Course Specifications (CS) preparation

University Development Deanship

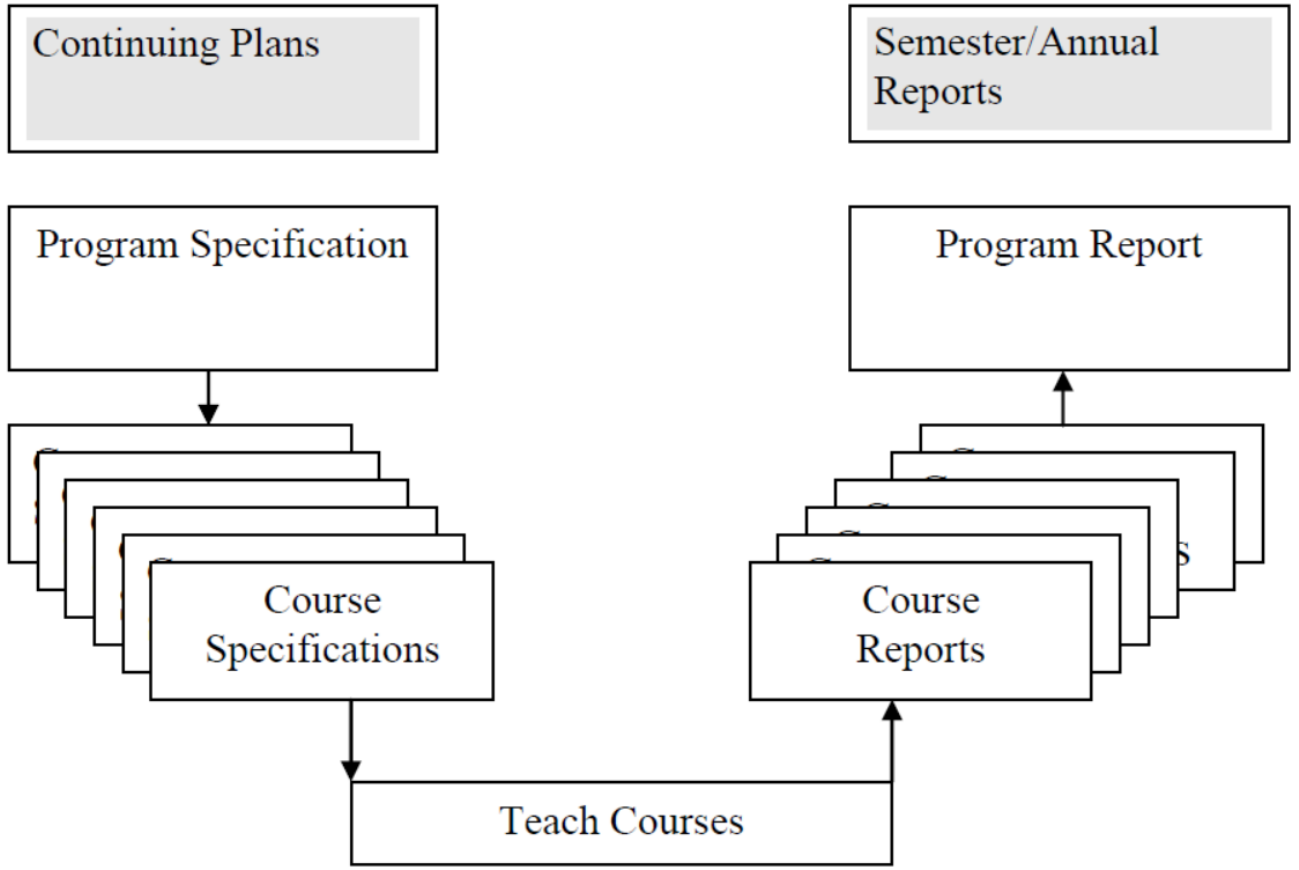
Note:

- **Red and Black color are used to explain the preparation of CS**
- **Green color is used to present CS submitted by General Biology Program.**

Course Specifications

- Individual course specifications should be prepared for each course in a program, and kept on file with the program specification.
- The purpose is to make clear the details of planning for the course as part of the package of arrangements to achieve the intended learning outcomes of the program as a whole.
- Course specifications should include the knowledge and skills to be developed in keeping with the *National Qualifications Framework* and the overall learning outcomes of the program, the strategies for teaching and assessment in sufficient detail to guide individual instructors, as well as the learning resources, facilities requirements and any other special needs.
- Course specifications should be prepared for both core and elective courses.

