

*Republic of Iraq
Ministry of Higher Education & Scientific
Research Supervision and Scientific
Evaluation Directorate Quality Assurance
and Academic Accreditation International
Accreditation Dept.*

Academic Program Specification Form For The Academic

University: Diyala

College :Engineering

Number Of Departments In The College: Chemical Engineering

Date Of Form Completion :25/9/2021

Dean 's Name

Date : / /

Signature

Dean 's Assistant

*For Scientific
Affairs*

Date : / /

Signature

*The College Quality
Assurance And University
Performance Manager*

Date : / /

Signature

Quality Assurance And University Performance

Manager Date : / /

Signature

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Program Specification provides a concise summary of the main features of the program and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the program.

1. Teaching Institution	University of Diyala
2. University Department/Centre	Chemical Engineering
3. Program Title	
4. Title of Final Award	Bachelor Degree in Chemical engineering
5. Modes of Attendance offered	semester
6. Accreditation	
7. Other external influences	
8. Date of production/revision of this specification	25/9/2021
9. Aims of the Program	
<ul style="list-style-type: none">(1) Achieving the university's goals within the field of chemical engineering.(2) Gives a sound education in the basics of chemical engineering.(3) develop the skills and confidence necessary to solve, based on engineering and scientific principles, problems in the biochemical, chemical and other industries.(4) Continuing to find graduates with high ability.(5) Providing education compatible with the needs of the labor market linked to the Syndicate of Chemical Engineers	
The program provides opportunities for students to develop and display knowledge, understanding, qualities, skills and other characteristics in the following areas:	
1- Knowledge and understanding: <ul style="list-style-type: none">a . The necessary facts, concepts, principles and theories of chemical engineering,	

and an understanding of the constraints facing the engineer in making the right decision.

b - Basic Mathematics, Science and Techniques.

c - Ideas and Concepts of Management.

2- Awareness and understanding:

a- Ethics and professionalism of the profession.

b- The impact of engineering activities on society and civilization.

c- compatibility with future issues.

3- Cultural capabilities:

a -Solve industrial problems that may be specific to known or unknown circumstances.

b- Analyzing and discussing the available data or conducting specific experiments to obtain more data.

c - Design units and processes and make the necessary improvements.

d- The ability to apply new technologies.

e- Possess a holistic view of industrial engineering problems, taking into account the cost, safety, quality and environmental impacts, and the ability to assess and manage risks.

4. Practical skills:

a . The use of multiple technologies and devices with software related to specialization.

b - Using laboratory equipment to find data.

c- Develop and provide a safe work environment.

5. Transferable skills:

a- Applying mathematical skills to practical problems.

b - Oral and written communication skills.

c - Use information and communicate effectively.

d - control of time and resources.

e- Work within one team.

f- To be creative, especially in designs.

g- work in problem analysis

h- Extracting information from published sources.

10. Learning Outcomes, Teaching, Learning and Assessment Methods

- A1- Necessary facts, concepts, principles and theories of chemical engineering.
- A2- Understand the constraints facing the engineer in making the right decision.
- A3- Basic mathematics and science.
- A4- Techniques used.
- A5- Management ideas and concepts

B. The skills goals special to the program :

- B1- Ethics and professionalism of the profession.
- B2- The impact of engineering activities on society and civilization.
- B3- Compatibility with future issues.

Teaching and Learning Methods

Assessment methods

C. Affective and value goals:

- C1- Solve industrial problems that may be specific to known or unknown circumstances.
- C2- Analyzing and discussing the available data or conducting specific experiments to obtain more data.
- C3- Design units and processes and make the necessary improvements.
- C4- The ability to apply new technologies and possess a holistic view of industrial engineering problems, taking into account cost, safety, quality and environmental impacts, and the ability to assess and manage risks.
- C3.
- C4.

Teaching and Learning Methods

Assessment methods				
D. General and Transferable Skills (other skills relevant to employability and personal development):				
D1- Applying mathematical skills in practical problems.				
D2- Skills in verbal and written communication and effective use of information and communication.				
D3- Control of time and resources and working within one team.				
D4- The ability to design and work in analyzing problems and extracting information from published sources.				
Teaching and Learning Methods				
Assessment Methods				
11. Program Structure				12. Awards and Credits
Level/Year	Course or Module Code	Course or Module Title	Credit rating	
1st		Static science	45 hr.	Bachelor Degree Requires (x) credits

13. Personal Development Planning

14. Admission criteria .

15. Key sources of information about the program

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the program specification.

