كلية العلوم و الدراسات الإنسانية بحريملاء

رقم المقرر ورمزه : ١١١ريض	اسم المقرر : رياضيات١
لغة التدريس : اللغة الانجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الأول

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks
1. Precalculus Review	1
2. Limits and Derivatives	1
3. Continuity	1
4. Limits at infinity;	1
5. Differentiation rules	1
6. Derivatives of trigonometric functions derivative of exponential and logarithmic functions Chain rule	
7. Exam I	1
8. Applications of differentiation	1
9. Maximum and minimum values 10. The mean value theorem, 11. Increasing /Decreasing	1
12. Concavity 13. Derivatives and the shape of curves 14. Indefinite forms and L'Hopital's rule 15. Summary of curve sketching	1
16. Exam II 17. Review of Exam II: Review all prior homework and solving exercises Exam II	1
18. Optimization Problems 19. Anti-derivatives	1
20. Integrals	1
21. Indefinite integrals and the net change theorem 22. The substitution rule	1

اسم المقرر : مهارات أكاديمية وحياتية	رمز المقرر ورمزه : ١٠٥ أكت
المتطلب السابق : لايوجد	لغة التدريس : اللغة العربية
مستوى المقرر : الأول	ساعات المقرر : ٣ساعات

الموضوعات
مهارة الاتصال ومفهومها ،والحاجة إليها ، ومقوماتها ،ومعوقاتها
عناصر عملية الاتصال ، الأسس النفسية في عملية التأثير ،
العوامل التي تحدد فاعلية تأثير الاتصال
أهداف الاتصال ووظائفه ،أساليب الاتصال ووسائله وقنواته
مهارات الاستذكار لدى الطالب الجامعي
مهارات الحصول على المعلومات وتنظيمها والتعبير عنها .
مهارات التعلم الذاتي ومصادر لتوجيهاته
مفهوم التفكير وأنواعه وتصنيفاته ،المهارات الأساسية للتفكير الفعال ، مهارات التفكير الناقد والابداعي
مهارة إدارة الوقت ، مضيعاتالوقت ، مشكلة التسويف ، تحديد الأولويات
مهارة العمل التطوعي ومفهومها، أهميتها ، أهدافها ، شروط العمل بها ، مكانتها في الإسلام
أخلاقيات العمل التطوعي ،مجالاته ، دوافع للعمل التطوعي ومعوقاته

رقم المقرر ورمزه : ١٣٠ تقن	اسم المقرر : **مهارات حاسب**
لغة التدريس : **اللغة الإنجليزية**	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الأول

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Introduction: What You Should Know Before Begin This Course Computer Basics	1	3
2. The Amazing Computer	1	3
3. An Overview of the Computer System 4. The Shapes of Computers Today	1	3
5. Interacting With Your Computer. 6. Standard Methods of Input. 7. Alternative Methods of Input	1	3
8. Output Devices	1	3
9. Mid-Term 1	1	1
10. Processing Data, Transforming Data Into Information, and CPUs Used in Personal Computers	1	3
11. Storing Information in a Computer, Types of Storage Devices, Measuring Drive Performance	1	3
12 The Operating System and User Interface	1	3
13. PC Operating Systems	1	3
14. Productivity Software, Part 1: Word Processing and Desktop Publishing Software	1	3
15. Mid-Term II	1	1
16. Productivity Software, Part II 17. Presentation Programs	1	3
18. The Internet and Online Resources	1	3
19. Revision and final Exam	1	3

أهداف المقرر :

Overview of computer systems — hardware, operating systems, and microcomputer application software, including the Internet, word processing, spreadsheets, presentation graphics, and databases. Current issues such as the effect of computers on society, and the history and use of computers in business, educational, and other modern settings are also studied, keyboarding proficiency.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1. Be able to identify computer hardware and peripheral devices
2. Be familiar with software applications
3. Understand file management
4. Accomplish creating basic documents, worksheets, presentations and databases
5. Distinguish the advantages and disadvantages of networks
6. Experience working with email and recognize email netiquette
7. Explore the Web and how to conduct research
8. Identify computer risks and safety. Identify the components of a computer system.
9. Demonstrate basic understanding of commonly used applications.
10. Explain the impact of computers on society.
11. Demonstrate proficiency in basic operating system functions.
12. Discuss current issues associated with security, ethics, and legal issues.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks
- Norton Peter. Peter Norton's Introduction to Computers Seventh Edition. Ohio: Glencoe/McGraw- Hill. ISBN 0-07-821058-7 © 2014.   - Norton Peter. Peter Norton's Introduction to Computers six Edition. Ohio: Glencoe/McGraw-Hill. ISBN 0-07-821058-5 © 2008
2. List Essential References Materials (Journals, Reports, etc.)
- New Perspectives on Computer Concepts- Essentials 5th Edition ISBN: 0-619-16164-7 © 2003   - Your Interactive Guide to the Digital World Gary B. Shelly and Misty E. Vermaat ISBN: 1-111-53048-3/978-1-111-53048-8 © 2012
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

أهداف المقرر :

This course is designed to develop the topics of differential and integral calculus. Emphasis is placed on limits, continuity, derivatives and integrals of algebraic and transcendental functions of one variable. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to derivative related problems.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:
1- Evaluates limits.
2- Prove basic theorems using limits of the difference equations.
3- Differentiate algebraic and trigonometric functions using key theorem.
4- Find the tangent line for a given graph at a given point.
5- Solve maximum and minimum problems using differentiation.
6- Solve related rate problems.
7- Apply methods of calculus to curve sketching.
8- Anti-differentiation, Areas, fundamental theorem of Calculus, evaluating definite integrals by substitution rules and.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks
Calculus Early Transcendentals 8th Edition by James Stewart.

2. List Essential References Materials (Journals, Reports, etc)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

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كلية العلوم والدراسات الإنسانية بحر يملاء

رقم المقرر ورمزه : ٥٢١ انجم	اسم المقرر : اللغة الانجليزية١
لغة التدريس : اللغة الانجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٩ ساعات	مستوى المقرر : الأول

وصف المقرر :

1 Topics to be Covered		
List of Topics	No. of Weeks	Contact hours
1. Unit 1 Student life	1	3
2. Unit 1 Student life	1	3
3. Unit 2 Daily Routines	1	3
4. Unit 3 People and the environment	1	3
5. Unit 3 People and the environment	1	3
6. Unit 4 Architecture + Test No.1		
7. Unit 5 Education	1	3
8. Unit 6 Technology	1	3
9. Unit 7 Food, drink, and culture	1	3
10. Unit 7 I need some more information...	1	3
11. Unit 8 What should we do? + Test No.2	1	3
12. Unit 9 Take care...	1	3
13. Unit 9 Take care...	1	3
14. Unit 10 What's it like?	1	3
15. Practical + Revision	1	3
16. Final exam	1	3

Note: General description in the form used in Bulletin or handbook: أهداف المقرر

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1- To inculcate and develop the habits of reading

English texts, mostly at general level.

2- To develop general lexical skills.

3- To identify and write simple sentences and

develop writing skills with special reference to

spelling and writing short sentences.

4- To expand general listening and reading skills.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

1. Headway Academic skills

(Reading, Writing, and Study Skills)

2. Headway Academic Skills

Listening, Speaking, and Study Skills)

2. Recommended References

1. Harrison, R. (2007). Academic skills reading, Writing and study skills.

2. Philpot, S. &Curnick, L. (2011). Academic Skills Reading, Writing, and Study Skills.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

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رقم المقرر ورمزه: ١٣٩ انجم	اسم المقرر : مصطلحات الحاسب
لغة التدريس : اللغة الانجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٢ ساعات	مستوى المقرر : الأول

وصف المقرر:

	List of Topics	No. of Weeks
	1. Top	
1.	Unit 1 Everyday uses of computer?	1
2.	Unit 2 Types of Computer	1
3.	Unit 3 Parts of computer	1
4.	Unit 4 Keyboard and mouses	1
5.	Unit 5 Computing words and abbreviations	1
6.	Unit 6 Input devices	
7.	Unit 7 Output devices	1
8.	Unit 8 Storage devices	1
9.	Unit 9 Graphical user interface	1
10.	Unit 10 Computing support assistant	1
11.	Unit 11 Networks	1
12.	Unit 12 Communications	1
13.	Unit 13 The internet 1: email and newsgroups	1
14. Unit 14 The internet 1: The World Wide Web 15. Unit 15 Website designer		1
16.	Practical + Revision	1
17.	Final exam	1

أهداف المقرر :

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1- To provide students with a solid basis of specialist language for their careers and study.

2- To explain and discuss the main concepts of the concerned field specialist language.

3- To enhance students' abilities to use specialist language in practical situations.

4- To inculcate and develop the skills to use Computing Terminology in English

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Glendinng, E., McEwan, J. Basic English for Computing. Oxford: Oxford University press.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or
and software.

رقم المقرر ورمزه : ١٠٠ فيز	اسم المقرر : اساسيات الفيزياء
لغة التدريس : اللغة الانجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الثاني

وصف المقرر :

		1. Topi
	List of Topics	No. of Weeks
1. **Physics defined and relationships to other fields**		
2. **Motion in a straight line:**		
3. Midterm		
4. **Newton's laws:**		
5. **Work and Energy**		

أهداف المقرر :

General Physics I is the first of a two semester sequence in General Physics designed to present concepts and applications of the following topics: kinematics, dynamics, gravitation, energy, momentum and heat. There are three hours of lecture and two hours of laboratory each week.

مخرجات التعليم : الفهم والمعرفه والمهارات الذهنية والعملية

Upon completion of this course, students are expected to:
To provide students with a thorough understanding of the basic concepts of physics and the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis .
B. To instruct students of the fundamental laws of physics and the

application of scientific data, concepts, and models for use in the natural sciences and real world situations.

C. To provide students with problem solving skills by an approach that describes physical phenomena with relevant mathematical models and formulae.

D. To develop the student's mathematical ability to manipulate formulae and derive correct numerical solutions that can be measured in the real world.

E. To instruct students in the competent use of laboratory equipment to collect and record data, apply relevant mathematical models and perform required computations, and present the derived results as an application of a measured observation of the physical world.

F. To have students prepare a written laboratory report that effectively interprets and communicates their results.

G. To have students effectively use computers as a tool for data collection, analysis, and communication.

الكتاب المقرر والمراجع المساندة :

References

1. Physics, Douglas C. Giancoli, sixth edition, Prentice Hall Publisher.ISBN

0-13-0690620-0

2. Physlet Physics, Christian &Belloni, Pearson PublisherISBN-13 978-0-13-

101969-0

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or and software.

اسم المقرر : رياضيات٢	رقم المقرر ورمزه : ١٢١ريض
المتطلب السابق : ١١١ريض	لغة التدريس : اللغة الانجليزية
مستوى المقرر : الثاني	الساعات المعتمدة : ٣ ساعات

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks
1. **SYSTEMS OF LINEAR EQUATIONS AND MATRICES**	3
2. **DETERMINANTS**	2
3. **GENERAL VECTOR SPACES**	1
4. Exam I	1
5. Basis and Dimension 6. Row Space, Column Space, and Nullspace 7. Rank and Nullity	1
8. **INNER PRODUCT SPACES**	2
9. Exam II	1
10. **EIGENVALUES, EIGENVECTORS**	2
11. **LINEAR TRANSFORMATIONS**	1
12. Review for the final exam	1

أهداف المقرر :

This course is designed to develop the topics of linear algebra,
systems of linear equations, matrices, determinants, vector spaces, inner product spaces,
eigenvalues and eigenvectors, and linear transformations.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students are expected to:
1. Learn about Matrices, Determinant, Master basic concepts and techniques of linear algebra.
2. Solving system of linear equations.
3. Perform computations involving linear systems, matrices, vector spaces, and linear transformations.
4. Applying linear Algebra to many practical applications in different fields.
5. Develop the ability to prove basic linear algebra results.

