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09/2671026

جامعة فلسطين التقنية – خضوري  
 دائرة الجودة والنوعية  
 طولكرم- ص.ب 7  
 هاتف: 09/2677923  
 فاكس: 09/2677922  
 بريد إلكتروني: [quality@ptuk.edu.ps](mailto:quality@ptuk.edu.ps)

## Course Specification Template

### 1. General information about Instructor:

Name	Taqwa Al Khader			Class Time & Office Hours				
Phone	Internal	1647	Day	SUN	MON	TUE	WED	THU
	External							
Mobile	0599226127		Class Time	10-11		10-11		10-11
				11-12		11-12		11-12
Instructor's E-mail	Taqwa.alkhader@hotmail.com		Class Room	E107		E107		E107
				E227		E227		E227
			Office Hours	9-10	8-9:30	9-10	8-9:30	9-10

### 2. General information about the Course

No	Requirements						
1	Course Title	<b>Calculus 2</b>					
2	Course code & Number	<b>15010102</b>					
3	Credit hours	Theo. (CH): 3			Practical (CH):		
4	Faculty	<b>Science and Arts</b>					
5	Department / Division that offers the course:	<b>Applied Mathematics</b>					
6	Course type	Compulsory			Elective		
		Uni. <input type="checkbox"/>	Fac. <input type="checkbox"/>	Dep. <input type="checkbox"/>	Uni. <input type="checkbox"/>	Fac. <input type="checkbox"/>	Dep. <input type="checkbox"/>
7	Level and Semester	The second semester 2016-2017					
8	Prerequisite(s) – If any	Calculus 1					
9	Co-requisite(s) – if any						
10	Program/programs for it/them the course is offered	Mathematics, Physics, Chemistry, Engineering and computer science.					
11	Instruction Medium:	English <input type="checkbox"/>			Arabic <input type="checkbox"/>		

### 3. Course description:

**Application of definite integral** (volume by slicing and solid of revolution, length of plane curves).

**Transcendental functions** ( inverse functions, natural logarithmic functions, exponential functions, logarithmic functions, inverse trigonometric functions and hyperbolic functions)

**Techniques of integrations** ( by parts, partial fractions, trigonometric substitution)

**Infinite sequences and series.**

### 4. General Course Objectives

**On successful completion of this course the student will be able to achieve the following objectives:**

1. Find the volume of solids of revolution and the length of plane curves.
2. Know the transcendental functions( inverse functions, natural logarithmic functions, exponential functions, logarithmic functions, inverse trigonometric functions and hyperbolic functions)and their derivatives, and to find integrals using them.
3. Use techniques of integrations to evaluate integrals.
4. Know improper integrals and test for convergence.
5. Know infinite sequences and series and use different tests for convergence.

### 5. Intended Learning Outcomes/ILO's (please specify the learning outcomes of the course as outlined below):

**A) Knowledge and understanding**

Know transcendental functions, improper integral and infinite sequences and series.

**B) Intellectual/Cognitive skills**

Find the volume of solids of revolution and the length of plane curves.

**C) Subject specialization and practical skills**

Use techniques of integrations to evaluate integrals and test for convergence.

**D) General and transferable skills**

Use techniques of integrations to evaluate integrals.

## 6. Topics covered and Calendar:

A. Theoretical parts (Please state the titles of the subjects you intend to cover each week)

Number	Topics	Number of hours
1.	<b>Ch 6:Application of definite integral(1,2,3)</b>	6
2.	<b>Ch 7: Transcendental functions(1,2,3,4,7,8)</b>	12
3.	<b>Ch 8: Techniques of integrations(1,2,3,4,5,8)</b>	12
4.	<b>Ch 11: Infinite sequences and series(1-8)</b>	15

## 7. Student assessment methods based on ILO,s

No	Assessment method	Week	Mark	Percentage to overall mark
1.	First Exam		30	30%
2.	Second Exam		30	30%
3.	Mid-term Exam (if any)			
4.	Coursework			
5.	Final Exam		40	40%

## 8. References and other resources

<b>A. Recommended Textbook(s): two maximum</b> 1. Thomas Finney: Calculus and Analytic Geometry, 11 <sup>th</sup> edition. 2.
<b>B. Other references</b> 1. Any book about Calculus and Analytic Geometry 2.
<b>C. Electronic resources, Websites related to the course</b> 1. 2.

**Name & signature of Head of department/ program leader**

Name: ..... signature: .....Date:  
.....

**Name & signature of Quality rep. in your faculty**

Name: ..... signature: .....Date:  
.....

**Course Tutor's name and signature**

Name: Taqwa Mutasem Al\_Khader... signature: .....Date: 1-2-2017.....