect.com](http://www.sciencedirect.com)

[www.plantphysiol.org](http://www.plantphysiol.org)

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

**Multimedia associated with the text book and the relevant websites**

## F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)  
**Lecture room with at least minimum capacity of 40 seats**

2. Technology resources (AV, data show, Smart Board, software, etc.)  
**Calculators; wireless connection in the building for students and faculties.**

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)  
Instruments required for conducting the experiments like: microtome, electrophoretic unit, Respirometer  
Apparatus for plant physiology practical: T/A apparatus, Respiroscope



## G Course Evaluation and Improvement Processes

<p>1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching</p> <ul style="list-style-type: none"> <li>• Course evaluation by student</li> <li>• Students- faculty meetings</li> </ul>
<p>2. Other Strategies for Evaluation of Teaching by the Program/Department Instructor</p> <ul style="list-style-type: none"> <li>• Peer consultation on teaching</li> <li>• Departmental council discussions</li> <li>• Discussions within the group of faculty teaching the course</li> </ul>
<p>3. Processes for Improvement of Teaching</p> <ul style="list-style-type: none"> <li>• Conducting workshops given by experts on the teaching and learning methodologies</li> <li>• Periodical departmental revisions of its methods of teaching</li> <li>• Monitoring of teaching activates by senior faculty members.</li> </ul>
<p>4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)</p> <ul style="list-style-type: none"> <li>• Providing samples of all kind of assessment in the departmental course portfolio of each course</li> <li>• Assigning group of faculty members teaching the same course to grade same questions for various students. Faculties from other institutions are invited to review the accuracy of the grading policy.</li> </ul>
<p>5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.</p> <ul style="list-style-type: none"> <li>• The course material and learning outcomes are periodically reviewed and the changes to be taken are approved in the departmental and higher councils.</li> <li>• The head of department and faculty take the responsibility of implementing the proposed changes</li> </ul>

Name of Course Instructor: **Dr. Abdelrahim Adam Elbalola**

Signature: *Abdelrahim A. Elbalola* Date Specification Completed: 15/8/1440

Program Coordinator: **Dr. Omar Salem Obeid Bahattab**

Signature: *Omar Bahattab* Date Received 16/8/1440