الكتاب المقرر والمراجع المساندة :

Textbook

Elementary Linear Algebra (9th edition), H. Anton and C. Rorres, Wiley, 2005.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or and software.

Course Code: ENG ١٢٦

Course Title: General English 2

Level: Preparatory Year Level 2

Credit Hours: 6 hours (4, ٢, ٢)

Pre-requisites for this course: ENG ١٢٥

Course Description:

SN	NAME OF BOOK	TOPIC HAS TO BE COVERED	
		READING	WRITING
1	Headway Level 2 Reading and Writing	International student	A host family
2	Headway Level 2 Reading and Writing	Where in the world?	My country
3	Headway Level 2 Reading and Writing	Newspaper articles	Mistaken identity
4	Headway Level 2 Reading and Writing	Modern technology	Technology good or bad?
5	Headway Level 2 Reading and Writing	Conferences and visits	Invitations
6	Headway Level 2 Reading and Writing	Science and our world	Trends
7	Headway Level 2 Reading and Writing	People: past and present	Information on the net
8	Headway Level 2 Reading and Writing	The world of IT	IT - benefits and drawbacks
9	Headway Level 2 Reading and Writing	Inventions, discoveries and processes	How thing are made?
10	Headway Level 2 Reading and Writing	Travel and tourism	Varying vocabulary

SN	NAME OF BOOK	TOPIC HAS TO BE COVERED	
		LISTENING	SPEAKING
1	Headway Level 2 Listening and Speaking	Moving on	Introductions
2	Headway Level 2 Listening and Speaking	Island states	Talking about countries
3	Headway Level 2 Listening and Speaking	Careers in the media	Talking about jobs and studies
4	Headway Level 2 Listening and Speaking	Innovations from nature	Describing objects
5	Headway Level 2 Listening and Speaking	conversations	Making conversations
6	Headway Level 2 Listening and Speaking	Food science	Expressing approximations
7	Headway Level 2 Listening and Speaking	Great lives	My hero
8	Headway Level 2 Listening and Speaking	Communication	Asking questions.
9	Headway Level 2 Listening and Speaking	Significant objects	Machines
10	Headway Level 2 Listening and Speaking	Responsible tourism	transitions

Prescribed books:

1. Headway Academic Skills Reading , Writing and Study Skills –(Student's Book2. Headway Academic Skills Listening , Speaking and Study Skills – (Student's Book)

اسم المقرر : مبادى البرمجة والخوارزميات	رقم المقرر ورمزه : ٢٠٢ عال
المتطلب السابق : ١٣٠ اتقن	لغة التدريس : اللغة الانجليزية
مستوى المقرر : الثاني	الساعات المعتمدة : ٢ ساعات

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks
1. Introduction and overview	1
2. Algorithms and flowcharts and PSEUDOCODE	2
3. Variable and Data types	1
4. Structural programing (logical structures)	2
5. Mid-Term I	1
6. **Loops structure (Repetition**	2
7. Java	2
8. Mid-Term II	1
9. Java	1
10. Revision and final Exam	1

أهداف المقرر :

This course gives an introduction about algorithms and programming. The course gives an overview about what an Algorithm is, how it can be designed, approaches for solving computational problem and finally a first interaction of student with computer programming to solve the problems using JAVA

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1. To understand the basics of computer Algorithms.

2. Be competent with writing computer design simple algorithms.

3. To make students familiar with computer based problems.

4. To make the students check the importance of algorithm designing and programming.

5. To make them capable of reading and understanding small-sized programs written by another author.

6. Become acquainted with the Java programming language and development environment.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

1. Fundamentals of Computer Algorithms Author(s): Ellis Horowitz, SartajSahni, Pu Computer Sci.P.

2. John C. Mitchell, Foundations for Programming Languages, MIT Press.

3. Benjamin C. Pierce, Types and Programming Languages, MIT Press.

4. Ravi Sethi, Programming Languages. Concepts and Constructs, Addison-Wesley

5. The Complete Reference, Java 2, Herbert Scheldt, Fifth Edition, Mc-Graw Hills/O

6. Algorithm Design, Sartaj Sahni, Prentice Hall.

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2. List Essential References Materials (Journals, Reports, etc.)

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3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or and software.

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اسم المقرر : تقنيات الانترنت	
المتطلب السابق : ١٣٠ تقن	رقم المقرر ورمزه : ٣٠٤ تقن
مستوى المقرر : الثاني	لغة التدريس : اللغة الانجليزية
	الساعات المعتمدة : ٣ ساعات

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks
1. Introduction	1
2. Internet part 1	2
3. Internet part 2	2
4. Mid-Term I	1
5. Internet security	2
6. Web programming	2
7. Distribution 1	1
8. Mid-Term II	1
9. Distribution 2	2
10. Revision and final Exam	1

أهداف المقرر :

This course presents the Internet from a dynamic workplace perspective. Reflects on how emerging technologies will empower society to do more with the Internet. Covers core Internet technologies, Web page design and authoring, computational thinking, networking fundamentals, and technology planning.

كلية العلوم والدراسات الإسلامية بحريملاء

مخرجات التعليم : الفهم والمعرفه والمهارات الذهنية والعملية

Upon completion of this course, students will:

1. Define terms related to the Internet.
2. Describe how the Internet is changing the world.
3. Understand how computers are connected to the Internet.
4. Demonstrate the ability to use the World Wide Web.
5. Understand and apply Internet Etiquette.
6. Understand how Web pages are designed and created.
7. Demonstrate an ability to create basic Web pages with HTML.
8. Understand societal issues and emerging technologies.

الكتاب المقرر والمراجع المساندة :

I. List Required Textbooks

1. The_Internet_for_Dummies, John R. Levine,12th edition.

2. How The Internet Works, The EDRi papers, 3rd ed

3. Internet Control Message Protocol, J.B. Postel

4. New Perspectives on Computer Concepts- Essentials 5th Edition ISBN: 0-619-1616

5. Your Interactive Guide to the Digital World Gary B. Shelly and Misty E. Vermaat
111-53048-3 / 978-1-111-53048-8 © 2012

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2 List Essential References Materials (Journals, Reports, etc.)

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3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or
and software.

رقم المقرر ورمزه : ٢٠١ تقن	اسم المقرر : مقدمة في قواعد البيانات
لغة التدريس : اللغة الانجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الثالث

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks
1. Introduction and Overview	1
2. Centralized and client/server Architecture for DBMS	1
3. The Relational Data Model and Relational Database Constraints.	1
4. Introduction to Structured Query Language (SQI)	1
5. SQL cont....	1
6. Mid-term 1 & Project Discussion	1
7. Formal Relational Query Language (Relational Algebra & Relational Calculus)	1
8. Conceptual Modeling and Database Design	1
9. SQL:	1
10. Disk Storage, Basic File Structures	1
11. Normalization:	1
12. Mid-term 2 & Project Follow-up	1
13. Normalization continued..	1

أهداف المقرر :

This course covers a wide array of topics such as characteristics and advantages of the database management systems (DBMS), concepts of database and its architecture, data models, database schemes and instances, database models, relational data model (ER-diagram) and SQL (Structured Query Language); including data definition, queries, update, statements, and views in SQL, database design; functional dependencies, normal forms, and relational algebra, relational model constraints; domains, keys, and Integrity constraints.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1. Introduce a fundamental data and database concepts
2. Identify and differentiate between the relational database models
3. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
4. Learn how to design a database using ER-diagram.
5. To learn how to design effective database schemas
6. Create databases using Mysql or other database management products
7. Manipulating database by applying different operation such as creation, altering, and manipulation of tables, indexes, and views using relational algebra and SQL

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

    • Avi Silberschatz, Henry F. Korth, and S. Sudarshan, ―Database System Co Edition, McGraw

Recommended: • Avi Silberschatz, Henry F. Korth, S. Sudarshan Database System

    • Murach's SQL Server 2008 for Developers, Syverson & Murach, 2008 978-1890774516

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or and softwar

رقم المقرر ورمزه : ٢١٠ريض	اسم المقرر : مبادي الاحصاء و الاحتمالات
لغة التدريس : اللغة الانجليزية	المتطلب السابق : ١٠٣ريض
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الثالث

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks
1. Introduction	
2. Probability	
3. Random Variables and Probability Distributions	
4. Mathematical Expectation	
5. Midterm	
6. Some Discrete Probability Distributions	
7. Some Continuous Probability Distributions	
8. Fundamental Sampling Distributions	
9. Tests of Hypotheses	

أهداف المقرر :

This course introduces fundamental concepts of probability and statistics. It provides the background for studying the uncertainty in computer problems. It Introduces some methods for statistical
inference. This course presents basic statistical principles and methods. It focuses on descriptive statistics, probability theory, Binomial, Poisson, z, t, and Chi-square distributions, central
limit theorem, confidence intervals and hypothesis testing. One hr/wk is spent in the microcomputer laboratory exploring software applications of statistical concepts presented in the lecture. No previous computer experience is assumed.

كلية العلوم والدراسات الإنسانية بعريملاء

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students are expected to:
1. be able to find the probability of events and distributions of random variables [POs: a];
2. be able to solve problems involving some well-known probability distributions [POs: a];
3. be able to solve some basic problems on statistical inference [POs: a].

الكتاب المقرر والمراجع المساندة :

References:

1. Probability & Statistics for Engineers & Scientists, 8th Ed.*, Walpole, Myeres, Myers & Ye, Prentice Hall.

2. Statistics for Engineering and the Sciences, 5th Ed., Mendenhall &Sincich, Prentice Hall.

3. Introduction to Probability and Statistics, 4th Ed., Milton & Arnold, McGraw-Hill.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or and software.

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رقم المقرر ورمزه : ٢١١عال	اسم المقرر : تصميم المنطق الرقمي
لغة التدريس : اللغة الانجليزيه	المتطلب السابق : ١٠٣ريض
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الثالث

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks
1. Digital Systems & Binary Numbers	2
2. Operations on Binary Numbers	1
3. Introduction to Logic Gates	1
4. Basic Theorems and Properties of Boolean Algebra 5. Boolean Functions 6. Canonical and Standard Forms	2
7. Gate Level Minimization	2
8. Combinational Logic	2
9. Sequential Logic	2
10. Registers and Counters	1
11. Memory and Programmable Logic	1

أهداف المقرر :

This course presents the introductory concepts that are needed in order to design digital systems. Classical methods, including Number system, Boolean algebra, gate level design, combinational and sequential logic design methods. The lab experiments will involve the design and implementation of digital circuits. Emphasis is on the use computer aided tools in the design, simulation, and testing of digital circuits

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1. Introduce the concept of digital and binary systems

2. Be able to design and analyze combinational logic circuits.

3. Be able to design and analyze sequential logic circuits.

4. Understand the basic software tools for the design and implementation of digital circuits and

systems

5. Reinforce theory and techniques taught in the classroom through experiments and projects in

the laboratory.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required

1. Logic and Computer Design Fundamentals, 4-th, M. Morris M

Charles R. Kime, Prentice Hall

Recommended

1. Stephen Brown and Zvonko Vranesic, Fundamentals of Digita

with VHDL

Design,McGraw-Hill, 2000.

