

وزارة التعليم العالي والبحث العلمي
جهاز الإشراف والتقويم العلمي
دائرة ضمان الجودة والاعتماد الأكاديمي
قسم الاعتماد



دليل وصف البرنامج الأكاديمي والمقرر الدراسي

2024

المقدمة:

يُعد البرنامج التعليمي بمثابة حزمة منسقة ومنظمة من المقررات الدراسية التي تشتمل على إجراءات وخبرات تنظم بشكل مفردات دراسية الغرض الأساس منها بناء وصقل مهارات الخريجين مما يجعلهم مؤهلين لتلبية متطلبات سوق العمل يتم مراجعته وتقييمه سنوياً عبر إجراءات وبرامج التدقيق الداخلي أو الخارجي مثل برنامج الممتحن الخارجي.

يقدم وصف البرنامج الأكاديمي ملخص موجز للسمات الرئيسية للبرنامج ومقرراته مبيناً المهارات التي يتم العمل على اكسابها للطلبة مبنية على وفق اهداف البرنامج الأكاديمي وتتجلى أهمية هذا الوصف لكونه يمثل الحجر الأساس في الحصول على الاعتماد البرامجي ويشترك في كتابته الملاكات التدريسية بإشراف اللجان العلمية في الأقسام العلمية.

ويتضمن هذا الدليل بنسخته الثانية وصفاً للبرنامج الأكاديمي بعد تحديث مفردات وفقرات الدليل السابق في ضوء مستجدات وتطورات النظام التعليمي في العراق والذي تضمن وصف البرنامج الأكاديمي بشكلها التقليدي نظام (سنوي، فصلي) فضلاً عن اعتماد وصف البرنامج الأكاديمي المعمم بموجب كتاب دائرة الدراسات ت م 2906/3 في 2023/5/3 فيما يخص البرامج التي تعتمد مسار بولونيا أساساً لعملها.

وفي هذا المجال لا يسعنا إلا أن نؤكد على أهمية كتابة وصف البرامج الأكاديمية والمقررات الدراسية لضمان حسن سير العملية التعليمية.

وصف البرنامج الأكاديمي: يوفر وصف البرنامج الأكاديمي إيجازاً مقتضباً لرؤيته ورسالته وأهدافه متضمناً وصفاً دقيقاً لمخرجات التعلم المستهدفة على وفق استراتيجيات تعلم محددة.

وصف المقرر: يوفر إيجازاً مقتضباً لأهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنأ عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ويكون مشتق من وصف البرنامج.

رؤية البرنامج: صورة طموحة لمستقبل البرنامج الأكاديمي ليكون برنامجاً متطوراً وملهماً ومحفزاً وواقعياً وقابلاً للتطبيق.

رسالة البرنامج: توضح الأهداف والأنشطة اللازمة لتحقيقها بشكل موجز كما يحدد مسارات تطور البرنامج واتجاهاته.

اهداف البرنامج: هي عبارات تصف ما ينوي البرنامج الأكاديمي تحقيقه خلال فترة زمنية محددة وتكون قابلة للقياس والملاحظة.

هيكلية المنهج: كافة المقررات الدراسية / المواد الدراسية التي يتضمنها البرنامج الأكاديمي على وفق نظام التعلم المعتمد (فصلي، سنوي، مسار بولونيا) سواء كانت متطلب (وزارة، جامعة، كلية وقسم علمي) مع عدد الوحدات الدراسية.

مخرجات التعلم: مجموعة متوافقة من المعارف والمهارات والقيم التي اكتسبها الطالب بعد انتهاء البرنامج الأكاديمي بنجاح ويجب أن يُحدد مخرجات التعلم لكل مقرر بالشكل الذي يحقق اهداف البرنامج.

استراتيجيات التعليم والتعلم: بأنها الاستراتيجيات المستخدمة من قبل عضو هيئة التدريس لتطوير تعليم وتعلم الطالب وهي خطط يتم إتباعها للوصول إلى أهداف التعلم. أي تصف جميع الأنشطة الصفية واللاصفية لتحقيق نتائج التعلم للبرنامج.

نموذج وصف البرنامج الأكاديمي

اسم الجامعة: جامعة كلية الهادي الجامعة
الكلية / المعهد: كلية كلية الهادي الجامعة
القسم العلمي: قسم الفيزياء الطبية
اسم البرنامج الأكاديمي او المهني: الفيزياء الطبية
اسم الشهادة النهائية: بكالوريوس في الفيزياء الطبية

النظام الدراسي: سنوي

تاريخ اعداد الوصف: 24/2/2024

تاريخ ملء الملف: 24/2/2024

معاون العميد
للشؤون العلمية

: التوقيع

: اسم معاون العميد : أ.م.د. مجيد محمود عبد علي

: التاريخ : 2024/4/28

التوقيع

: اسم رئيس القسم : أ.د. مهدي هادي جاسم

: التاريخ : 2024/4/29

كلية الهادي الجامعة
قسم
الفيزياء الطبية

دقق الملف من قبل

شعبة ضمان الجودة والأداء الجامعي
اسم مدير شعبة ضمان الجودة والأداء الجامعي: أ.د محمد جويد علوان

التاريخ 2024/4/29
التوقيع

أ.د. عبد المحسن ناجي المحيسن
العميد
٢٠٢ / /

مصادقة السيد العميد

أ.د عبد المحسن ناجي المحيسن العجيلي

1. رؤية البرنامج

يسعى قسم الفيزياء الطبية الى السعي لبناء وتأهيل وتطوير قسم علمي متخصص ضمن كلية الهادي الجامعة وفقاً للمعايير المحلية والدولية وبما يلبي متطلبات سوق العمل للمؤسسات الحكومية والخاصة من خلال استخدام وتطوير اساليب علمية وتعليمية وبما يحقق الريادة على الاقسام المماثلة في الجامعات المحلية والعالمية الريادة في التعليم والبحث العلمي لتحقيق الابداع والتكامل المعرفي في مختلف التخصصات العلمية من خلال الانفتاح والتواصل مع المؤسسات الصحية والبحثية والتعليمية ذات العلاقة باختصاص القسم.

2. رسالة البرنامج

يسعى القسم الى توفير البيئة التعليمية والاكاديمية المناسبة لاكساب الطلبة الخبرات والمهارات اللازمة لرفد المجتمع بكفاءات متخصصة في الفيزياء الطبية وفي مجال التعليم والبحث العلمي فضلاً عن تنمية قدراتهم العلمية والعملية وان هذه الرسالة تنفذ من خلال المشاركة الفاعلة بين رئاسة القسم والهيئة التدريسية والطلبة وسوق العمل.

3. اهداف البرنامج

تمثل الفيزياء الطبية أحد فروع الفيزياء التطبيقية التي تهتم بتطبيق المفاهيم والأساليب الفيزيائية في مهنة الطب والرعاية الصحية. ويستكشف الطرق التي يتم من خلالها تطبيق مفاهيم الفيزياء في تشخيص وعلاج الأمراض التي تصيب الإنسان باستخدام أنواع مختلفة من الإشعاع ومفاهيم الفيزياء. سيتعلم الطلاب المقبولون في البرنامج كيفية تطبيق المفاهيم والمنهجيات القائمة على الفيزياء على إجراءات مثل التصوير الطبي (التشخيص الطبي)، والعلاج الإشعاعي، والطب النووي، والإشعاع، وعلم السمع وعلم أمراض النطق. توفر الفيزياء الطبية معلومات مهمة للأطباء في مجال الأشعة التشخيصية وعلاج الأورام بالإشعاع. كما تشمل العديد من الأنشطة المهنية في مجال الفيزياء الطبية وأجهزة العلاج الطبيعي، مثل أجهزة المعايرة والاختبار، والمساعدة في الإجراءات السريرية، وحساب جرعات الإشعاع للمريض، والإشراف على البرامج الفنية للتأكد من جودة الأجهزة.

يهدف قسم الفيزياء الطبية الى تحقيق عدد من الاهداف المتمثلة بما يلي:

1. تحقيق الريادة في التعليم والتعلم والبحث العلمي لخدمة المجتمع.

2. رفع مستوى الخريجين من خلال تحقيق معايير الجودة الشاملة.
3. اعداد البرامج التعليمية المتقدمة والمبتكرة والتي تؤهل الخريجين لمواكبة متطلبات مجتمع المعرفة وسوق العمل.
4. تزويد الطلبة بالمعرفة والمهارات الاساسية في مجال الفيزياء الطبية وتطبيقاتها المختلفة.
5. تشجيع البحث العلمي وتأهيل الكوادر العلمية والمهنية المتخصصة للمساهمة في اجراء البحوث العلمية والعملية المتميزة.

4. الاعتماد البرامجي
لا يوجد

5. المؤثرات الخارجية الأخرى
لا يوجد

6. هيكلية البرنامج				
هيكل البرنامج	عدد المقررات	وحدة دراسية	النسبة المئوية	ملاحظات *
متطلبات المؤسسة	12	59		مقرر اساسي
متطلبات الكلية	نعم			
متطلبات القسم	نعم			
التدريب الصيفي	لا يوجد للمرحلة الاولى			
أخرى				

* ممكن ان تتضمن الملاحظات فيما اذا كان المقرر أساسي او اختياري .

