



وزارة التعليم العالي والبحث العلمي

وحدة الإشراف والتقويم العلمي

شعبة ضمان الجودة والاعتماد الأكاديمي

## استمارة وصف البرنامج الأكاديمي للكليات للعام الدراسي 2022-2023

الجامعة: جامعة الأنبار

الكلية /المعهد: كلية علوم الحاسوب وتكنولوجيا المعلومات

القسم العلمي: قسم نظم المعلومات

تاريخ ملء الملف: ٢٠٢٣/ ٢/٦

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مصادقة السيد العميد

# نموذج وصف البرنامج الأكاديمي

## مراجعة أداء مؤسسات التعليم العالي ((مراجعة البرنامج الأكاديمي))

يوفر وصف البرنامج الأكاديمي هذا إيجازاً مقتضياً لأهم خصائص البرنامج ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنًا عما إذا كان قد حقق الاستفادة القصوى من الفرص المتاحة . ويصاحبه وصف لكل مقرر ضمن البرنامج

١. المؤسسة التعليمية	جامعة الانبار
٢. القسم الجامعي / المركز	كلية علوم الحاسوب وتكنولوجيا المعلومات / قسم نظم المعلومات
٣. اسم البرنامج الأكاديمي	نظم المعلومات
٤. اسم الشهادة النهائية	بكالوريوس نظم المعلومات
٥. النظام الدراسي	فصلي
٦. برنامج الاعتماد المعتمد	ABET
٧. المؤثرات الخارجية الأخرى	
٨. تاريخ إعداد الوصف	10/ 2 / 2022
٩. أهداف البرنامج الأكاديمي	

### ١٠. مخرجات التعلم المطلوبة وطرائق التعليم والتعلم والتقييم

١. المعرفة والفهم:
  - يكون للطالب القدرة على المعرفة والفهم للمبادئ والنظريات والاساسيات في نظم المعلومات.
  - يكون للطالب القدرة على فهم المواضيع العلمية الحديثة والمتقدمة في اختصاص نظم المعلومات.
  - يكون الطالب قادر على فهم اللغات البرمجية الخاصة بدراسة اختصاصه.
  - يكون الطالب قادر على حل المشاكل واسس تطبيقاتها.
  - يكون الطالب قادر على فهم اسس عمل الاجهزة المختبرية التي تستخدم في مجال اختصاصه.

ب. المهارات الخاصة بالموضوع

١٢. الشهادات والساعات المعتمدة	١١. بنية البرنامج ١١.١ السنة الدراسية الأولى			
	المستوى / السنة	رمز المقرر أو المساق	اسم المقرر أو المساق	الساعات والوحدات المعتمدة
4	فصلي	CSIT107	البرمجة بلغة 1 C++	3
3	فصلي	CSIT110	أساسيات تكنولوجيا المعلومات ١	2
3	فصلي	CSIT109	التصميم المنطقي ١	2
3	فصلي	ISDC115	الرياضيات ١	3
2	فصلي	UOA140	اللغة الانكليزية	2
1	فصلي	UOA135	الحريات وحقوق الإنسان	1
4	فصلي	CSIT108	البرمجة بلغة 2 C++	3
3	فصلي	CSIT112	أساسيات تكنولوجيا المعلومات ٢	2
3	فصلي	CSIT117	مبادئ نظم المعلومات	3
3	فصلي	CSIT111	التصميم المنطقي ٢	2
3	فصلي	ISDC116	الرياضيات ٢	3
1	فصلي	UOA137	اللغة العربية	1
٣3	عدد الوحدات الكلية			
				٢٦

١٤. الشهادات والساعات المعتمدة	١٣. بنية البرنامج ١١.١ السنة الدراسية الثانية			
	المستوى / السنة	رمز المقرر أو المساق	اسم المقرر أو المساق	الساعات والوحدات المعتمدة
4	فصلي	ISDC201	هياكل البيانات	3
2	فصلي	ISDE203	الرياضيات المتقدمة	2
2	فصلي	ISDC215	النظرية الاحتمالية ١	2

2	2	تحليل وتصميم نظم المعلومات	ISDC202	فصلي
3	2	تفاعل الإنسان مع الحاسوب	ISDC204	فصلي
4	3	البرمجة الكيانية ١	ISDC207	فصلي
1	1	الحريه و الديمقراطية	UOA201	فصلي
4	3	الخوارزميات	ISDE317	فصلي
3	2	التحليل العددي	ISDC303	فصلي
2	2	النظرية الاحتمالية ٢	ISDE218	فصلي
3	2	تحليل وتصميم قواعد البيانات	ISDC205	فصلي
3	2	تصميم صفحات الانترنت	ISDE219	فصلي
4	3	البرمجة الكيانية ٢	ISDE211	فصلي
٢	٢	اللغة الانكليزية	UOA240	فصلي
٣٩	٣١	عدد الوحدات الكلية		
١٦. الشهادات والساعات المعتمدة	١٥. بنية البرنامج			
	١١.١ السنة الدراسية الثالثة			
	الساعات والوحدات المعتمدة	اسم المقرر أو المساق	رمز المقرر أو المساق	المستوى / السنة
3	2	البرمجة المرئية ب (C# Net) 1	ISDC308	فصلي
2	2	إدارة المشاريع	ISDC307	فصلي
3	2	نظم إدارة قواعد البيانات ١	ISDC306	فصلي
3	2	شبكات الحاسبة ١	ISDC305	فصلي
3	2	المترجمات ١	ISDE321	فصلي
٢	٢	انكليزي	UOA340	فصلي
2	2	نظم ادارة المعلومات	ISDC327	فصلي
2	2	هندسة البرامجيات	ISDC309	فصلي
3	2	البرمجة المرئية ب (C# Net) 2	ISDE323	فصلي
2	2	قواعد بيانات موزعه	ISDE414	فصلي
3	2	شبكات الحاسبة ٢	ISDE325	فصلي
3	2	المترجمات ٢	ISDE324	فصلي
٢	٢	نظم دعم القرار		فصلي
34	26	عدد الوحدات الكلية		

١٨. الشهادات والساعات المعتمدة	١٧. بنية البرنامج ١١.١ السنة الدراسية الرابعة
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المستوى / السنة	رمز المقرر أو المساق	اسم المقرر أو المساق	الساعات والوحدات المعتمدة	
فصلي	CSIT402	حوسبة الوسائط المتعدد ١	2	3
فصلي	ISDC406	أمنية نظم المعلومات ١	2	2
فصلي	ISDC405	الذكاء الاصطناعي ١	2	3
فصلي	ISDE422	تطوير تطبيقات الانترنت ١	2	3
فصلي	ISDC403	مستودع البيانات	2	2
فصلي	ISDE414	استرجاع المعلومات ومحركات البحث	2	٢
فصلي	CSDE423	منهج البحث	2	2
فصلي	ISDE427	حوسبة الوسائط المتعدد ٢	2	3
فصلي	ISDE425	أمنية نظم المعلومات ٢	2	2
فصلي	ISDE429	الذكاء الاصطناعي ٢	2	3
فصلي	ISDE313	تجارة الكترونيه	2	3
فصلي	ISDC404	تنقيب البيانات	2	2
فصلي	UOA440	انكليزي	٢	٢
فصلي	ISDE419	برمجة تطبيقات الموبايل ٢	2	3
فصلي	ISDC407	مشروع في نظم المعلومات	12	6
عدد الوحدات الكلية			40	41

١٩. التخطيط للتطور الشخصي
٢٠. معيار القبول (وضع الأنظمة المتعلقة بالالتحاق بالكلية أو المعهد) . اعتماد شروط القبول للطلاب وفق لوائح وزارة التعليم العالي والبحث العلمي (القبول المركزي) . المقابلة الشخصية للقسم. . ان يكون لائق بالفحص الطبي . معدل الثانوية العامة . . الطاقة الاستيعابية .
٢١. أهم مصادر المعلومات عن البرنامج . احتياجات السوق . التوجهات المحلية للمحافظة . . الدراسات والاستبيانات.

## مخطط مهارات المنهج

يرجى وضع اشارة في المربعات المقابلة لمخرجات التعلم الفردية من البرنامج الخاضعة للتقييم

مخرجات التعلم المطلوبة من البرنامج																المرحلة الاولى			
المهارات العامة والمنقولة (أو) المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي				مهارات التفكير				المهارات الخاصة بالموضوع				المعرفة والفهم				أساسي أم اختياري	اسم المقرر	رمز المقرر	السنة / المستوى
4د	3د	2د	1د	4ج	3ج	2ج	1ج	4ب	3ب	2ب	1ب	4أ	3أ	2أ	1أ				
							√				√			√	√		البرمجة بلغة C++ 1	CSIT 107	فصلي
							√				√			√	√		أساسيات تكنولوجيا المعلومات ١	CSIT 110	فصلي
							√				√			√	√		التصميم المنطقي ١	CSIT 109	فصلي
							√				√			√	√		الرياضيات ١	ISDC 115	فصلي
							√				√			√	√		اللغة الانكليزية	UOA 140	فصلي
							√				√			√	√		الحريات وحقوق الإنسان	UOA 135	فصلي
							√				√			√	√		البرمجة بلغة C++ 2	CSIT 108	فصلي

							√				√			√	√		أساسيات تكنولوجيا المعلومات ٢	CSIT 112	
							√				√				√		مبادئ نظم المعلومات	CSIT 117	فصلي
							√				√				√		التصميم المنطقي ٢	CSIT 111	
							√			√	√				√		الرياضيات ٢	ISDC 117	فصلي
							√			√	√				√		اللغة العربية	UOA 137	
مخطط مهارات المنهج																			
يرجى وضع اشارة في المربعات المقابلة لمخرجات التعلم الفردية من البرنامج الخاضعة للتقييم																			
مخرجات التعلم المطلوبة من البرنامج														المرحلة الثانية					
المهارات العامة والمنقولة (أو) المهارات الأخرى المتعلقة بقابلية التوظيف والتنطور الشخصي				مهارات التفكير				المهارات الخاصة بالموضوع				المعرفة والفهم				أساسي أم اختياري	اسم المقرر	رمز المقرر	السنة / المستوى
د4	د3	د2	د1	ج4	ج3	ج2	ج1	ب4	ب3	ب2	ب1	أ4	أ3	أ2	أ1				
							√			√	√				√		هياكل البيانات	ISDC	

																		201	
						√	√			√	√				√			الرياضيات المتقدمة	ISD E203
							√			√	√				√			النظرية الاحتمالية ١	ISDC 215
						√	√			√	√				√			تحليل وتصميم نظم المعلومات	ISDC 202
							√			√	√				√			تفاعل الإنسان مع الحاسوب	ISDC 204
							√		√	√	√				√			البرمجة الكيانية ١	ISDC 207
						√	√				√				√			الحريه و الديمقراطية	UOA 201
							√			√	√				√			الخوارزميات	ISDE 317
							√			√	√			√	√			التحليل العددي	ISDC 303
							√			√	√			√	√			النظرية الاحتمالية ٢	ISDE 218
							√			√	√		√	√				تحليل وتصميم قواعد البيانات	ISDC 205
						√	√			√	√		√	√				تصميم صفحات الانترنت	ISDE 219
						√	√		√	√	√		√	√	√			البرمجة الكيانية ٢	ISDE 211

						✓	✓				✓				✓		اللغة الانكليزية	UOA 240	
مخطط مهارات المنهج																			
يرجى وضع اشارة في المربعات المقابلة لمخرجات التعلم الفردية من البرنامج الخاضعة للتقييم																			
مخرجات التعلم المطلوبة من البرنامج												المرحلة الثالثة							
المهارات العامة والمنقولة (أو) المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي				مهارات التفكير				المهارات الخاصة بالموضوع				المعرفة والفهم				أساسي أم اختياري	اسم المقرر	رمز المقرر	السنة / المستوى
د4	د3	د2	د1	ج4	ج3	ج2	ج1	ب4	ب3	ب2	ب1	أ4	أ3	أ2	أ1				
							✓		✓	✓	✓		✓	✓	✓		البرمجة المرئية ب (C# Net) 1	ISD C308	
							✓			✓	✓			✓	✓		إدارة المشاريع	ISD C307	
							✓			✓	✓			✓	✓		نظم إدارة قواعد البيانات ١	ISD C306	
							✓		✓	✓	✓			✓	✓		شبكات الحاسبة ١	ISD C305	
							✓			✓	✓				✓		المتجمات ١	ISD E321	
							✓			✓	✓				✓		انكليزي	UOA 340	

							√			√	√		√	√	√		نظم ادارة المعلومات	ISDC 327	
						√	√		√	√	√				√		هندسة البرامجيات	ISD C309	
						√	√		√	√	√				√		البرمجة المرئية ب (C# Net) 2	ISD E323	
						√	√		√	√	√				√		قواعد بيانات موزعه	ISD E326	
							√			√	√		√	√	√		نظم دعم القرارات		

يرجى وضع اشارة في المربعات المقابلة لمخرجات التعلم الفردية من البرنامج الخاضعة للتقييم

مخرجات التعلم المطلوبة من البرنامج																المرحلة الرابعة			
المهارات العامة والمنقولة (أو) المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي				مهارات التفكير				المهارات الخاصة بالموضوع				المعرفة والفهم				أساسي أم اختياري	اسم المقرر	رمز المقرر	السنة / المستوى
د4	د3	د2	د1	ج4	ج3	ج2	ج1	ب4	ب3	ب2	ب1	أ4	أ3	أ2	أ1				
							√				√				√		حوسبة الوسائط المتعدد ١	CSIT 402	
							√				√				√		أمنية نظم المعلومات ١	ISDC 406	
							√				√				√		الذكاء الاصطناعي ١	ISDC 405	
							√				√				√		برمجة تطبيقات الويب ١	ISD04 314	
							√				√				√		مستودع البيانات	ISDC 403	
							√				√		√	√	√		استرجاع المعلومات ومحركات البحث	ISDE 414	
						√	√			√	√		√	√			منهج البحث	CSDE 423	
						√	√				√			√	√		حوسبة الوسائط المتعدد ٢	ISDE 427	
					√	√	√				√				√		أمنية نظم المعلومات ٢	ISDE 425	
							√			√	√			√	√		الذكاء الاصطناعي ٢	ISDE 429	



						√				√				√		تجارة الكترونيه	<b>ISDE 313</b>	
						√				√				√		تنقيب البيانات	<b>ISDC 404</b>	
						√				√			√	√		انكليزي	<b>UOA 440</b>	
						√							√	√		برمجة تطبيقات الموبايل ٢	<b>ISDE 419</b>	



# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	College of computer science and information technology Information System Department
3. Course title/code	Structure Programming (C++) I
4. Programme(s) to which it contributes	First stage
5. Modes of Attendance offered	Theoretical and practical
6. Semester/Year	First Semester 2020\2021
7. Number of hours tuition (total)	3 h. theoretical 2 h. practical per week
8. Date of production/revision of this specification	٢٠٢١/٠٩/٢١
9. Aims of the Course	
Learn how to use the algorithms	
How to draw a flowcharts	
The main principles of programming and the development of programming languages	
Learn the principles of Structure programming	
Learn How to programming with C++	

## 10. Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

A1. Learn algorithms

A2. Learn flowcharts

A3. Learn structured programming

A4. Learn C++ programming

A5.

A6 .

### B. Subject-specific skills

B1.

B2.

B3.

### Teaching and Learning Methods

### Assessment methods

Final Exam project   Quizzes   Laboratory   Term Tests

### C. Thinking Skills

C1.

C2.

C3.

C4.

### Teaching and Learning Methods

### Assessment methods

Final Exam project   Quizzes   Laboratory   Term Tests

## D. General and Transferable Skills (other skills relevant to employability and personal development)

- D1.
- D2.
- D3.
- D4.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
First Week	3 h.	Program ming principle s	Overview to Programming Language	Explain Menu, Getting Started with C++.	
Second Week	3 h.	Algorith ms	Algorithms and Flow Charts	Algorithms and Flow Charts	
Third Week	3 h.	C++ program ming	Character set Identifiers Getting Started with C++. Variables Declaration	Character set Identifiers Getting Started with C++. Variables Declaration	Quiz
Fourth Week	3 h.	Variables in C++	Variables Constants Arithmetic Operations The “math.h” Library Unary Minus Increment and /decrement Operators.	In program Explain Variables Constants Program of Arithmetic Operations The “math.h” Library	
Fifth Week	3 h.	Unary Operator s	Unary Minus Increment and /decrement Operators.	Program of Unary Minus Increment and /decrement Operators.	
Sixth Week	3 h.	Operatio nal Operator s	Operational Operators Assignment Relational Logical Bitwise Logical Bitwise Operator	Program Operational Assignment Operators Relational Operators Program Logical Operators. Bitwise Operator	Quiz
Seventh Week	3 h.	Selection Statemen ts	Selection Statements the Single. The Switch Selection Statement (Selector	Programs in Lectures	
Eighth Week	3 h.	If Statemen ts	Nested If and If/else Statements If Statement Structure Conditional Statement	Programs in Lectures	
Ninth Week	3 h.	To evaluate the students	Monthly exam		By exam
Tenth Week	3 h.	Switch Statemen ts	The Switch Selection Statement	Programs in Lectures	

Eleventh Week	3 h.	Loop Statements	While Repetition Structure. Do/While Statement for Statement	Programs in Lectures	
Twelfth Week	3 h.	Do/While Statement	Do/While Statement for Statement	Programs in Lectures	
Thirteenth Week	3 h.	For Statement	For Statement	Programs in Lectures	
Fourteenth Week	3 h.	Nested loop	Break and Continue Control Statements Nested Loops	Programs in Lectures	
Fifteenth Week	3 h.	To evaluate the students	Monthly exam		By exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Mastering C++, shomme's series
Special requirements (include for example workshops, periodicals, IT software, websites)	<a href="https://www.learncpp.com/">https://www.learncpp.com/</a> <a href="https://www.w3schools.com/CPP/default.asp">https://www.w3schools.com/CPP/default.asp</a>
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	
Minimum number of students	25-30
Maximum number of students	50-60

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	College of Computer Science and Information Technology – Computer Science Department
3. Course title/code	Logic Design 1
4. Programme(s) to which it contributes	Bachelors of Information System
5. Modes of Attendance offered	Electronic attendance
6. Semester/Year	First semester 2020-2021
7. Number of hours tuition (total)	48
8. Date of production/revision of this specification	5-6-2021
9. Aims of the Course	
- The student should understand number systems and codes and conversion between them.	
- The student should understand the Boolean expression and how to apply it.	
- The student should recognize among different logic gates and how to use them.	
- The student should understand how to design a logic circuit.	
- The student should understand using K-map for simplification.	



