توصیف مقرر در اسی

				١ -بيانات المقرر
المستوى: الأول	أسم المقرر:Electricity and Magnetism - Optics			الرمز الكودى :Phys 102
عملی: ۲	تمارین: ۱ ع	نظری ۲:	عدد الوحدات الدراسية: ٣ ساعة معتمدة	التخصص: إحصاء وعلوم الحاسب

For students undertaking this course, the aims are: 1- Aims at introducing the students to the basics and fundamentals of Electricity and Magnetism including, Electric current and ohm's law, Network theorem, Work, power and energy, Capacitance and inductance, Magnetism and electromagnetism, Electromagnetic induction. 2- Aims at introducing the students to the basics and fundamentals of geometric Optics including, Nature of light, propagation of light, deviation of light by prisms and dispersion, image formation, perception of light, color vision and Lasers		· ·
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b3- Explain the principles of geometrical optics and its applications.		
	b4- Predict optical behavior of materials by discussing related physical pheno	omena
b5- Know more information about geometrical optics and their applications.		Omena
b6- Define the physial terms like nature of light, propagation of light, deviation of		n of
light by prisms and dispersion.		TH OI
b7- Explain the principles of image formation, perception of light, color vision and		n and
Lasers.		i uiid
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c-Professional and	Practical Skil	lls:	ج- المهارات المهنية
On completing t	his course, st	udents will be able to:	ج- المهارات المهنية الخاصة بالمقرر:
c1- Choose and clas			
electricity and magn	•	1 7 1	
c2- Design physics			
physics lab			
c3- Use mathematic			
c4- Choose and clas			
	•	apply geometric optics principles.	
C 1 3	1	for image formed due to geometric optics	
phenomena.	8- ··P · · · · ·	er	
1	al formula in s	olving problems related to geometric optics	
course.	W1 101111 0110 111 0	or, mg processing resiment to geometric operation	
d-General and Tra	nsferable Skil	lls:	د- المهارات العامة:
		idents will be able to:	, ,
d1- Present data in g			
d2- Managements of			
		to electricity and magnetism course topics.	
		to geometric optics course topics.	
d5- Present results in			
		a students by discussing results obtained from	
experimental pl	•	i students by discussing results obtained from	
Electricity and Ma	•		٤ - محتوى المقرر:
Electric current and	0		.55=-755=-1
Network theorem	omm s law		
Work			
Power and energy			
Capacitance and ind	uctance		
Magnetism and elec			
Electromagnetic ind	_		
Optics:	uction		
Nature of light			
Propagation of light			
Deviation of light by	nrieme and die	energion	
Image formation	prisms and dis	spersion	
Perception of light an	nd color vision		
Lasers	id Color vision		
1- Lectures using da	ta show and h	oard	٥ اسالان التعادد
2- Discussion sessio	٥- اساليب التعليموالتعلم:		
3- Class activity.	واستم		
4- Laboratory work.			
		skeletal disabilities are allowed in the Faculty of	٦- أساليب التعليم
The same as normal students, only skeletal disabilities are allowed in the Faculty of Science.			٠٠ - المعاليب المصليم والتعلم للطلاب ذوي
Science.	القدرات المحدودة:		
			٧ ـ تقويم الطلاب :
Final exam	to assess	a1-a9, b1-b7, c1-c7 and d1-d6	أ- الأساليب المستخدمة
Oral exam	to assess	a1-a10, b1-b8 and c1-c7	
Practical exam	to assess	a3, a7, a8, b1-b2,, b4, c1-c2 and d1,d5	
Mid-Term Exam	to assess	a1-a9, b1-b7, c1-c7and d1-d6	
IVIIG TOTHI EXAIII	10 035033	a1 a2, 01 01, 01-07 and u1-d0	

Final ex	Final exam Week #			16		ب- التوقيت:
Oral ex	Oral exam Week #			16		
Practica	Practical exam Week #			15		
Mid-Te	erm Exam	Week #		7		
	Final-Term Exami	ination	10%			ج- توزيع الدرجات:
	Oral Examination	n	60 %			
	Practical Examination		20%			
	Mid-Term Exam		10%			
	Total		100%			
والمراجع:					٨ ـ قائمة الكتب الدراسية	
Notes Electricity & Magnetism					أ ـ مذكرات:	
Notes of Optics prepared by the physics department.						
				ب۔ کتب ملزمة		
Raymond A. Serway ,Physics for Scientists and Engineers, John W. Jewett 6th				ب کتب ملزمة ج کتب مقترحة :		
Edition, 2004.						
http://op.wikipodia.org					د دوريات علمية أو نشرات	
http://en.wikipedia.org				نشرات		

مصفوفة المعارف والمهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	مهارات ذهنية	مهارات مهنیة	مهارات عامة
Electric current and ohm's law	1-2	a1-a2	b1	c1	d1-d5
Network theorem	3-4	a2	b1	c1	d1-d5
Work	5-6	a2	b1	c1	
Capacitance and Inductance	7-8	a3	b1	c1	
Magnetism and electromagnetism	9-10	a3	b1		d1-d5
Electromagnetic conduction	11-13	a4	b2		
Nature of light	14	a4	b2		d1-d5
Propagation of light	1-2	a6, a7	b3, b4	c4, c5	
Deviation of light by prisms	3-4	a7	b5, b6		
Image formation	4-7	a8	b5, b6	c 6	
Precipitation of light and color vision	8-11	a8, a9	b6	c6, c7	
Lasers	12-14	a9	b7		

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