7. وصف البرنامج				
الساعات المعتمدة		اسم المقرر أو المساق	رمز المقرر أو المساق	السنة / المستوى
تكويني (سع)	نظري (سع)			
17	50		HUC1101	2023-2024 / الأولى
30	45		HUC1102	
20	30	الرياضيات	HUC1103	
100	75	اساسيات علم الحاسوب	HUC1104	
100	75	الديموقراطية وحقوق الانسان	HUC1105	
75	75	الاحياء العامة	HUC1106	
45	55	الكيمياء العامة	MPHY107	
17	33	الكهربائية	HUC12011	
17	33	البرمجة	HUC12010	
97	78	اللغة الانكليزية	SCI12012	
75	75	اللغة العربية	SCI12013	
98	102	الفيزياء العامة	MPHY101	
		المغناطيسية		
		الميكانيك		

8. مخرجات التعلم المتوقعة للبرنامج	
المعرفة	
	<p>أ- ااهداف المعرفية .</p> <p>1- وضع الخطط وبرامج العمل الخاصة في مفردات الفيزياء الطبية.</p> <p>2- الاشراف المستمر لرفع تعليم الطلبة</p> <p>3- اعداد البحوث والدراسات لتحسين كفاءة الطلبة.</p> <p>4- المشاركة باللجان ذات العلاقة بنشاطات الفيزياء الطبية.</p>
	المهارات

	<p>ب- الاهداف المهاراتية الخاصة بالبرنامج :</p> <p>1- فهم الاساسيات الفيزيائية وتطبيقاتها في العلوم الطبية و</p> <p>2- القدرة على استخدام الادوات والتقنيات المختلفة في تقييم وتشخيص الحالات الطبية</p> <p>3- تحليل البيانات وتقديم النتائج بطريقة دقيقة وموثوقة.</p>
القيم	
	<p>تنمية المهارات العملية والتحليلية للطلبة وتعزيز القدرة على حل المشاكل والتواصل مع بيئة العمل</p>

9. استراتيجيات التعليم والتعلم
<p>محاضرات – مختبرات – وسائل الايضاح (data show) - ورش عمل – ندوات – معارض علمية</p>

10. طرائق التقييم
<p>تقييم يومي (quiz) – تقييم فصلي – تقييم عملي – تقييم نهائي – عرض تقديمي – تقارير – واجبات بيتية – حضور يومي – نشاطات صفية</p>

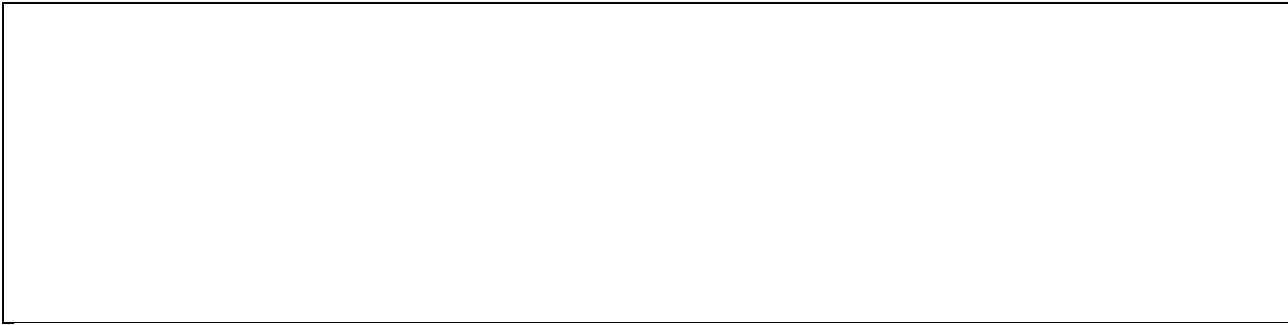
11. الهيئة التدريسية
أعضاء هيئة التدريس

الرتبة العلمية		التخصص		المتطلبات/المهارات الخاصة (ان وجدت)		اعداد الهيئة التدريسية	
		عام	خاص			ملاك	محاضر
أ. د مهدي هادي جاسم		فيزياء	الفيزياء النووية			ملاك	
م م رؤى ستار		فيزياء	فيزياء الليزر			ملاك	
م م شهلاء ماجد		فيزياء	فيزياء الليزر			ملاك	
م د مروان جواد كاظم		بايولوجي	بايولوجي				محاضر
م. د حيدر عبد منعم		كيمياء	كيمياء				محاضر

التطوير المهني
توجيه أعضاء هيئة التدريس الجدد
التطوير المهني لأعضاء هيئة التدريس

12. معيار القبول
قبول مركزي عن طريق نافذة الكترونية من قبل وزارة التعليم العالي. خريج سادس اعدادي تطبيقي واحيائي

13. أهم مصادر المعلومات عن البرنامج
المكتبة , الانترنت , المواقع الالكترونية الرسمية.



14. خطة تطوير البرنامج

-استخدام المفاهيم الجديدة في مجال الفيزياء الطبية واستخدام الاجهزة التشخيصية والعلاجية

Document2 - Word (Product Activation Failed) Mahdi Hadi Jasim Tell me what you want to do

File Home Insert Design Layout References Mailings Review View Developer Help Efofex Table Design Layout Tell me what you want to do

Table Tools

Align Group Selection Pane

Send Backward Forward Rotate Arrange

Position Wrap Text Forward Backward Arrange

Paragraph

Indent

Before After

Spacing

Before After

Page Setup

Page Orientation Size Columns Hyphenation

Page Setup

Page 1 of 2 309 of 309 words Arabic (Saudi Arabia) Accessibility: Good to go 90%

مخطط مهارات المتخرج

يرجى وضع اشارة في المربعات المعادلة لمخرجات التعلم الفريدة من البرامج الخاضعة للتقييم

مخرجات التعلم المطلوبة من البرنامج

المهارات العامة والتأهيلية المتوقعة (المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي)	الاهداف الوجدانية والقيمية				الاهداف المعرفية الخاصة بالبرنامج				الاهداف المعرفية				تخصصية /مساعدة /الاساسي	اسم المادة	رمز المادة	السنة / المستوى			
	1د	2د	3د	4د	1ع	2ع	3ع	4ع	1ب	2ب	3ب	4ب					1ا	2ا	3ا
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	رياضيات	HUC1101	الأساسي (مسار بولونيا)
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	اساسيات علم الحاسوب	HUC1102	الأساسي
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	البيومترية وطب وحقوق الانسان	HUC1103	الأساسي
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	الاحياء العامة	HUC1104	مساعد
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	الكيمياء العامة	HUC1105	مساعد
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	الكهربائية	HUC1106	تخصصي
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	اللغة الانكليزية	MPHY107	مساعد
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	اللغة العربية	HUC12011	مساعد
/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	الفيزياء العامة	SC112012	تخصصي

نماذج وصف المواد الدراسية

العام الدراسي: 2023-2024

الفصل الدراسي : الاول

1-MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Mathematics		Module Delivery
Module Type	Core		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	HUC1101		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level		Semester of Delivery	
Administering Department	RS	College	RG
Module Leader	Sajeda Kareem Radhi	e-mail	sajeda.kareem@kus.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Ph.D.
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	6/11/2023	Version Number	
Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		None	Semester
Co-requisites module		None	Semester

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Aims أهداف المادة الدراسية</p>	<ol style="list-style-type: none">1. Identify the properties of mathematical functions and their opposites.2. Familiarity with the properties of polynomials, exponential and logarithmic functions, trigonometric functions and their opposites.3. Recognize the concept of differential functions and its relationship to speed and the rate of their change with time (acceleration).4. Identify the integration of the functions and methods of Integration.5. Knowledge of applications of integral in geometry.
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<ol style="list-style-type: none">1. Recognize properties of functions and their inverses;2. Recall and use properties of polynomials, rational functions, exponential, logarithmic, trigonometric and inverse-trigonometric functions;3. Apply the differentiation procedures to solve related rates and extreme value problems;4. To understand the term integration.5. To distinguish between definite and indefinite integration.6. To describe the area and volume by means of integration.
<p>Indicative Contents المحتويات الإرشادية</p>	<ol style="list-style-type: none">1-To know the methods of differentiation of functions accurately and its applications.2- To know the relationship between the function term and its differential.3- To extract the area and volume through integration.4 - To know the differentiation and integration of functions.4- To use integration methods to find complex integrals.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

- Following up the scientific development of mathematics by reviewing modern curricula.
- Follow-up and development of academic courses and compare them with other universities.
- Using the latest teaching aids to motivate the student to learn and understand.

Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	50		
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	75		
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5,10	LO#1,2,10 and 11
	Assignments	2	10% (10)	2,12	LO#3,4,6 and 7
	Projects / Lab. Report	1	10% (10)	13	LO#5,8, and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO,#1-7
	Final Exam	2hr	60% (60)	16	All
Total assessment		100% (100 Marks)			

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Functions, Inverse Functions.
Week 2	Trigonometric Functions, Inverse Trigonometric Functions.
Week 3	Exponential and Logarithmic Functions.
Week 4	Limits and Continuity
Week 5	The Derivative, The Chain Rule.
Week 6	Implicit Differentiation, L'Hopitals Rule.
Week 7	The Derivative in graphing and applications, Relative Extrema.
Week 8	Rolle's Theorem; Mean –Value Theorem
Week 9	The indefinite integral, Areas under a curve
Week 10	The fundamental theorem of integral calculus, Area between two curves
Week 11	The integral of trigonometric functions, the integral of inverse trigonometric
Week 12	The integral of the functions $\log u(x)$, $\ln u(x)$, $e^{u(x)}$ and $a^{u(x)}$
Week 13	Methods of integration , powers of trigonometric functions
Week 14	Integration by parts
Week 15	Volumes
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Thomas & Finney "Calculus and Analytic Geometry" (2005), 11th edition, Addison Wesley.	Yes
Recommended Texts	Howard Anton, IrI Bivens & Stephen Davis "Calculus" (2009), 9th edition, John Wiley & Sons, NC.	Yes
Websites	Various lectures and lecture notes on the internet.	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors

	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (فيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	Fundamental of Computer Science		Module Delivery
Module Type	Basic		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	HUC1102		
ECTS Credits	3		
SWL (hr/sem)	75		
Module Level	1	Semester of Delivery	1
Administering Department	Mbo	College	SC
Module Leader	Dr. Nora Hikmat Mutasher	e-mail	dr.nora.hikmat@kus.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	Lecturer Eng. Ahmed Sobri	e-mail	eng.ahmed.sabri@kus.edu.iq
Peer Reviewer Name	Dr. Saad Hussein	e-mail	saad_2019@ku.edu.iq
Scientific Committee Approval Date	17/06/2023	Version Number	ق.أ.م/ ٥٠٨

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	The computer course includes in the theoretical side the basics of computers, as well as a brief historical summary on the development and generations of computers also Computer Types. A detailed explanation of the Computer Components (Hardware and Software); addition to the student's definition of Numbers Systems (Decimal & Binary); the last axis comes about introducing the student to the Internet and the Intranet. As for the practical side, the student is taught the ready-made basic programs that include Microsoft Office and the Windows operating system, as the course includes practical hours, so the most important output is the student's mastery in dealing with the calculator as an easy tool to work with.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	The learning outcomes of studying medical image analysis include: <ol style="list-style-type: none">1. Defining computer components (hardware and software) to the students.2. Explaining input and output devices to the students.3. Enabling students to recognize different types of memory.4. Teaching students about number systems and how to convert between decimal and binary.5. Defining the Internet and Intranet to students and discussing the similarities and differences between the two.6. Providing hands-on experience with basic programs, including Microsoft Office and the Windows operating system, to students.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A</u> Introduction to Computer, Definition of Computer, Computer History, Generations of Computers, Categories of Computer. [4 hrs] <u>Part B</u> Computer Components, Software. [4 hrs] <u>Part C</u> Computer Components, Hardware, Input Devices, Output Devices, Components of