Reference: Page 39, Saudi handbook 2, July 2011



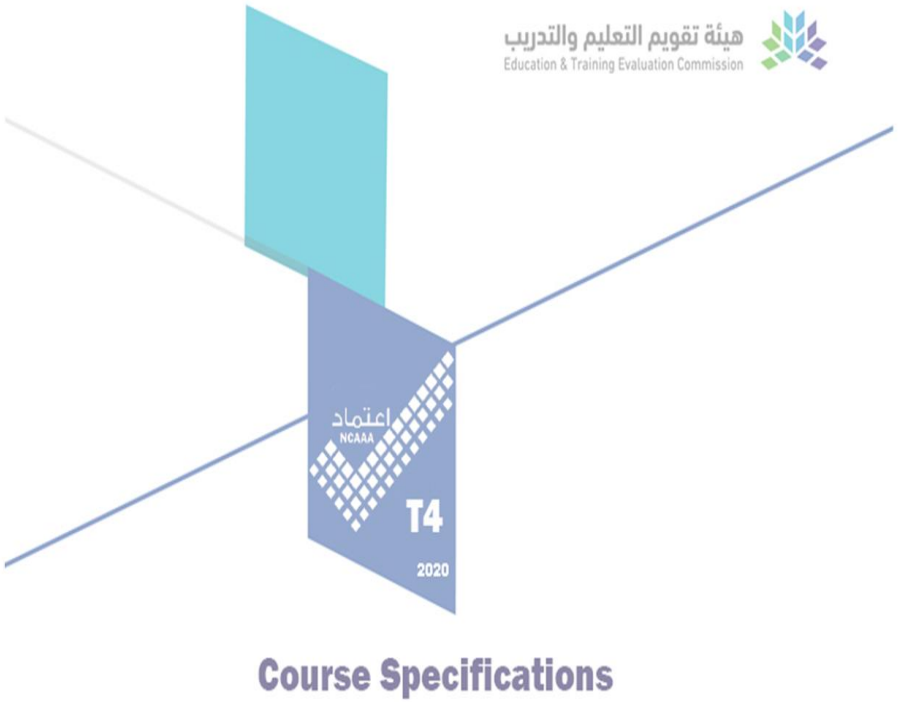
Planning and review sequence

Contents of Course Specifications

Table of Contents

Cover Page of the Course Specifications template

Course Title:	Macromolecules Refer Study Plan
Course Code:	**2045202-3** Refer Study Plan
Program:	**Bachelor of General Biology (20105)** Refer Student Transcript
Department:	**Department of Chemistry** Department of ------
College:	**College of Science** College of ---
Institution:	**Taif University** In CR should be same



A. Course Identification

1. Credit hours: 3	**or** 3 (2 Theory, 1 Lab/Tutorial)
2. Course type	
a. University ☐ College ☐ Department ☑ Others ☐	
b. Required ☑ Elective ☐	
3. Level/year at which this course is offered:	5th Level/3rd Year
4. Pre-requisites for this course (if any)**:**	Advanced Polymer Chemistry (2045102-2)
5. Co-requisites for this course (if any)**:**	None

Refer Program Specification, Section-C. Curriculum/2. Program Study Plan

A. Course Identification

6. Mode of Instruction (mark all that apply)

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom		
2	Blended		
3	E-learning		
4	Distance learning		
5	Other		

Old CS

9. Mode of Instruction (mark all that apply)

a. Traditional classroom	✓	What percentage?	90%
b. Blended (traditional and online)		What percentage?	
c. e-learning	✓	What percentage?	10%
d. Correspondence		What percentage?	
f. Other		What percentage?	

