هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

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Course Specification

Course Title:	**Static**
Course Code:	**151Math-3**
Program:	**B.Sc. of Mathematics**
Department:	**Mathematics**
College:	**Arts and Sciences**
Institution:	**Najran University**
Version:	**1**
Last Revision Date:	**07-05-2023**

Table of Contents:

A. General information about the course:

Course Identification					
1. Credit hours:	3				
2. Course type					
a.	University ☐	College ☐	Department☒	Track☐	Others☐
b.	Required ☒	Elective☐			
3. Level/year at which this course is offered:	2/1				
4. Course general Description:					
This course covers fundamental concepts of vectors and its applications and introduces the appropriate way to solve the Equilibrium problems. Also, it covers the differences between smooth surfaces and frictional surfaces equilibrium problems. The definition of the basic concepts of Moments, Couples, Virtual work and Centre of gravity and its applications introduced in this course.					
5. Pre-requirements for this course (if any): Differential Calculus(101Math-4)					
6. Co- requirements for this course (if any): Non					
7. Course Main Objective(s):					
The main objective of this course is learning the basic concepts of vectors and Equilibrium problems, also, Moments, Couples, Virtual work and Centre of gravity by using a suitable methods and its applications.					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	3	100%
2.	E-learning	-	-
3.	Hybrid • Traditional classroom • E-learning	-	-
4.	Distance learning	-	-

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45
2.	Laboratory/Studio	-
3.	Field	-
4.	Tutorial	-
5.	Others (specify)	-
	Total	45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Define the basic concepts of vectors, equilibrium, Moments, Couples, Virtual work center of gravity and, its applications	K1	• Lecture • Cooperative learning • Problem solving	• Assignments • Quizzes • Midterm Final Exam
2.0	Skills			
2.1	Solve equilibrium problems contain smooth surfaces and frictional surfaces.	S1	• Lecture • Cooperative learning • Problem solving	• Assignments • Quizzes • Midterm Final Exam
2.2	Solve many problems of Forces in space, Moments and Couples by using Vectors Technique.			
2.3	Determine the Centers of gravity for some different Shapes			
3.0	Values, autonomy, and responsibility			
3.1				

C. Course Content

No	List of Topics	Contact Hours
1.	Vectors	**12**
2.	Forces in Space, Moments and Couples	9
3.	Equilibrium	9
4.	Friction	6
5.	Virtual work	3
6.	Centre of gravity	6
Total		45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Midterm Exams	6-8 11-13	20 20
2.	Assignments & Quizzes	During classes	10
3.	Final Exam	16-18	50

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	عادل طه يونس- أساسيات علم الاستاتيكا- مكتبة الرشد 2005 م
Supportive References	عبد الله المرحومي , سعيد سيف الدين، مقدمة في الاستاتيكا. مكتبة المتنبي، 2010م
Electronic Materials	Engineering Mechanics: Statics & Dynamics (13th Edition), by Russell C. Hibbeler,ISBN-13: 978-0132915489
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	**Lecture Hall by the number of seats = 25 seat approximately.**
Technology equipment (projector, smart board, software)	• **Data show** • **Smart Board** • **Wi Fi**
Other equipment (depending on the nature of the specialty)	-

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	Student Questionnaire (Indirect)
Effectiveness of students assessment	Peer Reviewer	Rubrics (Indirect)
Quality of learning resources		
The extent to which CLOs have been achieved	Faculty	Direct
Other		

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	COUNCIL OF MATHEMATICS DEPARTMENT
REFERENCE NO.	14441017-0208-00014
DATE	17-10-1444H