	<p>the System Unit, Central Processing Unit (CPU), Memory. [4 hrs]</p> <p><u>Part D</u></p> <p>Hardware, Cache Memory, Primary, Memory (Main Memory) ,Random Access Memory, Read Only Memory, Secondary Memory, Memory Units, Storage Devices. [8 hrs]</p> <p><u>Part E</u></p> <p>Numbers Systems, Decimal Number System, Binary Number System, Convert Decimal to Binary System, Examples, Convert Binary to Decimal System, Examples. . [6 hrs]</p> <p><u>Part F</u></p> <p>Defining Internet and Intranet, Types of Computer Network, Computer network. [4 hrs]</p>
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	<p>In order to enable students to learn computer skills effectively, here are some strategies that can be employed:</p> <ol style="list-style-type: none"> 1. Provide hands-on activities: Incorporate hands-on activities, projects, and exercises to engage students actively in the learning process. Practical application of concepts helps students understand how computers work and reinforces their understanding. 2. By using visual aids and interactive resources: Utilize visual aids, diagrams, charts, and interactive resources like educational software, simulations, and coding platforms to make abstract concepts more tangible and engaging. 3. Foster a collaborative learning environment: Encourage students to work in teams or pairs on projects or coding exercises. Collaborative learning allows students to share ideas, help one another, and learn from different perspectives. 4. Personalize the learning experience: Recognize that students have different learning styles and paces. Provide opportunities for individualized learning, allowing students to progress at their own speed and explore topics of interest to them. Tailor the learning experience to accommodate diverse learning needs. 5. Encourage exploration and experimentation: Encourage students to explore and experiment with different programming languages, tools, and technologies. Let them pursue their own coding projects and interests. This

	<p>fosters curiosity and self-directed learning.</p> <p>6. Connect with real-world applications: Demonstrate how computer skills are applied in various fields and industries. Show examples of how coding is used in creating websites, mobile apps, robotics, or data analysis. Connecting computer skills to real-world applications can motivate students and help them understand the practical significance of what they are learning.</p> <p>7. Through updated with technology trends: Stay abreast of the latest technology trends, tools, and programming languages. Integrate relevant and up-to-date content into the curriculum to ensure students are learning skills that are in demand in the job market.</p> <p>It is important to create a supportive and inclusive learning environment where students feel encouraged to ask questions, take risks, and explore their interests. By implementing these strategies, we can help students develop a solid foundation in computer skills and foster their passion for technology.</p>
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Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	45	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	30	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	2
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	75		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	5% (5)	4, 8	LO # 1,2,3,5,6, and 7
	Assignments	2	10% (10)	10, 14	LO # 8, 9, 11,12 and 13
	Projects / Lab.	1	20% (20)	Continuous	
	Report	1	5% (5)	15	LO # 4,14
Summative assessment	Midterm Exam	2hr	10% (10)	9	LO # 1-8
	Final Exam	2hr	50% (50)	15	All

Total assessment	100% (100 Marks)		
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Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Computer, Definition of Computer
Week 2	Computer History, Generations of Computers,
Week 3	Categories of Computer.
Week 4	Computer Components, Software
Week 5	Computer Components, Hardware, Input Devices
Week 6	Computer Components, Hardware, Output Devices
Week 7	Computer Components, Hardware, Components of the System Unit, Central Processing Unit (CPU), Memory
Week 8	Hardware, Cache Memory, Primary, Memory (Main Memory)
Week 9	Hardware, Random Access Memory, Read Only Memory
Week 10	Hardware, Secondary Memory, Memory Units, Storage Devices
Week 11	Numbers Systems, Decimal Number System, Binary Number System
Week 12	Numbers Systems, Convert Decimal to Binary System, Examples
Week 13	Numbers Systems, Convert Binary to Decimal System, Examples
Week 14	Defining Internet and Intranet, Types of Computer Network, Computer network
Week 15	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Windows 10: An introduction to windows 10, The start menu, Notification pane and action center.
Week 2	Lab 2: Cortana, Microsoft edge, Use multiple desktops, Tablet mode, The settings App.
Week 3	Lab 3: Microsoft word 2016: An introduction to Microsoft Word 2016, Starting Word, The Home Ribbon: Using Paragraph Styles, Bold, Italic & Underlined, Superscript & Subscript, Highlighting Text, Text Colour, Text Justification, Paragraph Indents, Bullet Lists, Numbered Lists, Cut, Copy & Paste.

Week 4	Lab 4: The Insert Ribbon: Inserting Symbols, Equations, Cover Pages, Adding Images, Adding Effects to Images, Cropping Images, Wrap Text around Images, Adding Tables, Formatting Tables, Add a Column, Insert a Row, Resizing Rows & Columns, Headers and Footers, Inserting Headers & Footers, Editing Headers & Footers.
Week 5	Lab 5: Page Numbering: The Design Ribbon (Page Borders, Page Color, Watermarks, Page

	Numbering: The Page Layout Ribbon, Page Setup, The References Ribbon, The Mailings Ribbon, The Format Ribbon, File Backstage, Saving Documents, Saving as a Different Format, Opening Saved Documents, Printing Documents.
Week 6	Lab 6: Microsoft Excel 2016: An introduction to Microsoft Excel 2016, Starting Excel, The Home Ribbon, The Insert Ribbon, The Page Layout Ribbon, The Formulas Ribbon, The Data Ribbon, The Review Ribbon, The View Ribbon, File Backstage, Introduction to a Spreadsheet, Entering Data.
Week 7	Lab 7: Simple Text Formatting, Text Orientation, Resizing Rows and Columns, inserting Rows & Columns, Cut, Copy & Paste, Sorting Data, Formatting Spreadsheet, Cell Alignment, Text Format, Cell Borders, Using Formulas, Using Functions, Count, Count IF, Auto Sum, Average, Max & Min, IF Function, Adding Charts, Change Chart Type.

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	1- Ata Elahi, "Computer Systems, Digital Design, Fundamentals of Computer, Architecture and Assembly Language", Springer International Publishing AG 2018. 2- Peter Norton "Introduction to Computers", sixth Edition, 2008, ISBN-13:978-0-07-059374-9. 3- B. Hemanta, Computer Fundamental, Stratford College London, pp.1-20 4- R Mansfield, "Mastering VBA for Microsoft Office", 2019, 944 Pages.	Yes
Recommended Texts	1- Steven Freund, Gary B. Shelly, Thomas J. Cashman, Misty Vermaat, Introduction to Computers, Eighth Edition, 2012, ISBN10 143908131X, ISBN13 9781439081310	No
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A – Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 –49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	الديمقراطية و حقوق الانسان		Module Delivery
Module Type	Basic		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	HUC1103		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	1	Semester of Delivery	
Administering Department	MBO	College	SC
Module Leader	Mohanad Basim Ibrahim	e-mail	Mohanad.al.sallami@kus.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D
Module Tutor	-----	e-mail	-----
Peer Reviewer Name	Dr. Saad Hussein	e-mail	saad_2019@ku.edu.iq
Scientific Committee Approval Date	6/11/2023	Version Number	ق.أ.م/ ٥٠٨

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims	تهدف المادة الى بيان اهمية الحقوق الاصلية للصيقة بالانسان، التي تتفق مع فطرته والتي يقبلها العقل المجرد، والتي لا تختلف باختلاف الزمان والمكان وهذه هي حقوق الانسان		
Module Learning Outcomes	تسهم المادة العلمية الى تثقيف الطالب من الناحية القانونية، ليكون مطلع على ماهية الحقوق الانسانية واصلها التاريخي وتعريف ماله من حقوق وما عليه من التزامات من خلال معرفة حقه وحدود ذلك الحق وحقوق الاخرين، وما سعت اليه الدول والمنظمات الدولية والاقليمية في تعزيز مفاهيم تلك الحقوق، والزام الدول للنص عليها في التشريعات الداخلية والضمانات التي تكفل تطبيق تلك الحقوق العالمية.		
Indicative Contents	ان المحتويات الارشادية لمادة الديمقراطية وحقوق الانسان تتلخص بتهذي الطالب (١٥ ساعة) وتعريفه ان تعامله مع غيره من بني البشر يقوم على مبدأ (ان الناس صنفان، اما اخ لك في الدين، او نظير لك في الخلق (١٥ ساعة)		

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<p>نعمد في هذا الجانب إلى ما يلي:</p> <ol style="list-style-type: none"> يعرف الطالب إبتداءً بمضمون موجز عن المفردات التي سيتم تناولها خلال المحاضرة، ثم نوجه له بعض الأسئلة التي تحرك ذهنه، وتشد إنتباهه؛ لضمان حسن الاستماع. يتم التعمق بشرح المفردات العلمية في حدود تناسب متوسط المستويات العلمية لضمان عدم تجاوز الفروق الفردية عند عموم الطلبة. يتم ترك مساحة للنقاش الحر في إطار الموضوع المخصص للمحاضرة. الحرص على جانب التغذية الراجعة للمعلومات قبل نهاية المحاضرة. التواصل الكترونياً مع الطلبة لنشر المحاضرات المسجلة، والمكتوبة من خلال الموقع الرسمي للجامعة.
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Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	Non	Semester	
Co-requisites module	Non	Semester	

Student Work load (SWL)

الحمل الدراسي للطلاب ل ١٥ اسبوعاً

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	30	Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	20	Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	1.3
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	50		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	Lo #1,#2,#10 and 11
	Assignments	2	10% (10)	2 and 12	Lo #3,#4,#6, and #7
	Projects / Tutorial	1	10%(10)	Continuous	All
	Report	1	10% (10)	13	Lo #5, ,#8 and #10
Summative assessment	Midterm Exam	1 hr	10% (10)	7	Lo #1-7
	Final Exam	2hrs	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	تعريف وطبيعة حقوق الانسان
Week 2	التطور التاريخي لحقوق الانسان
Week 3	مميزات حقوق الانسان عن غيرها من الحقوق
Week 4	حقوق الانسان في الديانات السماوية
Week 5	حقوق الانسان في المواثيق الدولية
Week 6	حقوق الانسان في التشريعات الداخلية
Week 7	حقوق الانسان الشخصية
Week 8	حقوق الانسان الاجتماعية
Week 9	حقوق الانسان الثقافية
Week 10	حقوق الانسان الاقتصادية
Week 11	ضمانات حقوق الانسان الدولية
Week 12	ضمانات حقوق الانسان الاقليمية
Week 13	ضمانات حقوق الانسان الداخلية (الوطنية)
Week 14	الجزاء المترتبة على المساس بحقوق الانسان
Week 15	امتحان نهائي

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1:
Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	حقوق الانسان (تطورها، مضامينها، حمايتها) // د. رياض عزيز هادي	Yes
Recommended Texts	حقوق الانسان / د. حميد حنون	
Websites	https://www.noor-book.com/ https://www.un.org/ar/about-us/universal-declaration-of-human-rights https://ar.wikipedia.org/wiki	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A – Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 –49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	General Biology		Module Delivery
Module Type	Basic		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	SCI 1104		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	
Administering Department	MBO	College	SC
Module Leader	Dr. Sraa Nsayef Muslim	e-mail	Sraa.N.Muslim@kus.edu.iq
Module Leader's Acad. Title	Asst. Professor	Module Leader's Qualification	Ph.D.
Module Tutor	-----	e-mail	-----
Peer Reviewer Name	Dr. Saad Hussein	e-mail	saad_2019@ku.edu.iq
Scientific Committee Approval Date	18/06/2023	Version Number	ق/أ.م/ 805