## 10· Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

- A1. The student should understand number systems and codes and conversion between them.
- A2. The student should understand the Boolean expression and how to apply it.
- A3. The student should recognize among different logic gates and how to use them.
- A4. The student should understand how to design a logic circuit.
- A5. The student should understand using K-map for simplification

### B. Subject-specific skills

- B1.
- B2.
- B3.

### Teaching and Learning Methods

- The student should use utilities in the lab to apply scientific experiment
- The ability to design a logic circuit.

### Assessment methods

Notes	Date	%	Assessment	
	6 <sup>th</sup> week	10%	First Month exam	1
	10 <sup>th</sup> week	10%	Second Month exam	2
	16 <sup>th</sup> week	10%	Third Month exam	3
	All weeks	5%	Attendance and HW	4
	At end of each experiment	15%	Reports and Lab exam	5
	End of semester	50%	Final exam	6
		<b>100</b> %	Sum	

### C. Thinking Skills

- C1.
- C2.
- C3.
- C4.

### Teaching and Learning Methods

### Assessment methods

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**D. General and Transferable Skills (other skills relevant to employability and personal development)**

D1.

D2.

D3.

D4.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1					
2					
3	2 Theory + 2 Practical		Introduction to number system		
4	2 Theory + 2 Practical		Conversion between systems		
5	2 Theory + 2 Practical		Codes and conversion between them		
6	2 Theory + 2 Practical		First month exam		
7	2 Theory + 2 Practical		Boolean expression		
8	2 Theory + 2 Practical		Logic gates		
9	2 Theory + 2 Practical		Logic gates design		
10	2 Theory + 2 Practical		Second month exam		
11	2 Theory + 2 Practical		NAND gates		
12	2 Theory + 2 Practical		NOR gates		
13	2 Theory + 2 Practical		Sum of product form		
14	2 Theory + 2 Practical		Product Of sum form		
15	2 Theory + 2 Practical		K-map		
16	2 Theory + 2 Practical		Third month exam		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	<ul style="list-style-type: none"> <li>- Lectures</li> <li>- Home works</li> <li>- Case study in the Lab</li> <li>- Weekly reports</li> </ul>
Special requirements (include for example workshops, periodicals, IT software, websites)	<ul style="list-style-type: none"> <li>- “Digital Design” 4<sup>th</sup> Edition by M. Morris Mano and Michael D. Ciletti</li> <li>- Fundamentals of logic design by J. Roth</li> </ul>
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Fundamental of English and Mathematics
Minimum number of students	25
Maximum number of students	40

**Dr. Muntaser A. Salman**

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	College of Computer Science and Information Technology – Information System Department
3. Course title/code	Information Technology Principles
4. Programme(s) to which it contributes	Bachelors of Information System
5. Modes of Attendance offered	Electronic attendance
6. Semester/Year	First semester 2021-2022
7. Number of hours tuition (total)	48
8. Date of production/revision of this specification	25-10-2021
9. Aims of the Course	
- Provide a basic knowledge of computer hardware and software	
- Introduce the business areas to which computers may be applied.	
- Provide an introduction to business organization and information systems.	
- Develop the skills in network & communication , which play an important part in business computing and information processing.	

## 10· Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

- A1. The student should understand the architecture of any IT systems.
- A2. The student should understand the parts of hardware.
- A3. The student should understand the system software.
- A4. The student should understand the architecture of networks ,protocols and communications devices.
- A5.

### B. Subject-specific skills

- B1.
- B2.
- B3.

### Teaching and Learning Methods

- The student should use utilities in the lab to apply scientific experiment
- The ability to execute the applications software .

### Assessment methods

Notes	Date	%	Assessment	
	6 <sup>th</sup> week	10%	First Month exam	1
	10 <sup>th</sup> week	10%	Second Month exam	2
	16 <sup>th</sup> week	10%	Third Month exam	3
	All weeks	5%	Attendance and HW	4
	At end of each experiment	15%	Reports and Lab exam	5
	End of semester	50%	Final exam	6
		<b>100</b> %	Sum	

### C. Thinking Skills

- C1.
- C2.
- C3.
- C4.

### Teaching and Learning Methods

### Assessment methods

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#### D. General and Transferable Skills (other skills relevant to employability and personal development)

D1.

D2.

D3.

D4.

### 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2 Theory + 2 Practical		Introduction of Computers and Programming		
2	2 Theory + 2 Practical		Brief history of computer		
3	2 Theory + 2 Practical		Generation of Computers & Computer hierarchy		
4	2 Theory + 2 Practical		Basic Computer Components		
5	2 Theory + 2 Practical		Computer function (fetch cycle, interrupt cycle, I/O function)		
6	2 Theory + 2 Practical		Semiconductor main memory (RAM, ROM, CACHE)		
7	2 Theory + 2 Practical		Computer Software(application software)		
8	2 Theory + 2 Practical		External & Internal memory		
9			First Exam		
10	2 Theory + 2 Practical		Telecommunications system & Network		
11	2 Theory + 2 Practical		Topology of a network		
12	2 Theory + 2 Practical		Layering model		
13	2 Theory + 2 Practical		Protocols		
14	2 Theory + 2 Practical		addressing communications		

15			Final Exam		
16					

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	<ul style="list-style-type: none"> <li>- Lectures</li> <li>- Home works</li> <li>- Case study in the Lab</li> <li>- Weekly reports</li> </ul>
Special requirements (include for example workshops, periodicals, IT software, websites)	1.Computing Essentials Making IT work for you 2017 by Timothy J. O’Leary. 2.Computer Organization and Architecture Designing for Performance (8th Edition).
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Fundamental of English .
Minimum number of students	25
Maximum number of students	40

**Dr. Salah Sleibi Al-Rawi**





## نموذج وصف المقرر

### مراجعة أداء مؤسسات التعليم العالي ((مراجعة البرنامج الأكاديمي))

يوفر وصف المقرر هذا إيجازاً مقتضياً لأهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنناً عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ولابد من الربط بينها وبين وصف البرنامج.

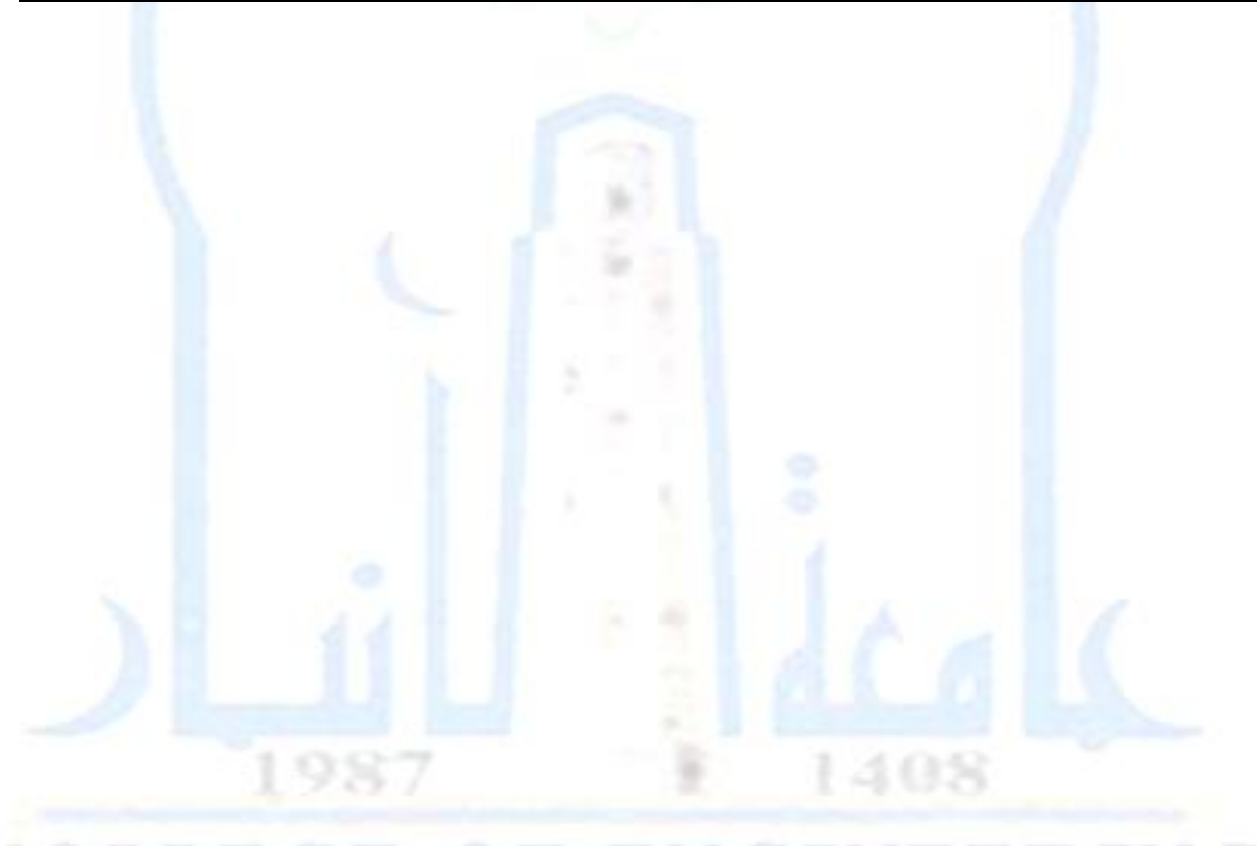
١. المؤسسة التعليمية	جامعة الانبار / كلية علوم الحاسوب وتكنولوجيا المعلومات
٢. القسم الجامعي / المركز	نظم المعلومات
٣. اسم / رمز المقرر	حقوق الإنسان
٤. البرامج التي يدخل فيها	
٥. أشكال الحضور المتاحة	دوام رسمي
٦. الفصل / السنة	الفصل الأول / السنة الدراسية الأولى
٧. عدد الساعات الدراسية (الكلي)	15
٨. تاريخ إعداد هذا الوصف	2023 / 9 / 10
٩. أهداف المقرر :	
أ. تعليم الطلبة على أساسيات حقوق الإنسان وقوانينها	
ب. التعرف على الحقوق وأهم الإشكاليات والتحديات التي تواجهها	


١٠. مخرجات التعلم وطرائق التعليم والتعلم والتقييم
<p>أ. المعرفة والفهم :</p> <p>١. أن يعرف الطالب مفهوم الحقوق وقوانينها وتطبيقاتها</p> <p>٢. أن يعرف الطالب كيفية المشاركة في نشر الحقوق وتطبيقها بالعمل الواقعي الحقيقي</p>
<p>ب. المهارات الذهنية :</p> <p>١. القدرة على استخدام الحقوق وسيلة من أجل التعايش السلمي بين مكونات المجتمع وجميع المخلوقات</p> <p>٢. القدرة على مشاركة الآخرين في نشر هذه الحقوق</p>
طرائق التعليم والتعلم
<p>١. المشاركة بالتحضير في قاعة الدرس</p> <p>٢. طريقة الأسئلة والأجوبة في قاعة الدرس</p>
طرائق التقييم
<p>١. المشاركة في قاعة الدرس</p> <p>٢. اختبارات فصلية ونهائية</p>
<p>ج- مهارات التفكير</p> <p>١. تطوير قدرة الطالب على الحوار والمناقشة</p> <p>٢. معرفة الطالب بالحقوق والعمل بقوانينها</p>
طرائق التعليم والتعلم
<p>١. إدارة المحاضرة على نحو تطبيقي مرتبط بواقع الحياة اليومية</p> <p>٢. تكليف الطالب ببعض الأنشطة والواجبات</p>



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

طرائق التقييم
<p>١. المشاركة الفاعلة في قاعة الدرس دليل التزام الطالب وتحمله المسؤولية . ٢. الالتزام بالموعد المحدد في تقديم الواجبات والبحث . ٣. الاختبارات الفصلية والنهائية تعبر عن الالتزام والتحصيل المعرفي .</p>
<p>د - المهارات العامة والمنقولة ( المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي ). ١. تنمية قدرات الطالب على التعامل مع القوانين لحقوق الإنسان . ٢. تنمية قدرة الطالب على الحوار والمناقشة في الأمور العامة والخاصة .</p>



الأسبوع	الساعات	مخرجات التعلم المطلوبة	اسم الوحدة / المساق أو الموضوع	طريقة التعليم	طريقة التقييم
الأول	1		تعريف حقوق الإنسان	نظري	التحضير وأسئلة ومناقشة
الثاني	1		انواع حقوق الإنسان	نظري	التحضير وأسئلة ومناقشة
الثالث	1		الحقوق الأساسية وغير الأساسية	نظري	التحضير وأسئلة ومناقشة
الرابع	1		الحقوق المدنية	نظري	التحضير وأسئلة ومناقشة
الخامس	1		الحقوق السياسية	نظري	التحضير وأسئلة ومناقشة
السادس	1		الحقوق الاقتصادية والاجتماعية والثقافية	نظري	التحضير وأسئلة ومناقشة
السابع	1		الحقوق الفردية والحقوق الجماعية و طائفة الحقوق الجديدة	نظري	التحضير وأسئلة ومناقشة



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

التحضير وأسئلة ومناقشة	نظري	حقوق الإنسان والقانون الدولي الإنساني	1	الثامن
التحضير وأسئلة ومناقشة	نظري	العلاقة بين حقوق الإنسان والقانون الدولي الإنساني	1	التاسع
التحضير وأسئلة ومناقشة	نظري	أوجه الشبه والاختلاف بين حقوق الإنسان والقانون الدولي الإنساني	1	العاشر
التحضير وأسئلة ومناقشة	نظري	حقوق الإنسان في العصور القديمة والوسطى	1	الحادي عشر
التحضير وأسئلة ومناقشة	نظري	حقوق الإنسان في الإسلام	1	الثاني عشر
التحضير وأسئلة ومناقشة	نظري	الاهتمام الدولي والإقليمي بحقوق الإنسان	1	الثالث عشر
التحضير وأسئلة عامة ومناقشة	نظري	مصادر حقوق الإنسان (الدولية – الوطنية - الدينية)	1	الرابع عشر
امتحان شهري	نظري		1	الخامس عشر

١٢. البنية التحتية	
١ - الفصل الأول : التعريف بحقوق الإنسان ، الانترنت	القراءات المطلوبة : <ul style="list-style-type: none"> <li>▪ كتب المقرر</li> <li>▪ اخرى</li> </ul>
	متطلبات خاصة
	الخدمات الاجتماعية ( وتشمل على سبيل المثال محاضرات الضيوف والتدريب المهني والدراسات الميدانية )

١٣. القبول	
لا توجد	المتطلبات السابقة
10	أقل عدد من الطلبة
40	أكبر عدد من الطلبة

## TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	College of CS & IT – University of Anbar
2. University Department/Centre	Computer Science
3. Course title/code	English Language
4. Programme(s) to which it contributes	English (١)
5. Modes of Attendance offered	Electronic
6. Semester/Year	1 <sup>st</sup> / 1 <sup>st</sup>
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	12/6/2021
9. Aims of the Course	
<ul style="list-style-type: none"> <li>▪ Enhancing English speaking, reading and writing</li> <li>▪ Memorize a big number of vocabularies</li> <li>▪ Helping students to deal with the English language in easier ways</li> </ul>	



## 10. Learning Outcomes, Teaching ,Learning and Assessment Methods

A1. Reading  
A2. writing  
A3. Speaking.  
A4. Listening  
A5.

### B. Subject-specific skills

B1. Learn scanning and skimming skills in reading  
B2. Right pronunciation  
B3. Vocabularies

### Teaching and Learning Methods

- Working in groups.
- Home work
- Quizzes and exams.
- Referring to some related specialist subjects.

### Assessment methods

- Classroom participation.
- Student attendance
- Oral exam.
- Online exam.

### C. Thinking Skills

C1. Developing self-confidence through speaking freely  
C2. Understanding English from various accents  
C3.  
C4.

### Teaching and Learning Methods

- Work in groups to solve the H/Ws
- Using related websites to deepen understanding the main concepts of English Grammar

### Assessment methods

- Oral test.
- Quizzes and online exams.

D. General and Transferable Skills (other skills relevant to employability and personal development)  
D1. Development of the skills of listening.  
D2. Development of the skills of speaking.  
D3. Growing up the skills of doing search in WWW  
D4.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1 <sup>st</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 1: Hello	Theoretical	Oral, Student Participation
2 <sup>nd</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 2: Your world	Theoretical	Oral, Student Participation
3 <sup>rd</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 3: All about you	Theoretical	Oral, Student Participation
4 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 4: Family and friends	Theoretical	Oral, Student Participation
5 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 5: The way I live	Theoretical	Oral, Student Participation
6 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Exam	Theoretical	Exam
7 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 6: Every Day	Theoretical	Oral, Student Participation
8 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 7: My favourites	Theoretical	Oral, Student Participation
9 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 8: Where I live	Theoretical	Oral, Student Participation
10 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 9: Times past	Theoretical	Oral, Student Participation
11 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Unit 10: we had a great time!	Theoretical	Oral, Student Participation
12 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Exam	Theoretical	Exam

13 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	English for Computer Science	Theoretical	Oral, Student Participation
14 <sup>th</sup>	2	listening,	Listening	Theoretical	Oral, Student Participation
15 <sup>th</sup>	2	Grammar, reading, writing, listening, vocabulary	Revision of most important topics in the subject	Theoretical	Oral, Student Participation

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	<ul style="list-style-type: none"> <li>▪ New headway Beginner student's book</li> <li>▪ New headway plus Beginner Teacher's book</li> <li>▪ New headway plus Beginner workbook</li> </ul>
Special requirements (include for example workshops, periodicals, IT software, websites)	<a href="https://elt.oup.com/student/headway/int/download?cc=global&amp;sellLanguage=en">https://elt.oup.com/student/headway/int/download?cc=global&amp;sellLanguage=en</a>
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	None
Minimum number of students	10
Maximum number of students	50



# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## COURSE SPECIFICATION

Study of derivatives, their methods and applications, and their relationship to real problems. Teaching training students to deal with the rules and laws of derivatives and apply them in the future in a logical and correct manner.

