

T6. Course Specification (CS)

Institution	Date
Najran University	4/5/1439 H.
College/Department	
Faculty of sciences and arts/Mathematics	

A. Course Identification and General Information:

1. Course title and code: Analytic Geometry 161 Math-3			
2. Credit hours : 3			
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)			
4. Name of faculty member responsible for the course : Rashad A. Al-Jawfi			
5. Level/year at which this course is offered : Level 3			
6. Pre-requisites for this course (if any) : Calculus (1)			
7. Co-requisites for this course (if any) : None			
8. Location if not on main campus : Faculty of science and arts Najran (Male and Female) Faculty of science and arts Sharwrah (Male and Female)			
9. Mode of Instruction (mark all that apply)			
a. Traditional classroom	<input checked="" type="checkbox"/>	What percentage	<input type="text" value="75"/>
b. Blended (traditional and online)	<input type="checkbox"/>	What percentage	<input type="text"/>
c. e-learning	<input checked="" type="checkbox"/>	What percentage	<input type="text" value="25"/>
d. Correspondence	<input type="checkbox"/>	What percentage	<input type="text"/>
f. Other	<input type="checkbox"/>	What percentage	<input type="text"/>
Comments :			

B. Objectives

1. What is the main purpose for this course ? The main purpose of the course is to give students to the fundamental concepts of analytic geometry.
2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field) <ol style="list-style-type: none"> 1. Increased use of web based reference material. 2. Changes in content as a result of new research in the field and the observations during course teaching). 3. Increasing use of references and properly activated.

C. Course Description (Note: General description in the form used in the Bulletin or handbook should be attached).

<p>Course Description : This is an introductory course in plane analytic geometry emphasizing the correspondence between geometric curves and algebraic equations. This correspondence makes it possible to reformulate problems in geometry as an equivalent problems in algebra, and vice versa. Curves studied including straight lines, circles, parabolas, ellipses, and hyperbolas. Coordinate transformations, polar coordinates, and parametric equations are also introduced. The course assumes a sound background in algebra and calculus.</p>

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
Vectors in 2D and 3D plane and their properties. The dot and cross product.	2	6
Line equation in the plane. Different forms of line equations.	2	6
Intersection of pair of lines.	3	9
Circle: defined and equation and special cases . Different forms of the equation of the circle. Family of circles.	3	9
Parabola: the equation of the parabola, the equation of the tangent and the normal, some geometric properties of the parabola. Ellipse: standard equation, some geometric properties of the ellipse.	3	9
Hyperbolic: standard equation, some properties of hyperbolic.	2	6
The general form of the conic section, translate and rotate Axis.	1	3

1.Course components (total contact hours and credits per semester):						
	Lecture	Tutorial	Laboratory or studio	Practical	Other:	Total
Contact Hours	45					45
Credit	3					3

3-Additional private study/learning hours expected for students per week	6
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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy.

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table)

Second, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes.

Third, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain).

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Method
1.0	Knowledge المعرفة		
1.1	Define the circle, ellipse, hyperbola, and parabola.	<ul style="list-style-type: none"> Lectures discussions 	<ul style="list-style-type: none"> quarterly theory test final exams
1.2	Recognize the different cases of relation between two lines and two circles	<ul style="list-style-type: none"> solve some examples and exercises To encourage the positive reviews using the discussion of mathematical ideas through advance preparation to prepare educational material expected to be study. Give students the opportunity to solve 	
1.3	State the different forms of the quadratic equation with two variables.		

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Method
		exercises individually or in small groups. • emphasis on the student to bring the main reference during lectures to help solve the exercises and classroom discussions.	
1.4			
2.0	Cognitive Skills		
2.1	Calculate the coordinate of the intersection points between two lines, two circles and between line and circle	lectures. • discussions. • Some research works in some vocabulary of the course.	• homework. • classroom tests.
2.2	Distinguish between the different forms of the conical section.		
3.0	Interpersonal Skills & Responsibility		
3.1	Study, learn and work independently. Self-learning.	• grouping assignments. • individual assignments. • grouping discussions.	• supervision. • observation. • self-evaluation. • colleague evaluation.
3.2	work in teamwork		
4.0	Communication, Information Technology, Numerical		
4.1	Present mathematics to others, both in oral and written form clearly and in a well-organized manner.	• Work in small groups. • presentations. • informed and self-learning.	• the first quarterly test. • the second quarterly test. • practical applications and the costs of the individual and the collective. • final tests.
4.2	use the Internet.		
5.0	Psychomotor		
5.1	None	None	None
5.2	None	None	None

5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (e.g. essay, test, Quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	First Exam	6	22
2	Second Exam	13	22
3	Quiz 1	4	3

4	Quiz 2	10	3
5	Final Exam	17	50

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

3

E. Learning Resources

4. List Required Textbooks

الجوفي رشاد, الهندسة التحليلية في المستوى, مكتبة الرشد, 2017

5. List Essential References Materials (Journals, Reports, etc.)

Loney, S.L., The Elements of Coordinate Geometry, Macmillan and Co. London, 1953.
Kindle, J.H., Theory and Problems of Plane and Solid Analytic Geometry, Schaum P. Co., New York, 1950.

6. List Electronic Materials Web Sites, Facebook, Twitter, etc.

Some recommended web sites

<http://www.uaemath.com/ar/aforum/>

<http://www.mathramz.com/xyz/index.php>

<http://www.yzeed.com>

<http://www.math.math.com>

The student can search using the following keywords: coordinates, Lines, Circles, conic section.

7. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

None

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.)

30 students in a class.

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

- Classrooms Lecture Hall by the number of seats = 30 seat approximately.

2. Computing resources (AV, data show, Smart Board, software, etc.)

- Datashow
- Smart Board

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list).

- Coloured pens.

G. Course Evaluation and Improvement Processes:

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching Final students assessment (Evaluation Survey) of the course. Exam result.
2. Other Strategies for Evaluation of Teaching by the Instructor or by the department. Peer experiences and self-evaluation. Studying Course Report & Improvement Plan Studying Course Port of olio
3. Processes for Improvement of Teaching <ul style="list-style-type: none"> • Training programs and workshops for faculty members on the most important teaching methods based around the learner. • Creating the right atmosphere for students through social programs, entertainment, and so on. • Improve the relationship between the teacher and the students to be a human relationship. • Follow up on new teaching strategies. • Using different methods to present lessons. • Using different methods for assessment.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) Check marking by an independent member teaching staff of a sample of student work
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement <ul style="list-style-type: none"> • Hosting a visiting professor to evaluate the decision and developed his Article. • Periodic meetings with outstanding students to learn the positive and negative aspects in the decision. • The use of specialists in the design and planning of programs and courses. • Update your sources of learning decision to make sure keep pace of developments in the field. • The statistical results to evaluate the students' decision and to benefit from its results in the improvement and development of decision. • Studying Course Report & Improvement Plan. • Studying Course Port of olio (Trend Analysis) • Measuring Related KPIs

Name of instructor: **Prof. Dr. Rashad A. Al-Jawfi**

Signature: _____ Date Report Completed : **4/5/1439 H.**

Name of field experience teaching staff : **None**

Program coordinator: **Assistance Prof. Dr. Hamood Al-haddad** Signature: _____

Date received : **1439H**