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	General Microbiology	Semester	2

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Aims أهداف المادة الدراسية</p>	<ol style="list-style-type: none">1. Give a general understanding of the types, divisions, and components of organisms.2. Understand the effect of organisms on humans and their environments.3. Gain practical knowledge of the classification of organisms4. Complete the reports, seminars, and presentations to develop the student's skills.
<p>Module Learning Outcomes المخرجات النهائية للمادة الدراسية</p>	<ol style="list-style-type: none">1. Identify the most important differences between animals, plants, and microorganisms2. Identify the processes of evolution in the organisms and the theories of their emergence3. Statement the divisions of the plant kingdom and the animal kingdom4. Identify the types of animal and plant tissues5. Identifying the interdependent relationship between animals and plants.
<p>Indicative Contents المحتويات الإرشادية</p>	<p>Indicative content includes the following:</p> <p><u>Part A - Life and science</u> Life - Characteristics of life, The scientific method, Development of the scientific attitude, Biology today, Biology as a science. [22 hrs.]</p> <p><u>Part B - Different forms of life</u> The kingdoms of organisms - The animals, plants, and Monera, Their structure, Components, Functions, and Classification. [10 hrs.]</p> <p>Revision problem classes. [6hrs.]</p> <p><u>Part C - Chemistry of life</u> Matter and elements - How elements differ, Structure of matter, Chemical bonding, Ionic bonding, Inorganic compounds, and Organic compounds. [22 hrs.]</p> <p><u>Part D – Cells in Life</u> Cells - The cell theory, The cell and its parts, Prokaryotic, and eukaryotic cells, Compare and contrast between plant and animal cells, The cell membrane/Wall, The cell membrane/Wall structure and function, and The transport of materials across the membrane. [19 hrs.]</p> <p><u>Part D – Cell life cycle</u> Cell Cycle - Control of cycle, Interphase (Gap I phase, Synthesis phase, and Gap II phase), Mitosis (Prophase, Metaphase, Anaphase, and Telophase), Meiosis. [21 hrs.]</p>

Learning and Teaching Strategies

ستراتيجيات التعلم والتعليم

Strategies	Many strategies will be used in this module to encourage students to learn such as participation in the exercises, seminars, lab experiments, and workshops, as well as using educational videos and electronic to refine and expand their critical thinking skills. This will be achieved through classes, interactive tutorials, and by considering types of simple experiments involving some interesting sampling activities for the students.
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Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب اسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي الغير منتظم للطالب خلال الفصل	100	Unstructured SWL (h/w) الحمل الدراسي الغير منتظم للطالب اسبوعيا	6.66
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	5% (5)	4, 8	LO #1, 2, 3, 5,6, and 7
	Assignments	2	10% (10)	5, 10	LO # 2, 4, 6, 8, and 9
	Projects / Lab.	1	20% (20)	Continuous	
	Report	1	5% (5)	13	LO # 12
Summative assessment	Midterm Exam	1 hr	10% (10)	7	LO # 1-6
	Final Exam	2 hr	50% (50)	15	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to the life science
Week 2	The characteristics of life
Week 3	The characteristics of organisms
Week 4	The kingdom of organisms
Week 5	Classification of Animal and plant Kingdoms
Week 6	Kingdom Monera
Week 7	Mid-term Exam
Week 8	Chemistry of life (1)
Week 9	Chemistry of life (2)
Week 10	Cell structure and function (1)
Week 11	Cell structure and function (2)
Week 12	Cell life cycle
Week 13	Mitosis
Week 14	Meiosis
Week 15	Final exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1,2	Lab 1,2: Microscope and cell structure
Week 3,4	Lab 3,4: Cell behavior
Week 5,6	Lab 5,6: Respiration
Week 7,8	Lab 7,8: Photosynthesis
Week 9,10	Lab 9,10: Mitosis
Week 11,12	Lab 11,12: Meiosis
Week 13,14	Lab 13,14: Gametogenesis
Week 15	Lab 15: A preparatory week before the final exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Biology: Concepts and Connections; Campbell, Reece, Taylor, and Simon; Latest edition 2018	No
Recommended Texts	The Science of Biology by Sadava, Hillis, Heller and Berenbaum 9th ed. 2011	No
Websites	https://www.coursera.org/browse/biology-science	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A – Excellent	أمتياز	90 – 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	General Chemistry		Module Delivery
Module Type	Basic		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	MBO11002		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	1
Administering Department	MBO	College	SC
Module Leader	Firas H. Abdulrazzak	e-mail	Firas_ald2020@yahoo.com
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	-----	e-mail	-----
Peer Reviewer Name	Dr. Saad Hussein	e-mail	saad_2019@ku.edu.iq
Scientific Committee Approval Date	18/6/2023	Version Number	ق.أ.م / 805

Relation with other Modules			
العلاقة مع المادة الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية أهداف

Module Aims أهداف المادة الدراسية	1-To develop skills and understanding of different types of elements through the application of techniques. 2. To understand metals, physical and chemical properties. 3. This course deals with the basic concept of general chemistry. 4. To understand periodic table and distribution elements on it
Module Learning Outcomes مخرجات التعليم للمادة الدراسية	1. Recognize the classification of elements. 2. List the various terms associated with periodic table. 3. Summarize what is meant by a basic chemical property. 4. Discuss the reaction and involvement of atoms in chemical reaction. 5. Describe bonds, oxidation number, and Lewis term. 6. Identify the elements according to conductivity and their applications. 7. Discuss the electrons distribution in the atomic levels. 8. Identify the primary terms that used to characterized physical and chemical properties.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Part A-Circuit Theory Starting from atomic theory and electron distribution in the outer and inner shells the details required make enough information for the principle of chemistry. [14 hrs] Enhance the principle of general chemistry when highlight in more information about losing and acceptance electrons with the abilities for forming any bonds and forming new molecules with new properties. [13 hrs] Periodic table with highlight in the orientations of molecules to show different and variance in properties. [12hrs] . Revision problem classes [6hrs] Part B-Analogue chemistry 3-Fundamentals Electron configuration, oxidation number, The ratios of forming molecules. [15hrs] Components and active site. [8 hrs] Identification of general properties [7 hrs]

Learning and Teaching Strategies

استراتيجيات التعليم والتعلم

Strategies	<p>To describe the learning activities of the students and the teaching methods of the staff. Effective module design should result in a varied range of active learning experiences for students, including learning activities which are 'research-like'.</p> <p>Activities should, of course, motivate and encourage deep learning (reflection on wider meanings, rather than superficial memorisation of information). They should also be varied and flexible enough to accommodate different learning styles and orientations, and allow for inclusivity of students from different backgrounds and with different kinds of learning abilities.</p> <p>Learning activities therefore need to include reference to independent, interdependent (peer- supported) and online activities, as well as participation in different kinds of taught class.</p>
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Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب اسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي الغير منتظم للطالب خلال الفصل	100	Unstructured SWL (h/w) الحمل الدراسي الغير منتظم للطالب اسبوعيا	6.66
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Course introduction; What is biology?
Week 2	The nature of life
Week 3	Atomic structure and chemistry of water
Week 4	Carbohydrates, proteins, and lipids
Week 5	Nucleic acids
Week 6	Cells, Part I
Week 7	Exam Mid-term Exam
Week 8	Cells, Part 2
Week 9	Energy & metabolism, Part I
Week 10	Energy & metabolism, Part 2
Week 11	Cellular respiration, Part I
Week 12	Cellular respiration, Part 2
Week 13	Photosynthesis
Week 14	DNA & its role in heredity
Week 15	Final Exam

delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Introduction to Measurement
Week 2	Lab 2: Course intro; Life and the scientific theory
Week 3	Lab 3: Enzyme function I
Week 4	Lab 4: Enzyme function 2
Week 5	Lab 5: Microscope & cell structure
Week 6	Lab 6: Cell behavior
Week 7	Lab 7: Respiration
Week 8	Lab 8 : Photosynthesis

Week 9	Lab 9 : Restriction digest of plasmids
Week 10	Lab 10: Gene transformation
Week 11	Lab 11: Mitosis, meiosis, and gametogenesis
Week 12	Lab 12: Mendelian crosses
Week 13	Lab 13: Outcomes of evolution
Week 14	Lab 14: Blood Typing 1
Week 15	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	FReece J, Urry L, Cain M, Wasserman S, Minorsky P, Jackson, R. (Eds) 9th Global Edition, 2011, Campbell Biology, Pearson Benjamin Cummings.	Yes
Recommended Texts	Butler, J. (2005) Forensic DNA Typing 2nd Ed. Elsevier (MA) ISBN: 9780121479527 Forensic Science – Jackson A.R. & Jackson J., Prentice Hall, ISBN: 130432512	No
Websites	https://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402/subject-content	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A – Excellent	أمتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	General Chemistry		Module Delivery
Module Type	Basic		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	MBO11002		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	1
Administering Department	MBO	College	SC
Module Leader	Firas H. Abdulrazzak	e-mail	Firas_ald2020@yahoo.com
Module Leader's Acad. Title	Professor	Module Leader's Qualification	Ph.D.
Module Tutor	-----	e-mail	-----
Peer Reviewer Name	Dr. Saad Hussein	e-mail	saad_2019@ku.edu.iq
Scientific Committee Approval Date	18/6/2023	Version Number	ق/أ.م/ 805

Relation with other Modules			
العلاقة مع المادة الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية أهداف

Module Aims أهداف المادة الدراسية	<p>1-To develop skills and understanding of different types of elements through the application of techniques.</p> <p>5. To understand metals, physical and chemical properties.</p> <p>6. This course deals with the basic concept of general chemistry.</p> <p>7. To understand periodic table and distribution elements on it</p>
Module Learning Outcomes مخرجات التعليم للمادة الدراسية	<p>9. Recognize the classification of elements.</p> <p>10. List the various terms associated with periodic table.</p> <p>11. Summarize what is meant by a basic chemical property.</p> <p>12. Discuss the reaction and involvement of atoms in chemical reaction.</p> <p>13. Describe bonds, oxidation number, and Lewis term.</p> <p>14. Identify the elements according to conductivity and their applications.</p> <p>15. Discuss the electrons distribution in the atomic levels.</p> <p>16. Identify the primary terms that used to characterized physical and chemical properties.</p>
Indicative Contents المحتويات الإرشادية	<p>Indicative content includes the following.</p> <p>Part A-Circuit Theory Starting from atomic theory and electron distribution in the outer and inner shells the details required make enough information for the principle of chemistry. [14 hrs]</p> <p>Enhance the principle of general chemistry when highlight in more information about losing and acceptance electrons with the abilities for forming any bonds and forming new molecules with new properties. [13 hrs]</p> <p>Periodic table with highlight in the orientations of molecules to show different and variance in properties. [12hrs]</p> <p>·</p> <p>Revision problem classes [6hrs]</p> <p>Part B-Analogue chemistry</p> <p>3-Fundamentals Electron configuration, oxidation number, The ratios of forming molecules. [15hrs]</p> <p>Components and active site. [8 hrs]</p> <p>Identification of general properties [7 hrs]</p>