2. Electronic Materials, Web Sites etc.

http://jjackson.eng.ua.edu/courses/ece380/lectures/

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

...

4. Other learning material such as computer-based programs/CD, professional standards o

and software

(١٠١ سلم)

رقم المقرر ورمزه : ١٠١ سلم	اسم المقرر : المدخل الى الثقافة الاسلامية
لغة التدريس : اللغة العربية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٢ ساعه	مستوى المقرر : الأول

وصف المقرر :

مقدمة وأهداف المقرر ومفرداته
تعريف الثقافة وأهداف دراستها
التحديات التي واجهت الثقافة الإسلامية
موقف المثقف المسلم من الثقافات الأخرى + الحوار بين الحضارات
الخصائص العامة للإسلام
الخصلة الأولى: دين إلهي
الخصلة الثانية: دين شامل
الخصلة الثالثة: دين الفطرة
الخصلة الرابعة: الوسطية
الخصلة الخامسة: دين العلم
الخصلة السادسة: دين الأخلاق
تعريف العقيدة الإسلامية ومنهجها
أركان الإيمان + الإيمان بالله تعالى
الإيمان بالملائكة + الإيمان بالكتب
الإيمان بالرسل + الإيمان باليوم الآخر
الإيمان بالقدر
نواقض الإيمان

أهداف المقرر :

١. ترسيخ العقيدة الإسلامية الصحيحة.

٢. ربط الأجيال المسلمة بمصادر الإسلام الأساسية الصحيحة.

٣. التعريف بأهم المذاهب والتيارات المعاصرة المخالفة للإسلام والرد عليها وكشف أساليب الغزو الفكري.

٤. التعريف بأسس الحضارة الإسلامية وبيان واقع الأمة الإسلامية وأسباب تخلفها وسبل النهوض بها.

٥. ترجمة الأخلاق والتعاليم الإسلامية . إلى واقع عملي وسلوكي ملموس ، يعايشه المسلم في حياته العملية اليومية ، باعتبار الإسلام نظاماً تطبيقياً في الحياة .

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

1-أن يتدبر الطالب مصادر الإسلام الأساسية .

2 أن يتعرف الطالب على ما يحيط بها من المخاطر المعاصرة

3 أن يتعرف الطالب الى ترسيخ العقيدة الصحيحة

4- ان يعرف الطالب على خصائص الدين الاسلامي

5- أن يتمكن الطالبةمن استخدم المراجع والمصادر للبحث

6- تفسير المشكلات وتوضيح خطرها على الشباب

7-أن يحدد الحلول المتاسبة للمشكلة

الكتاب المقرر والمراجع المساندة :

١ – كتاب (المدخل إلى الثقافة الإسلامية) تأليف: عدد من أعضاء هيئة التدريس بقسم الدراسات الإسلامية . جامعة الملك سعود

٢ مقدمات في الثقافة الإسلامية تأليف : د. مفرح بن سليمان القوسي.
٣ المدخل لدراسة الشريعة الإسلامية تأليف : د . عبد الكريم زيدان
٤ شرح أصول الإيمان، للشيخ محمد بن صالح العثيمين.

اسم المقرر : لغة برمجة ١	رقم المقرر ورمزه : ٢١٢ عال
المتطلب السابق : ٢٠٢ عال	لغة التدريس : اللغة الانجليزية
مستوى المقرر : الثالث	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks
1. Overview of Object Oriented programming with JAVA	1
2. JAVA Environment Setup and IDEs	1
3. More details on Java	1
4. Data types ,Literals, Variables and Operators	1
5. Type Conversion and Casting	1
6. MID TERM I	1
7. Selection Statements and Iteration statements (Loops) Jump Statements	2
8. Class Inheritance	1
9. Recursion, Overloading And Overriding	1
10. Access Control Arrays ,Araylist Comparison	1
11. Abstract Class And Abstract Methods	1
12. MID TERM II & Revision of Object Oriented Concepts	1
13. Interfaces and Packages	1
14. final, static and others	1

أهداف المقرر :

This course is an introductory course of JAVA programming and is one of the core courses for computer programming. Topics focus on the programming essentials using java, object oriented concepts of java, inheritance, polymorphism, encapsulation and abstraction etc, and problem solving by programming.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1. To develop programs in java language.
2. To understand Object Oriented Approaches of Java Programming.
3. Be competent with the minor and major programming techniques that JAVA uses.
4. Make student comfortable in programming JAVA on console based as well as IDE based systems.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

1.Java: The Complete Reference™, Eighth Edition by Herbert Schildt.

2. Learning Java, By Dietel and Deitel.

3. Programming Java, Cray Horstman Vol-1 and II (Sun Micros

2. List Essential References Materials (Journals, Reports, etc.

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc

4. Other learning material such as computer-based programs/CD, professional standards o and software

رقم المقرر ورمزه : ٢٠٢ تقن	اسم المقرر : شبكات ١
لغة التدريس : اللغة الانجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الثالث

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks

1. Introduction To computer networks:
  ○ Communication systems (centralized, distributed)
  ○ Computer networks: definition
  ○ Comp. net objectives
  ○ Comp. net features
  ○ Network components
  ○ Classification of comp. networks
  ○ Protocols y internet technology
  ○ Readings: Tanenbaum introduction, sections 1.1-1.4	

2. Computer networks and reference models:
  ○ Definition
  ○ Principles of computer networks •
  ○ Network architecture models
  ○ Standardization & OSI model
  ○ Protocol hierarchies
  ○ Internet & TCP/IP
  ○ Readings: Tanenbaum chapter 1 and sections 2.2, 2.4	

3. Data link layer:
  ○ Data link sub-layers
  ○ Framing
  ○ Error detection and correction
  ○ Flow control – Readings: Tanenbaum sections 3.1-3.4
  ○ Medium Access Control: MAC sub-layer
  ○ ALOHA, CSMA – Readings: Tanenbaum sections 4.1, 4.2.1-4.2.6
  ○ HDLC, PPP & SLIP	

4. Ethernet Network Topology MAC layer Data encapsulation CSMA/CD Backoff algorithm ○ Readings: Tanenbaum section 4.3.1	

5. Chapter 5 : Token ring network y Features
  ○ Interface modes y Token passing protocol
  ○ Frame & token format y Priority in token ring
  ○ Readings: Tanenbaum section 4.3.3	

6. Hubs and switches	

	1	
List of Topics	1	

7. Introduction To computer networks:
  ○ Communication systems (centralized, distributed)
  ○ Computer networks: definition
  ○ Comp. net objectives
  ○ Comp. net features
  ○ Network components
  ○ Classification of comp. networks
  ○ Protocols y Internet technology
  ○ Readings: Tanenbaum introduction, sections 1.1-1.4
	1	

8. Computer networks and reference models:
  ○ Definition
  ○ Principles of computer networks •
  ○ Network architecture models
  ○ Standardization & OSI model
  ○ Protocol hierarchies
  ○ Internet & TCP/IP
  ○ Readings: Tanenbaum chapter 1 and sections 2.2, 2.4
	1	

9. Data link layer:
  ○ Data link sub-layers
  ○ Framing
  ○ Error detection and correction
  ○ Flow control – Readings: Tanenbaum sections 3.1-3.4
  ○ Medium Access Control: MAC sub-layer
  ○ ALOHA, CSMA – Readings: Tanenbaum sections 4.1. 4.2.1-4.2.6
  ○ HDLC, PPP & SLIP
	1	

10. Ethernet Network Topology MAC layer Data encapsulation CSMA/CD Backoff algorithm ○ Readings: Tanenbaum section 4.3.1	1	

11. Chapter 5 : Token ring network y Features
  ○ Interface modes y Token passing protocol
  ○ Frame & token format y Priority in token ring
  :: Readings: Tanenbaum section 4.3.3
	1	

أهداف المقرر :

Course Description:

- ○ This course will provide students with a thorough understanding of the basic principles of computer networks.
- ○ Introductory course on computer networks and their protocols.
- ○ The design philosophy of the Internet, and the details of network and Internet protocols.
- ○ Students who complete this course will be able to describe in detail the operations of networks and Internet protocols.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

After completion of this course the students will learn:
- The basic principles of computer networks
- The objectives and applications
- The Internet and its protocols
- The key design principles used to build networks and the Internet
- Network Reference Model y Data Link Layer
- Ethernet
- Token Ring
  Hubs & Switches

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required:

- A. S. Tanenbaum (text book), "Computer Networks", 4rd Ed., Prentice-Hall, '
- Panko's Business Data Networks and Telecommunications, 4th edition
- J. Kurose and K. Ross "Computer Networking: A Top-Down Approach Featur Internet" 1st Ed., Addison-Wesley
- W. Stallings, "Computer Networking with Internet Protocols"; and
  W. Stallings, " Data and Computer Communications"; Fifth Edition
- Preston Gralla y How the Internet Works. Pearson Education. Inc., 2002

اسم المقرر : تنظيم و عمارة الحاسب الآلي	رقم المقرر ورمزه : ٢٠٣ تقن
المتطلب السابق : ٢١١ عال	لغة التدريس : اللغة الإنجليزية
مستوى المقرر : الرابع	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks
1. Introduction and Computer system operation	2
2. Assembly language and assemblers	1
3. Ways to design a processor	3
4. Test 1	1
5. Memory	2
6. Input/ Output Interface	2
7. Test 2	1
8. Brief introduction to advanced design and recent developments in computer design	2
9. Final Examination	1

أهداف المقرر :

Main concepts of computer architecture; Hardware components of a computer; Instruction set:
instruction formats, encoding of instructions, types; Execution unit: registers design, combinational shifters, ALU, division and multiplication algorithms; Control unit: register transfer language, hardwired and micro-programmed control unit; Memory unit: RAM, cache memory, associative memory, virtual memory; Input/output processors; Introduction to Assembly Language; Introduction multiprocessor systems and parallel processing.

كلية العلوم والدراسات الإنسانية بحريملاء

مخرجات التعليم : الفهم والمعرفه والمهارات الذهنية والعملية

Upon completion of this course, students will:

1. Have understanding of evolvement of computer and how they are affected by technology;

2. Understand the organization and architecture of computer systems

3. Describe the various architectures and their stages

4. Know the factors influencing the design of hardware and software elements of computer systems

5. Work together as a team on assigned projects.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required:

1. Computer Organization & Design : The Hardware/Software Interface 4th edition by D. A.

Patterson and J. L. Hennessy, Morgan Kaufmann, 2009.

Recommended:

1. Null & Lobur, (2003). The essentials of Computer Organization and Architecture. Boston, MA:

Jones and Bartlet.

Patterson & Hennessy, (1998). Computer Organization and Design: The Hardware/Software

Interface. Second Edition. San Francisco, CA: Morgan Kaufmann.