1. Teaching Institution	College of Computer Science and Information Technology / University of Anbar
2. University Department/Centre	Information system
3. Course title/code	Mathematic 1
4. Programme (s) to which it contributes	Computer Science
5. Modes of Attendance offered	On-line
6. Semester/Year	2 <sup>nd</sup> Semester / 2021 – 2022
7. Number of hours tuition (total)	45 hours
8. Date of production/revision of this Specification	01 / 10 / 2021
9. Aims of the Course	
A - Understand the concept of mathematics, its methods and applications.	
B - Explain the concept of derivatives and integration and their applications.	
C - Understand the relationship between extracts and integration and the real problems and how to deal with them	

## 0 - Learning outcomes, teaching method, learning and assessment

### A- Knowledge and Understanding

A 1. Acquiring the ability and skill to distinguish the bases of derivatives methods and dealing with them

A 2. Acquire the capabilities and skills of applications of derivatives

A3. Dealing with different methods of finite and indefinite derivatives

### B. Subject-specific skills

B1. Summer Training

B2. Fourth year projects

B3. Scientific projects

### Teaching and Learning Methods

- Daily and weekly quizzes.
- Class room activities.
- Guiding the student to some electronic websites.

### Assessment methods

- Participation inside the class.
- Presentation of activities.
- Semesters and final examinations.

### C. Thinking Skills

C1. Develop the student's ability to work and provide homework in a timely manner.

C2. Analyze the problem and find the solution based on the methods used in the various derivatives

C 3. To develop the student's ability to debate.

### Teaching and Learning Methods

- Managing the lecture to deal with the real problem that attracts the student to the topic of the lesson.
- Assigning groups of students with some activities.
- Make part of the grades for the assignments.

### Assessment methods

- Active participation in the classroom is evidence of student commitment and responsibility.
- Commitment to the deadline in submitting assignments and research.
- The exams express commitment and cognitive and skill achievement.

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Developing the student's ability to deal with technical methods.

D2. Developing the student's ability to deal with Internet.

D3. Developing the student's ability to deal with multi media.

D4. Developing the student's ability to discuss real problems.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	3	Derivatives	The Definition of the Derivative Interpretation of the Derivative	Theoretical	Assignments and Discussions
2	3	Differentiation Formulas, Product and Quotient Rule	Properties of Derivative , Some laws of derivatives	Theoretical	Assignments and Discussions
3	3	Differentiation Formulas, Product and Quotient Rule	Properties of Derivative , Some laws of derivatives	Theoretical	Quiz ,Assignments and Discussions
4	3	Derivatives of Trig Functions	<b>Derivatives of the six trig functions</b>	Theoretical	Quiz
5	3	Derivatives of Exponential and Logarithm Functions	<b>Exponential Functions, Logarithm Functions</b>	Theoretical	Assignments ,Discussions, H.W
6	3	Derivatives of Inverse Trig Functions	<b>Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation</b>	Theoretical	Assignments and Discussions
7	3	Derivatives of Inverse Trig Functions	<b>Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation</b>	Theoretical	Assignments and Discussions
8	3	Derivatives of Hyperbolic Trig Functions	These are the six hyperbolic trig Functions .and They are defined as	Theoretical	Quiz, Assignments and Discussions
9	3	Chain Rule	There are two forms of the chain rule	Theoretical	Assignments and Discussions
10	3	Implicit Differentiation	Defined , formula, and used the chain rule	Theoretical	Assignments and Discussions,H.W
11	3	Higher Order Derivatives	first derivative, second derivative, third derivative.	Theoretical	Quiz, Assignments and Discussions
12	3	Logarithmic Differentiation	the properties of logarithms	Theoretical	Assignments and

					Discussions
13		Examination		On- line	
14	3	Applications of Derivatives	Introduction, Critical Points and Minimum and Maximum Values	Theoretical	Assignments and Discussions
15	3	Applications of Derivatives	Introduction, Critical Points and Minimum and Maximum Values	Theoretical	Assignments and Discussions

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1- Book " Thomas Calculas 2- Lecture Notes
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	Practical applications in the companies and projects.

13. Admissions	
Pre-requisites	Mathematical I, Mathematical II, Advanced Mathematics
Minimum number of students	15
Maximum number of students	50





## TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

[illegible]

## 10. Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

A1. Learn the algorithms

A2. Learn the Flowchart

A3. Learn C++ Programming

A4.

A5.

A6 .

### B. Subject-specific skills

B1.

B2.

B3.

### Teaching and Learning Methods

#### Assessment methods

Final Exam project	Quizzes	Laboratory	Term Tests
50%	10%	15%	25%

### C. Thinking Skills

C1.

C2.

C3.

C4.

### Teaching and Learning Methods

#### Assessment methods

Final Exam project	Quizzes	Laboratory	Term Tests
50%	10%	15%	25%

## D. General and Transferable Skills (other skills relevant to employability and personal development)

D1.  
D2.  
D3.  
D4.

### 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
First Week	3 h.		Function	Programs in Lectures	
Second Week	3 h.		Passing Parameters. Passing by Value. Passing by Reference.	Program and example Passing Parameters. Passing by Value. Passing by Reference.	
Third Week	3 h.		Pointers	Pointers	Quiz
Fourth Week	3 h.		Arrays. Array of One Dimension: Declaration of Arrays.	Program and example Arrays. Array of One Dimension: Declaration of Arrays.	
Fifth Week	3 h.		Initializing Elements	Program and example Initializing Array Elements	
Sixth Week	3 h.		Accessing Array Elements.	Program and example Accessing Array Elements.	Quiz
Seventh Week	3 h.		Read / Write / Process Array Elements.	Program and example Read / Write / Process Array	
Eighth Week	3 h.		Array of Two Dimension: Declaration of 2D-Arrays.	Program and example Array of Two Dimension: Declaration of 2D-Arrays.	
Ninth Week	3 h.	To evaluate the students	Monthly exam		By exam
Tenth Week	3 h.		Read / Write / Process Array Elements.	Program and example Read / Write / Process Array Elements.	
Eleventh Week	3 h.		Member Function of String stdlib Library.	Program and example Member Function of String.	
Twelfth Week	3 h.		Structures. The Three Ways for Declare the Structure.	Program and example Structures. The Three Ways for Declare the	

				Structure.	
Thirteenth Week	3 h.		Array of Structures.	Program and example Array of Structures.	
Fourteenth Week	3 h.		The Files	Program and example of files	
Fifteenth Week	3 h.	To evaluate the students	Monthly exam		By exam

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Mastering C++, shomme's series
Special requirements (include for example workshops, periodicals, IT software, websites)	<a href="https://www.learncpp.com/">https://www.learncpp.com/</a> <a href="https://www.w3schools.com/CPP/default.asp">https://www.w3schools.com/CPP/default.asp</a>
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	
Minimum number of students	25-30
Maximum number of students	50-60

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	College of Computer Science and Information Technology – Computer Science Department
3. Course title/code	Logic Design 2
4. Programme(s) to which it contributes	Bachelors of Information System
5. Modes of Attendance offered	Electronic attendance
6. Semester/Year	Second semester ٢٠٢١-٢٠٢٢
7. Number of hours tuition (total)	48
8. Date of production/revision of this specification	٢٠٢١/٠٩/٢٠
9. Aims of the Course	
<ul style="list-style-type: none"><li>• The student should understand encoder , decoder and multiplexers</li><li>• The student should understand synchronous logic circuit</li><li>• The student should understand flip-flops and how to use them</li><li>• The student should understand registers and their types</li><li>• The student should understand counters and their types</li><li>• The student should understand ROM and PLA implementation</li></ul>	

## 10· Learning Outcomes, Teaching ,Learning and Assessment Methode

### A- Knowledge and Understanding

- A1. The student should understand encoder, decoder and multiplexers
- A2. The student should understand flip-flops and how to use them.
- A3. The student should understand registers and their types.
- A4. The student should understand counters and their types.
- A5. The student should understand ROM and PLA implementation.

### B. Subject-specific skills

- B1.
- B2.
- B3.

### Teaching and Learning Methods

- The student should use utilities in the lab to apply scientific experiment
- The ability to design a logic circuit.

### Assessment methods

Notes	Date	%	Assessment	
	6 <sup>th</sup> week	10%	First Month exam	1
	10 <sup>th</sup> week	10%	Second Month exam	2
	16 <sup>th</sup> week	10%	Third Month exam	3
	All weeks	5%	Attendance and HW	4
	At end of each experiment	15%	Reports and Lab exam	5
	End of semester	50%	Final exam	6
		100 %	Sum	

### C. Thinking Skills

- C1.
- C2.
- C3.
- C4.

### Teaching and Learning Methods

### Assessment methods

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D. General and Transferable Skills (other skills relevant to employability and personal development)

D1.

D2.

D3.

D4.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2 Theory + 2 Practical		Synchronous logic gates		
2	2 Theory + 2 Practical		Adder and subtractor circuits		
3	2 Theory + 2 Practical		Comparator circuits		
4	2 Theory + 2 Practical		Encoders and multiplexers		
5	2 Theory + 2 Practical		Multiplexers		
6	2 Theory + 2 Practical		First month exam		
7	2 Theory + 2 Practical		Flip-flops		
8	2 Theory + 2 Practical		SR flip flop and j k flip flop		
9	2 Theory + 2 Practical		T flip flop and D flip flop		
10	2 Theory + 2 Practical		Second month exam		
11	2 Theory + 2 Practical		Registers design		
12	2 Theory + 2 Practical		Counters design		
13	2 Theory + 2 Practical		ROM		
14	2 Theory + 2 Practical		PLA		
15	2 Theory + 2 Practical		State plan		
16	2 Theory +		Final exam		



	2 Practical				
12. Infrastructure					
Required reading:		<ul style="list-style-type: none"> <li>- Lectures</li> <li>- Home works</li> <li>- Case study in the Lab</li> <li>- Weekly reports</li> </ul>			
· CORE TEXTS · COURSE MATERIALS · OTHER					
Special requirements (include for example workshops, periodicals, IT software, websites)		<ul style="list-style-type: none"> <li>- “Digital Design” 4<sup>th</sup> Edition by M. Morris Mano and Michael D. Ciletti</li> <li>- Fundamentals of logic design by J. Roth</li> </ul>			
Community-based facilities (include for example, guest Lectures , internship , field studies)					

13. Admissions	
Pre-requisites	Fundamental of English and Mathematics and Logic design 1 course.
Minimum number of students	25
Maximum number of students	40

Dr. Muntaser A. Salman



# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	College of Computer Science and Information Technology – Information System Department
3. Course title/code	Information System Fundamentals
4. Programme(s) to which it contributes	Bachelors of Information System
5. Modes of Attendance offered	Electronic attendance
6. Semester/Year	First semester 2021-2022
7. Number of hours tuition (total)	32
8. Date of production/revision of this specification	25-10-2021
9. Aims of the Course	
- Describe the concepts of organizational structure and culture	
- Identify the framework and boundaries of information systems in the global environment.	
- Apply appropriate systems analysis and design methods, tools and techniques in solving business problems.	
- Developing the communication skills needed to collaborate with others.	

## 10· Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

- A1. Students will be introduced to information systems for the purpose of processing data into information
- A2. Students will be introduced to the use of productivity computer software programs and their relevance to problem-solving and communication
- A3. Students will be introduced to the concept and analysis of information requirements of problem-solving.
- A4. The student should understand the data communications devices , networks and protocols .
- A5.

### B. Subject-specific skills

- B1.
- B2.
- B3.

### Teaching and Learning Methods

-

### Assessment methods

Notes	Date	%	Assessment	
	6 <sup>th</sup> week	10%	First Month exam	1
	10 <sup>th</sup> week	10%	Second Month exam	2
	16 <sup>th</sup> week	10%	Third Month exam	3
	All weeks	10%	Attendance and HW	4
	At end of each experiment			5
	End of semester	60%	Final exam	6
		<b>100</b> %	Sum	

### C. Thinking Skills

- C1.
- C2.
- C3.
- C4.

### Teaching and Learning Methods

### Assessment methods

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D. General and Transferable Skills (other skills relevant to employability and personal development)

D1.

D2.

D3.

D4.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	2 Theory		An Introduction to Information Systems		
2	2 Theory		Information Systems in Organizations		
3	2 Theory		Hardware: Input, Processing, and Output Devices		
4	2 Theory		Software: Systems and Application Software		
5	2 Theory		Database Systems and Business		
6	2 Theory		Telecommunications and Networks		
7	2 Theory		The Internet, Intranets, and Extranets		
8	2 Theory		Topology of a network		
9			First Exam		
10	2 Theory		Data communications systems		
11	2 Theory		Layering model		
12	2 Theory		Protocols Layering		
13	2 Theory		Addressing communications		
14	2 Theory		Transmission Media		
15			Final Exam		
16					

12. Infrastructure
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Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	<ul style="list-style-type: none"> <li>- Lectures</li> <li>- Home works</li> </ul>
Special requirements (include for example workshops, periodicals, IT software, websites)	1. Ralph M. Stair & George W. Reynolds" Principles of Information Systems" Ninth Edition.2010 2. Data Communications and Networking, Fourth Edition by Behrouz A. Forouzan, McGraw-Hill ,2007
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	Fundamental of English .
Minimum number of students	25
Maximum number of students	40

**Dr. Salah Sleibi Al-Rawi**



## نموذج وصف المقرر

### مراجعة أداء مؤسسات التعليم العالي ((مراجعة البرنامج الأكاديمي))

يوفر وصف المقرر هذا إيجازاً مقتضياً لأهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنناً عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ولابد من الربط بينها وبين وصف البرنامج.

١. المؤسسة التعليمية	جامعة الانبار / كلية علوم الحاسوب وتكنولوجيا المعلومات
٢. القسم الجامعي / المركز	نظم المعلومات
٣. اسم / رمز المقرر	اللغة العربية
٤. البرامج التي يدخل فيها	
٥. أشكال الحضور المتاحة	دوام رسمي
٦. الفصل / السنة	الفصل الأول / السنة الدراسية الأولى
٧. عدد الساعات الدراسية (الكلي)	15
٨. تاريخ إعداد هذا الوصف	2018 / 8 / 20
٩. أهداف المقرر :	
أ. تعليم الطلبة على أساسيات اللغة العربية وقواعدها	
ب. تعليم الطلبة على كيفية الأعراب	


١٠. مخرجات التعلم وطرائق التعليم والتعلم والتقييم
<p>أ.المعرفة والفهم :</p> <p>١. أن يتعرف الطالب على قواعد اللغة العربية</p> <p>٢. أن يعرف الطالب كيفية بناء الجمل واستخراجها للعنوان المطلوب</p>
<p>ب.المهارات الذهنية :</p> <p>١. القدرة على استعمال العبارات الصحيحة</p> <p>٢. القدرة على مشاركة الآخرين في الحوار الصحيح</p>
طرائق التعليم والتعلم
<p>١. المشاركة بالتحضير في قاعة الدرس</p> <p>٢. طريقة الأسئلة والأجوبة في قاعة الدرس</p>
طرائق التقييم
<p>١. المشاركة في قاعة الدرس</p> <p>٢. اختبارات فصلية ونهائية</p>
<p>ج- مهارات التفكير</p> <p>١. تطوير قدرة الطالب على الحوار والمناقشة</p> <p>٢. تطوير قدرات الطالب في القيام بالأنشطة اللغوية والأدبية</p>
طرائق التعليم والتعلم
<p>١. إدارة المحاضرة على نحو تطبيقي مرتبط بواقع الحياة اليومية</p> <p>٢. تكليف الطالب ببعض الأنشطة والواجبات</p>





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

طرائق التقييم
<p>١. المشاركة الفاعلة في قاعة الدرس دليل التزام الطالب وتحمله المسؤولية .</p> <p>٢. الالتزام بالموعد المحدد في تقديم الواجبات والبحث .</p> <p>٣. الاختبارات الفصلية والنهائية تعبر عن الالتزام والتحصيل المعرفي .</p>
<p>د - المهارات العامة والمنقولة ( المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي ).</p> <p>١. تنمية قدرات الطالب على التعامل مع الكتب الرسمية والمخاطبات باللغة السليمة .</p> <p>٢. تنمية قدرة الطالب على الحوار والمناقشة في الأمور العامة والخاصة .</p>



الأسبوع	الساعات	مخرجات التعلم المطلوبة	اسم الوحدة / المساق أو الموضوع	طريقة التعليم	طريقة التقييم
الأول	1		العدد تذكيره وتأنيثه	نظري	التحضير وأسئلة ومناقشة
الثاني	1		الأعداد المفردة والمركبة	نظري	التحضير وأسئلة ومناقشة
الثالث	1		ألفاظ العقود و الأعداد (مئة ، ألف ، مليون)	نظري	التحضير وأسئلة ومناقشة
الرابع	1		تعريف العدد وتذكيره	نظري	التحضير وأسئلة ومناقشة
الخامس	1		ما يصاغ من العدد على وزن فاعل	نظري	التحضير وأسئلة ومناقشة
السادس	1		كتابة الهمزة المتوسطة والمتطرفة	نظري	التحضير وأسئلة ومناقشة
السابع	1		كتابة الألف اللينة	نظري	التحضير وأسئلة ومناقشة



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

التحضير وأسئلة ومناقشة	نظري	كتابة التاء المربوطة والمبسوطة	1	الثامن
التحضير وأسئلة ومناقشة	نظري	كتابة الضاد والطاء	1	التاسع
التحضير وأسئلة ومناقشة	نظري	اللامات وأنواعها	1	العاشر
التحضير وأسئلة ومناقشة	نظري	الهاءات وأنواعها	1	الحادي عشر
التحضير وأسئلة ومناقشة	نظري	النونات وأنواعها	1	الثاني عشر
التحضير وأسئلة ومناقشة	نظري	استعمالات (ما ، من) والفرق بين (أما ، إما)	1	الثالث عشر
التحضير وأسئلة عامة ومناقشة	نظري	استعمالات (أن ، إن) و (حتى ، رويد)	1	الرابع عشر
امتحان شهري	نظري		1	الخامس عشر



١٢. البنية التحتية	
<p>١- الكتاب : قواعد اللغة العربية ، أ. يوسف الصيداوي</p> <p>٢- الكتاب : رسالتان في اللغة ، أبو الحسن علي بن عيسى بن علي بن عبد الله الرماني ، دار الفكر للنشر والتوزيع - عمان ، ١٩٨٤ م ، تحقيق : إبراهيم السامرائي .</p>	<p>القراءات المطلوبة :</p> <ul style="list-style-type: none"> <li>▪ كتب المقرر</li> <li>▪ أخرى</li> </ul>
	متطلبات خاصة
	الخدمات الاجتماعية ( وتشمل على سبيل المثال محاضرات الضيوف والتدريب المهني والدراسات الميدانية )

١٣. القبول	
لا توجد	المتطلبات السابقة
10	أقل عدد من الطلبة
40	أكبر عدد من الطلبة

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## COURSE SPECIFICATION

Study of derivatives, their methods and applications, and their relationship to real problems. Teaching training students to deal with the rules and laws of derivatives and apply them in the future in a logical and correct manner.

