نموذج مواصفات المقرر

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ǔ ǔ/F ǔΘǔ ǔ : الفرقة الأولي الفصل الدراسي الثاني   K̦

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On completion of this course student will be able to:

1-Be familiar with the fundamental concepts of linear algebra.

2-Solve system of linear equations by advanced methods of elimination and also apply some approximate methods.

3-Evaluate the eigen value and eigen vector of matrix.

4-Know and understand the concept of vector space.

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On completion of this course, students will be :

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A-1-1-Student will understand the fundamental concepts and properties of matrices, vector spaces and will be able to convey the meaning of these concepts to others

A-1-2–Know and understand the concept of vector space.

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B-1-1-Understand and distinguish between different cases of linear systems solutions

B-7-1- Show logical thinking and be self independent in problems solving.

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C-7-1-Solve system of linear equations by advanced methods of elimination and also apply some approximate methods.

C-7-2-Show mathematical thinking for students to be self independent in problem solving.

D-2-1-Training problem solving and studying in small teams.

D-3-1- Ability to explain basics to others.

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ساعات إرشاد دروس أكاديمية/عملية	المحاضرة	عدد الساعات	الموضوع
6	3	9	1-Matrices, system of linear equations (solution of systems, rank, Gauss Jordan method, interaction method).
6	3	9	2- Vector spaces, linear independence, basis and dimension, mapping between vector spaces.
6	٣	9	3- Inner product and inner product space, orthogonal basis and orthogonalisation process, linear transformation.
5	٢	6	4- Similar matrices diagonoliztion, orthogonal matrices, eigen value and eigen vectors.
5	3	9	5- Bilinear forms, quadratic forms, transformation of general quadratic forms.

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4-1- **Lectures.**

4-2- **Discussion sessions.**

4-3- **Research assignment .**

٥ـ أساليب تقييم الطلبة

5-1-**Class work (Quizzes).** to assess **the level of Intellectual skills to discuss and solve some problems.** 1,2

5-2- **Written exam (Mid term exam).** to assess **the level of knowledge and understanding.** 1,2

5-3- **Written exam (Final exam)** to assess **the ability to pass the exam.** 1,2

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التق م ١	الأسبوع الثانى – الخامس	
التق م ٢	الأسبوع السادس	
التق م ٣	الأسبوع في نهاية الفصل الدراسي	

النسبة المئوية لكل تقييم

	%	
امتحان نصف العام/الفصل الدراسي الاول	٧٠	%
امتحان نصف العام/الفصل الدراسي الثاني	–	%
الامتحان الشفوي –		%
الامتحان العملي –		%
أعمال السنة/الفصل الدراسي	٣٠	%
أنواع التقييم الاخرى ----------		%
المجموع	١٠٠	%

أي تق م بدون درجات   واجبات منزلية

٦- قائمة المراجع

٦–١– مذكرات المقرر

Courses notes prepared by staff members of Math. Dept.

٦–٢– الكتب الدراسية

Howard Anton, Elementary linear algebra, John Wiley & Sons, Inc., NY

٦–٣– كتب مقترحة

David C. Lay, Linear algebra and its application (3rd Edition) Addison Wesley,

٦–٤– مجلات دورية،مواقع انترنت،إلخ

http:// mathworld.wolfram.com/tropics/Algebra.html

٧- الإمكانات المطلوبة للتعليم والتعلم

Library contains new edition books of Calculus with enough copies.

Internet networks

منسق المقرر : د/عائشه عيسوي

رئيس القسم : أ.د / كمال الديب

التاريخ: /   /