Learning and Teaching Strategies

استراتيجيات التعليم والتعلم

Strategies	<p>To describe the learning activities of the students and the teaching methods of the staff. Effective module design should result in a varied range of active learning experiences for students, including learning activities which are 'research-like'.</p> <p>Activities should, of course, motivate and encourage deep learning (reflection on wider meanings, rather than superficial memorisation of information). They should also be varied and flexible enough to accommodate different learning styles and orientations, and allow for inclusivity of students from different backgrounds and with different kinds of learning abilities.</p> <p>Learning activities therefore need to include reference to independent, interdependent (peer- supported) and online activities, as well as participation in different kinds of taught class.</p>
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Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب اسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي الغير منتظم للطالب خلال الفصل	100	Unstructured SWL (h/w) الحمل الدراسي الغير منتظم للطالب اسبوعيا	6.66
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Course introduction; What is biology?
Week 2	The nature of life
Week 3	Atomic structure and chemistry of water
Week 4	Carbohydrates, proteins, and lipids
Week 5	Nucleic acids
Week 6	Cells, Part I
Week 7	Exam Mid-term Exam
Week 8	Cells, Part 2
Week 9	Energy & metabolism, Part I
Week 10	Energy & metabolism, Part 2
Week 11	Cellular respiration, Part I
Week 12	Cellular respiration, Part 2
Week 13	Photosynthesis
Week 14	DNA & its role in heredity
Week 15	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Lab 1: Introduction to Measurement
Week 2	Lab 2: Course intro; Life and the scientific theory
Week 3	Lab 3: Enzyme function I
Week 4	Lab 4: Enzyme function 2
Week 5	Lab 5: Microscope & cell structure
Week 6	Lab 6: Cell behavior
Week 7	Lab 7: Respiration
Week 8	Lab 8 : Photosynthesis

Week 9	Lab 9 : Restriction digest of plasmids
Week 10	Lab 10: Gene transformation
Week 11	Lab 11: Mitosis, meiosis, and gametogenesis
Week 12	Lab 12: Mendelian crosses
Week 13	Lab 13: Outcomes of evolution
Week 14	Lab 14: Blood Typing 1
Week 15	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Freece J, Urry L, Cain M, Wasserman S, Minorsky P, Jackson, R. (Eds) 9th Global Edition, 2011, Campbell Biology, Pearson Benjamin Cummings.	Yes
Recommended Texts	Butler, J. (2005) Forensic DNA Typing 2nd Ed. Elsevier (MA) ISBN: 9780121479527 Forensic Science – Jackson A.R. & Jackson J., Prentice Hall, ISBN: 130432512	No
Websites	https://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402/subject-content	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A – Excellent	أمتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
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Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Electricity

Module Information			
معلومات المادة الدراسية			
Module Title	Electricity		Module Delivery
Module Type	Core		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	<u>MPH1106</u>		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	1 st
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	Dr. Nihad K. Ali	e-mail	nihad@kus.edu.iq
Module Leader's Acad. Title	Assoc. Prof	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	//2023	Version Number	1.0

العلاقة مع المواد الدراسية الأخرى

Relation with other Modules

Prerequisite module	None	Semester	
Co-requisites module	Magnetism	Semester	2 nd

Module Aims, Learning Outcomes and

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	<ol style="list-style-type: none"> 1. . 3. . 5. 6.
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	<p>Indicative content includes the following Indicative Contents</p> <p>Unit 1: Electrostatics</p> <p>You'll begin your study of the electric force with an exploration of electric</p>
	<p>أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية</p>
<p>Module Aims</p> <p>أهداف المادة الدراسية</p>	<p>electric charge and using them</p> <p>charges. In addition, Coulomb's law will be stated and its expression derived and used in calculations. Along with this, electric field, dipole moments; potential energy; and torque on an electric dipole and flux of electric field will be defined. Their expressions will be derived and also used to solve problems.</p> <p>Unit 3: Electric Circuits</p> <p>You'll build on your knowledge of electrical components to investigate the nature of electric circuits and explore current, resistance, and power. 25 hr's</p>
	<p>2 Differentiate between conductors and insulators; Explain charging processes. State, derive and use Coulomb's law to solve electric field and electric potential</p>
<p>Learning and Teaching Strategies</p> <p>استراتيجيات التعلم والتعليم</p>	
<p>مخرجات التعلم للمادة الدراسية</p>	<p>plane distribution). Derive the expression for calculating capacitance. Explain the physical basis of Ohm's law and use Ohm's law in solving various problem of resistors connected in parallel and in series.</p>

The main strategy that will be adopted in delivering these modules is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the student,

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	75	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

تقييم المادة الدراسية					
			10% (10)	5, 10	LO #1, 2, and 5
	Assignments		10% (10)	2, 12	LO # 3, 4, and 6
	Projects / Lab.		10% (10)	Continuous	
	Report		10% (10)	13	LO # 3, 4 and 6
			10% (10)		LO # 1-4
	Final Exam		50% (50)	16	All
Total assessment			100% (100 Marks)		

The main strategy to be adopted in delivering this course is to encourage students' participation in the exercises, at the same time refining their skills. This will be achieved through interactive classes, interactive tutorials and by considering type of simple experiments involving some

	Material Covered
Week 1	Electric charge, Charge is conserved, Electric Charge and the Structure of Matter
Week 2	Conductors, Insulators, and Induced Charges, Charging an object
Week 3	Coulomb's law.
Week 4	Electric field, A point charge in an electric field, A dipole in an electric field.
Week 5	Flux of the electric field, Gauss's law.
Week 6	Gauss's law and Coulomb law, An insulated conductor.
Week 7	Electric potential, Potential and the electric field, A group of point charges.
Week 8	Potential due to a dipole, Electric potential energy.
Week 9	Capacitance, Calculating Capacitance.
Week 10	Energy storage in an electric field, Parallel plate capacitor with dielectric.
Week 11	Dielectrics and atomic view.
Week 12	Current and current density, Ohm's law-A microscopic view.
Week 13	Electromotive force, Calculating the current.
Week 14	Potential difference.
Week 15	Multi loop circuits.
Week 16	Preparatory week before the final Exam

تقييم المادة الدراسية Model Evaluation

		Time/number	Weight(Marks)	Week Due	Relevant Learning outcome
Formative assessment	Quizzes	2	10%(10)	5,10	LO#1,2 and 5
	Assignments	2	10%(10)	2,12	LO#3 , 4 and 5
	Projects	1	10%(10)	continuous	LO#3,4 and 6
	Report	1	10%(10)	13	LO#3,4 and 6
Summative Assessment	Midterm Exam	2	10%(10)	7	LO#14
	Final Exam	2	10%(10)	16	ALL

Total assessment	100%
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Delivery Plan (Weekly Lab. Syl	
I Covered	
Week 1-2	Lab 1: Introduction, Measurement, graph drawing and lab safety.
Week 3-4	Lab 2: Verification of Ohm's Low
Week 5-6	Lab 3: A graphical Method for Calculating Ammeter Resistance.
Week 7	Test 1
Week 8-9	Lab 4: Calculating the Value of Unknown Resistance.
10-11	Lab 5: The Ratio Between Lamp Power Dissipation and Resistance Power Dissipation.
Week 12-13	Lab 6: Capacitor Discharge and Calculating Time Constant.
Week 14	Test 2

Reference مصادر التعلم

	Text	Available in the Library?
Required Texts	Physics/John D. Cutnell & Kenneth W. Johnson—9th ed.	
Recommended Texts	Fundamentals of Physics Extended 9th-HQ-Halliday	

العام الدراسي: 2023-2024

الفصل الدراسي : الثاني

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
معلومات المادة الدراسية			
Module Title	General Physics		Module Delivery
Module Type	Basic		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	SCI12012		
ECTS Credits	7		
SWL (hr/sem)	175		
Module Level	1	Semester of Delivery	2
Administering Department	Medical Physics	College	Science
Module Leader	Aqeel Mahdi Kadim	e-mail	dr.akeelm.kadim@kus.edu.iq
Module Leader's Acad. Title	Prof. Assist.	Module Leader's Qualification	Ph.D.
Module Tutor	Aqeel Mahdi Kadhum	e-mail	dr.akeelm.kadim@kus.edu.iq
Peer Reviewer Name	Amer Basim Shaalan	e-mail	ame7@kus.edu.iq
Scientific Committee Approval Date		Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none">1. To have knowledge about General Physics basic principles like Mechanics of liquid and material properties.2. To get skills in solving mathematical problems that related to physics subjects.3. To get practical skills in managing physics experiments in the lab. and record measurements and then calculate required quantities.4. Analysis the physical information in syllabus and be able to make conclusions by joining between physical concepts.5. To be able to apply his knowledge in physics in market.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none">1. Save in memory basic principles and laws of Fluids and material properties.2. Produce scientific concepts by joining between physical principles.3. Joining physical concepts to produce more complicated concepts.4. The ability to make conclusions by analysis the physical information.5. The ability to apply all his knowledge to solve problems in reality.6. To be able to run the devices and apparatus in the lab.7. Assemble devices and make an experiment to prove physical relation.8. Discuss the results get from running experiment in the lab.9. Make reports from theory to conclusion about any physical concept proved in the lab.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <ol style="list-style-type: none">1- You will begin your study with Fluid Properties like density and pressure2- You will learn how to measure the Pressure and Pressure varying with depth3- You will learn Pascal and Archimedes principles4- You will study Fluid dynamics and Bernoulli equation5- You will study thermal Physics (heat, internal energy and specific heat)6- You will study kinetic theory of gases

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and
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	expanding their critical thinking skills. This will be achieved through classes, online lectures and home works and by considering type of simple experiments involving some sampling activities that bring attention of the students.
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Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	97	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4,6	LO #1, 2
	Assignments	2	10% (10)	2, 12	LO # 3, 4, and 5
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 9
Summative assessment	Midterm Exam	1 hr	10% (10)	7	LO # 1-7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الأسبوعي النظري	
	Material Covered
Week 1	Fluid Mechanics: Fluid Density and Pressure
Week 2	Measuring Pressure
Week 3	Pascal principle
Week 4	Archimedes principle of Buoyancy

Week 5	Fluid dynamics and Bernoulli's equation
Week 6	Surface tension

Week 7	Exam
Week 8	Thermal Physics: Heat and internal energy
Week 9	Specific Heat
Week 10	Energy transfer
Week 11	Global warming and Green house gases
Week 12	Calorimeter
Week 13	Ideal gases
Week 14	Kinetic theory of gases
Week 15	Kinetic theory of gases
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1,2	Lab 1,2: Introduction to diagrams and report writing
Week 3,4	Lab 3,4: Surface tension
Week 5,6	Lab 5,6: Center of Pressure
Week 7,8	Lab 7,8: Flow Through a Venturi Meter
Week 9,10	Lab 9,10: Measure the specific Heat capacity of liquid by method of cooling
Week 11,12	Lab 11,12: Measure the specific Heat capacity of Copper by Calendar method
Week 13,14	Lab 13,14: Determination of coefficient of apparent cubic expansivity of a liquid
Week 15	Lab 15: Measure of Specific Heat capacity of Metal by method of mixtures

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Applied Physics by Schaum 2013	No
Recommended Texts	Physics for scientists and engineers by Serway 2004.	No
Websites	https://www.coursera.org/browse/physical-science-and-engineering	

مخطط الدرجات

Grading Scheme

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 -49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Magnetism

Module Information				
معلومات المادة الدراسية				
Module Title	Magnetism		Module Delivery	
Module Type	Core		<input type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input checked="" type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar	
Module Code				
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	1	Semester of Delivery	2 nd	
Administering Department	Type Dept. Code	College	Type College Code	
Module Leader	Dr. Nihad K. Ali		e-mail	nihad@kus.edu.iq
Module Leader's Acad. Title	Assoc. Prof		Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)		e-mail	E-mail
Peer Reviewer Name	Name		e-mail	E-mail
Scientific Committee Approval Date	/ /2023		Version Number	1.0

Relation with other Modules				
العلاقة مع المواد الدراسية الأخرى				
Prerequisite module	Electricity		Semester	1 st
Co-requisites module	None		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	This unit is designed to provide experiences for the student that will lead him/her into an understanding of the similarities and differences among electric, magnetic, and gravitational fields. The inquiry projects used here will support instruction in electrical circuits, gravitational dynamics, and electromagnetic phenomena of all sorts. The students will know how to demonstrate magnetic field and interaction using magnets, and current-carrying wire, show the influence of the magnetic field by a moving charge using an oscilloscope, and demonstrate the electromagnetic induction/ Faraday's law using simple materials
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none">1. Define the terms: magnetic field, magnetic flux and flux density2. Explain and draw magnetic field lines associated with current carrying conductors, and explain the principles of instruments based in it;3. Explain the principles of an oscilloscope;4. State, explain and use Faraday's law of electromagnetic induction;5. Derive expression for force on a current-carrying wire in a magnetic field6. Relate the force (F) to velocity (v), charge (q) and magnetic field (B)7. How electromotive force induced.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	75	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	<ul style="list-style-type: none"> ➤ The magnetic field 1- Magnetism 2- The magnetic field
Week 2	<ul style="list-style-type: none"> ➤ Magnetic field lines Magnetic flux

Week 3	➤ Calculating the magnetic field.
Week 4	➤ Motion of charged particles in magnetic fields
Week 5	➤ The Torque on a Current-Carrying Coil.

Week 6	➤ Ampere's law Applications of ampere's law
Week 7	➤ Magnetic field of current 1- Sources of magnetic field 2- Magnetic field of moving charge.
Week 8	➤ Magnetic field of current element ➤ Biot- Savart law.
Week 9	➤ Magnetic field of a long straight conductor 1- Force between parallel Conductors
Week 10	➤ Magnetic field of circular loop.
Week 11	➤ Induced electromotive force Faraday's law.
Week 12	➤ Induced electric fields Lens's law.
Week 13	➤ Inductance 1- Mutual and self-inductance 2- Energy in an inductor
Week 14	➤ R-L circuit
Week 15	➤ L-C circuit
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)	
المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Biot -Savart Law, the relation between current and magnetic field
Week 2	Lab 2: Biot -Savart Law, the relation between magnetic field and distance.
Week 3	Lab 3: Magnetic Field Induced by a Current-Carrying Wire
Week 4	Lab 4: Current Balance

Week 5	Lab 5: The Transformer
Week 6	Lab 6: Capacitive Reactance
Week 7	Lab 7: Inductor in AC circuits

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Physics/John D. Cutnell & Kenneth W. Johnson —9th ed.	No
Recommended Texts	Fundamentals of Physics Extended 9th-HQ-Halliday	No
Websites	https://engineeringinterviewquestions.com/electrostatic-electrical-engineering-multiple-choice-questions-and-answers/	

Grading Scheme				
مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 -49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
<p>Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.</p>				

Modules Description Form

نموذج وصف المادة الدراسية

الميكانيك

Modules description Information			
معلومات المادة الدراسية			
Modules Title	Mechanics		Modules Delivery
Type	Core		<input checked="" type="checkbox"/> Theory
Course Code	MPHY101		<input checked="" type="checkbox"/> Lecture
ECTS Credits	8		<input checked="" type="checkbox"/> Lab
SWL (hr/sem)	200		<input checked="" type="checkbox"/> Tutorial
			<input checked="" type="checkbox"/> Practical
			<input type="checkbox"/> Seminar
Modules Level	1 st	Semester of Delivery	2 nd
Administering Department	Medical Physics	College	Science
Modules Leader	Assit. Prof. Dr. Akeel M. Kadim	e-mail	Dr.akeelm.kadim@kus.edu.iq
Modules Leader's Acad. Title	Assistant Professor	Modules Leader's Qualification	Ph.D.
Modules Tutor	non	e-mail	
Peer Reviewer Name	non	e-mail	
Scientific Committee Approval Date	01/06/2023	Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite course	The course to develop the student's ability to understand and apply a number of issues based on basic mechanical principles, and to provide the student with the ability to interpret some natural phenomena related to movement and their applications, and to build the basic basis for understanding the subsequent courses.	Semester	
Co-requisites course	General Physics, Biomechanics	Semester	1 st

Aims of a Course, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Aims Course

أهداف المادة
الدراسية

- 1- Providing the student with a cognitive skill about the basic concepts of mechanics physics.
- 2- Introducing students to the most important principles of mechanics and properties of matter.
- 3- Introduce the student to the mechanical properties and methods of their application.
- 4- Providing the student with knowledge of how to calculate the laws of dynamics and forces.
- 5- Introducing the student to mechanical systems

Course Learning

Outcomes

مخرجات التعلم للمادة
الدراسية

- 1- Enabling students to obtain knowledge and understanding of the topics of body mechanics and movement.
- 2- Enable students to obtain knowledge and understanding of body mechanics applications and conduct various practical experiments.
- 3- Enable students to obtain knowledge and understanding of the use of basic physical laws in mechanics and their use in solving problems.

Indicative Contents

Indicative content includes the following.

Part A – Mechanic Introduction

Fundamental of Mechanics Concept and analysis ,Scale Conversion and analysis of coordinates [15 hrs]

Vectors analysis and Types of Vectors Product Operations. [10 hrs]

Motion Types and Acceleration in. [15 hrs]

Free Fall in mechanics, Fundamental of acceleration and Constant Acceleration [15 hrs], Free Fall in mechanics, Fundamental of acceleration and Constant Acceleration. [15 hrs]

The Projection, Range of the Projection and mechanic coordinates of Projection [15 hrs] , Circular Motion in Two Dimension and Circular motion in three dimension [15hrs]

The Force, Types of force, Analysis of the forces in coordinates and Distance [15hrs]

The Work, Mechanical analysis of work, Energy, Types of Energy and Conservation Energy [15 hrs]

Part B- Newton's Law, Application in Mechanical problem and the Friction Forces [10 hrs] , The General of Gravitation Law and Application in Mechanical problem [15hrs]

Introduction of Biomechanics and Types of biomechanics in human body [10 hrs]

Prosthetic limb mechanics and Types of Prosthetic limb in human body [15hrs]

Solve Applications in Prosthetic limb [10hrs]

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	<ol style="list-style-type: none">1- Method of giving lectures, explanation and clarification.2- Student groups.3- E-learning within the university.4- Application of education.5- Experiential learning.
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Student Workload (SWL)

الحمل الدراسي للطلاب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	102	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	98	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	6.5
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	200		

Module Evaluation

تقييم المادة الدراسية

		Time/ Nu mbe r	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Week no.	Material Covered
Week 1	Introduction, Fundamental of Mechanic and Matter Properties
Week 2	Scale Systems, System scale conversion and Concept mechanical coordinate
Week 3	The Vectors, Type vectors, Oprations vectors and Physics laws of Operation
Week 4	The Motion, Type of motion, Concept mechanics in Straight Line
Week 5	Free Fall in mechanics, Fundamental of acceleration and Constant Acceleration
Week 6	The Motion in coordinates, Motion in Two Dimension and Motion in three dimension

Week 7	The Projection, Range of the Projection and mechanic coordinates of Projection
Week 8	Circular Motion in Two Dimension and Circular motion in three dimension
Week 9	The Force, Types of force, Analysis of the forces in coordinates and Distance
Week 10	The Work, Mechanical analysis of work, Energy, Types of Energy and Conservation Energy
Week 11	Newton's Law, Application in Mechanical problem and the Friction Forces
Week 12	The General of Gravitation Law and Application in Mechanical problem
Week 13	Introduction of Biomechanics and Types of biomechanics in human body
Week 14	Prosthetic limb mechanics and Types of Prosthetic limb in human body
Week 15	Solve Applications in Prosthetic limb

Week 16

Final Exam duration

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

Week no.	Material Covered
Week 1	Lab 1: Introduction graphical drawing
Week 2	Mathmatical Application
Week 3	Lab 2: Simple Pendulem
Week 4	Mathmatical Application
Week 5	Lab 3: Hook'sLaw
Week 6	Mathmatical Application

Week 7	Lab 4: The Air Truck
Week 8	Mathmatical Application
Week 9	Lab 5: Young's Modules
Week 10	Mathmatical Application
Week 11	Lab 11: Report for any Mechanical device
Week 12	Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Advanced Mechanics by Eric Poisson, 2008, 164	Yes
Recommended Texts	1. Booch A. Gorege, Mechanics and Material Properties 16th Edition , Welly, 2020.	yes
Websites		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information

