



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

## **ATTACHMENT 5.**

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

### Course Specifications

Institution: University of Tabuk	Date: 12.8.1440
College/Department :Faculty of Science, Biology Department	

#### A. Course Identification and General Information

1. Course title and code: Pollution (BIO 471)		
2. Credit hours: 3		
3. Program(s) in which the course is offered. Biology (If general elective available in many programs indicate this rather than list programs)		
4. Name of faculty member responsible for the course: Dr. Zahid Hameed Siddiqui		
5. Level/year at which this course is offered: Level 6		
6. Pre-requisites for this course (if any): Principles of Ecology (BIO271)		
7. Co-requisites for this course (if any): None		
8. Location if not on main campus: N. A.		
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

1. What is the main purpose for this course?

At the end of this course students learn the following:

- This course systematically introduces pollution issues to students.
- The course moves from the definition of pollution and how pollutants behave in environment.
- Basics of pollution, pollution and global change, solid waste, and pollution in the home.
- It also discusses persistent and bio-accumulative chemicals, and pesticides, and it places greater stress on global pollutants.
- The relationship between energy generation and use, and pollution is stressed.
- The importance of going beyond pollution control, to pollution prevention.
- Impacts on human and environmental health are emphasized

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)

- Theory classes using current data by power-point presentations
- Computer based programs have been utilized to support the lecture course material to demonstrate more of pollution and its effect
- Care is taken in the class for student.
- Field trips to the polluted sites, to learn impacts of industrial pollution on environment.

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

Course Description:

- This course includes Environment; introduction and its components, environmental pollution; definition and its sources, natural pollution and man-made pollution, different types of environmental pollution, environmental pollution and human health. minimization of environmental pollution, Environmental Impact Assessment (EIA) Concept, principles and types of EIAs, Environmental Legislations and Guidelines and recommendation of international conferences on pollution.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Environment-introduction and its components	1	3
Environmental pollution-definition and its sources	1	3
Natural pollution and man-made pollution	1	3
Types of environmental pollution	1	3

Water pollution	1	3
Soil pollution	1	3
Air pollution	1	3
<b>Revision and Pre Final Exam</b>		
<b>Mid Term Vacation</b>		
Noise pollution, Radioactive pollution	1	3
Environmental pollution and human health	1	3
Minimization of environmental pollution	1	3
Environmental Impact Assessment (EIA) -Concept, principles and types of EIAs	1	3
Environmental Legislations and Guidelines	1	3
Recommendation of International Conferences on pollution. Revision	1	3
<b>Final Exam</b>		

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

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planned	26			26		52
	Actual	26			26		52
Credit	Planned	2			1		3
	Actual	2			1		3

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

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

Cod e #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
<b>1.0</b>	<b>Knowledge</b>		
1.1	Describe pollution and its interrelationships with living organisms.	- Reproduce visual and interactive methods to inculcate the concepts of pollution biology.	- Ask questions while teaching and interaction with students
1.2	Define and describe environment and its components, environmental pollution types, sources, effects and control measures.	- Tell students to learn more by increasing interest in	- Conduct quiz - Group discussion - Home

		the subject by giving local examples.	assignments - Periodical exams
<b>2.0</b>	<b>Cognitive Skills</b>		
2.1	Explain major ideas relating to environment and environmental pollution. Develop clear understanding about causes consequences and control of ecological pollution.	- Use electronic and print media - Classroom teaching	- Ask questions while teaching and interaction with students
2.2	Explain the application of environmental biology to solve the practical problems in ecology and environment.	- Group discussions - Presentations - Laboratory techniques	- Conduct quiz - Group discussion - Home assignments - Periodical exams
<b>3.0</b>	<b>Interpersonal Skills &amp; Responsibility</b>		
3.1	- Analyze major ideas relating to ecology and environment - Illustrate clear understanding about ecological pollution.	- Show students to read more beyond the classroom lecture - Keep the students update with the latest developments in the subject.	- Conduct quiz - Interact with students directly
3.2	- Justify the need and ways to apply environmental techniques to solve the problems of ecology in general.	- Group discussion - Learning modern lab techniques. - Illustrate students to make correct observations and inferences.	- Involve students in projects
<b>4.0</b>	<b>Communication, Information Technology, Numerical</b>		
4.1	- Demonstrate web based searching on the topics of modern ecology and environment.	- Group discussion and interactive session - Apprise students to enhance communication, IT and numerical skills	- Engage students to express their opinion on a particular topic. - Conduct quiz
<b>5.0</b>	<b>Psychomotor</b>		
5.1	Not Applicable		

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	Short Quizzes	3	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)
  - An induction period at the beginning of the academic session
  - An extensive Learning Resources Centre, incorporating a library and computer center.
  - A Program Tutor to give academic advice.
  - Personal tutors to provide pastoral and academic support.
  - Office hours 8 hr/ week

#### E Learning Resources

1. List Required Textbooks  
Pierce J., Weiner, R.F., and Vesilind, P.A. (1998): Environmental Pollution and Control (4th edition); Elsevier Inc. ISBN: 978-0-7506-9899-3
2. List Essential References Materials (Journals, Reports, etc.)  
Journal of environmental biology
  - Journal of Environmental Pollution
  - Journal of Ecology
  - Journal of Air water and Soil Pollution
  - Journal of Environmental and Experimental biology
  - *Ecology, Second Edition* by Michael L. Cain, William D. Bowman, and Sally D. Hacker
  - *Atmospheric Pollution* by Jacobson, Mark Z.
  - *Understanding Environmental Pollution*, by Hill, Marquita K.
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.  
- Saudi Digital Library  
- <http://instructors.coursesmart.com>
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

#### 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.)  
Ecology and Environment Laboratory is required
  2. Technology resources (AV, data show, Smart Board, software, etc.)

Projectors required in each lecture theatre and laboratory
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) Equipment for environmental monitoring and impact assessment required.

## G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching - Course evaluation by student. - Students- faculty meetings.
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department - Peer consultation on teaching. - Departmental council discussions. - Discussions within the group of faculty teaching the course.
3. Processes for Improvement of Teaching - Conducting workshops given by experts on the teaching and learning methodologies. - Periodical departmental revisions of its methods of teaching. - Monitoring of teaching activities by senior faculty members.
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) - Providing samples of all kind of assessment in the departmental course portfolio of each course. - Assigning group of faculty members teaching the same course to grade same questions for various students. - Faculty from other institutions invited to review the accuracy of the grading policy.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. - The course material and learning outcomes are periodically reviewed and the changes to be taken are approved in the departmental and higher councils. - The Head of Department and Faculty take the responsibility of implementing the proposed changes.

Name of Course Instructor: Dr. Zahid Hameed Siddiqui

Signature:  Date Specification Completed: 13.08.1440

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

Signature:  Date Received: 16/8/1440