Comments:

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45 *or 42*	100% *or 93.33%*
2	Blended	-	
3	E-learning	*3*	or 6.67%
4	Correspondence	-	
5	Other	-	

15 x Lecture Credits
or
30 x Lab Credits

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	45
2	Laboratory/Studio	-
3	Tutorial	-
4	Others (specify)	-
	Total	45
Other Learning Hours*		
1	Study	30
2	Assignments	15
3	Library	15
4	Projects/Research Essays/Theses	-
5	Others (specify)	-
	Total	60

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	45
2	**Laboratory/Studio**	-
3	**Tutorial**	-
4	Others (specify)	-
	Total	45

B. Course Objectives and Learning Outcomes

1. Course Description

The course introduces/ emphasis on……..

(Copy from Student handbook, The main keywords of the subject/chapters/Units, (3-6 Lines))

Example: The course introduces students to the basics of macromolecules by providing an introduction to: the types of macromolecules; the biophysical and biochemical properties of macromolecules. In addition, a brief……

2. Course Main Objective

Learning objectives are statements of what the ***teacher intends*** for the students to learn and are generally part of a **teacher-centered approach,** for example, may outline the material **the *INSTRUCTOR* intends** to cover in the course or the disciplinary questions the class will address. **Known as IN-PUTS**.

Example of a Learning Objective: **Students will be taught the basic principles of database searching**. [***teacher will* teach basic principles** …]

Example: A problem-driven teaching scheme will be adopted to address the properties of macromolecules such as chemical composition, …….. The emphasis will be on …….. The overall goal of this course is to give students advanced knowledge of the relationship between the structure and function of biomolecules.

3. Course Learning Outcomes

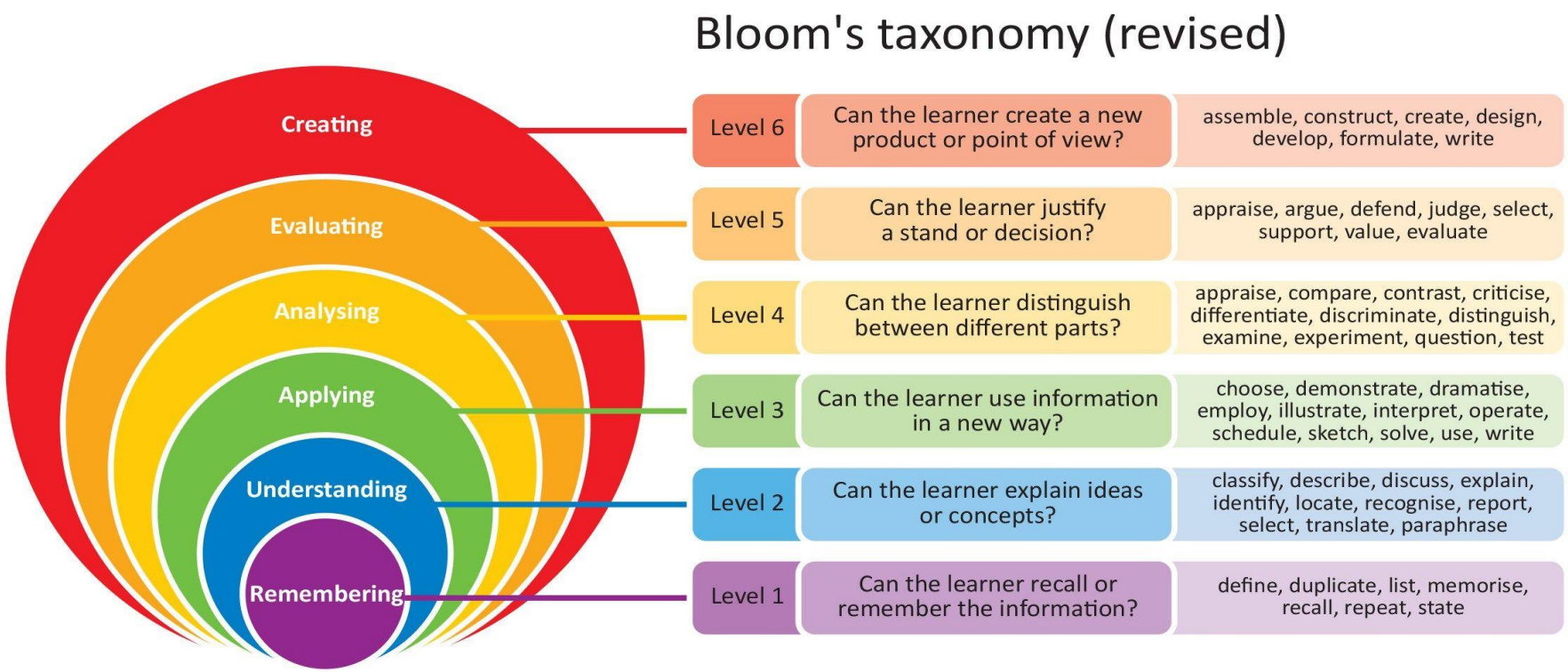
	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	**Theoretical, Factual** • Knowledge and understanding of the underlying theories, principles, and concepts, materials, techniques, practices, conventions and/or terminology; current developments of a discipline, profession or field of work, research methodology and inquiry techniques.	
1…		
2	**Skills :**	
2.1	**Practical Application of Knowledge**	
2…		
3	**Competence:**	
3.1	**Autonomy and Responsibility** • Working with peer or autonomously • self- learning and innovation. • management skill. • Decision-making	
3.2	**Attributes** • leadership and entrepreneurialism • building professional relationships • values and ethics	
3.3	**Practice** • make judgments and decisions, • complex decisions and innovation, • developing solutions to complex problems	
3…		

