

كلية : العلوم
قسم : الرياضيات

١- بيانات المقرر

المستوى: الثاني	اسم المقرر : Solid Analytic Geometry	كود المادة : Math 218
عدد الوحدات الدراسية: ٣ ساعة معتمدة نظري ٢ : تمارين: ٢ عملي: ٠		التخصص: إحصاء وعلوم الحاسب

For students undertaking this course, the aims are to: 1- discuss and study the basic geometric properties and equations of straight lines , planes and spheres in three dimension and central quadrics in this way.	٢- هدف المقرر :
٣- المستهدف من تدريس المقرر	
a- Knowledge and Understanding On completing the course students will be able to: a1 - provide a breadth of geometrical experiences in 3 dimensions a2- develop knowledge and understanding of basic concepts of the geometry of some curves and surfaces 3 dimensions a3- develop the students knowledge and the basic geometric properties about surfaces in three dimension	أ- المعلومات و المفاهيم :
b- Intellectual Skills: On completing the course students will be able to: b1- be familiar with some curves and surfaces in space and be able to work with them b2- Apply transformations to find and simplify the equations of quadratic surfaces . b3- develop logical thinking coordinates.	ب- المهارات الذهنية :
c-Professional and Practical Skills On completing the course students will be able to: c1- Use Geometry to illustrate the algebraic concepts c2 - Apply geometrical basis through modeling and solving real problems c3 - Handing-in of homework and attendance at tutorials described in Handing-in of homework and attendance at tutorials described in 3- the second Year Handbook c4- Use computer (maple software) to draw some geometrical curves and surfaces and study their properties	ج- المهارات المهنية الخاصة بالمقرر :
d-General and Transferable Skills : On completing the course students will be able to: d1- Use Internet and Library to get information d2- be able to solve simple problems in 2, 3 - dimensional spaces d3- Work effectively both in a team, and independently on solve problems	د- المهارات العامة :
1- Rectangular , spherical and cylindrical coordinates 2- straight line in space 3- the plane 4- surfaces in space (sphere-cone- cylinder) - some other quadric surfaces 5- The general equation of the second degree in three variables	

1- 4 hour lecturer weekly with exercise sheets and solution sheets 2- Weekly 4 hour tutorials in groups 3- Using Internet facilities	٥- أساليب التعليم و التعلم :
The same as normal students, only skeletal disabilities are allowed in the faculty of science.	٦- أساليب التعليم و التعلم للطلاب ذوي القدرات المحدودة
٧- تقويم الطلاب :	
1- Oral exam to assess a1,a2,b2,c2,d2,d3 2- Final exam to assess a1,a2,b1,b2,c1,c2,d1,d2,d3 3- Mid-Term Exam to assess a1,a2,b1,b2,c2,d2	أ- الأساليب المستخدمة
1- Oral week 16 2- Final exam week 16 3- Mid-Term Exam week 7	ب- التوقيت
- Mid-Term Examination 10 % - Final-Term Examination 80% - Oral Examination 10% - Practical Examination 0% - Semester work 0% - Other types of assessment 0% Total 100%	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية و المراجع :	
- Department notes in analytic geometry in three dimension	أ- المذكرات
Coordinate geometry" (2-D,3-D) G.C. Sharma, New Delhi,2003.	ب- الكتب ملزمة
E. Swokowski, M. Olinick & D.Pence, (1994) "Calculus", 6th Edition, PWS Publishing Co	ج- كتب مقترحة
web.page:http://mathworld.wolfram.com	د- دوريات علمية أو نشرات

(أ) مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	اسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنية	مهارات عامة
<u>Analytic geometry II</u>					
Rectangular , spherical and cylindrical coordinates	1-2	d1,d3	c1,c2		a1
Straight line in space	3-4	d2	c2,c3	b1	a2,a3
The plane and their equations	5-7	d3		b1	a2
Surfaces in space (sphere-cone-cylinder)	8-10	d2	c3,c4		a3
Some other quadric surfaces	11	d2,d3	c4,c5	b2	
The general equation of the second degree in three variables	12-13	d1,d2	c3	b2	a1,a3

أستاذ المادة : د. عواطف شاهين

رئيس مجلس القسم العلمي : ا.د. مجدى إلياس فارس