2. Mano & Kime, (2001). Logic and Computer Design Fundamentals. 2nd Edition Updated.

Upper Saddle River, NJ: Prentice Hall.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

(١٠٢ سلم)

رقم المقرر ورمزه : ١٠٣ سلم	اسم المقرر : الاسلام وبناء المجتمع
لغة التدريس : اللغة العربية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الثاني والثالث

وصف المقرر :

مفهوم المجتمع المسلم ، أسس بناء المجتمع
سمات المجتمع المسلم
أسباب تقوية الروابط الاجتماعية
أهم المشكلات الاجتماعية وسبل الوقاية منها وعلاجها
أهمية الأسرة ومكانتها في الإسلام
الخطبة وأحكامها
النكاح ومقاصده
الآثار المترتبة على عقد الزواج

أهداف المقرر :

- مفهوم المجتمع المسلم
- أسس بناء المجتمع وعناية الإسلام به
- أسباب تقوية الروابط الاجتماعية
- أهم للمشكلات الاجتماعية وطرق علاجها
- أهمية الأسرة ومكانتها في الإسلام
- الخطبة وأحكامها العامة
- النكاح مقاصده وأحكامه
- الآثار المترتبة على عقد النكاح
- توثّق النكاح
- إبراز حكم التشريع في عموم هذا للمقرر

مخرجات التعليم : الفهم والمعرفه والمهارات الذهنية والعملية

أ – المــــــعرفـــة

(٥)   وصف للمعرفة التي سيتم اكتسابها في المقرر:

١)   أن يذكر الطالب والطالبة دور الإسلام في تقوية الروابط الاجتماعية.

٢)   أن يعدد الطالب والطالبة الأسس الصحيحة التي يقوم عليها المجتمع الإسلامي .

٣)   أن يعدد الطالب والطالبة بعض سمات المجتمع المسلم.

٤)   أن يذكر الطالب والطالبة بعض الانحرافات الأخلاقية في المجتمع.

٥)   أن يوضح الطالب والطالبة الشبه المثارة ضد المرأة المسلمة والرد عليه

٦)   أن يصف الطالب والطالبة حال المرأة قبل الإسلام.

٧)   أن يذكر الطالب والطالبة مكانة الأسرة في الإسلام.

٨)   أن يعدد الطالب والطالبة صفات الحجاب الشرعي.

٩)   أن يذكر الطالب والطالبة معايير اختيار الزوجين.

١٠) أن يذكر الطالب والطالبة مقاصد النكاح وثمراته.

١١) أن يوضح الطالب والطالبة فرق النكاح وأحكام العدة .

٢) استراتيجيات التعليم (التدريس) المطلوب استخدامها لتطوير تلك المعرفة

. المحاضرة

. المناقشات الجماعية

. البحث والاستقراء

. عروض البوربوينت

٣) طرق تقييم المعرفة المكتسبة

. الاختبارات التحريرية والشفوية

. الامتحانات القصيرة المفاجئة

. الواجبات

ب – المهارات المعرفية (الإدراكية)

١ – المهارات المعرفية المطلوب تطويرها:

١.   أن يربط الطالب والطالبة بين فساد المجتمع وبين انهياره.

٢.   أن يشرح الطالب والطالبة مظاهر عناية الإسلام بالمرأة.

٣.   أن يقارن الطالب والطالبة بين التبرج والحجاب.

٤.   أن يناقش الطالب والطالبة الشبهات المثارة حول المرأة ويرد عليها.

٥.   أن يستنبط الطالب والطالبة المخالفات الشرعية في الخطبة في ضوء معرفته بأحكام الخطبة.

٦. أن يربط الطالب والطالبة بين المشكلات الزوجية وبين عدم التزام الزوجين أو أحدهما بالحقوق والواجبات الزوجية.

٣)- استراتيجيات التعلم المستخدمة في تطوير المهارات المعرفية:

١. التكليف بالواجبات المنزلية .

٢. تقسيم الطلاب / الطالبات إلى مجموعات للمناقشة حول قضايا محددة .

٣. البحث والاستقراء.

٤. استخدام التعليم التعاوني الذي يساعد على تنمية المهارات المعرفية .

٥. المناقشات الاستقصائية.

٣)- طرق تقييم المهارات المعرفية المكتسبة:

١. الاختبارات التحريرية والشفوية.

٢. استبيان (التقويم الذاتي من قبل الطالب)

٣. التقارير .

٤. الواجبات.

٥. حلقات النقاش.

٦. البحوث العلمية.

الكتاب المقرر والمراجع المساندة :

١-الإسلام وبناء المجتمع ، تأليف : مجموعة من أعضاء هيئة التدريس بقسم الثقافة الإسلامية بجامعة الملك سعود

٢-كتاب بناء المجتمع الإسلامي   تأليف : د. عبد الرحمن بن مبارك الفريح

٣. كتاب نظام الأسرة في الإسلام   تأليف : د. محمد عجاج الخطيب

٤. كتاب نظام الأسرة في الإسلام   تأليف : د. محمد عقلة

اسم المقرر : الرياضيات المتقطعة	رقم المقرر ورمزه : ٢٠٧ريض
المتطلب السابق : ١٠٣ريض	لغة التدريس : اللغة الإنليزية
مستوى المقرر : الرابع	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. Topics to be Covered

	List of Topics	No. of Weeks
1. Yes, There are Proofs!		
2. Sets and Relations		
3. Functions		
4. The Integers		
5. Induction and Recursion		
6. Midterm		
7. Principles of Counting		
8. Permutations and Combinations		

أهداف المقرر :

Introduction to Computer Applications is designed to familiarize students with computers and their applications. It will also emphasize the use of computers and technology throughout their high school, college, and future careers. Students will learn fundamental concepts of computer hardware.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1. Construct mathematical arguments using logical connectives and quantifiers. (Communication)

2. Verify the correctness of an argument using propositional and predicate logic and truth tables. (Critical Thinking)

3. Demonstrate the ability to solve problems using counting techniques and combinatorics in the
Context of discrete probability. (Empirical and Quantitative)

4. Solve problems involving recurrence relations and generating functions. (Empirical and Quantitative)

5. Use graphs and trees as tools to visualize and simplify situations.

6. Perform operations on discrete structures such as sets, functions, relations, and sequences.

7. Construct proofs using direct proof, proof by contraposition, proof by contradiction, proof by cases. And mathematical induction. (Communication)

8. Apply algorithms and use definitions to solve problems to prove statements in elementary number theory. (Critical Thinking).

الكتاب المقرر والمراجع المساندة :

1. Books:

1) J.P.Tremblay and R. Manohar, "Discrete Mathematical Structure with

applications to computer science", Tata McGraw-Hill, ISBN 0-07-463113-6

Mathematical Structure", PHI,

ISBN-978-81-203-3689-6

3) S. B Kishor." Discrete Mathamatic", Das GanuPrakushan, ISBN No: 978-

93-81660-21-8

References:

1) E.Goodaire , "Discrete Mathematics with Graph theory", PHI,ISBN-10

:0131679953

2) J.K.Sharma ,"Discrete Mathematics", McMillan, ISBN -9780230322301

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

كلية العلوم والدراسات الإنسانية بحريملاء

رقم المقرر ورمزه : ٢١٣ عال	اسم المقرر : لغة البرمجة٢
لغة التدريس : اللغة الإنجليزية	المتطلب السابق : ٢١٢ عال
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الرابع

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks
1. Revision of CS 202	1
2. Exception Handling	1
3. JAVA Stream , File and I/O Fundamentals	1
4. String Handling/Processing)	1
5. Collections and generics	1
6. Mid-term 1	1
7. Multithreaded Programming	1
8. JAVA Networking	1
9. Introducing the AWT and Event Handling	1
10. Applets	1
11. Introducing GUI Programming with Swing	1
12. Mid-term 2	1
13. Swing API Components	1
14. Java Beans	1
15. JAVA Beans	1

هداف المقرر :

The goal of this course is to take students from core java(212 عال) to the advanced level of java programming .This course covers the advanced topics of java programming (Advanced Class Design ,JAVA Stream , File and I/O Fundamentals –,Generics and Collections – Multithreaded Programming, AWT and event handling, Swing and GUI, Applet and Java Beans etc.)

المكتاب المقرر والمراجع المساندة :

I. List Required Textbooks

Required:

1. JAVA the complete reference, 9th edition, herb schildt.(Oracle Press)

2. Core Java, Volume – II, 9th Edition, Cay.S. Horstmann, Gary Cornell. Prentice Hall.

Recommended:

1. Java, How to Program, 9th Edition, Deitel & Deitel.

2. BIG JAVA, 4th edition, Gay Horstmann.

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2. List Essential References Materials (Journals, Reports, etc.)

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3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

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رقم المقرر ورمزه : ٢١٥ عال	اسم المقرر : نظم ادارة قواعد البيانات
لغة التدريس : اللغة الانجليزية	المتطلب السابق : ٢٠١ تقن
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الرابع

وصف المقرر :

1. Topi

List of Topics	No. of Weeks
1. Introduction: Databases and Database Users	1
2. Database System Concepts and Architecture	1
3. The Relational Data Model and Relational Database constraints	1
4. Structured Query language (SQL)	1
5. More SQL: Complex Queries, Triggers, Views, and Schema Modification	1
6. Mid-term 1	1
7. The Relational Algebra and Relational Calculus	1
8. The Enhanced Entity-Relationship (EER) Model	1
9. Object, Object-Relational, and XML: Concepts, Models, Languages, and Standards	1
10. Advance on Data Storage and Querying	1
11. Query Processing and Optimization, and Database Tuning:	1
12. Mid-term 2	1
13. Transaction Processing, Concurrency Control, and Recovery. 14. Database System Architecture	1
15. Database System Architecture	1
16. Presentation & Revision for Final Exam	1

أهداف المقرر :

This course include a wide array of topics, the main objective of this course is to expose the student to the various ideas of database design concept, storage and file structure, indexing and hashing techniques, query processing and optimization, transaction processing, concurrency control, and recovery system.

مخرجات التعليم : الفهم والمعرفه والمهارات الذهنية والعملية

Upon completion of this course, students will:

1. Evaluate and determine business information problem and find the requirements of a problem in terms of data.

2. Design the database schema with the use of appropriate data types for storage of data in database.

3. Use different types of physical implementation of database

4. Use database for concurrent use.

5. To understand an introductory background in concurrency control and recovery. 6. To learn how to backup data from database.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required: 1.

Fundamentals of Database Systems, Elmasri & Navathe, Addison Wesley, 4th Edition, 2004.

Recommended:

1. Database System Concepts, Abraham Silberschatz, Henry F. Korth & S. Sudarshan, McGraw Hill.

2. Database Systems, A practical Approach to design, implementation, and Management, Thomas Connoly& Carolyn Begg, Fifth Edition, 2003.

3. Database System Concept, Avi Silberschatz, Henry F. Korth, S. Sudarshan. 5u, 2005.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

كلية العلوم والدراسات الإنسانية بحريملاء

اسم المقرر : تحليل وتصميم النظم	رقم المقرر ورمزه : ٢٢١ نما
المتطلب السابق : لايوجد	لغة التدريس : اللغة الإنجليزية
مستوى المقرر : الرابع	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks
1. Introduction to the Systems Development Life Cycle (SDLC)	1
2. Introduction to Systems Analysis and Design	1
3. Project Managements and Scheduling	1
4. Requirements Determination	1
5. Functional Modelling	1
6. Mid-term 1	1
7. Introduction Structural Models	2
8. System Design	1
9. Class and Method Design	1
10. Data Base Design	1
11. User Interface Design	1
12. Mid-term 2	1
13. Architecture Design	1

أهداف المقرر :

System analysis and design deal with planning the development of information systems through understanding and specifying in detail what a system should do and how the components of the system should be implemented and work together. System analysts solve business problems through analyzing the requirements of information systems and designing such systems by applying analysis and design techniques. This course deals with the concepts, skills, methodologies, techniques, tools, and perspectives essential for systems analysts. The practical components of this course are object oriented and use-case driven, requiring students to go through the steps of system analysis and design to solve a real-life business problem.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:
• Understand the four phases of the systems development life cycle: planning, analysis, design, and implementation.
• Explain the steps that are followed to accomplish the purpose of each phase.
• Identify various techniques that may be used to complete the steps within each phase.
• Use the knowledge and skills learned to complete a sizeable project within the course timeframe
• Practice the software phases using a project.
• Learn a number of CASE tools and use them in a project within a team work environment.
• Get familiar with UML (modeling language for analysis and design).

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required:

Systems Analysis and Design with UML Version 2.0, Alan Dennis , Barbra Haley Wixom and David Tech, 3ed Edition, Wiley, 2011

Recommended:

Systems Analysis and Design, Kendall & Kendall, Sixth Edition, Prentice Hall,2013

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

(١٠٣ سلم)

رقم المقرر ورمزه :١٠٣ـسلم	اسم المقرر : النظام الاقتصادي في الاسلام
لغة التدريس : اللغة العربية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ساعة	مستوى المقرر : الرابع والخامس

وصف المقرر :
وصف عام للمقرر :

دراسة النظام الاقتصادي الإسلامي ونشمل : تعريف النظام الاقتصادي الإسلامي لغة واصطلاحاً ، ثم العلاقة بين النظام الاقتصادي الإسلامي والعلوم المشابهة .
مصدر النظام الاقتصادي الإسلامي ومراجعه
الاصول الاعتقادية للنظام الاقتصادي الإسلامي ومبادئها
نشأة النظام الاقتصادي الإسلامي وتطبيقه
دراسة الأنظمة الاقتصادية الوضعية من حيث نشأتها وخصائصها وعيوبها ومساوئها،
خصائص النظام الاقتصادي الإسلامي وأهدافه
اسس النظام الاقتصادي الإسلامي ، دراسة المبحث الأول منه ، وهو الملكية وأنواعها،
دراسة الاسباب المشروعة للملكية كالبيوع والسلم والإجارة ، وكذلك الأسباب المحرمة للملكية كالربا وغيره ،
الحرية الاقتصادية المقيدة في النظام الاقتصادي الإسلامي .
التكافل الاجتماعي في النظام الاقتصادي الإسلامي ، كالزكاة وصدقة التطوع والوقف وغير ذلك .
مفهوم التوزيع والتبادل ، وإعادته في النظام الاقتصادي الإسلامي.
المعاملات المصرفية
تاريخ التأمين وأقسامه .
التأمين التجاري : تعريفه وأركانه وخصائصه.

أهداف المقرر :
بهدف المقرر للتعريف بالمنهج الإسلامي للحياة الاقتصادية في علاقة الإنسان بأمال حمعاً رابطقاً، وعلاقة المجتمع العالمية بعضهم مع بعض توزيعاً وتكافلاً، وبيان القواعد وأحكام الشرعية التي تضبط الحياة الاقتصادية. والمعاملات المالية مع المقارنة الموجزة بالنظم الاقتصادية الوضعية بهدف بين سمات الاقتصاد الإسلامي وخصائصه الأساسية

مخرجات التعليم : القيم والمعرفه والمهارت الذهنية والعملية

أ – المـــــعرفـة

(أ) وصف المعرفة التي سيتم اكتسابها في المقرر:

(٢: أ: ٨) : أن يتعرف معنى النظام الاقتصادي الإسلامي .

(٢: أ: ٩) : أن يذكر مصادر النظام الاقتصادي الإسلامي .

(٢: أ:١٠) : أن يعدد الأنظمة الاقتصادية الوضعية .

(٢: أ: ١١) : أن يمثّل للملكية العامة وملكية الدولة والملكية الخاصة

(٢: أ:١٢) : أن يعرّف معنى التكافل الاجتماعي الاقتصادي .

(٢: أ: ١٣) : أن يعرّف وسائل التكافل الاجتماعي الاقتصادي .

(٢: أ: ١٤) : أن يحسب نصاب العملات الورقية .

(٢: أ: ١٥) : أن يخرّج المعاملات المصرفية التي تقدمها البنوك والمصارف .

(٢: أ: ٩٣) :أن يقارن بين أنواع العقود المختلفة.

(٢: أ: ٩٤) :أن يذكر القول الراجح في مسائل الخلاف في الزكاة.

(٢: أ: ٩٥) :أن يبين صفات أهلية الإنسان لإبرام العقود في الشرع الإسلامي.

الكتاب المقرر والمراجع المساندة :

النظام الاقتصادي في الإسلام أ.د. عمر المرزوقي وآخرون، مكتبة الرشد، الرياض

النظام الاقتصادي في الإسلام، د. محمود الخطيب، مكتبة الحرمين، الرياض.
مدخل للفكر الاقتصادي في الإسلام، د. سعيد مرطان، مؤسسة الرسالة، بيروت.
النظام الاقتصادي في الإسلام، د.رفعت العوضي، مؤسسة للطالب الجامعي.

كلية العلوم والدراسات الإنسانية بعريعلاء

رقم المقرر ورمزه : ٢٠٤ تقن	اسم المقرر : برمجة الويب
لغة التدريس : اللغة الانجليزية	المتطلب السابق : ٢٠٤ تقن، ٢١٣ عال
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الخامس

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks

1. Introduction to www:
   ○ Internet Standards
   ○ Introduction to WWW and WWW
   ○ Architecture
   ○ SMTP POP3 File Transfer Protocol
   ○ Overview of HTTP
   ○ HTTP request response
   ○ Web Browser Architecture
	1

2. Web Pages:
   ○ Web pages and Types.
   ○ Generations of dynamic web pages.
   ○ Plugins
   ○ Static Web Pages.
   ○ Dynamic Web Pages
   ○ Web Pages and Multimedia
	1

3. UI Design:
   ○ Introduction to HTML and HTML5
   ○ Formatting and Fonts ,Commenting Code,
   ○ Anchor, Background, Images. Hyperlinks.
   ○ Lists, Tables, Frames
   ○ HTML Forms
	1

4. Cascading Style Sheet:
   ○ The need for CSS
   ○ Introduction to CSS
   ○ Basic syntax and structure ,
   ○ Inline Styles ,Embedding Style Sheets
   ○ Linking External, Style
   ○ Backgrounds, Manipulating Text. Margins and Padding
   ○ Positioning using CSS.
   ○ Assignment
	1

5. Mid-Term 1	1

6. Introduction to JavaScript: ○ Introduction, ○ Core features, ○ Data types and Variables, ○ Operators, Expressions, Functions. ○ Objects, and Array ○ Date and Math related Objects	1	
7. Introduction to JQuery: ○ Selecting statements. ○ Operating on a jQuery collection ○ Working with properties, attributes, and data ○ Events are where it happens	1	
8. Introduction to XML: ○ XML Basics ○ Structuring data ○ XML Namespaces ○ Document Type Definition ○ XML Vocabularies ○ Working with XML	1	
9. Essentials of JAVA for Web Programming: ○ JAVA Networking Basics ○ URL Connection ○ Ftp URL Connection ○ Cookies ○ Java Bean Basics ○ Java Environment Setup For Web ○ Applications	1	
10. Mid-Term II	1	
11. JAVA Web Programming: ○ Web Applications in JAVA ○ JAVA Applets review. ○ Understanding Tomcat ○ JAVA Servlets	1	
12. Web Application Development with ASP.NET: ○ Introduction to Dot Net. ○ Dot Net framework and its architecture ○ Quick overview of C#. ○ CLR ,MSIL, Assemblies ○ First ASP.NET Application	1	

أهداف المقرر :

Course Description:

This course provides an introduction of web-development techniques that use HTML, CSS andJavaScript as a web development essentials including database connectivity (JDBC), Basics of PHP,Basics of Java for Web Development and Basics of Asp.Net as an advanced technique of web programming.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

1. To understand the concept of Web Application Development and its Architecture.
2. To understand the Essentials of Web Application Development.
3. To understand and practice web page designing techniques.
4. To understand and practice embedded dynamic scripting on client side Internet Programming.
5. 5. To understand the differences between client side & server side technologies to develop Web Application.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required

- Achyut S Godbole and Atul Kahate, "Web –Technologies", Second Edition, Tata McGraw Hill, 2012.
- Harvey & Paul Deitel & Associates, Harvey Deitel and Abbey Deitel], "Internet and World Wide Web-How to Program", Fifth Edition, Pearson Education,, 2011.
- jQuery in Action, Third Edition , Bear Bibeault, Yehuda Katz, and Aurelio De Rosa . Forewords by Dave Methvin and John Resig.
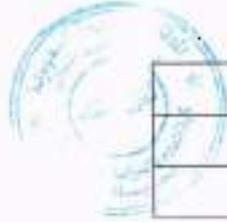- Java: The Complete Reference, Ninth Edition 9th Edition by Herbert Schildt

Recommended:

- Beginning ASP.NET 4.5.1: in C# and VB (Wrox Programmer to Programmer) by Imar Spaanjaars .

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

اسم المقرر : نظم التشغيل	رقم المقرر ورمزد :٢٠٥ عال
المتطلب السابق : ٢٠٣ تقن	لغة التدريس : اللغة الانجليزية
مستوى المقرر : الخامس	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. Top

	List of Topics	No. of Weeks
o Introduction.		1
o Introduction		1

1. Beyond Classical Search:
   o CPU Scheduling
   o Scheduling Criteria
   o Scheduling Algorithms.
   o Algorithm Evaluation
   o Process Scheduling Models
		1

2. Mid-Term I		1

3. Synchronization:
   o Process Synchronization
   o Critical-Section Problem
   o Synchronization Hardware
   o Semaphores
   o Critical Regions
   o Monitors
		1

4. Memory Management:
   o Swapping
   o Contiguous Memory
   o Allocation
   o Paging
   o Segmentation with Paging
   o Page Replacement
   o Virtual Memory
   o Allocation of frames
   o Thrashing
		1

5. File System:
   o File-System Interface
   o File-System Structure
   o File-System Implementation
		1

6. Mass-Storage Structure:
    ○ Disk Structure
    ○ Disk Scheduling
    ○ Disk Management
    ○ Swap-Space Management
    ○ RAID Structure
	1	

7. Mid-Term ll	1	

8. I/O Systems (1):
    ○ Kernel I/O Subsystem
    ○ Transforming I/O to
    ○ Hardware
    ○ Protection & Security
	1	

9. I/O Systems (2):
    ○ Overview of Window, Mac, iOS &
    ○ Andriod
	1	

أهداف المقرر :

Course Description:

This course is an introductory course to artificial intelligence. The purpose of this course is to provide an overview of this field. We will focus on problems in the field of AI and techniques and algorithms for solving those problems, therefore we will cover topics including: agents, search, planning, Uncertainty and learning. Students will not be expected to have any prior knowledge of AI, but they will be expected to have good programming skills and a grasp of basic theoretical techniques for analyzing computer algorithms.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

1. To have an appreciation for and understanding of both the achievements of AI and the theory underlying those achievements.
2. To have a basic proficiency in a traditional AI language including an ability to write simple to intermediate programs and an ability to understand code written in that language.
3. To have an understanding of the basic issues of knowledge representation and blind and heuristic search, as well as an understanding of other topics such as minimax, resolution, etc. that play an important role in AI programs.
4. To have an understanding of the Logics, Propositional log, First Order Logic.
5. Have a good knowledge of Prolog language in addition to use Java for AI applications.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required:

- Silberschatz, Galvin, and Greg Gagne. Operating System Concepts with Java (8th edition). WILEY.