1. Teaching Institution	University of diyala
2. University Department/Centre	Chemical Engineering
3. Course title/code	Static Science
4. Modes of Attendance offered	
5. Semester/Year	Semester
6. Number of hours tuition (total)	45
7. Date of production/revision of this specification	25/9/2021
8. Aims of the Course	<p>The science of static represents the basis in the calculations of structural, mechanical and structural designs for any structure, so by teaching the student the science of statics and resistance of materials, he will be able to make the necessary calculations in the design process</p>

9. Learning Outcomes, Teaching ,Learning and Assessment Method

A- Cognitive goals:

A1- Understand the basics of statics.

A2- Understand forces and analyze them and know their effects on parts, structures or mechanical systems.

A3- The extent to which the material of the parts used is affected by forces imposed on them.

B. The skills goals special to the course.

B1- Learn how to use the basics of statics and materials resistance in designing parts that are subjected to force Within the safety and security specifications without failure.

Teaching and Learning Methods

1- Lectures.

2- Presentation of power point slides.

3- Discussions

Assessment methods

1- Unannounced sudden exams.

2- Home and class duties.

3- Monthly exams.

4- Final exam

C. Affective and value goals :

C1- The ability to make calculations of force and stress.

C2- Using them in the design of parts

Teaching and Learning Methods

1- Lectures.

2- Presentation of power point slides.

3- Discussions

Assessment methods

1- Unannounced sudden exams.

2- Home and class duties.

3- Monthly exams.

4- Final exam

D. General and rehabilitative transferred skills(other skills relevant to employability and personal development)

- D1.
- D2.
- D3.
- D4.

10. Course Structure

Week	Hours	ILOs	Topic Title	Teaching Method	Assessment Method
1-2	6	<ol style="list-style-type: none"> 1. What is the science of statics 2. Newton's laws 3. Units 4. 4- Vectors 5. Unit vector. 6. vector sum. 	Introduction to statics, force vectors	lectures and presentation slides	Unannounced exams and self-assessment during the lecture
3-4	6	<ol style="list-style-type: none"> 1. Define force 2. Forces in two dimensions 3- Analysis of force 	Forces	lectures and presentation slides	Unannounced exams and self-assessment during the lecture
5-6	6	<ol style="list-style-type: none"> 1- Analyzes of forces in three dimensions 2- Moments 3- Force and Moments 	forces in three dimensions, moments	lectures and presentation slides	Unannounced exams and self-assessment during the lecture
7-8	6	<ol style="list-style-type: none"> 1. Equilibrium Calculations 	Equilibrium	lectures and presentation slides	Unannounced exams and self-assessment during the lecture
9-10	6	<ol style="list-style-type: none"> 1- Laws of Friction 2- 2- Static Friction 3- 3- Friction on Inclined Surfaces 	Friction	lectures and presentation slides	Unannounced exams and self-assessment during the lecture
11-12	6	<ol style="list-style-type: none"> 1- Center of Gravity of Objects 2- Center of Areas 	Center of Gravity, Moment of inertia	lectures and presentation slides	Unannounced exams and self-assessment during the lecture
13-15	9	<ol style="list-style-type: none"> 1-Area Moment of inertia 	Moment of inertia	lectures and presentation slides	Unannounced exams and self-assessment during the lecture

11. Infrastructure

1. Books Required reading:	
2. Main references (sources)	<p>1- SI Version, J. L. Merriam, L.G. Krieg, Engineering Mechanics, Volume 1, John Wiley and Sons Inc. 2008</p> <p>2- Ferdinand L. Singer, Andrew Pytel, Strength of Materials, HRPER & ROW Publisher, New York, 1980</p>
A- Recommended books and references (scientific journals, reports...).	<p>1- Applied Statics and Strength of Materials (Available at the library of the Engineering College)</p> <p>Third Edition</p> <p>Authors: Leonard Spiegel George F. Limeburner</p>
B-Electronic references, Internet sites...	<p>http://www.kutub.info/library</p>
12. The development of the curriculum plan	