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	• Knowledge and understanding of the underlying theories, principles, and concepts, materials, techniques, practices, conventions and/or terminology; current developments of a discipline, profession or field of work, research methodology and inquiry techniques.	
1.2		
1.3		
1…		
2	**Skills :**	
2.1	• Cognitive Skills • Practical and Physical Skills • Communication and ICT Skills	
2.2		
2.3		
2…		
3	**Values:**	
3.1	• Values and ethics • Autonomy and Responsibility	
3.2		
3.3		
3…		

3. Course Learning Outcomes

- **Learning outcomes** are statements of what the ***student will KNOW and be able to DO or demonstrate*** as a result of their learning and are part of a **student-centered approach** **By contrast,** focus on what **the *STUDENTS* know, comprehend** and realistically are able to **do… [skill performance]** by the end of course **[achievement].** **Known as OUT-PUTS.**



Avoid non measurable words (feel, enjoy, realize, see, listen, experience, etc.)

1. Minimum-2 and Maximum-8 CLOs.
2. Minimum two domains should be covered.

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	Recognize structural mechanisms of how important biological processes take place and are controlled	K1
1.2		
1...		
2	**Skills:**	
2.1	Use databases with information of structure and function of macromolecules.	S1
2.2	Analyze structural mechanisms of how important biological processes take place and are controlled	S2
2...		
3	**Competence:**	
3.2	Present scientific literature in the area of the course.	C2
3.3	Demonstrate act responsibly and ethically in conducting their work	C3

Should be consistent with PS, Section 4. Program learning Outcomes Mapping Matrix

Values ***(Competency)***

There is a lot of overlap between the two; the difference can sometimes seem to be just a matter of semantics. But in general the values can be seen as 'what' is important and the competencies cover 'how' it is demonstrated. So in reality, both are equally important because either one without the other provides an incomplete picture.