1. Teaching Institution	College of Computer Science and Information Technology / University of Anbar
2. University Department/Centre	Information system
3. Course title/code	Mathematic 1
4. Programme (s) to which it contributes	Computer Science
5. Modes of Attendance offered	On-line
6. Semester/Year	2 <sup>nd</sup> Semester / 2021 – 2022
7. Number of hours tuition (total)	45 hours
8. Date of production/revision of this Specification	01 / 10 / 2021
9. Aims of the Course	
A - Understand the concept of mathematics, its methods and applications.	
B - Explain the concept of derivatives and integration and their applications.	
C - Understand the relationship between extracts and integration and the real problems and how to deal with them	

## 0 - Learning outcomes, teaching method, learning and assessment

### A- Knowledge and Understanding

A 1. Acquiring the ability and skill to distinguish the bases of derivatives methods and dealing with them

A 2. Acquire the capabilities and skills of applications of derivatives

A3. Dealing with different methods of finite and indefinite derivatives

### B. Subject-specific skills

B1. Summer Training

B2. Fourth year projects

B3. Scientific projects

### Teaching and Learning Methods

- Daily and weekly quizzes.
- Class room activities.
- Guiding the student to some electronic websites.

### Assessment methods

- Participation inside the class.
- Presentation of activities.
- Semesters and final examinations.

### C. Thinking Skills

C1. Develop the student's ability to work and provide homework in a timely manner.

C2. Analyze the problem and find the solution based on the methods used in the various derivatives

C 3. To develop the student's ability to debate.

### Teaching and Learning Methods

- Managing the lecture to deal with the real problem that attracts the student to the topic of the lesson.
- Assigning groups of students with some activities.
- Make part of the grades for the assignments.

### Assessment methods

- Active participation in the classroom is evidence of student commitment and responsibility.
- Commitment to the deadline in submitting assignments and research.
- The exams express commitment and cognitive and skill achievement.

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Developing the student's ability to deal with technical methods.

D2. Developing the student's ability to deal with Internet.

D3. Developing the student's ability to deal with multi media.

D4. Developing the student's ability to discuss real problems.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	3	Derivatives	The Definition of the Derivative Interpretation of the Derivative	Theoretical	Assignments and Discussions
2	3	Differentiation Formulas, Product and Quotient Rule	Properties of Derivative , Some laws of derivatives	Theoretical	Assignments and Discussions
3	3	Differentiation Formulas, Product and Quotient Rule	Properties of Derivative , Some laws of derivatives	Theoretical	Quiz ,Assignments and Discussions
4	3	Derivatives of Trig Functions	<b>Derivatives of the six trig functions</b>	Theoretical	Quiz
5	3	Derivatives of Exponential and Logarithm Functions	<b>Exponential Functions, Logarithm Functions</b>	Theoretical	Assignments ,Discussions, H.W
6	3	Derivatives of Inverse Trig Functions	<b>Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation</b>	Theoretical	Assignments and Discussions
7	3	Derivatives of Inverse Trig Functions	<b>Inverse Sine, Inverse cosine, Inverse tangent, Alternate Notation</b>	Theoretical	Assignments and Discussions
8	3	Derivatives of Hyperbolic Trig Functions	These are the six hyperbolic trig Functions .and They are defined as	Theoretical	Quiz, Assignments and Discussions
9	3	Chain Rule	There are two forms of the chain rule	Theoretical	Assignments and Discussions
10	3	Implicit Differentiation	Defined , formula, and used the chain rule	Theoretical	Assignments and Discussions,H.W
11	3	Higher Order Derivatives	first derivative, second derivative, third derivative.	Theoretical	Quiz, Assignments and Discussions
12	3	Logarithmic Differentiation	the properties of logarithms	Theoretical	Assignments and

					Discussions
13		Examination		On- line	
14	3	Applications of Derivatives	Introduction, Critical Points and Minimum and Maximum Values	Theoretical	Assignments and Discussions
15	3	Applications of Derivatives	Introduction, Critical Points and Minimum and Maximum Values	Theoretical	Assignments and Discussions

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1- Book " Thomas Calculas 2- Lecture Notes
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	Practical applications in the companies and projects.

13. Admissions	
Pre-requisites	Mathematical I, Mathematical II, Advanced Mathematics
Minimum number of students	15
Maximum number of students	50







# Course Weekly Outline

**Course Name: Data Base I**

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	<p>أ. أن يفهم الطالب ماهي قواعد البيانات ، وماهي اهدافها ووظائفها وانواعها .</p> <p>ب. فهم مفهوم قواعد البيانات في نظام الحاسوب.</p> <p>ت. فهم إدارة العمليات وتحليل الانظمة.</p> <p>ث. فهم نماذج قواعد البيانات وتصميمها .</p> <p>ج. فهم مكونات نظام قاعدة البيانات ودروة الحياة الخاص بالانظمة.</p> <p>التعرف على مفاهيم الادخال والاخراج وإدارة الملفات في قواعد البيانات</p>				
<b>Course Description</b>					
<b>Textbook</b>					
<b>References</b>					
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
<b>General Notes</b>					



Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	First week	Intro: A brief history of Data, Information, Knowledge, Wisdom		/
2	Second week	Data Base concepts and structure		/
3	Third week	Database Management System		/
4	Fourth week	Database Models		/
5	Fifth week	The Entity Relationship model		/
6	Sixth week	Structured Query Language (SQL)		/
7	Seventh week	Data Definition Language (DDL)		/
8	Eighth week	Data Manipulation Language (DML)		/
9	Ninth week	Exam 1		/
10	Tenth week	Database Administrator		/
11	Eleventh week	Database Design		/
12	Twelfth week	The Design Process		/
13	Thirteenth week	Database Cardinality		/
14	Fourteenth week	Database Access Language		/
15	Fifteenth week	Life Cycle of Database Management System		/

**Instructor Signature:**

**Dean Signature:**



# Course Weekly Outline

**Course Name: Computational theory 1**

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	This course covers the Theory of computation. Computation models: automata and formal languages. Practical consequences				
<b>Course Description</b>	Set notation, Definitions, Finite Automata ( DFA, NFA), Regular Expression, Transition Graph, Kleens Theorem				
<b>Textbook</b>	Daniel L. A. Cohen, Introduction of the theory of computation.				
<b>References</b>	-Lewis, H.R. and Papadimitriou, Christos. 1998. Elements of the Theory of Computation. 2 <sup>nd</sup> Edition. Prentice-Hall.				
<b>Course Assessments</b>	TermTests	Laboratory	Quizzes	Project	Final Exam
	Exam1=15% Exam 2=15%		10%	-	60%
<b>General Notes</b>					



### Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Set notation, Definitions		
2		Regular Expression		
3		Regular Expression		
4		Finite Automata(F.A.)		
5		Finite Automata(F.A.)		
6		Transition Graphs		
7		Kleen theorm,		
8		Kleen theorm (part 2)		
9		Kleen theorm part 3		
10		DFA, NFA		
11		F. A. with output (Moore machine) (Mo)		
12		F. A. with output (Mealy machine) (Me)		
13		Converting from (Mo) to (Me) and vice versa		
14		Chomsky hierarchy language,		
15		Grammar( PSG, CSG, CFR, FSG)		

**Instructor Signature:**

**Dean Signature:**

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

The study of structured programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them.

1. Teaching Institution	College of Computer Science & Information Technology
2. University Department/Centre	Information System
3. Course title/code	Object Oriented Program-1
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	Attendance
6. Semester/Year	Semester 1
7. Number of hour tuition (total)	70
8. Date of production/revision of this specification	15-9-2021
9. Aims of the Course: - The student's acquisition of the concept of entity programming, classes, and objects, and how to deal with them. Clarify the concept of classes, what are the functions and properties of them, and the objects of each class. Giving the student experience in dealing with objects and classes and the distribution of properties and functions. The study of structured programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them.	

## 10·LearningOutcomes,Teaching,LearningandAssessmentMethod

### A-KnowledgeandUnderstanding

A1. Gain the ability and skill to distinguish and deal with program instructions and functions of entity programming.

A2- Acquire the skill of distinguishing between objects, classes and functions and linking them.

A3- Dealing with the attributes and characteristics of each class and programming functions.

### B. Subject-specific skills

B1. summer training

B2. Graduate Research

B3. Scientific Reports

### TeachingandLearningMethods

Sudden daily and continuous weekly tests.

Exercises and activities in the classroom.

Guide students to some websites to benefit from them.

### Assessmentmethods

Participation in the classroom.

Presentation of activities

- Semester and final exams and activities.

### C. Thinking Skills

C1. Develop the student's ability to work on the duties and deliver them on time.

C2. Programmatically analyze the problem and find solutions based on the expected results.

C3. - Develop the student's ability to dialogue and discussion.

### TeachingandLearningMethods

Management of the lecture in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without moving away from the core of the topic so that the material is flexible and capable of understanding and analysis.

- Assigning the student some group activities and duties.

- Allocating a percentage of the grade for daily assignments and tests.

### Assessment methods

- Active participation in the classroom is evidence of the student's commitment and responsibility.

- Commitment to the deadline in submitting assignments and research.

- The quarterly and final exams express commitment and cognitive and skill achievement.

**D. General and Transferable Skills (other skills relevant to employability and personal development)**

D1. - Develop the student's ability to deal with technical means.

D2. - Develop the student's ability to deal with the Internet.

D3. - Develop the student's ability to deal with multiple media.

D4. - Develop the student's ability to dialogue and discussion.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	5	Programming of C++	<b>C++ Language (Quick review)</b>	Theory+Practical	General questions and discussion
2	5	Functions, classes, and objects	<b>Function in C++ (Deep Look)</b>	Theory+Practical	General questions and discussion or an exam
3	5	Items and operations	<b>Array Function Interaction</b>	Theory+Practical	General questions and discussion
4	5	previous topics	<b>Structures and Array of Structures</b>	Theory+Practical	group assignments
5	5	previous topics	<b>Introduction to Class Fundamentals</b>	Theory+Practical	Debate+quiz
6	5	previous topics	<b>Closer Look at Class Member Access</b>	Theory+Practical	General questions and discussion
7	5	Functions, classes, and objects	<b>Constructors and Destructors</b>	Theory+Practical	General questions and discussion or an exam
8	5	genetics	<b>Creating Inline Functions Inside a Class</b>	Theory+Practical	General questions and discussion
9	5	previous topics	<b>Arrays of Objects (Classes)</b>	Theory+Practical	group assignments
10	5	previous topics	<b>Pointers to Objects (Classes)</b>	Theory+Practical	Debate+quiz
11	5	previous topics	<b>Friend Functions</b>	Theory+Practical	General questions and discussion
12	5		<b>Overloading Constructors</b>	Theory+Practical	General questions and discussion
13	5		<b>Passing Objects (Classes) to Functions</b>	Theory+Practical	group assignments



14	5		<b>Returning Objects (classes ) From Functions</b>	Theory+Practical	Debate
15	5		<b>Final Exam</b>		Final Exam

12.Infrastructure	
Required reading: · CORETEXTS · COURSE MATERIALS · OTHER	- <b>C++ from the Ground Up, Herbert Schildt, Third Edition , McGraw-Hill/Osborne, 2013.</b>
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures, internship, field studies)	Practical application in companies and related departments and graduation research projects.

13.Admissions	
Pre-requisites	--
Minimum number of students	10
Maximum number of students	70



# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Information system
3. Course title/code	Advance mathematics
4. Programme(s) to which it contributes	classroom
5. Modes of Attendance offered	Attendance
6. Semester/Year	1st semester
7. Number of hours tuition (total)	45
8. Date of production/revision of this specification	
9. Aims of the Course	
1-To describe the aim of study advance mathematics	
2-To understand what difference between ordinary equation and differential equation	
3- To understand the difference between the type of differential equation	
4- To learn the type of method to solve the differential equation	
5- To apply the application of differential equation	

## 10· Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

- A1. Understand the concept of ordinary and partial
- A2. Understand the method of solving the first order differential equation
- A3. Understand the method of solving second order differential equation
- A4. Understand the Laplace transform
- A5. Understand the Fourier series
- A6 .

### B. Subject-specific skills

- B1. explain what mean of ordinary and partial
- B2. classify the method of solving
- B3. Classify the differential equation

### Teaching and Learning Methods

By solving many exercises

### Assessment methods

10% homework

20% quiz

10% oral exam

20% mid exam

40% final exam

## D. General and Transferable Skills (other skills relevant to employability and personal development)

- D1.
- D2.
- D3.
- D4.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	3		Abstract of differential equation		
2	3		Separable equation		
3	3		Solve some example		
4	3		Homogenous equation		
5	3		Exact equation		
6	3		Linear equation		
7	3		Some example		
8	3		Bernoulli equation		
9	3		Second order differential equation		
10	3		Some example		
11	3		Laplace transform		
12	3		Power series , Fourier series		
13	3		Mid exam		
14	3		Review		
15	3		Final exam		

## 12. Infrastructure

Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Lecture notes of Advance mathematics , by Makarim alturky
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## 13. Admissions

Pre-requisites	
Minimum number of students	20
Maximum number of students	40





## نموذج وصف المقرر

### مراجعة أداء مؤسسات التعليم العالي ((مراجعة البرنامج الأكاديمي))

يوفر وصف المقرر هذا إيجازاً مقتضباً لأهم خصائص المقرر ومخرجات التعلم المتوقعة من الطالب تحقيقها مبرهنناً عما إذا كان قد حقق الاستفادة القصوى من فرص التعلم المتاحة. ولابد من الربط بينها وبين وصف البرنامج.

١. المؤسسة التعليمية	جامعة الانبار / كلية علوم الحاسوب وتكنولوجيا المعلومات
٢. القسم الجامعي / المركز	نظم المعلومات
٣. اسم / رمز المقرر	ديمقراطية
٤. البرامج التي يدخل فيها	
٥. أشكال الحضور المتاحة	دوام رسمي
٦. الفصل / السنة	الفصل الأول / السنة الدراسية الثانية
٧. عدد الساعات الدراسية (الكلي)	15
٨. تاريخ إعداد هذا الوصف	2023 / 9 / 10
٩. أهداف المقرر :	
أ. تعليم الطلبة على أساسيات الديمقراطية	
ب. تعليم الطلبة على كيفية حل المشكلات باستخدام الديمقراطية	


١٠. مخرجات التعلم وطرائق التعليم والتعلم والتقييم
<b>أ.المعرفة والفهم :</b> ١. أن يعرف الطالب مفهوم الديمقراطية وقوانينها وتطبيقاتها ٢. أن يعرف الطالب كيفية المشاركة في الديمقراطية واستخدام الحلول الايجابية
<b>ب.المهارات الذهنية :</b> ١. القدرة على استخدام الديمقراطية في وضع الحلول الناجحة ٢. القدرة على مشاركة الآخرين في حرية الرأي
طرائق التعليم والتعلم
١. المشاركة بالتحضير في قاعة الدرس ٢. طريقة الأسئلة والأجوبة في قاعة الدرس
طرائق التقييم
١. المشاركة في قاعة الدرس ٢. اختبارات فصلية ونهائية
ج- مهارات التفكير ١. تطوير قدرة الطالب على الحوار والمناقشة ٢. حل المشكلة بشكل ديمقراطي
طرائق التعليم والتعلم
١. إدارة المحاضرة على نحو تطبيقي مرتبط بواقع الحياة اليومية ٢. تكليف الطالب ببعض الأنشطة والواجبات





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

طرائق التقييم
<p>١. المشاركة الفاعلة في قاعة الدرس دليل التزام الطالب وتحمله المسؤولية .</p> <p>٢. الالتزام بالموعد المحدد في تقديم الواجبات والبحث .</p> <p>٣. الاختبارات الفصلية والنهائية تعبر عن الالتزام والتحصيل المعرفي .</p>
<p>د - المهارات العامة والمنقولة ( المهارات الأخرى المتعلقة بقابلية التوظيف والتطور الشخصي ).</p> <p>١. تنمية قدرات الطالب على التعامل مع القوانين الديمقراطية .</p> <p>٢. تنمية قدرة الطالب على الحوار والمناقشة في الأمور العامة والخاصة .</p>



الأسبوع	الساعات	مخرجات التعلم المطلوبة	اسم الوحدة / المساق أو الموضوع	طريقة التعليم	طريقة التقييم
الأول	1	الديمقراطية	مفهوم الديمقراطية	نظري	التحضير وأسئلة ومناقشة
الثاني	1		مميزات الديمقراطية	نظري	التحضير وأسئلة ومناقشة
الثالث	1	أنواع الديمقراطية	أنواع الديمقراطية	نظري	التحضير وأسئلة ومناقشة
الرابع	1		الديمقراطية المباشرة	نظري	التحضير وأسئلة ومناقشة
الخامس	1		الديمقراطية التمثيلية	نظري	التحضير وأسئلة ومناقشة
السادس	1		الديمقراطية شبه المباشرة	نظري	التحضير وأسئلة ومناقشة
السابع	1		الديمقراطية غير المباشرة	نظري	التحضير وأسئلة ومناقشة