Recommended:

- Tanenbaum and Woodhull. Operating Systems: Design and Implementation (3th edition). Prentice Hall.
- Tanenbaum . Modern Operating Systems (3th edition). Prentice Hall.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

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رقم المقرر ورمزه : ٢٠٨ عال	اسم المقرر : مقدمة في الذكاء الاصطناعي
لغة التدريس : اللغة الانجليزية	المتطلب السابق : ٢٠٧ ريض؛ ٢١١ عال
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الخامس

وصف المقرر :

1. Topics to be Covered	
List of Topics	No. of Weeks
1. Artificial Intelligence (AI) Introduction: o AI scope, goals, and policies of the course. Fundamentals of Artificial Intelligence (AI). History and AI disciplines.	1
2. Intelligent Agent: o Agent types and Environments The concept of rationality, the nature of environments, structure of agents. o Homework 1	1
3. Problem Solving: Solving Problem by searching (part 1): o Problem Solving and Search: Problem solving agents, example problem, and problem formulation using State Space Representations. Searching for solutions, uniformed search strategies Breadth first search, depth first search, Depth limited search, Iterative deepening. depth first search bidirectional search · comparison.	1
4. Solving Problem by searching (part 2): o Informed (Heuristic) search strategies: Search with partial information (Heuristic search) Greedy best first search, A* search, Memory bounded heuristic search, Heuristic functions.	1
5. Beyond Classical Search: o Heuristic Functions. optimality, Local Search and Optimization Local search Algorithms: Hill climbing, simulated, annealing search, local beam search, genetic algorithms. o Homework 2	1
6. Adversarial Search: o Games, Min-max, algorithm, optimal decisions in multiplayer games, Alpha-Beta pruning, Evaluation functions.	1

7. Knowledge, Reasoning, and Planning: Logical Agents: o Knowledge Base Agents, Logic, propositional Logic and Inference: a very simple Logic.	1	
8. Mid-Term II	1	
9. First-Order Logic: o Syntax and Semantics of FOL. Using FOL, Knowledge engineering in FOL.	1	
10. Learning from Examples: o Forms of Learning, Supervised Learning, Learning Decision Tree, machine Learning basics. Regression and classification of with Linear Model, Artificial Neural Networks	1	
11. Natural Language processing: o Language Models, Text classifications.	1	

12. Prolog Programming:
   o Facts, Rules and lists.
   o Programming with prolog.
	1	

13. Lab. Practical Prolog Programming: o Course Projects Overview.	1	

14. Course Project:
   o Projects Presentations, and
   o Course Revisions
	1	

أهداف المقرر :

Course Description:

This course is an introductory course to artificial intelligence. The purpose of this course is to provide an overview of this field. We will focus on problems in the field of AI and techniques and algorithms for solving those problems, therefore we will cover topics including: agents, search, planning, Uncertainty and learning. Students will not be expected to have any prior knowledge of AI, but they will be expected to have good programming skills and a grasp of basic theoretical techniques for analyzing computer algorithms.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

1. To have an appreciation for and understanding of both the achievements of AI and the theory underlying those achievements.
2. To have a basic proficiency in a traditional AI language including an ability to write simple to intermediate programs and an ability to understand code written in that language.
3. To have an understanding of the basic issues of knowledge representation

and blind and heuristic search, as well as an understanding of other topics such as minimax, resolution, etc. that play an important role in AI programs.

4. To have an understanding of the Logics, Propositional log, First Order Logic.

5. Have a good knowledge of Prolog language in addition to use Java for AI applications.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required:

- Artificial Intelligence: A Modern Approach, Third Edition, Stuart Russell & Peter Norvig, @Pearson Education Inc., 2010 - ISBN: 978-0-13-604259-4,

Recommended:

- Introduction to Machine Learning, Ethem Alpaydin, MIT Press, 2010 ISBN: 978-0-262-01243-0

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

رقم المقرر ورمزه : ٢١٩ عال	اسم المقرر : تراكيب البيانات
لغة التدريس : اللغة الإنجليزية	المتطلب السابق : ٢١٣ عال
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الخامس

			1. Topics to be Covered
	List of Topics	No. of Weeks	Contact hour
1. Overview: o Basic of Data structures (Abstract Data Types). o References o Algorithm: Objective of Algorithm, o Pseudo-Code o Quality, Space Complexity, Running Time o Complexity of Algorithm o Dynamic memory allocation		1	
2. Arrays: o Characteristics of an array, o Definition of an Array, 1-D arrays, 2-D arrays. o Array sorting o Searching an element in array o Algorithms complexity (Big Onotation)		1	
3. Sorting: o Definition of Sorting o Bubble Sort o Selection Sort o Insertion Sort o Merge Sort o Quick Sort		1	
4. Stack: o Stack as ADT o Operation on Stack o Stack implantation using array and linked list, o Application of Stack o Recursion		1	

5. Queue:
   o Queue as ADT,
   o Operation on Queue,
   o Type of Queues: Linear Queue,
   o Circular Queue, Priority Queue, and
   o Double Ended Queue,
   o Application of Queue
   o Recursion
	1	

6. Mid-Term I	1	

7. Linked Lists:
   o Fundamentals of Linked Lists
   o Types of link list (singly & double linked lists)
   o Generalized linked list
   o Application of linked list
   o Linked List Operations (Insert, Delete, Update)
	1	

8. Tree: o Concept of Tree, Tree as ADT, Binary tree. Strictly Binary Tree, Complete Binary Tree, Weight of Tree, Level of Node, and Height/Depth of Tree Operation on Tree. Tree Search Algorithm: Binary Search Tree, Tree Traversal Algorithm, AVL Trees, Heap Tree.	1	

9. Tree-Continued:
   o Heap Tree (Min and Max-heap)
   o Huffman Tree.
	1	

10. Mid-Term II	1	

11. Graph:
   o Different terminology associated with Graph.
   o Type of Graph: Directed/Undirected, Connected/Disconnected,
	1	

12. Graph-Continued: o Graph Traversal: BFS, and DFS.	1	

أهداف المقرر :

Course Description:

The main objective of this course is to provide students with a basic of data structures. It is cover wide area of topic such as Array, Linked lists, Stacks, Queues, Recursion, Graph and Tree structures.

This course is also aims to provide students with an understanding of the basic searching and sorting algorithms, including, binary search and bubble sort, selection sort, and merge sort. The students will

also provide with a conceptual understanding of the trade-offs among different abstract of data

structures, hence enabling students to choose an optimal and appreciated data structure for a particular application.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

The outcomes of this course are:

1. Describe fundamental of data structure concepts
2. Be able to write recursive methods using Java programming language
3. Be able to analyze problems and choose an appropriated data structure types to solve a particular problems in efficient algorithm's time and space complexity.
4. Design and implement linked list, stack, queue and tree as data types abstract using Java as the programming language.
5. Learning various types of searching and sorting algorithms such as quicksort, bubble sort, and merge sort.
6. Have a good understanding of some graph algorithms, for example shortest path and minimum spanning tree.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required:

- Data Structures and Algorithms in Java, by Robert Lafore (The Waite Group.

Recommended:

- Data Structures and Problem Solving Using Java, by Mark Allen Weiss, (Four Addison- Wesley, 2010, ISBN: 0-321-54140-5

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc

4. Other learning material such as computer-based programs/CD, professional standards or and softwar

رقم المقرر ورمزه : ٢٢٠ عال	اسم المقرر : مقدمة في هندسة البرمجيات
لغة التدريس : اللغة الانجليزية	المتطلب السابق : ٢٢١ نما ، ٢١٥ عال
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الخامس

وصف المقرر :

1. Topi

List of Topics	No. of Weeks

1. Introduction to Software Engineering and the Software Development Lifecycle:
    ○ What is software engineering?
    ○ Software Crisis?
    ○ Differences between programming and software engineering
    ○ What does a software engineering do?
    ○ What does a software engineering process look like?
    ○ Difficulties and risks in software engineering?
    ○ Software engineering ethics (Confidentiality. Competence, Intellectual property rights, Computer misuse)
    ○ General Software Development Methods:
       • Reuse-oriented software engineering)
       • Boehm's spiral model
       • Incremental development
	1

2. Project Planning and Management:
    ○ Software pricing
    ○ Project scheduling
    ○ Managing people
    ○ Teamwork
	1

3. Requirements Engineering:
    ○ Requirement Specification
    ○ Requirements engineering processes
    ○ Requirements elicitation
    ○ Requirements specification
    ○ Requirements validation
    ○ Requirements change
	1

4. Software Architecture Design:
    ○ Understanding Software Architecture
    ○ Examples Software Architecture
    ○ Architecture Presentations
    ○ Viewpoints and view models
    ○ Architecture assessment
	1

5. Software Design: ○ Design Considerations ○ Abstraction ○ Modularity ○ Information Hiding ○ Complexity ○ System Structure ○ Design Patterns	1	
6. Mid-Term I	1	
7. Software Implementation: ○ Software Reuse (Design for Reuse Design with Reuse) ○ Component-Based Software ○ Engineering(CBSE) ○ Open source development ○ License management ○ Implementation issue	1	
8. Verification/Validation, and Testing:: ○ Why testing ○ Testing theory and practice ○ Development testing ○ Unit testing ○ Choosing unit test cases ○ Component testing ○ System testing ○ Release testing ○ Requirements-based testing ○ Scenario testing ○ Performance testing ○ User testing	1	
9. Software Maintenance: ○ Software maintenance issues ○ Maintenance and evaluation ○ Reverse engineering ○ Maintenance tools.	1	
10. Mid-Term II	1	
11. Configuration and Changing Management: ○ Concurrency management ○ Versioning ○ Synchronization	1	
12. Introduction to Software Quality and Introduction to Software Metrics: ○ What is Software quality? ○ How can we measure quality? ○ How can ensure Quality?	1	

كلية العلوم والدراسات الإنسانية بحريملاء

أهداف المقرر :

Course Description:

This course covers the fundamentals of software engineering, including understanding system requirements, finding appropriate engineering compromises, effective methods of design, coding, and testing, team software development, and the application of engineering tools. The course will combine a strong technical focus with a capstone project providing the opportunity to practice engineering knowledge, skills, and practices in a realistic development setting with a real client.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

In previous courses in computer science you were taught how to write code given a specific design and set of specifications. In this course, you will learn to develop those designs and specifications and the formal methods used.

At the end of this course, the student should be able to

- Apply the concepts of Software Process and Model State the requirements for efficient Project Management Execute the needed steps in Software Design: Requirements, Specification, Architectural Demonstrate the procedure of converting a valid software design into efficient code Apply the procedures for Software Quality Assurance and Cost Estimation Identify issues involved with Legacy Systems, Re-engineering, and Configuration Management.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required

-   Software Engineering, 9th edition, Ian sommerville, Addison-Wesley, ISBN 0-
    39815-X. Authors page: http://www.software-engin.com/
    power point : http://iansommerville.com/software-engineering-book/slides/

    video : http://iansommerville.com/software-engineering-book/videos/softwareengine

    case study : http://iansommerville.com/software-engineering-book/case-studies/

    http://www.liacs.nl/~heijistek/#softeng

-   http://www.cs.cornell.edu/courses/cs5150/2014fa/materials.html)

Recommended:

-   Software Engineering Principle and Practice, Hans Van VLiet, Edition: 3rd , IS
    978-0470031469

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or and software.

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نموذج توصيف مقرر دراسي

تاريخ التوصيف: ١٤٣٩ـ١٢ـ٣٠	إسم المؤسسة التعليمية: جامعة شقراء
	الكلية /القسم: العلوم والدراسات الإنسانية بحريملاء–اللغة العربية

أ. التعريف بالمقرر الدراسي ومعلومات عامة عنه

١. اسم المقرر الدراسي ورمزه: المهارات اللغوية ١٠١ عرب
٢. عدد الساعات المعتمدة: ٢
٣. البرنامج (أو البرامج) الذي يقدم ضمنه المقرر الدراسي:
(في حال وجود مقرر عام في عدة برامج، بين هذا بدلاً من إعداد قائمة بكل هذه البرامج)
٤. السنة أو المستوى الدراسي الذي يعطى فيه المقرر الدراسي: المستوى الأول قب اللغة الإنجليزية ؛ والمستوى الثاني فية ،أقسام
٥. المتطلبات السابقة لهذا المقرر (إن وجدت):لايوجد
٦. المتطلبات المتزامنة مع هذا المقرر (إن وجدت): لايوجد
٧. موقع تقديم المقرر، إن لم يكن في المقر الرئيس للمؤسسة التعليمية:

ج. وصف المقرر الدراسي (البرنامج).

وصف عام للمقرر:

١. الموضوعات التي ينبغي تناولها:

ساعات التدريس	عدد الأسابيع	قائمة الموضوعات
٢	١	١–التعريف بالمقرر : وبيان أهدافه والمنهج المتبع .
٢	١	٢–الوحدة الأولى: ذكريات لا مذكرات قراءة النص ، التعرف بأنواع القراءة، وطريقة القراءة الصحيحة، وأساسيات مهارات القراءة، وتطبيقات الفهم والاستيعاب .
٢	١	٣–تطبيقات على علامات الإعراب الأصلية والفرعية وتشمل : (يعراب الأسماء الخمسة المثنى - جمع المذكر السالم - جمع المؤنث السالم –الممنوع من الصرف – الأفعال الخمسة –يعراب المقصور والمنقوص –الفعل المضارع المعتل الآخر) .
٢	١	٤–الوحدة الثانية . عندما يكون الغضب امتحانا، وتصمي قراءة النص وتطبيقات الفهم والاستيعاب .
٢	١	٥–تطبيقات على الجملة الفعلية وتركيبها وتشمل الفعل وأنواعه، نواصب الفعل المضارع وجوازمه – اسم الفاعل – اسم المفعول – الاسم الجامد –مصدر ثلاثية – المصدر الصناعي .
٢	١	٦–قراءة المقطوعة (نص لأحمد أمين) –تطبيقات الفهم والاستيعاب واللغة وتشمل زمن الفعل والفاعل – نائب الفاعل – المجرور به – أسئلة شاملة عن الوحدتين استعدادا

للاختبار الشهري .

٢	١	٧- الوحدة الثالثة : حياتي الزوجية
		وتتضمن قراءة النص ثم المناقشة حول مضمون النص والتدرب على مهارات المحادثة .
٢	١	٨- تطبيقات اللغة وتشمل المبتدأ والخبر – كان وأخواتها إن وأخواتها – ظن وأخواتها
٢	١	٩ قراءة المقطوعة (الأدبي وأن حللون)
		تطبيقات الفهم والاستيعاب وتطبيقات اللغة وتشمل : كاد وأخواتها – ظن وأخواتها ثم المناقشة حول قضايا الربط في الجملة :الاسمية والفعلية من خلال الإجابة عن التطبيقات الخاصة بذلك .
٣	١	١٠- الوحدة الرابعة : الحياة هدف وإرادة .
		وتشمل ـ قراءة النص وتطبيقات الفهم والاستيعاب ـ مناقشة الطالبات حول أهدافهم في الحياة للتدرب على مهارة المحادثة .
		تطبيقات اللغة وتشمل : ظروف الزمان والمكان – التمييز – المفعول المطلق .
٣	١	١١-قراءة النص والإجابة على تطبيقات الفهم والاستيعاب .
		مناقشة الطالبات حول المطالعة وأهميتها في الحياة للتدريب على مهارة المحادثة
٢	١	١٢- تطبيقات اللغة وتشمل : المفعول لأجله – الحال قضايا لغوية متفرقة .مع أسئلة شاملة على الوحدتين السابقتين استعدادا للاختبار الشهري الثاني .
٢	١	١٣- الوحدة الخامسة : كنوز مرصودة
		وتشمل ـ قراءة النص وتطبيقات الفهم والاستيعاب ـ المناقشة حول مضمون النص والتدرب على مهارة المحادثة .
٢	١	١٤- تطبيقات اللغة وتشمل : المجرورات – التوابع – العدد
٣	١	١٥ مراجعة لما سبق دراسته عن طريق التطبيق على مهارات الفهم والاستيعاب والمحادثة واللغة من خلال النص الأخير .

٢. إجمالي عدد ساعات المقرر وتوزيعها:

المجموع	أخرى	تطبيق	معامل أو استديو	دروس إضافية	محاضرات	
					٣٠	ساعات التدريس الفعلية
					٣٠	الساعات المعتمدة

نموذج توصيف مقرر دراسي- رمضان ١٤٣٨ هـ -يوليو يونيو ٢٠١٧م

اسم المقرر : الوسائط المتعددة و تقنيات الويب	رقم المقرر ورمزه : ٤١٠نقن ١٠
المتطلب السابق : لايوجد	لغة التدريس : اللغة الانجليزية
مستوى المقرر : السادس	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. T

List of Topics	No. Wee

1. Overview of Web Applications:
  ○ Web Development Essentials. World Wide web Consortium(W3C)
  ○ Mark-up languages
  ○ Web Application Development Technologies
  ○ Scripting, Client-side technologies. Server-side technologies
  ○ Content Network, User Generated
  ○ Contents Blogging .Social Networking,
  ○ Social Media .Tagging. Social Bookmarking	

2. Web 2.0:
  ○ Web 2.0 Monetization. Web 2.0
  ○ Business Models. Futures of Web	

3. Multimedia Essentials for Web Development:
  ○ Introduction
  ○ Overview of Multimedia Software Tools
  ○ Digital movie tools
  ○ Multimedia Authoring and Tools
  ○ Graphics and Image Data Representations
  ○ Introduction to Flash. Learning Flash with hands on Examples, Publishing Flash Continents on web	

4. Mid-Term 1	

5. Database Technologies for Web Development:
  ○ SQL Server, MySQL, ADO NET,JAVA DB
  ○ Database Programming	

6. JAVA Development Tools/Frameworks:
  ○ Java Web Technologies
  ○ Introduction to J2EE
  ○ Web Application Development Using Servlet
  ○ Web Application Development Java Server Pages
  ○ Developing java database enabled application	

7. ASP.net and Alias:	1	
○ Application and Page Frameworks		
○ ASP.NET Server Controls and Client-Side Scripts		
○ Validation Server Controls		
8. Mid-Term II	1	
9. ASP.NET Application Development:	1	
○ Working with Master Pages.		
○ ASP.Net Application Development		
○ Asp.Net Database enabled applications		
10. Ajax Enabled Asp.net and Java:	1	
○ Implementation of Ajax enabled Asp.net and Java Components		
11. Web Services:	1	
○ Creating, Publishing, Testing , and Describing a Web Service		

أهداف المقرر :

Course Description:

The goal of this course is to get students acquainted with the latest Multimedia and web application development Tools. The students will acquire advanced skills in web development along with the real hands on experience to build complex web applications. After having completed this course, students will have a thorough knowledge of all advanced web technologies. Topics include the Multimedia technologies, web development process, advanced layout and design features,
advanced study of scripting languages, Adobe flash action scripting web application designing patterns, web services, Database concepts for web and the latest web development technologies introduced by Microsoft and Oracle.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required:

- Deitel and Deitel, "Internet & World Wide How to Program?", 4ᵗʰ Edition, 2008.

- Programming the www by Robert Sabesta, Prentice Hall Publication House
- Fundamentals of Multimedia Authors: Li, Ze-Nian, Drew, Mark S., Liu, Jia
- Sams Teach Yourself J2EE in 21 Days (2nd Edition) 2nd Edition by Martin Debbie Law , Andy Longshaw , Dan Haywood , Peter Roxburgh .
- Professional ASP.NET 4 in C# and VB,Bill Evjen, Scott Hanselman, Devin

Recommended:

- Head First Servlets and JSP: Passing the Sun Certified Web Component Developer Exam by Bryan Basham (Author), Kathy Sierra (Author), Bert Bates. - Java EE 7: The Big Picture by Dr. Danny Coward (Author). - Web 2.0: A Strategy Guide, Business thinking and strategies behind successful Web 2.0 Implementations. By Amy Shuen, O'Reilly Media.	
2. List Essential References Materials (Journals, Reports, etc.)	
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. ----	
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. ---	

اسم المقرر : المعالجات الدقيقة ولغة التجميع	رقم المقرر ورمزه : ٣٠١ عال
المتطلب السابق : ٢٠٣ تقن	لغة التدريس : اللغة الإنجليزية
مستوى المقرر : السادس	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. Topi

List of Topics	No. of Weeks
1. Introduction: ○ Introduction to computer architecture, assembly and machine languages, components of a computer system, memory hierarchy, instruction execution cycle, chip manufacturing process, technology trends, programmer's view of a computer system.	1
2. Review of data representation: ○ Binary and hexadecimal numbers, signed integers, binary and hexadecimal addition and subtraction, carry and overflow, characters and ASCII table.	1
3. Instruction Set Architecture: ○ Instruction set design, RISC design principles, MIPS instructions and formats, registers, arithmetic instructions, bit manipulation, load and store instructions, byte ordering, jump and conditional branch instructions, addressing modes, pseudo instructions.	1
4. MIPS Assembly Language Programming: ○ Assembly language tools, program template, directives, text, data, and stack segments, defining data, arrays, and strings, array indexing and traversal, translating expressions, if else statements, loops, indirect jump and jump table, console input and output.	1
5. Procedures and the Runtime Stack: ○ Runtime stack and its applications, defining a procedure, procedure calls and return address, nested procedure calls, passing arguments in registers and on the stack, stack frames, value and reference parameters, saving and restoring registers, local variables on the stack.	1
6. Mid-Term 1	1
7. Interrupts: ○ Software exceptions, syscall instruction, hardware interrupts, interrupt processing and handler, MIPS coprocessor 0.	1