C. Course Content

No	List of Topics *(Lecture Plan)*	Contact Hours
1	Basic structural biology and Bioinformatics: Basic macromolecular structure, classification of Bioinformatics, proteins, DNA, and RNA. Page 100-120 (Textbook-1)	2
2	Binding specificity, catalysis, …….. Page 50-60 (Textbook-2)	1
3	……..	4
4		
5		
…		
Total		45

'Total' should be consistent with Section A.6,7

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	List all CLOs same as in the previous section		
1.2			
…			
2.0	**Skills**		
2.1			
2.2			
…			
3.0	**Values**		
3.1			
3.2			
…			

Teaching methods (NCAAA): 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.

*TU Teaching and Learning Strategies

S1. Brain Storming
S2. Group Work “Collaborative Learning”
S3. Discussion
S4. Reciprocal Teaching
S5. Projects
S6. Problem-Solving
S7. Discovery Learning
S8. Concept Maps
S9. E-Learning
S10. Peer Evaluation
S11. Lectures
S12. Flipped Classroom
S13. Self-learning

When assessing student learning,

Direct methods focus on looking at actual samples of student work produced in our programs.

This can be done through Course Work, Projects, Class discussion, Presentation, activity logs; any behavior that directly observes or measures student performance

Indirect methods focus on the perception of student competence other than looking at actual samples of student work.

This can be done through surveys, interviews, reports on retention, graduation, and placement.

Assessment methods (NCAAA): 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.

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Recognize structural mechanisms of how important biological processes take place and are controlled	Lecture	Exams, Assignment
1.2			
…			
2.0	**Skills**		
2.1	Use databases with information of structure and function of macromolecules.	Lecture, Group discussion	Exam, Group reports
2.2			
…			
3.0	**Competence**		
3.1	Present scientific literature in the area of the course.	Research activities, Case studies	Individual presentation
3.2	Demonstrate act responsibly and ethically in conducting their work	Small group work	Peer evaluations, Class observation.
…			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
List all direct assessment method included in previous table			
1	Assignment, Group reports	Continuous, or Throughout the semester	10%
2	Quiz (Best two out of three)	End of Unit	5%
3	Presentations	13	5%
4	Midterm exam-1	7	15%
5	Midterm exam-2	12	15%
6	Final exam	16	50%

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

Refer PS Section D. Student Admission and Support:

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Faculty members dedicate 10 hours every week for office hours, during which students are encouraged to visit their instructor for help, conversation practice and clarifying difficult concepts. The Academic Guidance Unit of the program offers personal, academic, psychological and professional counseling, as well as group counseling to support the academic, behavioral, emotional, psychological and social growth of students.

1.Learning Resources

Required Textbooks	**Approved Textbook.** Example: An Introduction to Polymer Science Editors/Authors: F Bovey 1st Edition Imprint/ Publisher: Academic Press Published Date: 28th October 1979 eBook ISBN: 978-0323145794
Essential References Materials	**Reference book, manuals, handbooks** Example: Human Biological Aging: From Macromolecules to Organ Systems Editors/Authors: Glenda E. Bilder 1st Edition Imprint/ Publisher: Wiley-Blackwell Published Date: January 29, 2016 eBook ISBN: 978-1118967027
Electronic Materials	CD, Electronic course books, SDL, Journals
Other Learning Materials	Link, Website

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Lecture room with 30 seats.
Technology Resources (AV, data show, Smart Board, software, etc.)	Projector, Smart Board, MATLAB
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	----

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching	Program Leaders	Direct
Extent of achievement of course learning outcomes	Faculty	Direct
Quality of learning resources	Student, Faculty	Indirect
Course management and planning	Students	Indirect
Teaching and interaction with students	Students	Indirect
Effectiveness of Evaluation and exams	Students, Peer Reviewer	Indirect, Direct

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	Department Council
Reference No.	41 / 40 – 9
Date	9/01/2020 Date should be after PS approval date

Thank You!

كود تسجيل المتدربين بالدورة	TU@DOD-700425
كود تحضير المتدربين بالدورة	TU-DOD@399021