معلومات المادة الدراسية

Module Title	<u>Computer Programing</u>	Module Delivery	
Module Type	<u>Core</u>	<input checked="" type="checkbox"/> Theory <input checked="" type="checkbox"/> Lecture <input checked="" type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input checked="" type="checkbox"/> Practical <input checked="" type="checkbox"/> Seminar	
Module Code	<u>MPHY107</u>		
ECTS Credits	<u>4</u>		
SWL (hr/sem)	<u>100</u>		
Module Level	UGx		
Administering Department	Medical Physics	College	Science
Module Leader	Dr. Nada Abdullah Rasheed	e-mail	Nadaar63@kus.edu.iq
Module Leader's Acad. Title	Assistant Professor	Module Leader's Qualification	Ph.D.
Module Tutor	Lecturer Eng. Ahmed Sobri	e-mail	eng.ahmed.sabri@kus.edu.iq
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	17/06/2023	Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	Computer	Semester	First
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	<ol style="list-style-type: none">1. This course provides a manual to operate MATLAB. It presents a detailed course of MATLAB code capabilities required for general programming.2. MATLAB is a high-performance language of technical computing. It integrates calculation, visualization and programming in an easy-to-use environment
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	<p>where problems and solutions are expressed in writing programs and implementing algorithms through the graphical user interface. MATLAB is an interactive system whose basic data element is an arrays that does not require dimensions. This allows solving many technical computing problems, especially those with matrix and vector formulations.</p> <p>3. This course includes interactive lectures and practical applications to enable the student to apply algorithms for image processing and apply enhancement methods. In addition, it enables the student to rotate and scale the image by applying many examples.</p>
<p>Module Learning Outcomes</p> <p>مخرجات التعلم للمادة الدراسية</p>	<p>The learning outcomes of studying computer programming include:</p> <ol style="list-style-type: none"> 1. Providing the student with cognitive skills from the basic concepts of programming language and enables them to the skills to run the MATLAB program and dealing with the MATLAB windows and all the types of Statements. 2. Enables students to understood and run all Statements (Loop, Control, Branch), reading and writing data file. 3. Providing the student with cognitive skills to deal with operations with Arrays or Matrices. 4. Providing the student with skills in the technique of dealing with ready-made functions in the language of MATLAB. 5. Providing the student with skills in the Plotting Capabilities, Subplots, 2D Plotting, 3 D Plotting 6. Enables students to deal with the Files: M-files, and functions. 7. They will also learn about algorithms and how to apply them to solve problems. 8. Additionally, they will acquire skills in opening graphical interfaces using the GUIDE UI. 9. Furthermore, the course will cover the types of images and their importance in processing. 10. Students will be provided with digital image processing skills in the MATLAB language.
<p>Indicative Contents</p> <p>المحتويات الإرشادية</p>	<p>Indicative content includes the following.</p> <p style="text-align: right;"><u>Part A</u></p> <p>Logical Operators, Algorithms and Control Structures, Advantages of algorithm. [5 hrs]</p> <p style="text-align: right;"><u>Part B</u></p> <p>MATLAB Windows: Window layout, Command Windows, History Window, Workspace Types of Statements, Window, Editor Window, Figure Window, General MATLAB Code: Constant Value, Variables, Numerical. Rules for Statement Editing, Arithmetic Statement. Variable, Logical Variable, Character Variable, Arrays and Matrices: Index Concept Numerical Arrays and Matrices, Operations on one Arrays or Matrices, N-Dimension Matrices, Logical Arrays, character and String Variables. [12 hrs]</p> <p style="text-align: right;"><u>Part C</u></p> <p>Operators, Expression, Loop Statement, Control Statement, Branch Statement, reading and writing data file, Plotting: , Plotting Elementary Function- XY- plotting functions, Generating Sub-Plots, Create Line Plot from Matrix, Specify Line Style, Specify Line Style and Color, [12 hrs] Specify Line Width, and Color, Add Title and Axis Labels.</p> <p style="text-align: right;"><u>Part D</u></p>

c) , a) Elementary Mathematical Functions, b) User Defined Functions Functions & Files, d) Working with Data Files, Introduction to Graphical ,Advanced Function Programming Set the Window Size in GUIDE, Layout the Simple ,User Interfaces (GUI) using GUIDE GUIDE UI. [10 hrs]
Part E
 •Intensity (or grayscale) images, •, Indexed images •, Programming Techniques: Image Types , Convert signals from an image sensor into digital images, RGB (or truecolor) images Convert Between Image Types, Convert Between Data Types. [8 hrs] ,Examples
Part F
 Image Rotation and Scale, Examples, Define Image Processing, Image processing in MATLAB, Read Image, Show Image, Examples, Improve clarity, and remove noise and other . [8 hrs] artifacts, (Enhancement methods in image processing)

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies

When it comes to teaching computer programming, it is important to use strategies that engage students, promote active learning, and facilitate the development of problem-solving and critical-thinking skills. Here are some effective teaching strategies for computer programming:

1. Hands-on coding practice: must provide ample opportunities for students to write code and practice programming through assign coding exercises, projects, and challenges that allow students to apply the concepts they have learned.
2. Pair programming: should encourage students to work in pairs, with one student as the "driver" who writes the code and the other as the "navigator" who reviews the code and offers suggestions. This collaborative approach promotes active learning, communication, and problem-solving skills.
3. Code reviews and feedback: Regularly review and provide feedback on students' code. Offer constructive criticism and guidance on how to improve their programming skills. Encourage students to review and provide feedback to their peers, fostering a culture of collaboration and continuous improvement.
4. Project-based learning: Assign projects that require students to design and develop software applications or solve real-world problems using programming. Project-based learning provides a context for applying programming skills, encourages creativity, and promotes deeper understanding of programming concepts.
5. Demonstrate coding practices: Model good coding practices by writing clean, well-structured code. Explain the reasoning behind coding decisions, such as variable names, code organization, and documentation. Show examples of code refactoring and optimization to help students understand the importance of writing efficient code.
6. Use visual aids and interactive resources: Utilize visual aids, diagrams, flowcharts, and interactive programming environments to explain

	<p>programming concepts. Visual representations can help students grasp abstract concepts and understand program flow.</p> <p>7. Real-world examples and applications: Connect programming concepts to real-world examples and applications. Illustrate how programming is used in various domains, such as web development, mobile app development, data analysis, or game development. This helps students understand the practical applications of programming and fosters motivation.</p> <p>8. Updated with technology trends: Stay informed about the latest programming languages, frameworks, and tools. Integrate current and relevant examples into your teaching to expose students to industry-relevant skills.</p>
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Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	55	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	3.7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	45	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	3
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	5% (5)	4	LO # 1, 2, 3, 7 and 11
	Assignments	2	10% (10)	5, 7, 14	LO # 4, 5, 6, 10, 11, 12 and 13
	Projects / Lab. Report	1	20% (20)	Continuous	
	Report	1	5% (5)	10	LO # 8 and 9
Summative assessment	Midterm Exam	2hr	10% (10)	9	LO # 1-8
	Final Exam	2hr	50% (50)	16	All
Total assessment		100% (100 Marks)			

Delivery Plan (Weekly Syllabus)

المنهاج الأسبوعي النظري

Material Covered	
Week 1	Logical Operators, Algorithms and Control Structures, Advantages of algorithm, Examples

Week 2	MATLAB Windows: Window layout, Command Windows, History Window, Workspace Window, Editor Window, Figure Window.
Week 3	Constant Types of Statements, Rules for Statement Editing, Arithmetic Statement. General MATLAB Code: Value, Variables, Numerical. Variable, Logical Variable, Character Variable.
Week 4	Arrays and Matrices: Index Concept Numerical Arrays and Matrices, Operations on one Arrays or Matrices, N-Dimension Matrices, Logical Arrays, character and String Variables.
Week 5	Operators, Expression, Loop Statement, Control Statement, Branch Statement, reading and writing data file.
Week 6	Plotting: , Plotting Elementary Function- XY- plotting functions, Generating Sub-Plots, Create Line Plot from Matrix, Specify Line Style, Specify Line Style and Color, Specify Line Width, and Color, Add Title and Axis Labels.
Week 7	c) Advanced Function , a) Elementary Mathematical Functions, b) User Defined Functions Functions & Files, .d) Working with Data Files ,Programming
Week 8	Introduction to Graphical User Interfaces (GUI) using GUIDE
Week 9	Set the Window Size in GUIDE, Layout the Simple GUIDE UI
Week 10	RGB (or •Intensity (or grayscale) images, •, Indexed images •, Programming Techniques: Image Types .truecolor) images
Week 11	Convert signals from an image sensor into digital images, Examples
Week 12	Convert Between Image Types, Convert Between Data Types, Examples
Week 13	Image Rotation and Scale, Examples
Week 14	Define Image Processing, Image processing in MATLAB, Read Image, Show Image, Examples
Week 15	Examples ,Improve clarity, and remove noise and other artifacts, (Enhancement methods in image processing)
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Constant Value, Variables, Numerical. Variable, Logical Variable, example of Lab 1: MATLAB Windows, Character Variable.
Week 2	Lab 2: Examples of Arrays and Matrices: Index Concept Numerical Arrays and Matrices, Operations on one Arrays or Matrices, N-Dimension Matrices, Logical Arrays, character and String Variables.
Week 3	Lab 3: Examples of Operators, Expression, Loop Statement, Control Statement, Branch Statement, reading and writing data file.
Week 4	Lab 4: Examples of Plotting: , Plotting Elementary Function- XY- plotting functions, Generating Sub-Plots, Create Line Plot from Matrix, Specify Line Style, Specify Line Style and Color, Specify Line Width, and Color, Add Title and Axis Labels.
Week 5	Set the Window Size ., Introduction to Graphical User Interfaces (GUI) using GUIDE Lab 5: Functions & Files in GUIDE, Layout the Simple GUIDE UI
Week 6	RGB •Intensity (or grayscale) images, •, Indexed images •, Lab 6: Programming Techniques: Image Types , Convert signals from an image sensor into digital images, Examples.images
Week 7	Lab 7: Examples of convert between Image Types, Convert Between Data Types, Examples of Image Rotation and Scale, Read Image, Show Image.

