

University: Benha

Faculty of Science

Course Specifications

Programme(s) on which the course is given . Basic Science

Major or Minor element of programmes: Major

Department offering the programme : Chemistry

Department offering the course : Mathematics

Academic year / Level : First year(Physical science) /First Semester

Date of Department approval : 2008

A- Basic Information

Title: Analytical Geometry

Code: 161 M

Credit Hours:

Lecture:2 hrs/week

Tutorial:1

Practical:

Total:3` hrs

B- Professional Information

1 – Overall Aims of Course: With completion of this course the students able:

- i)To know the vectors in the space , the scalar and vector product**
- ii) To know the polar ,cylindrical and spherical coordinates**
- iii) To understand the analytical Geometry in the plane and the analytical Geometry in the space**

2 – Intended Learning Outcomes of Course (ILOs):

a- Knowledge and Understanding:

- a1- By the end of the course the student will know the equations of some curves and surfaces**
- a2- By the end of the course the student can reduce the terms in the equations of the second degree**
- a3- Studying the equations of the straight line in the plane and in the space**

b-Intellectual Skills: At end of this course student able to:

b1- Use of basic principles to find the equations of some curves and surfaces

b2- Make discussion concerning assigned problems

b3- Extend of mental ability for the student

c-Professional and Practical Skills

c1- Develop the ability of the student to relate between topics

c2- Apply what was studying in the previous courses

c3- Develop the capability of the student for thinking

d-General and Transferable Skills

d1- Solve problems

d2- Work in groups

d3- Analyze of results

3- Contents

Topic	No. of hours	Lecture	Tutorial/Practical
The vectors	3	2	1
The straight line in the plane	3	2	1
Transportation and rotation of the axes	3	2	1
The circle	3	2	1
Conical sections	9	6	3
The straight line in the space	3	2	1
The plane ,the sphere,	12	8	4

Conical surfaces			
-------------------------	--	--	--

4- Teaching and Learning Methods

- 4.1- Lecturing**
- 4.2- Discussions**
- 4.3- Exercises**
- 4.4- Homework**

5- Student Assessment Methods

- 5.1 Discussions to assess to assess the knowledge and skills**
- 5.2 Essay to assess to assess understanding**
- 5.3 Mid term exam to assess application and solve the problem**
- 5.4 End of term exam to assess qualify over all the course**

Assessment Schedule

- Assessment 1 : Discussions Week 1-12**
- Assessment 2 : Essay Week 3**
- Assessment 3 : Mid term Week 7**
- Assessment 4 : Final exam Week 14**

Weighting of Assessments

Mid-Term Examination	10%
Final-term Examination	80%
Oral Examination.	5%
Practical Examination	%
Semester Work	5%
<u>Other types of assessment</u>	<u>%</u>
Total	100%

Any formative only assessments

6- List of References

6.1- Course Notes

6.2- Essential Books (Text Books)

Analytical Geometry, A. V. Pogorelov, Mir Publishers Moscow, 1984

6.3- Recommended Books

Analytical Geometry, A. V. Pogorelov, Mir Publishers Moscow, 1984

6.4- Periodicals, Web Sites, ... etc

Science direct, google.com

6- Facilities Required for Teaching and Learning

Overhead project, blackboard

Course Coordinator: Prof. Dr. Said Shihata

Head of Department: Prof. Dr. Effat Abbas

Date

Head of Department: