Course Specifications

Course Title:	**Statics**
Course Code:	**151Math-3**
Program:	**Mathematics**
Department:	**Mathematics**
College:	**Sciences & Arts**
Institution:	**Najran University**

Table of Contents

A. Course Identification

1. Credit hours: **Three Hours**
2. Course type **a.** University ☐ College ☐ Department ☑ Others ☐ **b.** Required ☑ Elective ☐
3. Level/year at which this course is offered: **Level Two**
4. Pre-requisites for this course (if any)**:None**
5. Co-requisites for this course (if any)**: Calculus II / 112Math-3**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3	100%
2	Blended	---	---
3	E-learning	---	---
4	Correspondence	---	---
5	Other	----	----

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	Lecture	45
2	Laboratory/Studio	---
3	Tutorial	---
4	Others (Exams)	3
	Total	48
Other Learning Hours*		
1	Study	30
2	Assignments	10
3	Library	10
4	Projects/Research Essays/Theses	---
5	Others (specify)	15
	Total	113

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

This course covers fundamental concepts of vectors and its applications and Introduce the appropriate way to solve the Equilibrium problems by using a suitable methods.
The differences between smooth surfaces and frictional surfaces equilibrium problems also will be discussed.
The definition of the basic concepts of Centre of gravity and its application introduced in this course.

2. Course Main Objective

To learn the basic concepts of vectors and Equilibrium problems by using a suitable methods And its applications.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	**Define the basic concepts of vectors , Centre of gravity and Equilibrium problems.**	
1.2	**list the appropriate way to solve the Equilibrium problems by using a suitable method**	
1.3		
1...		
2	**Skills :**	
2.1	**Explain the different between smooth surface and frictional surface when we study any equilibrium problems**	
2.2		
2.3		
2...		
3	**Competence:**	
3.1	**Demonstrate the student involved in teamwork with peers in an atmosphere of cordiality and understanding with regard to semi-real situations**	
3.2		
3.3		
3...		

C. Course Content

No	List of Topics	Contact Hours
1	**Vectors**	**9**
2	**Forces in Space , Moments and Couples**	**6**
3	**Equilibrium (String &Catena and Smooth Joint Equilibrium)**	**9**
4	**Friction**	**6**
5	**Virtual work**	**3**

6	Centre of gravity	6
7	Essentials of fluid statics	6
	Total	45

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	define the basic concepts of vectors ، Equilibrium, Centre of Gravity and، its applications	Lecture Discussions	Quiz Written Exam
1.2	list the appropriate way to solve the Equilibrium problems by using a suitable methods	Lecture Discussions	Quiz Written Exam
…			
2.0	Skills		
2.1	Explain the different between smooth surfaces and frictional surfaces when we study any equilibrium problems	Lecture Discussions	Homework written tests and oral Exam
2.2			
…			
3.0	Competence		
3.1	Demonstrate the student involved in teamwork with peers in an atmosphere of cordiality and understanding with regard to semi-real situations	Lecture Discussions	Oral Exam
3.2			
…			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Exercises, Homework& Assignments	Open	10%
2	Written Test(1)	7th Week	15%
3	Quizzes	Open	5%
4	Written Test(2)	13th Week	15%
5	Oral Exam and Rubrics	14th Week	5%
6	Final Exam	End of Semester	50%
7			
8			

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

E. Student Academic Counseling and Support

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

- **Arrangements for availability of teaching staff for individual student consultations and academic advice (include amount of time teaching staff are expected to be available each week).**
- **Office hours for a teaching staff for one hour weekly.**

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	أ.د.عادل طه يونس- أساسيات علم الاستاتيكا- مكتبة الرشد ٢٠٠٥ م.
Essential References Materials	• **Engineering Mechanics: Statics & Dynamics (13th Edition), by Russell C. Hibbeler, ISBN-13: 978-0132915489**
Electronic Materials	**Course videos on YouTube .**
Other Learning Materials	**None**

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Lecture Hall by the number of seats = 25 seat approximately.**
Technology Resources (AV, data show, Smart Board, software, etc.)	• **Data show** • **Smart Board** • **Wi Fi**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	**None**

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Student course evaluation survey at the end of semester	**Students**	**Questionnaire (Indirect)**
Effectiveness of teaching and assessment	**Peer Reviewer**	**Rubrics (Indirect)**

Evaluation Areas/Issues	Evaluators	Evaluation Methods

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	
Reference No.	
Date	