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1- Matlab: Numerical Computing, Tutorials point,2014. 2- Alasdair McAndrew, An Introduction to Digital Image Processing with Matlab, Notes for SCM2511 Image, Processing 1, Semester 1, 2004, School of Computer	Yes

	Science and Mathematics, Victoria University of Technology. 3- The MathWorks, Image Processing Toolbox For Use with MATLAB, Version 2, COPYRIGHT 1993 - 2000.	
Recommended Texts	1- Brian R. Hunt, Ronald L. Lipsman, Jonathan M. Rosenberg, R. Coombes, John E. Osborn, and Garrett J. Stuck, A Guide to MATLAB for Beginners and Experienced Users, Cambridge, University Press, 2001	No
Websites		

Grading Scheme مخطط الدرجات				
Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required
Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

MODULE DESCRIPTION FORM

Module Information		
Module Title	English Language	Module Delivery
Module Type	Basic	<input checked="" type="checkbox"/> Theory
Module Code	KUS12011	<input type="checkbox"/> Lecture

ECTS Credits	2			<input type="checkbox"/> Lab
SWL (hr/sem)	50			<input type="checkbox"/> Tutorial
				<input type="checkbox"/> Practical
				<input type="checkbox"/> Seminar
Module Level	1 st	Semester of Delivery		2 nd
Administering Department	Medical Physics	College	Science	
Module Leader	Jaafer Fadhel Odah	e-mail	E-mail	
Module Leader's Acad. Title	Professor	Module Leader's Qualification		Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail	
Peer Reviewer Name	Name	e-mail	E-mail	
Scientific Committee Approval Date	21/09/2023	Version Number	1.0	

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

<p>Module Aims</p> <p>أهداف المادة انذراسيڤت</p>	<p>a. to enable the learner to communicate effectively and appropriately in real life situation:</p> <p>b. to use English effectively for study purpose across the curriculum;</p> <p>c. to develop interest in and appreciation of Literature;</p> <p>d. to develop and integrate the use of the four language skills i.e. Reading, Listening, Speaking and Writing; e.to revise and reinforce structure already learnt</p>
<p>Module Learning Outcomes</p>	<ol style="list-style-type: none"> 1. Enhance the efficiency of student to use many reference or books which reported in English language. 2. To develop the competence that students need to read a wide range of general and academic texts in English. 3. To develop students competence in reference skills [locating and evaluating information needed for assignments in a library. 4. demonstrate adequate general and detailed comprehension of a range of advanced general and academic texts 5. undertake research in an academic library
<p>Indicative Contents</p>	<p>Indicative content includes the following.</p> <p>Attention will be given to both grammatical form and communicative function. Controlled practice will be given to consolidate form and meaning. Classroom activities will be designed to maximize active participation and use of the target language. The Language Labs will be used for students to work on their own individual needs and problems.</p> <p>Students' language skills will improve through completion of a range of tasks, both individual and group-based.</p> <p>In this programme module the Teacher / Tutor will ensure that the Learner uses correct pronunciation and grammatical constructions , to include: sentence connectors, for example, and, or, with, but, then question words, for example, why, where, who, when when communicating in the English language.</p> <p>An ability to read a minimum of 10 introductory level reading texts, on both social information and work-related information. In reading the texts, the Learner will complete tasks to demonstrate an understanding of the context and content of the</p>

	<p>text An ability to read the message being communicated in a minimum of 6 common notices and signs ☒ The capacity to complete a simple form requiring personal details such as name, address, phone number, age, date of birth The collection of work may include work sheets, cloze tests, multiple choice statements or other appropriate evidence in the form of written, oral, graphic, audio, visual or any combination of these. Any audio or video evidence must be provided on tape.</p> <p>Make different activity for the student to be able to use huge amount of sources such report, books, journals to enhance the abilities and skills.</p> <p>Revision problem classes [6 hrs]<u>Part</u></p> <p><u>B -</u></p> <p>Develop the toking and spooking skills</p>
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Learning and Teaching Strategies	
Strategies	<p>Use will be made of individual, pair and groupwork to develop students abilities to read increasingly complex academic and general texts. Other skills will be practised and developed within this modules and students will be expected to work extensivelyout of class to develop their reading fluency.</p> <p>Students will study the specialist vocabulary in the context of published listening and reading materials produced particularly for these ESP situations and also explore lexis within authentic sources.</p> <p>Groups will be managed according to specialist areas and students will be expectedto work extensively outside class contact time. Emphasis will be placed on integratingthis module to work done within the International Foundation option module programme</p>

Student Workload (SWL)			
Structured SWL (h/sem)	33	Structured SWL (h/w)	2
Unstructured SWL (h/sem)	17	Unstructured SWL (h/w)	1
Total SWL (h/sem)	50		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects	1	10% (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	1 hr	10% (10)	7	LO # 1-7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Reading Comprehension
Week 2	Writing I
Week 3	Writing I
Week 4	Learning English through Literature
Week 5	Advanced Reading
Week 6	Linguistics
Week 7	Advanced Writing
Week 8	Grammar I
Week 9	Grammar II

Week 10	Introduction to Literature
Week 11	Debate and Dialogue
Week 12	General Translation
Week 13	Listening & Speaking
Week 14	Listening & Speaking
Week 15	Exam
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	Haarman et al. <i>Reading Skills for the Social Sciences</i> . OUP Cotton, D. et al. <i>Business Class</i> . Nelson	NO
Recommended Texts	An appropriate selection of Collins Specialist English Dictionaries, ArangeofA-leveltypeStudyGuides	No
Websites		

Grading Scheme

Group	Grade		Marks (%)	Definition
Success Group (50 - 100)	A - Excellent		90 - 100	Outstanding Performance
	B - Very Good		80 - 89	Above average with some errors
	C - Good		70 - 79	Sound work with notable errors
	D - Satisfactory		60 - 69	Fair but with major shortcomings
	E - Sufficient		50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail		(45-49)	More work required but credit awarded
	F – Fail		(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

نموذج وصف مادة اللغة العربية

Module Information			
معلومات المادة الدراسية			
Module Title	اللغة العربية		Module Delivery
Module Type	Basic		<input checked="" type="checkbox"/> Theory <input type="checkbox"/> Lecture <input type="checkbox"/> Lab <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	KUS12010		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	1	Semester of Delivery	
Administering Department	Medical Physics	College	Science
Module Leader	Dr. Ahmed kahlaf	e-mail	Ahmed.k@kus.edu.iq
Module Leader's Acad. Title	lecturer	Module Leader's Qualification	Ph.D.
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	none	e-mail	none
Scientific Committee Approval Date	21/09/2023	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

<p>Module Aims أهداف المادة الدراسية</p>	<ol style="list-style-type: none"> 1- نعلم العربية السليمة كونها اللغة الرسمية للوطن 2- اللغة جوهر الهوية ورمزها 3- اللغة تختلف عن اللهجة، فالأولى عالمية والثانية محلية 4- نوظف المفردات الفصيحة في الصياغة الأكاديمية للبحوث العلمية مترجمة بنظيرها الفصحى 5- التمكن من كتابة البحوث والمقالات ذات المحتوى العلمي الصرف باللغة العربية الفصحى 6- نجنب الأخطاء الشائعة في الكتابة واختيار المفردات الصائبة 7- اتراء الخزين المعجمي لدى الطالب للمساعدة في بناء كاريهما التواصل الكلامي 8- الاطلاع على نماذج من الأدب العربي شعرا ونثرا لما لها من اساس في بناء الجانب الثقافي المتنوع لدى الطالب 9- كتابة الأعداد بتمكن فضلا الكتابة الصحيحة في صياغة الطلبات الرسمية 10- التعرف على درس الصوتي في اللغة العربية وعلاقته بعلم القزباء
<p>Module Learning Outcomes مخرجات التعلم للمادة الدراسية</p>	<p>عند انتهاء مفردات المادة الدراسية يكون الطالب متمكنا من:</p> <ol style="list-style-type: none"> 1- الكتابة السليمة خالية من الأخطاء 2- التعبير العلمي الأكاديمي الصحيح 3- استعمال المفردات الفصيحة توظيفا ونطقا 4- اضافة رصيد لغوي ومفاهيم جديدة لمعاني الكلمات 5- القدرة على المخاطبة الإدارية في الطلبات الرسمية
<p>Indicative Contents المحتويات الإرشادية</p>	<ol style="list-style-type: none"> 1- لكل تخصص لغة التي تسمى اليه، وتدل عليه، ولغة كل علم تتبع من طبيعة كنهه، فالإختصاصات العلمية لها معجم خاص بها يجبر عن جوهرها ومضمونها، فضلا عن المصطلحات الخاصة بها التي تدل عليها، وكذلك المصادر العلمية التي يرجع اليها، والحل كما في اللغة الانبئية؛ فهي ايضا لها مفرداتها وطريقة كتابتها والتعبير بها وعبرها، ومصطلحاتها الخاصة بها التي تعبر عنها وتدل عليها. [4 hrs] 2- المعالج - بشكل عام - على اختلاف موارها تمثل محتوى وكثفا لمفردات اي لغة مقترنة بالشرح والتفسير لتلك المفردات، اما المعالج في اللغة العربية فهي واسعة ومتنوعة؛ فهناك معالج غير معجمات اللغة، فالعربية فيها اول معجم جغرافي في التاريخ، معجم البلدان لـ (ياقوت الحموي)، فضلا عن المعالج المتخصصة في جزئية معينة، مثل معجم البلاغة، فضلا عن تنوع المدارس في تكليف المعالج وتبويبها وطريقة البحث عن المفردة فيها. [4 hrs] 3- العلامة تدرج ضمن حقل علم السيمياء او السيميائية، وعلامات الترفيم من المواضيع المهمة بالأخص في البحوث الأكاديمية، بغض النظر عن التخصص، سواء كان التخصص علميا، او انسانيًا، من هنا تكفي أهمية علامات الترفيم؛ فلها دور سيميائي، ودلالي مهم في الكتابة النصية وفي بناء النص، فهي تسهل الفهم على القارئ، وتوضح المعنى المقصود، عبر القراءة والتلفظ بالعجاء، فعلامات الترفيم خير وسيلة لإظهار الصراحة وبيان الوضوح في الكلام المكتوب؛ لأنه يدل الناظر إلى تلك العلامات الاصطلاحية وعلى العلاقات التي تربط أجزاء الكلام بعضها ببعض بوجه عام، وأجزاء كل جملة بوجه خاص، وكما يقول المتخصصون عن علامات الترفيم: بأن الوقف ليس مستقلاً وإنما هو من نوابغ التفكير، أي: إن الشكوك المقررة بمقادير مضبوطة في مواضع معينة، ليست مجرد محطات تنصية بالمعنى البيولوجي للتنفس، وإنما في المقام الأول وقفت محتوى فالجدة من الشاحبة اللغوية ليست بأن يستعيد القارئ نفسه، بل المهم أن يتعاطى القارئ السكت بمقادير معلومة، وفي مواضع محددة من السلسلة المنطوقة رفعا للبس، وصوتنا لمقصود المتكلم عن التبدل، فهذه العلامات تجسد لمشاعر الكاتب وقصداته فيها. [6 hrs]

Week 9	كتابة الهمزة بداية الكلام وآخره
Week 10	المبتدأ والخبر – مهارات كتابة العدد
Week 11	المفاعيل / المفعول به – المفعول لأجله
Week 12	المفعول معه – المفعول فيه – المفعول المطلق
Week 13	النثر العربي
Week 14	الأخطاء الشائعة – طريقة كتابة الطلبات الرسمية
Week 15	نملاذج مختارة من الشعر الجاسي والشعر الحديث
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Texts	Available in the Library?
Required Texts	كتاب: العربية الجامعية لغير المتخصصين / د. عيده الراجحي كتاب: النحو التطبيقي / د. عيده الراجحي	كلا
Recommended Texts	الصرف التطبيقي / د. عيده الراجحي النحو الوافي / عباس حسن تاريخ الادب العربي / توفيق ضيف	كلا
Websites	شبكة الفصحى لعلوم اللغة العربية	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A – Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (فقد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.