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

التحضير وأسئلة ومناقشة	نظري	الحرية ، الكرامة الإنسانية	ركائز الديمقراطية	1	الثامن
التحضير وأسئلة ومناقشة	نظري	المساواة والعدالة ، المشاركة السياسية		1	التاسع
التحضير وأسئلة ومناقشة	نظري	التعددية السياسية ، الانتخابات		1	العاشر
التحضير وأسئلة ومناقشة	نظري	حق الأكثرية وحماية حقوق الأقلية ، تداول السلطة سلميا		1	الحادي عشر
التحضير وأسئلة ومناقشة	نظري	الفصل بين السلطات ، الشفافية والمساءلة		1	الثاني عشر
التحضير وأسئلة ومناقشة	نظري	القواعد والمبادئ العامة للديمقراطية	آليات الديمقراطية	1	الثالث عشر
التحضير وأسئلة عامة ومناقشة	نظري	الآليات العامة للديمقراطية		1	الرابع عشر
امتحان شهري	نظري			1	الخامس عشر

١٢. البنية التحتية	
الديمقراطية وحقوق الإنسان ، وزارة حقوق الإنسان / المركز الوطني لحقوق الإنسان / قسم البحوث	القراءات المطلوبة : <ul style="list-style-type: none"> <li>▪ كتب المقرر</li> <li>▪ أخرى</li> </ul>
	متطلبات خاصة
	الخدمات الاجتماعية ( وتشمل على سبيل المثال محاضرات الضيوف والتدريب المهني والدراسات الميدانية )

١٣. القبول	
لا توجد	المتطلبات السابقة
10	أقل عدد من الطلبة
40	أكبر عدد من الطلبة

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of Anbar
2. University Department/Centre	Information system
3. Course title/code	znxlmo4
4. Programme(s) to which it contributes	classroom
5. Modes of Attendance offered	Attendance
6. Semester/Year	2st smester
7. Number of hours tuition (total)	45
8. Date of production/revision of this specification	
9. Aims of the Course	
1-To convey the basic concepts of data structures	
2-To understand basic concepts about stacking, queues, lists, trees, and graphs	
3-It helps the student to know how to deal with data and how to choose the appropriate graphic structure for it	
4-Data structure helps the student to understand the nature of the problem at a deeper level and thus better understanding the world for solving programming problems	

## 10. Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

A1- Know the concept of data structures and how to apply them

A2- Understand how to use data structures to know the data to be organized in program memory

A3- Understand and know the use of data structures in different real applications

A4- Understand and know the methods of different data structures

### B. Subject-specific skills

1. Providing the student with the skill of applying various data

2- Providing the student with the skill of structuring programs

3- Providing the student with the skill of planning any problem and solving it programmatically

4- Providing the student with the skill of dealing with any type of data

### Teaching and Learning Methods

Data model use

using the Internet

Use the whiteboard

Use the Paint program

Use the group solution method

### Assessment methods

10	semester exam	1
10	oral exam	2
10	homework	3
5	Attendees	4
15	Practical laboratory	5
50	final exam	6
<b>% 100</b>	<b>total</b>	

### C. Thinking Skills

1- Clarification skill

2- Describing skill

3- The skill of accessing information and converting it into digital data

4- Classification skill

5- Problem solving skill

6- The skill of presenting and representing information

7- The skill of creating cognitive patterns to solve any software problem

8- The skill of applying procedures

#### D. General and Transferable Skills (other skills relevant to employability and personal development)

- 1-Providing the student with experience in the field of data structure
- 2- Providing the student with experience in the field of project management to solve any problem in a digital way
- 3- Providing the student with experience in the field of understanding applications
- 4- Providing the student with experience in using real data structures in business

### 11. Course Structure

Week	Hou rs	ILOs	Unit/Module orTopic Title	Teaching Method	Assessment Method
1	3	Introduction for data structure	Introduction	Theoretical	Activities
2	3	Learn the basic principles	General concept	Theoretical	Activities
3	3	Learn the array in different domination	Array Data structure	Practical and Theoretical	Oral exam
4	3	Learn stack and its operation	Stack data structure	Practical and Theoretical	Solving examples
5	3	Learn one of the stack application	Expression Parsing	Theoretical	Solving examples
6	3	review	Solving homework	Theoretical	Oral exam
7	3	Learn Queue and its operation	Queue data structure	Practical and Theoretical	Solving examples
8		Learn circular Queue and its operation	circular Queue data structure	Practical and Theoretical	Solving examples
9	3		lecture 1 to 7		Middle exam
10	3	Review for Pointer &Structure	Pointer &Structure	Practical and Theoretical	Daily exam
11	3	Learn Linked list representation	linked list data structure	Theoretical	Solving examples
12	3	Learn Linked list operations	linked list operations	Practical and Theoretical	Solving examples
13	3	Learn Doubly Linked list representation	Doubly linked list data structure	Theoretical	Solving examples
14	3	Learn Doubly Linked list operations	Doubly linked list operations	Practical and Theoretical	Solving examples
15	3	second semester exam			

### 12. Infrastructure

Required reading:

- CORE TEXTS
- COURSE MATERIALS
- OTHER

عصام الصفار, هياكل البيانات, 2001

Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	<a href="https://www.programiz.com/dsa/algorithm">https://www.programiz.com/dsa/algorithm</a> <ul style="list-style-type: none"> <li>• <a href="https://www.tutorialspoint.com/data_structures_algorithms/index.htm">https://www.tutorialspoint.com/data_structures_algorithms/index.htm</a></li> </ul>

13. Admissions	
Pre-requisites	
Minimum number of students	20
Maximum number of students	40







# Course Weekly Outline

**Course Name: Computational theory 2**

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>					
<b>Course Description</b>	Grammar, Chomsky Normal Form, Greibach Normal Form, LMD & RMD, Ambiguity, Regular language, PDA, TM, PM .				
<b>Textbook</b>	Daniel L. A. Cohen, Introduction of the theory of computation.				
<b>References</b>	-Lewis, H.R. and Papadimitriou, Christos. 1998. Elements of the Theory of Computation. 2 <sup>nd</sup> Edition. Prentice-Hall.				
<b>Course Assessments</b>	TermTests	Laboratory	Quizzes	Project	Final Exam
	Exam1=15% Exam 2=15%		10%	-	60%
<b>General Notes</b>					



### Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Regular Grammar (RG or FSG)		
2		Context Free Grammar (CFG)		
3		Grammar Generating, LMD & RMD, Parsing tree		
4		Ambiguity in CFG		
5		Chomsky Normal Form		
6		Greibach Normal Form		
7		Push Dawn Automata (PDA) for $a^n b^n$		
8		Push Dawn Automata (PDA) for $a^n b^n b^n a^n$		
9		Tracing in PDA		
10		Turing Machine (TM)		
11		Insert, delete, replace TM subprogram		
12		Post Machine (PM)		
13		PM tracing		
14		Regular language		
15		Regular language		

**Instructor Signature:**

**Dean Signature:**

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

The study of structured programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them.

1. Teaching Institution	College of Computer Science & Information Technology
2. University Department/Centre	Information System
3. Course title/code	Object Oriented Program-2
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	Attendance
6. Semester/Year	Semester 2
7. Number of hour tuition (total)	70
8. Date of production/revision of this specification	15-9-2021
9. Aims of the Course: - The student's acquisition of the concept of entity programming, classes, and objects, and how to deal with them. Clarify the concept of classes, what are the functions and properties of them, and the objects of each class. Giving the student experience in dealing with objects and classes and the distribution of properties and functions. The study of structured programming, entity programming and what is known as object-oriented programming, knowledge of	

injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them.

## 10. Learning Outcomes, Teaching, Learning and Assessment Methods

### A- Knowledge and Understanding

A1. Gain the ability and skill to distinguish and deal with program instructions and functions of entity programming.

A2- Acquire the skill of distinguishing between objects, classes and functions and linking them.

A3- Dealing with the attributes and characteristics of each class and programming functions.

### B. Subject-specific skills

B1. summer training

B2. Graduate Research

B3. Scientific Reports

### Teaching and Learning Methods

Sudden daily and continuous weekly tests.

Exercises and activities in the classroom.

Guide students to some websites to benefit from them.

### Assessment methods

Participation in the classroom.

Presentation of activities

- Semester and final exams and activities.

### C. Thinking Skills

C1. Develop the student's ability to work on the duties and deliver them on time.

C2. Programmatically analyze the problem and find solutions based on the expected results.

C3. - Develop the student's ability to dialogue and discussion.

### Teaching and Learning Methods

Management of the lecture in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without moving away from the core of the topic so that the material is flexible and capable of understanding and analysis.

- Assigning the student some group activities and duties.

- Allocating a percentage of the grade for daily assignments and tests.

#### Assessment methods

- Active participation in the classroom is evidence of the student's commitment and responsibility.
- Commitment to the deadline in submitting assignments and research.
- The quarterly and final exams express commitment and cognitive and skill achievement.

D.General and Transferable Skills (other skills relevant to employability and personal development)

D1. - Develop the student's ability to deal with technical means.

D2. - Develop the student's ability to deal with the Internet.

D3. - Develop the student's ability to deal with multiple media.

D4. - Develop the student's ability to dialogue and discussion.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	5	chapter one	<b>Introduction to Operator Overloading</b>	Theory+Practical	General questions and discussion
2	5	Functions, classes, and objects	<b>Operator Overloading Using Member Functions</b>	Theory+Practical	General questions and discussion or an exam
3	5	Items and operations	<b>Unary Operators Overloading</b>	Theory+Practical	General questions and discussion
4	5	previous topics	<b>Operator Overloading Tips and Restrictions</b>	Theory+Practical	group assignments
5	5	previous topics	<b>Nonmember Operator Functions</b>	Theory+Practical	Debate+quiz
6	5	previous topics	<b>Using a Friend to Overload a Unary Operator</b>	Theory+Practical	General questions and discussion
7	5	Functions, classes, and objects	<b>Overloading the Relational and Logical Operators</b>	Theory+Practical	General questions and discussion or an exam
8	5	genetics	<b>Introducing Inheritance</b>	Theory+Practical	General questions and discussion
9	5	previous topics	<b>Base Class Access Control</b>	Theory+Practical	group assignments
10	5	previous topics	<b>Using protected Members</b>	Theory+Practical	Debate+quiz
11	5	previous topics	<b>Inheriting Multiple Base Classes</b>	Theory+Practical	General questions and discussion



12	5		<b>Constructors, Destructors, and Inheritance</b>	Theory+Practical	General questions and discussion
13	5		<b>Passing Parameters to Base Class Constructors</b>	Theory+Practical	group assignments
14	5		<b>Virtual Base Classes</b>	Theory+Practical	Debate
15	5		<b>Final Exam</b>		Final Exam

12.Infrastructure	
Required reading: · CORETEXTS · COURSE MATERIALS · OTHER	- <b>C++ from the Ground Up, Herbert Schildt, Third Edition , McGraw-Hill/Osborne, 2013.</b>
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures, internship, field studies)	Practical application in companies and related departments and graduation research projects.

13.Admissions	
Pre-requisites	--
Minimum number of students	10
Maximum number of students	70



# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

Studying the numerical analysis, methods, applications and its relationship with the real problems. Teach train the students to deal with the numerical process in the future in logic and right style.

1. Teaching Institution	College of Computer Science and Information Technology / University of Anbar
2. University Department/Centre	Information Systems
3. Course title/code	Numerical Analysis
4. Programme (s) to which it contributes	Computer Science
5. Modes of Attendance offered	Class Room and On-line
6. Semester/Year	2 <sup>nd</sup> Semester / 2020 – 2021
7. Number of hours tuition (total)	60 hours
8. Date of production/revision of this Specification	15 / 9 / 2021
9. Aims of the Course	
	A- Understanding the concept of numerical analysis, its methods and applications.
	B- Explain the concept of the Matrices and its application in numerical analysis.
	C- Understanding the relationship between the numerical methods and the real problems and how to deal with it.

## 10. Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

- A1. Gain the ability and skill to distinguish the numerical methods and deal with them.
- A2. Gain the ability and skills of the matrices applications.
- A3. Dealing with the different numerical methods.

### B. Subject-specific skills

- B1. Summer Training
- B2. Fourth year projects
- B3. Scientific projects

### Teaching and Learning Methods

- Daily and weekly quizzes.
- Class room activities.
- Guiding the student to some electronic websites.

### Assessment methods

- Participation inside the class.
- Presentation of activities.
- Semesters and final examinations.

### C. Thinking Skills

- C1. Developing the student ability to work and present the home works in time.
- C2. Analyses the problem and find the solution based on the numerical methods
- C3. Developing the student discussion ability.
- C4.

### Teaching and Learning Methods

- Managing the lecture to deal with the real problem that attracts the student to the topic of the lesson.
- Assigning groups of students with some activities.
- Make part of the grades for the assignments.

### Assessment methods

- Active participation in the classroom is evidence of student commitment and responsibility.
- Commitment to the deadline in submitting assignments and research.
- The exams express commitment and cognitive and skill achievement.

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Developing the student's ability to deal with technical methods.

D2. Developing the student's ability to deal with Internet.

D3. Developing the student's ability to deal with multi media.

D4. Developing the student's ability to discuss real problems.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4	Direct Methods	Direct methods for solving linear system of equation	Theoretical and Experimental	Assignments and Discussions
2	4	Gaussian Elimination	Simple Gaussian elimination method, gauss elimination method with partial pivoting,	Theoretical and Experimental	Assignments and Discussions
3	4	Determinant	determinant evaluation, gauss Jordan method,	Theoretical and Experimental	Quiz
4	4	LU decomposition	L U decompositions Doolittle's LU decomposition, Doolittle's method with row interchange	Theoretical and Experimental	Assignments and Discussions
5	4	Matrix inverse	Finding Matrix Inverse	Theoretical and Experimental	Assignments and Discussions
6	4	Iteration methods	Iterative methods for solving linear systems of equations	Theoretical and Experimental	Quiz
7	4	Jacobian iteration	Jacobian iteration, gauss – seidel method,	Theoretical and Experimental	Assignments and Discussions
8	4	gauss – seidel method,	Successive over relaxation method (sort method)	Theoretical and Experimental	Assignments and Discussions
9	4	gauss – seidel method,	Successive over relaxation method (sort method)	Theoretical and Experimental	Quiz
10	4	Newton-Raphson's	Newton-Raphson's Method	Theoretical and Experimental	Assignments and Discussions
11	4	Runge-kutta	Runge-kutta Method	Theoretical and Experimental	Assignments and Discussions
12	4	Polynomial, Data Approximation	Interpolation and the Lagrange Polynomial, Data Approximation and Neville's Method,	Theoretical and Experimental	Quiz
13	4	Differential Equation method	Numerical Analysis Methods for Differential Equation	Theoretical and Experimental	Assignments and Discussions
14	4	Integral Equation	Numerical Analysis Methods for Integral	Theoretical and Experimental	Assignments and Discussions

		methos	Equation		
15	4	Integral Equation method	Numerical Analysis Methods for Integral Equation	Theoretical and Experimental	Quiz

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1- Book " Numerical methods with applications" Autar K. Kaw and Egwu Eric Kalu, 2002. 2- Lecture Notes
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	Practical applications in the companies and projects.

13. Admissions	
Pre-requisites	Mathematical I, Mathematical II, Advanced Mathematics
Minimum number of students	10
Maximum number of students	40

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	University of anbar
2. University Department/Centre	Information system
3. Course title/code	znxlmo4
4. Programme(s) to which it contributes	classroom
5. Modes of Attendance offered	e-learning
6. Semester/Year	2st smester
7. Number of hours tuition (total)	30
8. Date of production/revision of this specification	
9. Aims of the Course	
1. The student will be able to understand and understand the mechanics of their algorithmic data repair problems in terms of their degree of complexity.	
2. Trees, how to build them in C++, self-recall, and how to deal with them	
3.. that the student be able to understand the working mechanics of algorithms for data structures	
4. What are the best search algorithms, and the criteria for choosing the type of algorithm?	
5.sorting algorithm	

## 10· Learning Outcomes, Teaching ,Learning and Assessment Methode

### A- Knowledge and Understanding

This article is based on knowledge

### B. Subject-specific skills

Learn to program in C++ in a professional way

### Teaching and Learning Methods

Understand code and algorithms and implement them in different ways and new steps

### Assessment methods

Each student performs part of a problem and then gives a set of questions to each lecture for the student to solve

### C. Thinking Skills

The student will have the ability to imagine and suggest hybrid methods between data structures, for example, a hybrid data structure that combines two different models of data structures. And also ways to embed and deal with evidence

### Teaching and Learning Methods

The giver and the receiver

Writing the code

Write action steps in an algorithm

### Assessment methods

Each student performs part of a problem and then gives a set of questions to each lecture for the student to solve



## D. General and Transferable Skills (other skills relevant to employability and personal development)

This course opens the horizon for the student to represent data in digital form and deal with it professionally

### 11. Course Structure

Week	H ou rs	ILOs	Unit/Modul e orTopic Title	Teaching Method	Assessment Method
1	2	The general structure of the subject and the study vocabulary	general vocabulary	An individual explanation from the instructor	
2	2	Define algorithms, their properties, and how to write them Know the	Introduction to the article	adopt scheme	
3	2	complexity of the algorithm in terms of time and execution	Calculate the complexity of the algorithm in terms of time and steps	Solve a set of code collectively	
4	2	Recursion	Recursion	Converting a normal code to a Recursion code	
5	2	Study all previous lectures with homework	Solve the assessment methods in the previous 3 lectures	Give other examples	
6	2	How to choose the type of sorting algorithm according to the data	Introduction for sorting algorithm	Solve numeric examples	
7	2	Understand the workings of the algorithm	selection sort algorithm	Solve numeric examples	
8	2	Understand the workings of the algorithm	Insertion sort algorithm	Solve numeric examples	

9	2	Understand the workings of the algorithm	Bubble sort algorithm	Solve numeric examples	
10	2	Study all previous lectures	Solve the assessment methods in the previous 3 lectures	Give other examples	
11	2	Exam			
12	2	Representing data as a tree	the trees	Convert tree to code	
13	2	Programmatically represent the tree	Print, delete and add to the tree in the form of code	adopt scheme give examples	
14	2	How to search in trees	search algorithms	Solve a set of code collectively	
15	2	second semester exam			

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	عصام الصفار, هياكل البيانات, 2001
Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	<a href="https://www.programiz.com/dsa/algorithm">https://www.programiz.com/dsa/algorithm</a> • <a href="https://www.tutorialspoint.com/data_structures_algorithms/index.htm">https://www.tutorialspoint.com/data_structures_algorithms/index.htm</a>

13. Admissions	
Pre-requisites	
Minimum number of students	20
Maximum number of students	33



## TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

## COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

[illegible]

## 10· Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

A1. Learn HTML5

A2.Learn CSS

A3.Learn JavaScript

A4.

A5.

A6 .

### B. Subject-specific skills

B1.

B2.

B3.

### Teaching and Learning Methods

### Assessment methods

Final Exam project	Quizzes	Laboratory	Term Tests
50%	10%	15%	25%

### C. Thinking Skills

C1.

C2.

C3.

C4.

### Teaching and Learning Methods

### Assessment methods

Final Exam project	Quizzes	Laboratory	Term Tests
50%	10%	15%	25%

## D. General and Transferable Skills (other skills relevant to employability and personal development)

- D1.
- D2.
- D3.
- D4.

## 11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
First Week	2 h.		General introduction Stander HTML Basics	Give general description of HTML + start our first program	
Second Week	2 h.		HTML Attributes	Design and implement our web pages.	
Third Week	2 h.		HTML Format.	Design and implement our web pages.	Quiz
Fourth Week	2 h.		HTML Lists	Design and implement our web pages.	
Fifth Week	2 h.		HTML Images	Design and implement our web pages.	
Sixth Week	2 h.		HTML Tables	Design and implement our web pages.	Quiz
Seventh Week	2 h.		Advance HTML HTML forms	Design and implement our web pages.	
Eighth Week	2 h.		HTML Embed Multimedia	Design and implement our web pages.	
Ninth Week	2 h.	To evaluate the students	Monthly exam		By exam
Tenth Week	2 h.		Introduction to CSS cascading style sheet	Design and implement our web pages.	
Eleventh Week	2 h.		External Stylesheet & Internal Stylesheet	Design and implement our web pages.	
Twelfth Week	2 h.		CSS Borders	Design and implement our web pages.	
Thirteenth Week	2 h.		JavaScript Introduction	Design and implement our web pages.	
Fourteenth Week	2 h.		Put a JavaScript into an HTML page	Design and implement our web pages.	
Fifteenth	2 h.	To evaluate	Monthly exam		By exam

Week		the students			
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12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	Web Based Application. Web development and design Java script step by step Web Programming with ASP.
Special requirements (include for example workshops, periodicals, IT software, websites)	<a href="https://www.w3schools.com">https://www.w3schools.com</a> <a href="https://www.w3schools.com/css/">https://www.w3schools.com/css/</a>
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	
Minimum number of students	25-30
Maximum number of students	50-60



# Course Weekly Outline

**Course Name: Compiler I**

Course Instructor						
E-mail						
Title						
Course Coordinator						
Course Objective	A. Definition of how to build and design of programming languages by looking at the work of the translator techniques and how to build it B. Training students to design and build programming languages through the implementation of some stages of the translator in the practical side C. Accommodate the student how the data is stored within the memory process through simulation methods of storage D. Increase the possibility of student programming by giving him examples of different issues within the limits set					
Course Description	1 - To distinguish between the types of algorithms of Compiler 2 - Determine the best algorithm for designing compiler 3 - The language used components to convert any algorithm to the interpreter program 4- Determine the evolution in the field of design compilers and programming languages 5- Distinction between the types of translators by knowing the the input and output of the compiler 6- Take collective project to design and build compiler for some simple programming languages proposed					
Textbook	Compilers Principles,Techniques,and Tools , Aho Law, Addison Wesley					
References	Basics of Compiler Design, T. Mogensen, Copenhagen Uni.					
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam	
	30%	15%	5%	-	50%	
General Notes						





## Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	First week	Introduction to Programming Languages	files	/
2	Second week	Introduction to Translators & Compilation Concepts	files	/
3	Third week	Lexical Analysis – Scanner	TokenType	/
4	Fourth week	Finite Automata	TokenType	/
5	Fifth week	Symbol Table	TokenType	/
6	Sixth week	Symbol Table	TokenType	/
7	Seventh week	Syntax Analysis – parser	Left_Recursive	/
8	Eighth week	Context Free Grammar	Left_Recursive	/
9	Ninth week	Ambiguity-Left Recursive-Left Factoring	Left_Recursive	/
10	Tenth week	First & Follow	Left_Recursive	/
11	Eleventh week	Top-Down Parsing	Left_Factoring	/
12	Twelfth week	LL(1) Grammar	Left_Factoring	/
13	Thirteenth week	Bottom – Up parsing	Left_Factoring	/
14	Fourteenth week	LR – Parsers	Left_Factoring	/
15	Fifteenth week	Semantic Analysis – Type Checking	Left_Factoring	/

**Instructor Signature:**

**Dean Signature:**



# Course Weekly Outline

## Course Name : Communications and Networks Fundamentals

<b>Course Instructor</b>	Dr. Salah Awad Salman				
<b>E-mail</b>	Salah_eng1996@yahoo.com				
<b>Title</b>	3107:Communications and Networks Fundamentals – CS 3214:Computer Networks I - IS				
<b>Course Coordinator</b>	-				
<b>Course Objective</b>	<p>The students will be able to:</p> <ol style="list-style-type: none"> <li>1. Build an understanding of the fundamental concepts of computer networking.</li> <li>2. Familiarize the student with the basic taxonomy and terminology of the computer networking area.</li> <li>3. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.</li> <li>4. Allow the student to gain expertise in some specific areas of networking such as the design and maintenance of individual networks.</li> </ol>				
<b>Course Description</b>	<p>This course is to provide students with an overview of the concepts and fundamentals of data communication and computer networks. Topics to be covered include: data communication concepts and techniques in a layered network architecture, communications switching and routing, types of communication, network congestion, network topologies, network configuration and Management, network model components, layered network models (OSI reference model, TCP/IP networking architecture) and their protocols, various types of networks (LAN, MAN, WAN and Wireless networks) and their protocols.</p>				
<b>Textbook</b>	Data Communications and Networking, 3, 4 /e, Behrouz A Forouzan				
<b>References</b>	Computer Networks, Fourth Edition, Andrew S. Tanenbaum.				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	25	15	10	-	50
<b>General Notes</b>	The course is supplemented by a practical component				



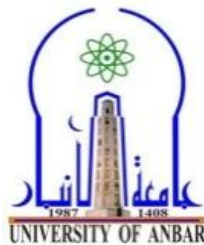
### Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		<b>PART 1: Overview: Chapter: 1 Introduction</b> <b>1.1 DATA COMMUNICATIONS</b> Components, Data Representation, Data Flow	Lab1: Comm. Sys.	
2-3		<b>1.2 NETWORKS</b> Distributed Processing , Network Criteria, Physical Structures, Network Components: NIC, Repeater HUB, Bridge, Router, BRouter, GATEWAY	Lab2: Simulator :Comm. Sys.	
4-5		<b>1.2 NETWORKS</b> Network Models, Categories of Networks, Network Classification, LAN, MAN and WAN Network topologies: Mesh, Star, Bus and Ring, the advantages and disadvantages of each topology. Interconnection of Networks: Internetwork	Lab2: Simulator :Comm. Sys	
6		<b>1.3 THE INTERNET</b> A Brief History, The Internet Today <b>1.4 PROTOCOLS AND STANDARDS</b> Protocols , Standards, Standards Organizations, Internet Standards	Lab3:Network Components	
7-9		<b>Chapter: 2 Network Models</b> <b>2.1 LAYERED TASKS</b> Sender, Receiver, and Carrier , Hierarchy <b>2.2 THE OSI MODEL</b> Layered Architecture, Peer-to-Peer Processes, Encapsulation <b>2.2.1 LAYERS IN THE OSI MODEL</b> Physical Layer, Data Link Layer, Network Layer, Transport Layer, Session Layer, Presentation Layer, Application Layer, Summary of Layers	Lab3:Network Components	
10-11		<b>2.3 TCP/IP PROTOCOL SUITE</b> Physical and Data Link Layers, Network Layer Transport Layer, Application Layer	Lab4:Network Topology	
12		<b>2.4 ADDRESSING</b> Physical Addresses, Logical Addresses, Port Addresses , Specific Addresses	Lab4:Network Topology	
13-14		<b>PART 2: Physical Layer and Media</b> <b>Chapter : 3 Data and Signals</b> <b>3.1 ANALOG AND DIGITAL</b> Analog and Digital Data, Analog and Digital Signals, Periodic and Non-periodic Signals <b>3.2 PERIODIC ANALOG SIGNALS</b> Sine Wave, Phase, Wavelength, Time and Frequency Domains, Composite Signals, Bandwidth <b>3.3 DIGITAL SIGNALS</b> Bit Rate, Bit Length, Digital Signal as a Composite Analog Signal, Transmission of Digital Signals	Lab4:Network Topology	
15		<b>3.4 TRANSMISSION IMPAIRMENT</b> Attenuation , Distortion, Noise <b>3.4.1 DATA RATE LIMITS</b> Noiseless Channel: Nyquist Bit Rate, Noisy Channel: Shannon Capacity, Using Both Limits	Lab5:Cabling	
16		<b>Chapter: 4 Transmission Media</b> <b>4.1 GUIDED MEDIA</b> Twisted-Pair Cable, Coaxial Cable, Fiber-Optic Cable <b>4.2 UNGUIDED MEDIA: WIRELESS</b> Radio Waves, Microwaves, Infrared	Lab5:Cabling	

Instructor Signature:

Dean Signature:

Republic of Iraq  
Ministry of Higher Education  
& Scientific Research  
Al Anbar University



University: University of Anbar  
College: CS & IT  
Instructor Name:  
Academic status:  
Qualification:  
Place of work: Anbar University  
Book's Title, Computer Architecture,  
William Stalling

# Course Weekly Outline

Course Name: Computer Architecture

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>					
<b>Course Description</b>					
<b>Textbook</b>					
<b>References</b>	Introduction to Algorithms Second Edition				
<b>Course Assessments</b>	TermTests	Laboratory	Quizzes	Project	Final Exam
<b>General Notes</b>					



### First Course Weekly Outline

Week	Date	Topics Covered				Notes
1		Introduction Computer organization				
2		Historical development for computers				
3		Computer Levels				
4		Data Representation in Computer Systems.				
5		Signed Integer Representation				
6		Floating Point Representation				
7		Introduction to a Simple Computer				
8		CPU Functions				
9		Mid Examination				
10		Registers, Buses				
11		simple model computer design, Marie				
12		Instruction Processing				
13		Assembler				
14		Control Unit, Real World Architecture				
15		Final Examination.				
	Term Tests		Laboratory	Quizzes	Project	Final Exam
	(30%)		-----	(10 %)	( %)	(60%)

**Instructor Signature:**

**Dean Signature:**



### Second Course Weekly Outline

Week	Date	Topics Covered				Notes
1		Instruction Set Architecture				
2		Instruction Format and types				
3		Addressing modes:1-3				
4		Addressing modes:3-7				
5		Memory system, Introduction				
6		Components of memory system				
7		The memory Hierarchy				
8		Cache Memory				
9		Mid Examination				
10		Cache Organization				
11		Replacements Algorithms				
12		Write Strategies				
13		Virtual Memory				
14		Virtual Memory				
15		Final Examination.				
	Term Tests		Laboratory	Quizzes	Project	Final Exam
	(30%)		-----	(10 %)	( %)	(60%)

Instructor Signature:

Dean Signature:



## Course Weekly Outline

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	It involves planning, design, development, testing, implementation, operations coordination, and maintenance for automated systems and business application software that integrate hardware, software, and communication technologies .				
<b>Course Description</b>	Project Management includes the development and integration, system and application project and technical support to improve the automated systems and agency-wide applications of an organization.				
<b>Textbook</b>	NO				
<b>References</b>	<b>Book Title:</b> Developments in Power Communications Systems <b>ISBN :</b> 978-1-4244-4041-2 <b>Year Published:</b> 2003 <b>Pages:</b> 159				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%	-	10%		60%
<b>General Notes</b>	.				



## Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		What is Project Management	Chapter1	
2		A Structured Project Management Methodology	Chapter1	
3		Waterfall Development, Parallel Development and Phased Development	Chapter2	
4		Types of Information Systems Management	Chapter3	
5		Transaction Processing Systems and Management Information Systems	Chapter3	
6		Decision Support Systems and Executive Information Systems	Chapter4	
7		Strategic Project Management Common Elements Systems	Chapter4	
8		The Stages of a Project Management	Chapter5	
9		Why Should We Manage Projects?	Chapter6	
10		Systems Development Life Cycle	Chapter7	
11		What is a design methodology of Project Management?	Chapter8	
12		Phases of project Design	Chapter9	
13		Goals for the Design of a Project.	Chapter10	
14		Developing Enterprise Systems with Intelligent Agent Technology	Chapter11	
15		A full-lifecycle solution development process and An intelligent agent can:	Chapter11	
		<u>First Examination</u>		

Instructor Signature:

Dean Signature:



# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	College of Computer Science & Information Technology
2. University Department/Centre	Information System
3. Course title/code	Visual Programming II
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	Attendance
6. Semester/Year	Semester2
7. Number of hours tuition (total)	60
8. Date of production/revision of this specification	15-9-2021
9. Aims of the Course: The student's acquisition of the advanced topics of c# programming languages. Clarify the Complex aspects of C# language such as manipulation of objects collections. Working with characters, string, and regular expressions. Then, advanced topic such as structures, classes are clarified. Finally, constructed visual application using windows form applications	

## 10. Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

- A1. Gain the ability and skill to build C# program and solving different problem.
- A2- Acquire the skills of advance problem analysis.
- A3- Acquire the skills of solving a complex mathematical concept and build a program for them.

### B. Subject-specific skills

- B1. summer training
- B2. Graduate Research
- B3. Scientific Reports

### Teaching and Learning Methods

Quizzes and monthly test.  
Exercises and activities in the classroom and Homework.  
Guide students to some websites to benefit from them.

### Assessment methods

- Participation in the classroom.
- Presentation of activities
- Semester and final exams and activities.

### C. Thinking Skills

- C1. Develop the ability of students to work on the Homework and deliver them on time.
- C2. Analyze the problem Programmatically and find solutions based on the expected results.
- C3. Development the ability of students for discussion.

### Teaching and Learning Methods

- the lecture Management in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without moving away from the core of the topic so that the material is flexible and capable of understanding and analysis.
- Assigning the student some group activities and duties.
- Allocating a percentage of the grade for daily assignments and tests.

### Assessment methods

- Effective participation in the classroom is evidence of the commitment and responsibility of students.
- Commitment to the final deadline to submit assignments and research.
- Quarterly and final exams reflect the commitment and achievement of knowledge and skills.

**D. General and Transferable Skills (other skills relevant to employability and personal development)**

D1. Develop the ability of students to deal with technical means.

D2. Develop the ability of students to deal with the Internet and multiple media.

D3. Develop the ability of students to deal with knowledge sharing.

**11. Course Structure**

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4	String and Characters	Fundamentals of Strings string Constructors Comparing strings Locating Characters and Substrings in strings	Theory+Practical	General questions and discussion
2	4	String	Extracting Substrings from strings Concatenating strings Miscellaneous string Methods	Theory+Practical	General questions and discussion or an exam
3	4	Characters	Fundamentals of Characters Char Methods	Theory+Practical	General questions and discussion
4	4	Advanced String	Regular Expressions	Theory+Practical	General questions and discussion
5	4	Advanced String	Complex Regular Expressions Regex Methods Replace and Split	Theory+Practical	Debate+quiz
6	4	Structures	Introduction to Structures Structures with Constructors Work with	Theory+Practical	General questions and discussion

			structures		
7	4	Collections	Introduction to Collections List Collection	Theory+Practical	General questions and discussion or an exam
8		Mid-Exam			Mid-Exam
9	4	LINQ Providers	Querying an Array of int Values Using LINQ Querying an Array of Employee Objects Using LINQ	Theory+Practical	group assignments
10	4	LINQ Providers	Querying a Generic Collection Using LINQ		General questions and discussion
11	4	Files	Computer Files Files Categories Input Files Outputs Files Append to Files	Theory+Practical	General questions and discussion
12	4	Windows Form Application	Form Buttons textbox LabelBox	Theory+Practical	General questions and Quiz
13	4	Windows Form Application	Checkbox RadioButtons Menu	Theory+Practical	group assignments
14	4	Classes	Introduction to classes Class with Constructors Work with classes	Theory+Practical	Debate
15	4	Final Exam			Final Exam

## 12. Infrastructure

Required reading:

- CORE TEXTS
- COURSE MATERIALS
- OTHER

Paul J. Deitel and Harvey Deitel. 2016. C# 6 for Programmers (6th Edition) (6th. ed.). Prentice Hall Press, USA.

Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	
Minimum number of students	10
Maximum number of students	34





# Course Weekly Outline

**Course Name: Compiler II**

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	<p>A. Definition of how to build and design of programming languages by looking at the work of the translator techniques and how to build it</p> <p>B. Training students to design and build programming languages through the implementation of some stages of the translator in the practical side</p> <p>C. Accommodate the student how the data is stored within the memory process through simulation methods of storage</p> <p>D. Increase the possibility of student programming by giving him examples of different issues within the limits set</p>				
<b>Course Description</b>	<p>1 - To distinguish between the types of algorithms of Compiler</p> <p>2 - Determine the best algorithm for designing compiler</p> <p>3 - The language used components to convert any algorithm to the interpreter program</p> <p>4- Determine the evolution in the field of design compilers and programming languages</p> <p>5- Distinction between the types of translators by knowing the the input and output of the compiler</p> <p>6- Take collective project to design and build compiler for some simple programming languages proposed</p>				
<b>Textbook</b>	Compilers Principles, Techniques, and Tools , Aho Law, Addison Wesley				
<b>References</b>	Basics of Compiler Design, T. Mogensen, Copenhagen Uni.				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%	15%	5%	-	50%
<b>General Notes</b>					



## Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	First week	Introduction to Back-End	First & follow	/
2	Second week	Intermediate Code Generation	First & follow	/
3	Third week	Intermediate Code Generation	First & follow	/
4	Fourth week	Code Optimization Concepts	First & follow	/
5	Fifth week	Local Optimization	Predicative parser	/
6	Sixth week	Data – Flow Analysis	Predicative parser	/
7	Seventh week	Global Optimization	Predicative parser	/
8	Eighth week	Code Generation	Predicative parser	/
9	Ninth week	Code Generation	Predicative parser	/
10	Tenth week	Optimization during Code Generation	Bottom-up	/
11	Eleventh week	Assembler & Loader – Linker Editor	Bottom-up	/
12	Twelfth week	Decompiler concepts	Shift reduce parser	/
13	Thirteenth week	Decompiler concepts	Shift reduce parser	/
14	Fourteenth week	Compiler of Object Oriented Language	Shift reduce parser	/
15	Fifteenth week	Debugging concepts	Shift reduce parser	/
Final Year Exam				

**Instructor Signature:**

**Dean Signature:**





# Course Weekly Outline

## Course Name : Communications and Networks Fundamentals

<b>Course Instructor</b>	Dr. Salah Awad Salman				
<b>E-mail</b>	Salah_eng1996@yahoo.com				
<b>Title</b>	Communications and Networks Fundamentals – CS, Computer Networks II-IS				
<b>Course Coordinator</b>	-				
<b>Course Objective</b>	<p>The students will be able to:</p> <ol style="list-style-type: none"> <li>1. Build an understanding of the fundamental concepts of computer networking.</li> <li>2. Familiarize the student with the basic taxonomy and terminology of the computer networking area.</li> <li>3. Introduce the student to advanced networking concepts, preparing the student for entry Advanced courses in computer networking.</li> <li>4. Allow the student to gain expertise in some specific areas of networking such as the design and maintenance of individual networks.</li> </ol>				
<b>Course Description</b>	<p>This course is to provide students with an overview of the concepts and fundamentals of data communication and computer networks. Topics to be covered include: data communication concepts and techniques in a layered network architecture, communications switching and routing, types of communication, network congestion, network topologies, network configuration and Management, network model components, layered network models (OSI reference model, TCP/IP networking architecture) and their protocols, various types of networks (LAN, MAN, WAN and Wireless networks) and their protocols.</p>				
<b>Textbook</b>	Data Communications and Networking, 3, 4 /e, Behrouz A Forouzan				
<b>References</b>	Computer Networks, Fourth Edition, Andrew S. Tanenbaum.				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	25	15	10	-	50
<b>General Notes</b>	The course is supplemented by a practical component				



## Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1-2		<b>PART 2: Physical Layer - Chapter: 5 Digital Transmission</b> <b>5.1 DIGITAL-TO-DIGITAL CONVERSION</b> Line Coding, Block Coding, Scrambling <b>5.2 ANALOG-TO-DIGITAL CONVERSION</b> Pulse Code Modulation (PCM), Delta Modulation (DM) <b>5.3 TRANSMISSION MODES</b> Parallel Transmission, Serial Transmission	Lab1: Coding	
3-4		<b>Chapter: 6 Analog Transmission &amp; Bandwidth Utilization</b> <b>6.1 DIGITAL-TO-ANALOG CONVERSION</b> ASK, FSK, PSK, QAM <b>6.2 ANALOG-TO-ANALOG CONVERSION</b> AM, FM, PM <b>6.3 MULTIPLEXING</b> FDM, WDM, STDM, S TDM <b>6.4 SPREAD SPECTRUM</b> FHSS, DSSS	Lab2: Modulation & SSS	
5-6		<b>PART 3: Data Link Layer- Chapter: 7 Error Detection, Correction &amp; Multiple Access</b> <b>7.1 INTRODUCTION</b> Types of Errors, Redundancy, Detection Versus Correction, Coding, Modular Arithmetic <b>7.2 BLOCK CODING</b> Error Detection, Error Correction <b>7.3 CYCLIC CODES</b> Cyclic Redundancy Check, Hardware Implementation <b>7.4 MAC</b> <b>7.5 CHANNELIZATION</b> FDMA, TDMA, CDMA	Lab4: TCP/IP Programming	
7-8		<b>Chapter8: Wired LANs &amp; Wireless LANs</b> <b>8.1 Wired LANs: Ethernet</b> 8.1.1 IEEE STANDARDS, 8.1.2 STANDARD ETHERNET <b>8.2 Wireless LANs</b> 8.2.1 IEEE 802. 8.2.2 BLUETOOTH	Lab6: TCP/IP Programming	
9-10		<b>PART 4 Network Layer- Chapter 9: Logical Addressing</b> <b>9.1 IPv4 ADDRESSES</b> <b>9.2 IPv6 ADDRESSES</b> <b>9.3 Internet Protocol</b> <b>9.3.1 IPv4</b> Datagram, Fragmentation, Checksum, Options, <b>9.3.2 IPv6</b> Advantages, Packet Format, Extension Headers	Lab7: TCP/IP Programming	
11		<b>Chapter 10: Address Mapping &amp; Routing</b> <b>10.1 ADDRESS MAPPING</b> ARP, RARP, BOOTP, and DHCP <b>10.2 UNICAST ROUTING PROTOCOLS</b> Intra- and Inter-domain Routing, Distance Vector Routing, Link State Routing, Path Vector Routing <b>10.1 MULTICAST ROUTING PROTOCOLS</b> Unicast, Multicast, and Broadcast, Applications, Multicast Routing, Routing Protocols	Lab7: TCP/IP Programming	
12-13		<b>PART 5 Transport Layer- Chapter 11: UDP, TCP</b> <b>11.1 PROCESS-TO-PROCESS DELIVERY</b> <b>11.2 USER DATAGRAM PROTOCOL (UDP)</b> User Datagram, Checksum, UDP Operation, Use of UDP <b>11.3 TCP</b> TCP Services, TCP Features, Segment, A TCP Connection, Flow Control	Lab8: Network Programming	

14-15		<b>PART 6 Application Layer- Chapter 12 DNS, Remote Logging, E-Mail, and FTP</b> <b>12.1 NAME SPACE</b> <b>12.2 DOMAIN NAME SPACE</b> Label , Domain Name, Domain <b>12.3 RESOLUTION</b> Resolver, Mapping Names to Addresses, Mapping Address to Names <b>12.4 REMOTE LOGGING: TELNET</b> <b>12.5 ELECTRONIC MAIL</b> <b>12.6 FILE TRANSFER</b> FTP, Anonymous FTP	Lab9:Network Programming	
16		<b>Chapter 13 WWW and HTTP</b> <b>13.1 ARCHITECTURE</b> Client (Browser), Server, Uniform Resource Locator, Cookies <b>13.2 WEB DOCUMENTS</b> Static Documents, Dynamic Documents, Active Documents <b>13.3 HTTP</b> HTTP Transaction, Proxy Server	Lab9:Network Programming	

**Instructor Signature:**

**Dean Signature:**



# Course Weekly Outline

**Course Name : Computer Graphics**

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	Software Engineering				
<b>Course Description</b>	Provide students information about fundamental of software engineering with different SW algorithms.				
<b>Textbook</b>	Software Engineering: A practitioner's approach Fifth Edition- Roger S. Pressman, Ph.D.				
<b>References</b>	Software Engineering: A practitioner's approach Fifth Edition- Roger S. Pressman, Ph.D.				
<b>Course Assessments</b>	TermTests	Laboratory	Quizzes	Project	Final Exam
	10 %	10 %	20 %	10 %	50 %
<b>General Notes</b>					



### Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	5/11/2016	Section (1) Fundamental of S.E.	2	
2	15/11/2016	System analysis System planning	2	
3	20/11/2016	System design System documentation	2	
4	1/12/2016	Coding and programming Software testing 8) Cost and time estimation	2	
5	8/12/2016	Software project management Software quality CASE	2	
6	15/1/2016	Section (2)      System Planning	2	
7	25/1/2016	Section (8)      Software Project Management	2	
8	1/2/2016	Section (3)      System Design	2	
9	15/2/2016	Section (4)      System Documentation	2	
10	1/3/2016	Section (5)      Coding and programming	2	
11	18/3/2016	Section (6)      System Testing	2	
12	5/4/2016	Section (7)      Software Quality	2	
13	17/4/2016	UML	2	
14	3/4/2016	Review	2	
15	25/4/2016	Comprehensive exam	2	

**Instructor Signature:**

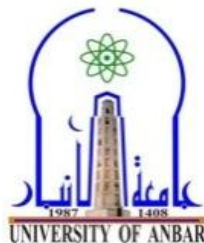
**Dean Signature:**



## Course Weekly Outline

### Course Name: Mobile Computing

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	<b>Give the student basic topics in mobile computing concepts, mobile device management (MDM) and Android Applications</b>				
<b>Course Description</b>	<b>The purpose of this course is to provide an introduction to the exciting and emerging world of wireless and mobile computing, and mobile technology. Reading this book will teach you the fundamentals of computer networking and protocols, radio frequency communication principles, and IEEE standards based wireless technology and give you an overview of hardware and software components, cellular communications, wireless site surveys, mobile device management, troubleshooting, and security principles for both wireless networking and mobility.</b>				
<b>Textbook</b>	<b>Mobile Computing Deployment and Management, by Robert J. Barts, by John Wiley &amp; Sons, Inc., Indianapolis, Indiana, 2015.</b>				
<b>References</b>	<b>1- Mobile Computing Deployment and Management, by Robert J. Barts, by John Wiley &amp; Sons, Inc., Indianapolis, Indiana, 2015.</b> <b>2- Android Studio Development Essentials – Second Edition, by Neil Smyth, 2015.</b>				
<b>Course Assessments</b>	<b>Term Tests</b>	<b>Laboratory</b>	<b>Quizzes</b>	<b>Project</b>	<b>Final Exam</b>
	<b>(10%)</b>	<b>-----</b>	<b>(10 %)</b>	<b>(10 %)</b>	<b>(70%)</b>
<b>General Notes</b>					



### Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		<b>Introduction Historical Notes</b>		
2		<b>Computer Network Types, Topologies, and the OSI Model</b>	Seminar	
3		<b>Common Network Protocols and Ports Radio Frequency and Antenna Technology</b>	Seminar	
4		<b>Fundamentals Standards and Certifications for Wireless Technology IEEE 802.11 Terminology and Technology Computer Network Infrastructure Devices</b>		
5		<b>Cellular Communication Technology Site Survey, Capacity Planning, and Wireless Design Understanding Network Traffic Flow and Control</b>	Seminar	
6		<b>Introduction to Mobile Device Management</b>	Seminar	
7		<b>Mobile Device Policy, Profiles, and Configuration</b>	Seminar	
8		<b>Implementation of Mobile Device Technology</b>	Seminar	
9		<b>Mid Examination</b>		
10		<b>Mobile Device Operation and Management Concepts</b>	Seminar	
11		<b>Mobile Device Technology Advancements,</b>	Seminar	
12		<b>Requirements, and Application Configuration</b>	Seminar	
13		<b>Mobile Device Security Threats and Risks</b>	Seminar	
14		<b>Android Application Design</b>	Seminar	
15		<b>Final Examination</b>		

Instructor Signature:

Dean Signature:

# TEMPLATE FOR COURSE SPECIFICATION

## HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

### COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

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2. University Department/Centre	Information System
3. Course title/code	Visual Programming II
4. Programme(s) to which it contributes	
5. Modes of Attendance offered	Attendance
6. Semester/Year	Semester2
7. Number of hours tuition (total)	60
8. Date of production/revision of this specification	15-9-2021
9. Aims of the Course: The student's acquisition of the advanced topics of c# programming languages. Clarify the Complex aspects of C# language such as manipulation of objects collections. Working with characters, string, and regular expressions. Then, advanced topic such as structures, classes are clarified. Finally, constructed visual application using windows form applications	



## 10. Learning Outcomes, Teaching ,Learning and Assessment Method

### A- Knowledge and Understanding

- A1. Gain the ability and skill to build C# program and solving different problem.
- A2- Acquire the skills of advance problem analysis.
- A3- Acquire the skills of solving a complex mathematical concept and build a program for them.

### B. Subject-specific skills

- B1. summer training
- B2. Graduate Research
- B3. Scientific Reports

### Teaching and Learning Methods

Quizzes and monthly test.  
Exercises and activities in the classroom and Homework.  
Guide students to some websites to benefit from them.

### Assessment methods

- Participation in the classroom.
- Presentation of activities
- Semester and final exams and activities.

### C. Thinking Skills

- C1. Develop the ability of students to work on the Homework and deliver them on time.
- C2. Analyze the problem Programmatically and find solutions based on the expected results.
- C3. Development the ability of students for discussion.

### Teaching and Learning Methods

- the lecture Management in an applied manner linked to the reality of daily life to attract the student to the topic of the lesson without moving away from the core of the topic so that the material is flexible and capable of understanding and analysis.
- Assigning the student some group activities and duties.
- Allocating a percentage of the grade for daily assignments and tests.

### Assessment methods

- Effective participation in the classroom is evidence of the commitment and responsibility of students.
- Commitment to the final deadline to submit assignments and research.
- Quarterly and final exams reflect the commitment and achievement of knowledge and skills.

**D. General and Transferable Skills (other skills relevant to employability and personal development)**

D1. Develop the ability of students to deal with technical means.

D2. Develop the ability of students to deal with the Internet and multiple media.

D3. Develop the ability of students to deal with knowledge sharing.

**11. Course Structure**

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	4	String and Characters	Fundamentals of Strings string Constructors Comparing strings Locating Characters and Substrings in strings	Theory+Practical	General questions and discussion
2	4	String	Extracting Substrings from strings Concatenating strings Miscellaneous string Methods	Theory+Practical	General questions and discussion or an exam
3	4	Characters	Fundamentals of Characters Char Methods	Theory+Practical	General questions and discussion
4	4	Advanced String	Regular Expressions	Theory+Practical	General questions and discussion
5	4	Advanced String	Complex Regular Expressions Regex Methods Replace and Split	Theory+Practical	Debate+quiz
6	4	Structures	Introduction to Structures Structures with Constructors Work with	Theory+Practical	General questions and discussion

			structures		
7	4	Collections	Introduction to Collections List Collection	Theory+Practical	General questions and discussion or an exam
8		Mid-Exam			Mid-Exam
9	4	LINQ Providers	Querying an Array of int Values Using LINQ Querying an Array of Employee Objects Using LINQ	Theory+Practical	group assignments
10	4	LINQ Providers	Querying a Generic Collection Using LINQ		General questions and discussion
11	4	Files	Computer Files Files Categories Input Files Outputs Files Append to Files	Theory+Practical	General questions and discussion
12	4	Windows Form Application	Form Buttons textbox LabelBox	Theory+Practical	General questions and Quiz
13	4	Windows Form Application	Checkbox RadioButtons Menu	Theory+Practical	group assignments
14	4	Classes	Introduction to classes Class with Constructors Work with classes	Theory+Practical	Debate
15	4	Final Exam			Final Exam

## 12. Infrastructure

Required reading:

- CORE TEXTS
- COURSE MATERIALS
- OTHER

Paul J. Deitel and Harvey Deitel. 2016. C# 6 for Programmers (6th Edition) (6th. ed.). Prentice Hall Press, USA.

Special requirements (include for example workshops, periodicals, IT software, websites)	
Community-based facilities (include for example, guest Lectures , internship , field studies)	

13. Admissions	
Pre-requisites	
Minimum number of students	10
Maximum number of students	34





# Course Weekly Outline

**Course Name: Artificial Intelligence I**

<b>Course Instructor</b>	Dr. Belal Al-Khateeb				
<b>E-mail</b>	belal@computer-college.org				
<b>Title</b>	Asst. Prof.				
<b>Course Coordinator</b>	Dr. Belal Al-Khateeb				
<b>Course Objective</b>	1- Understanding of AI definitions, characteristics and types. 2- Distinguishing between AI search techniques. 3- Designing smart systems for solving daily life problems.				
<b>Course Description</b>	This course aims to make students know about AI and how to solve problems by using blind search techniques and resolution methods.				
<b>Textbook</b>	Artificial Intelligence: A Modern Approach, Stuart Russell and Peter Norvig, Pearson Education 2010.				
<b>References</b>	Artificial Intelligence: Structures and Strategies for Complex Problem Solving, George F. Luger, Addison-Wesley, 2008				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	25%	15%	10%	5%	50%
<b>General Notes</b>					



## Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		General Introduction.		
2		The History of AI.		
3		Systematic Search: basic graph concepts; state space representation of problems.		
4		Depth-First Search.		
5		Breadth-First search.		
6		Hybrid Search.		
7		Predicate logic: basic concepts and definitions		
8		Predicate logic: basic concepts and definitions		
9		Mid Term Exam		
10		Propositional logic and resolution in propositional logic;		
11		Horn clauses; unification		
12		Clause normal form.		
13		Modus-ponens and resolution inference rules in predicate logic.		
14		Control strategies for resolution inference (problem solving).		
15		Control strategies for resolution inference (problem solving).		

Instructor Signature:

Dean Signature:



# Course Weekly Outline

**Course Name : Multimedia Computing I**

<b>Course Instructor</b>	Dr. Salah Awad Salman				
<b>E-mail</b>	Salah_eng1996@yahoo.com				
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	<p>أ. تغطي هذه المادة الاساس النظري لنظم المعلومات من جانب الاوساط (النص. رسم. الصورة. الصوت والفيديو)</p> <p>ب. و ان يعرف معلومات عن كل نوع من الاوساط ( طرق ادخالها ومعالجتها واخراجها).</p> <p>ج. ان يفهم كيفية التحويل للاوساط من الشكل المدخل الى الشكل الذي يعالج بالحاسبة وكذلك انواع الصيغ التي يخزن بها في الحاسبة.</p> <p>د. ان يفهم الطالب الاسس التي يتم ضغط الاوساط والفائدة من ذلك.</p>				
<b>Course Description</b>	<p>Introduction to Multimedia computing, Multimedia Systems, Components of a Multimedia System, Multimedia Data Basics Analog and Digital Signal Conversion, Presentation of text and graph, Presentation of still image and digital audio, Presentation of video, Digital Audio Synthesis, MIDI, Basic Algorithms Compression, Graphic/Image Data Structures, Basics of Video Spatial and Frequency Domain, Image Compression , Video compression, Audio compression</p>				
<b>Textbook</b>	<p>Fundamentals of Multimedia, Ze-Nian Li, Mark S. Drew, Prentice Hall, 2003(ISBN: 0130618721</p>				
<b>References</b>	<p>Multimedia Module No: CM0340 c David Marshall 2013</p>				
<b>Course Assessments</b>	TermTests	Laboratory	Quizzes	Project	Final Exam
	30%	10%	5%	5%	50%
<b>General Notes</b>					





Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Introduction to Multimedia computing		
2		Multimedia Systems		
3		Components of a Multimedia System		
4		Multimedia Data Basics		
5		Analog and Digital Signal Conversion		
6		Presentation of text and graph		
7		Presentation of still image and digital audio		
8		Presentation of video		
9		Digital Audio Synthesis		
10		Graphic/Image Data Structures		
11		Basics of Video		
12		Spatial and Frequency Domain		
13		Image Compression		
14		Video compression		
15		Audio compression		
16		Exam		

Instructor Signature:

Dean Signature:



# Course Weekly Outline

## Course Name: Information Security I

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	To make students familiar with the basic concepts of applied cryptography, including classical cryptography and modern secret key cryptography.				
<b>Course Description</b>	This is an introductory undergraduate course on cryptography and data security. We will focus on classical and symmetric key cryptography, including block ciphers and their modes of operation. The course will emphasize rigorous mathematical formulations of security goals and aim to train students in spotting weaknesses in designs.				
<b>Textbook</b>	William Stallings, <i>Cryptography and Network Security: Principles and Practice</i> , 6/E, Pearson Education, Inc., 2014.				
<b>References</b>	<p>Charles P. Pfleeger and Shari Lawrence Pfleeger, <i>Security in Computing</i>, John Wiley &amp; Sons, Inc., 2007.</p> <p>Mark Stamp, <i>Information Security Principles and Practice</i>, John Wiley &amp; Sons, 2006.</p>				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%		10%	10%	50%
<b>General Notes</b>					



## Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Introduction Historical Notes		
2		Classical Encryption Techniques Substitution Ciphers		
3		Transposition Ciphers Encryption Machines		
4		Block Ciphers		
5		The Data Encryption Standard		
6		DES Cryptanalysis		
7		Groups, Rings, and Fields		
8		Modular Arithmetic		
9		Polynomial Arithmetic		
10		Finite Fields		
11		Finite Fields of the Form $GF(2^n)$		
12		AES: The Advanced Encryption Standard		
13		AES Strength		
14		Using Block and Stream Ciphers		
15		Modes of Operation		

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# Course Weekly Outline

**Course Name: Web Application Development I**

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	<b>Give the student programming language to design and control web application.</b>				
<b>Course Description</b>	<b>Give overview about Asp.Net and .Net Framework, apply the First Asp.Net Program, Explain ASP.NET State Management, ASP.NET Web Control Tools, ASP.NET Statements, ASP.NET Data Structure, ASP.NET Collection, ASP.NET Data Access</b>				
<b>Textbook</b>	<b>Web Application Development , Free online resources for Microsoft .NET developers, Net-Information.com, net-informations.com (C) 2013</b>				
<b>References</b>	<b>1- Beginning ASP.NET 4.5 in CSharp and VB, Imar Spaanjaars, Joen Wiley &amp; Suns, Inc., 2013.</b> <b>2- Web Application Development , Free online resources for Microsoft .NET developers, Net-Information.com, net-informations.com (C) 2013</b>				
<b>Course Assessments</b>	<b>Term Tests</b>	<b>Laboratory</b>	<b>Quizzes</b>	<b>project</b>	<b>Final Exam</b>
	<b>(20%)</b>	<b>(10 %)</b>	<b>(10 %)</b>	<b>(10 %)</b>	<b>(50%)</b>
<b>General Notes</b>					



### Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		What is ASP.NET ? Deploy an ASP.NET Web Application		
2		ASP.NET View State		
3		ASP.NET Session State ASP.NET Cookies ASP.NET Caching		
4		Web Control Tools Label Control Button Control Textbox Control DropDownList Control Listbox Control Checkbox Control		
5		-RadioButton Control -LinkButton Control -Image Control -Colander Control -Treeview Control		
6		Control Statements -if else statements -for loop -foreach loop -while loop -switch case -Exceptions		
7		Mid Exam		
8		Recursion, Definition		
9		Trees , Tree Structure, Binary Tree, Other types of trees		
10		Tree Traversing, Trees Representation, General Tree, Binary Search Tree		
11		Collections -ArrayList -HashTable		
12		-Stack -Queue -Array		
13		ADO.NET Architecture, Advantages of ADO.Net		
14		Disconnected Data Access Architecture ASP.NET Connection String First ASP.NET Database Program		
15		Final Exam		

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# Course Weekly Outline

**Course Name: Artificial Intelligence I**

<b>Course Instructor</b>	Dr. Belal Al-Khateeb				
<b>E-mail</b>	belal@computer-college.org				
<b>Title</b>	Asst. Prof.				
<b>Course Coordinator</b>	Dr. Belal Al-Khateeb				
<b>Course Objective</b>	1- Understanding of AI definitions, characteristics and types. 2- Distinguishing between AI search techniques. 3- Designing smart systems for solving daily life problems.				
<b>Course Description</b>	This course aims to make students know about AI and how to solve problems by using blind search techniques and resolution methods.				
<b>Textbook</b>	Artificial Intelligence: A Modern Approach, Stuart Russell and Peter Norvig, Pearson Education 2010.				
<b>References</b>	Artificial Intelligence: Structures and Strategies for Complex Problem Solving, George F. Luger, Addison-Wesley, 2008				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	25%	15%	10%	5%	50%
<b>General Notes</b>					



## Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Heuristic Search: Heuristic Functions.		
2		Hill Climbing Algorithm.		
3		Best-First Search Algorithm.		
4		Cost Functions.		
5		A* Algorithm.		
6		Properties of Heuristic Functions.		
7		Search in Games: Introduction.		
8		Min-Max Algorithm.		
9		Mid Term Exam		
10		Alpha-Beta Search Procedure; Enhancement to Game Search.		
11		Expert Systems: Structure; Rule Based Expert Systems.		
12		Control Strategies in Rule Based Production Systems: Backward Chaining and its Implementation.		
13		Pure Forward Chaining and its Implementation; Rule-Cycle Hybrid Control Strategy and its Implementation.		
14		Uncertainty in Expert Systems: Representing Probabilities in Rules; Combining Evidence.		
15		Other Approaches to Expert System Design: Decision Lattices; And-Or-Not Lattices.		

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# Course Weekly Outline

**Course Name: Multimedia Computing II**

<b>Course Instructor</b>	Dr. Salah Awad Salman				
<b>E-mail</b>	Salah_eng1996@yahoo.com				
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	<p>أ. تغطي هذه المادة الاساس النظري لنظم المعلومات من جانب الاوساط (النص. رسم. الصورة. الصوت والفيديو)</p> <p>ب. و ان يعرف معلومات عن كل نوع من الاوساط ( طرق ادخالها ومعالجتها واخراجها).</p> <p>ج. ان يفهم كيفية التحويل للاوساط من الشكل المدخل الى الشكل الذي يعالج بالحاسبة وكذلك انواع الصيغ التي يخزن بها في الحاسبة.</p> <p>د. ان يفهم الطالب الاسس التي يتم ضغط الاوساط والفائدة من ذلك.</p>				
<b>Course Description</b>	Media Protection, Media Retrieval, Media Distribution Across Internet, Media Communications, Internet elephony and Teleconference, Mobile Multimedia Service Over Wireless Networks				
<b>Textbook</b>	Fundamentals of Multimedia, Ze-Nian Li, Mark S. Drew, Prentice Hall, 2003(ISBN: 0130618721				
<b>References</b>	Multimedia Module No: CM0340 c David Marshall 2013				
<b>Course Assessments</b>	TermTests	Laboratory	Quizzes	Project	Final Exam
	30%	10%	5%	5%	50%
<b>General Notes</b>					





Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Media Protection		
2		Media Encryption		
3		Media Watermark		
4		Information Retrieval,		
5		Image Retrieval		
6		Video Retrieval		
7		Audio Retrieval		
8		Media Distribution Category, Media Streaming, Streamed Media On Demand Delivery		
9		Streamed Media Internet Broadcast, Streamed Media Server and Client/Player,		
10		Streaming Service System, Scenario and Issue of IP Telephony		
11		Scenario and Issue of IP Teleconference, ITU and IETF Standards for IP Telephony/conf.		
12		H.323 Standard Series for IP Multimedia Comm, T.120 Standard Series for Data Conferencing SIP/SDP (Session Initiation/Description Protocol)		
13		Mobility and Universal Services, Wireless LAN (Local Area Network), Wireless WAN (Wide Area Network)		
14		3G Wireless Networks and IMT-2000, FOMA and DoCoMo Mobile Services		
15		WAP (Wireless Application Protocol), Techniques and Challenges in Mobile Multimedia		
16		Exam		

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# Course Weekly Outline

## Course Name: Information Security II

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	To make students familiar with the basic concepts and applications of public key cryptography and hash functions.				
<b>Course Description</b>	In the second semester, our focus will mainly be directed to public key cryptography. We will cover topics like hash functions, digital signatures, asymmetric encryption, RSA, public-key infrastructure, key distribution, and various applications. Indeed, we will cover topics like viruses, worms, and operating systems security.				
<b>Textbook</b>	William Stallings, <i>Cryptography and Network Security: Principles and Practice</i> , 6/E, Pearson Education, Inc., 2014.				
<b>References</b>	<p>Charles P. Pfleeger and Shari Lawrence Pfleeger, <i>Security in Computing</i>, John Wiley &amp; Sons, Inc., 2007.</p> <p>Mark Stamp, <i>Information Security Principles and Practice</i>, John Wiley &amp; Sons, 2006.</p>				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%		10%	10%	50%
<b>General Notes</b>					



## Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	20/2/2016	Issues for Symmetric Key Cryptography: Key Distribution		
2	27/2/2016	Random Number Generation		
3	5/3/2016	Prime Numbers Primality Tests		
4	12/3/2016	Public-Key Cryptography I: General Concepts		
5	19/3/2016	RSA System RSA Security		
6	26/3/2016	Public-Key Cryptography II: Exchanging Secret Session Keys		
7	2/4/2016	Diffie-Hellman System		
8	9/4/2016	Public-Key Cryptography III: Constructing Digital Signatures		
9	16/4/2016	El-Gamal System		
10	23/4/2016	Hashing for Message Authentication Cryptographic Hash Functions		
11	30/4/2016	MACs Schemes		
12	7/5/2016	Malware: Viruses		
13	14/5/2016	Worms		
14	21/5/2016	Trusted Systems		
15	28/5/2016	Mounting Targeted Attacks with Trojans and Social Engineering		

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## Course Weekly Outline

### Course Name: Web Application DevelopmentII

<b>Course Instructor</b>					
<b>E-mail</b>					
<b>Title</b>					
<b>Course Coordinator</b>					
<b>Course Objective</b>	<b>Give the student programming language to manage Database on web application.</b>				
<b>Course Description</b>	<b>Give overview about ASP.NET Data Providers, Command, Dataset, Dataset row count, ASP.NET Database Programming, Stored Procedures, ASP.NET GridView, DetailsView, ASP.NET Repeater, ASP.NET Communications, ASP.NET Excel Automation, ASP.NET Data Access</b>				
<b>Textbook</b>	<b>Web Application Development , Free online resources for Microsoft .NET developers, Net-Information.com, net-informations.com (C) 2013</b>				
<b>References</b>	<b>1- Beginning ASP.NET 4.5 in CSharp and VB, Imar Spaanjaars, Joen Wiley &amp; Suns, Inc., 2013.</b> <b>2- Web Application Development , Free online resources for Microsoft .NET developers, Net-Information.com, net-informations.com (C) 2013</b>				
<b>Course Assessments</b>	<b>Term Tests</b>	<b>Laboratory</b>	<b>Quizzes</b>	<b>project</b>	<b>Final Exam</b>
	<b>(20%)</b>	<b>(10 %)</b>	<b>(10 %)</b>	<b>(10 %)</b>	<b>(50%)</b>
<b>General Notes</b>					



Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		ASP.NET Connection, Sql Server Connection, OLEDB Connection, ODBC Connection		
2		ASP.NET ExecuteNonQuery ExecuteScalar ExecuteReader DataReader DataAdapter DataAdapter Commands		
3		How to Asp.Net Dataset Find Tables in a Dataset		
4		How to Asp.Net Dynamic Dataset Dataset Column Definition		
5		ASP.NET DBNull Value ASP.NET single quotes		
6		ASP.NET Procedure with Parameter Range of records from database ASP.NET Image to Database		
7		ASP.NET Simple GridView Sorting , Paging and AutoGenerateColumns		
8		Mid Exam		
9		ASP.NET GridView Editing and GridView Delete		
10		Detailsview Update Detailsview Delete GridView with DetailsView		
11		How to Repeater ASP.NET Repeater Templates Repeater with HTML Table ASP.NET Repeater Paging		
12		ASP.NET Email application		
13		Email Address Validation ASP.NET File Upload ASP.NET Email Attachment		
14		Export ASP.NET to Excel Write content from ASP.NET to Excel		
15		Read Excel file from ASP.NET Insert to Excel file from ASP.NET Modify Excel file from ASP.NET		

Instructor Signature:

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## Course Weekly Outline

<b>Course Instructor</b>	Maha Mahmood Jassam				
<b>E-mail</b>	Maha_882010@yahoo.com				
<b>Title</b>	Asst. Teacher				
<b>Course Coordinator</b>	Maha Mahmood Jassam				
<b>Course Objective</b>	Provide computer science students to understand the basic-to advanced concepts related to data warehousing..				
<b>Course Description</b>	Introductory course to Data Warehouse.				
<b>Textbook</b>	Data Warehousing . Copyright 2014 by Tutorials Point (I) Pvt. Ltd.				
<b>References</b>	Data Warehousing Guide with Oracle® Database. Release 2 (11.2), E10810-02. August 2009.				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	20%	15%	5 %	10	50%
<b>General Notes</b>	<b><u>PROJECTS for this Course:</u></b> <b>DW and Data Mining. DW and Integration. Dimensions.</b> <b>Materialized View. DW and Indexing. DW AI techniques.</b> <b>DW Architectures. Metadata. Extraction tools. ETL.</b>				



### Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1	1/11/2015	Data Warehousing .Overview and Concepts.		
2	8/11/2015	Need for data warehousing.		
3	15/11/2015	The building blocks of a Data warehouse.		
4	22/11/2015	Architecture of Data Warehouse.		
5	29/11/2015	Metadata Management.		
6	6/12/2015	Principles of Dimension Modeling:		
7	13/12/2015	Introduction to Dimensional Modeling, Advanced Concepts.		
8	20/12/2015	ETL overview, Extraction, Loading, Transformation techniques.		
9	27/12/2015	Information Access and Delivery .		
10	3/1/2016	Matching information to classes of users, OLAP – the need. Design of the OLAP database, OLAP.		
11	10/1/2016	Design of the OLAP database, OLAP.		
12	17/1/2016	Operations: slice, dice, rollup, drill-down... etc.		
13	24/1/2016	OLAP implementations.		
14	31/1/2016	Others Analysis Techniques		
15	7/ 2/2016	Useful Applications of Data Warehouses		

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# Course Weekly Outline

**Course Name:** Research methodology

<b>Course Instructor</b>	Asst. Prof. Dr. Khalid Shaker				
<b>E-mail</b>	<a href="mailto:khalidalhity@uoanbar.edu.iq">khalidalhity@uoanbar.edu.iq</a>				
<b>Title</b>	Research methodology				
<b>Course Coordinator</b>					
<b>Course Objective</b>	<p>-Studies with this object in view are termed as exploratory or formative research studies</p> <p>-Studies with this object in view are known as descriptive research studies</p> <p>-Studies with this object in view are known as diagnostic research studies</p>				
<b>Course Description</b>	<p>منهج البحث يعني الاتباع، فالمنهج هو عبارة عن منظومة محددة يتم اتباعها لغرض معين، وكذلك مناهج البحث العلمي عبارة عن الطريق الذي سيسلكه الباحث أو الطالب في جمع وترتيب المعلومات داخل دراسته وفقاً لمتطلبات الدراسة وطبيعة المعلومات وتحمل أيضاً كلمة مناهج صيغة الجمع التي توحي بأن هناك أكثر من نوع ضمن هذا المصطلح العام</p>				
<b>Textbook</b>	<p>RESEARCH METHODOLOGY: TOOLS AND TECHNIQUES</p> <p>ISBN 978-606-93502-7-0</p> <p>Buzau, Al. Marghiloman 245 bis, 120082</p>				
<b>References</b>	<p>RESEARCH METHODOLOGY: TOOLS AND TECHNIQUES</p> <p>ISBN 978-606-93502-7-0</p> <p>Buzau, Al. Marghiloman 245 bis, 120082</p>				
<b>Course Assessments</b>	Term Tests	Laboratory	Quizzes	Project	Final Exam
	20%	15%	10%	5%	50%
<b>General Notes</b>	-				



Republic of Iraq  
The Ministry of Higher Education  
& Scientific Research



University: Anbar  
College: CS & IT  
Department: computer network system department  
Stage: 4<sup>th</sup> Year  
Instructor name: Dr. Ahmed Noori  
Academic status: Asst. Prof.  
Qualification: PhD  
Place of work: University of Anbar

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Definition of Research methodology		
2		Formulating the Research Problem		
3		Formulating the Research Objective		
4		Extensive Literature Survey		
5		Developing the Research Hypothesis		
6		Preparing the Research Design		
7		Determining the Research Design		
8		Collecting the Research Data		
9		الامتحان الشهري		
10		Analyzing the Research Data		
11		Execution of the Project		
12		Hypothesis Testing		
13		Generalization and Interpretation		
14		Analysis of Data		
15		Preparing of the Report or Presentation of the Result		

### Course Weekly Outline

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Signature:

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