8. Integer Arithmetic and ALU Design: o Hardware adders, barrel shifter, multifunction ALU design, integer multiplication, shift add multiplication hardware, Shiftsubtract division algorithm and hardware, MIPS integer multiply and divide instructions, HI and LO registers..	1	
9. Floating-Point Arithmetic: o Floating-point representation, IEEE 754 standard, FP addition and multiplication, rounding, MIPS floating-point coprocessor and instructions.	1	
10. CPU Performance: o CPU performance and metrics, CPI and performance equation, MIPs, Amdahl's Law.	1	
11. Mid-Term II	1	
12. Single-Cycle Datapath and Control Design: o Designing a processor, register transfer, datapath components, register file design, clocking methodology, control signals, implementing the control unit, estimating longest delay.	1	
13. Pipelined Datapath and Control: o Pipelining concepts, timing and performance, 5-stage MIPS pipeline, pipelined datapath and control, pipeline hazards, data hazards and forwarding, control hazards, branch prediction.	1	

أهداف المقرر :

Course Description:

In this course, we will cover topics such as Machine organization; assembly language: addressing,
stacks, argument passing, arithmetic operations, decisions, modularization; Input/Output Operations and Interrupts, Memory Hierarchy and Cache memory; Pipeline Design Techniques;
Super scalar architecture; Parallel Architectures.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

By the completion of the course the students should be able to:

1. Ability to analyze, write, and test MIPS assembly language programs.
2. Ability to describe the organization and operation of integer and floating-point arithmetic
   units.
3. Ability to apply knowledge of mathematics in CPU performance analysis and in speedup
   computation.
4. Ability to design the datapath and control unit of a processor.
5. Ability to use simulator tools in the analysis of assembly language programs and in CPU
   design.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

Required:

- David Patterson and John Hennessy. Computer Organization & Design:
- The Hardware/Software Interface. Morgan Kaufmann Publishers, 2005(Third Edition)

Recommended:

- Robert Britton. MIPS Assembly Language Programming. Pearson Prentice Hall, 2004

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

رقم المقرر ورمزه : ٣٠٥تقن	اسم المقرر : شبكات ٢
لغة التدريس : اللغة الإنجليزية	المتطلب السابق : ٢٠٢تقن
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الخامس

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours

1. Introduction:
  o Network overview
  o Type of network
  o Data communication
	1	4

2. Optical Networking:
  o Introduction to Optical
  o Networking
  o SONET / SDH Standard
  o DWDM
	1	4

3. ATM-The WAN protocol:
  o Introducing ATM Technology
  o Introducing Faces of ATM
  o Explaining the basic concepts
  o of ATM Networking
  o Exploring the B-ISDN
  o reference model
  o Explaining the Physical Layer.
  o Explaining the ATM Layer
  o Explaining the ATM
  o Adaptation Layer
  o Exploring ATM Physical interface
  o Choosing an Appropriate ATM Public Service
	1	4

4. Packet Switching Protocols:
  o Introduction to Packet
  o Switching, Introduction to
  o Virtual Circuit Packet,
  o Switching Introduction to
  o X.25,Introducing switched
  o multimegabit data service
	1	4

5. Protocols and interfaces in the upper layers of TCP/IP:
   o Introducing TCP/IP suite
   o Explaining Network Layer
   o Protocols How do routers use next-hop addresses to select a path for packets to reach their destination?
   o Explaining Transport Layer Protocol
   o Explaining Application Layer Protocol
	1	4

6. Routing in the internet:
   o Introduction to traffic
   o Engineering IP over ATM.
	1	4

7. Layer 2 switching and EIGRP:
   o Enhance Interior gateway routing protocol.
   o And Storage Area Network?
   o Before Layer 2 Switching
   o Switching Services
   o Spanning Tree Protocol (STP)
   o LAN Switch-Types
	1	4

8. Other Routing Techniques:
   o OSPF
   o CIDR.
	1	4

9. Network Management and Services:
   o Introduction to Network
   o Management Standard
   o Network Management Protocol
	1	4

10. Traffic Engineering Basics:
   o Introduction to traffic Engineering
   o Requirement Definition for Traffic Engineering
   o Traffic Sizing
   o Traffic Characteristics Protocols
   o Time and Delay Consideration Connectivity
   o Availability, Reliability, and Maintainability
   o Throughput Calculation
	1	4

11. Multimedia over Internet:
   o Introduction to Multimedia Services
   o Explaining Transmission of Multimedia over the Internet
   o Explaining IP Multicasting
   o Explaining VOI
	1	4

12. Mid-Term II	1	1

13. Introduction to Cisco IOS:
   o The Cisco Router User Interface
   o Command Line Interface (CLI)
   o Router and Switch
   o Administrative Functions
   o Router Interfaces
   o Viewing, Saving, and Erasing Configurations
	1	4

14. IP Routing IPv4 & 6:
   o Routing Basics
   o The IP Routing Process
   o Configuration IP Routing in Our Network
	1	4

15. Dynamic Routing Protocols:
   o Routing Protocol Basics
   o Routing Information Protocol (RIP)
   o Interior Gateway Routing Protocol (IGRP) Verifying
      Your Configurations
	1	4

أهداف المقرر :

Course Description:

The course is the second in a series of courses on computer networking. It assumes familiarity with the basics of network architecture including the physical layer, the link layer, the network layer, and the transport layer. The course's topics include: an introduction to the internet, the Word Wide Web (WWW), and the Hypertext Transfer Protocol (HTTP), internet servers, high speed networks, optical networks, cellular networks, fixed infrastructure networks, multicast, intranet and internet routing protocols, comparison between distance vector and link state routing mechanisms, encryption, and resource reservation. Protocols for the above topics will be discussed along with their properties and ways to improve them the course's topics will be divided roughly into three sections: transport layer issues (inter-network routing, congestion control and avoidance).

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

1. This module aims to provide a broad coverage of some new advanced topics in the field of
   computer networks (wireless networks, mobile networks, VPN networks, Mobile IP, etc.)

2. Practical aspects of the Ethernet, Wi-Fi and the TCP/IP will be discussed in more details. The goal
   of this course is to give the background information help the better understanding of the practical
   Computer Network related problems.

3. The main goal here is answering the question like "What is the problem?", "Why it is a problem?", "How can we solve it?", and "What else can we do?".

    4. Will be able to understand concepts of the Advance Computer Networks

كلية العلوم والدراسات الإنسانية بحريملاء

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

   Required:

· High-Speed Networks and Internets, Performance and Quality of Service by William Stallin

- CCNA Intro Study Guide Todd Lammle, Sybex

Recommended:

1. Andrew S. Tanenbaum (2010). Computer Networks (5th edition). Prentice Hall.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or and software.

اسم المقرر : امن المعلومات	رقم المقرر ورمزه : ٣٢٢ نما
المتطلب السابق : لايوجد	لغة التدريس : اللغة الإنجليزية
مستوى المقرر : السادس	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Information Security Overview: o Basic concepts: Describe the role of Information Security with Identifying different kind of threats to information systems.	1	4

2. Cryptography:
  o Basic cryptographic terms
  o Historical background
  o Symmetric crypto primitives
  o Modes of operation
  o Cryptographic hash functions
  o Asymmetric crypto
	1	4

3. Program Security (1):
  o Malicious code: viruses,
  o Trojan horses, worms
  o Program flaws: buffer
  o overflows, time-of-check to time off-use flaws. incomplete mediation
	1	4

4. Program Security (2):
  o Defenses
  o Software developer controls,
  o testing techniques
  o Access Control
	1	4

5. Operating Systems Security (1):
  o Memory, time, file, object protection requirements and techniques
  o Protection in contemporary operating systems
  o Identification and authentication
  o Identify goals
  o Authentication requirements
  o Human authentication
  o Machine authentication
	1	4

6. Operating Systems Security (2).
     ○ Assurance; trust
     ○ Design principles
     ○ Evaluation criteria
     ○ Evaluation process
     ○ Virtualization Security
	1	4

7. Mid-Term I	1	1

8. Database Security (1)
     ○ Database integrity
     ○ Database secrecy
	1	4

9. Database Security (2):
     ○ Database Access control
     ○ Database Management Control
     ○ Multilevel databases
	1	4

10. Network Security (1): ○ Network threats: eavesdropping, spoofing, modification, denial of service attacks	1	4
11. Mid-Term II	1	1
12. Network Security (2): ○ Introduction to network security techniques: firewalls, virtual private networks, intrusion detection	1	4

13. Web Security:
     ○ Attacks on Clients
     ○ Attacks on Servers
	1	4

14. Management Security (1): ○ Security Polices	1	4

15. Management Security (2):
     ○ Risk Analysis
     ○ Physical Threats and Control
	1	4

أهداف المقرر :

Course Description:

This course consists of Introduction to Information Security, Need for Security, Application Security, operating System Security, Web Security, Planning for Security, Security Technology: Firewalls, Intrusion Detection and Prevention Systems, Cryptography, Implementing Information Security, Student study the optimum protection strategies from harmful software from the internet and the protection techniques. Finally, complete Computer security for optimum security levels.

مخرجات التعليم : الفهم والمعرفه والمهارات الذهنية والعملية

- Understanding the fundamentals of information security
- Familiarity with practical applications in various aspects of information security.
- Identify the role of information in the world today along with the importance protecting that information from unauthorized disclosure.
- Explain the basic concepts involved with cryptography along with its contribution to the authentication and encryption schemes used to secure computer systems and resources.
- Identify the protection of computer software in both an application program and an operating systems environment, including the identification and elimination of virus software.
- Describe methods used to secure wired and wireless networks from both the many wellknown and documented attacks of today as well as those attacks yet to be developed.
- Describe the importance of the development of a security policy for the computer environments of today along with the contents of that security policy.
- Identify the legal and ethical issues involved with securing computer systems, networks, and information.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

   Required:

   - Mark Stamp, "Information Security: Principles and Practice Jon Wiley & Sons Inc.. ISBN 13 978-0-471-73848-0

   Recommended:

   - William Stallings, Lawri Brown, "Computer Security: Principles and Practices". Prentice Hall 2008, ISBN 13: 9780136004240.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

رقم المقرر ورمزه : ٢٥٢ عال	اسم المقرر : الرسم بالحاسب
لغة التدريس : اللغة الإنجليزية	المتطلب السابق : ٢١٣ عال
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : السادس

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Introduction: o Displays, Pixels, Frame buffer, Vector & Character generation, Random Scan systems, Display devices, Scan Conversion techniques	1	4
2. Line Drawing Algorithm: o Line Drawing: simple DDA. Algorithm	1	4
3. Polygon Drawing Algorithms: o Polygon fill algorithm: Boundary-fill and Flood-fill algorithms	1	4
4. Other Drawing Algorithm: o Ellipse Drawing. Pixel Addressing. Scan Line, Boundary Fill.	1	4
5. Output Primitives: o Line, Curve. Color Levels. Area, Character and Bundled Attributes.	1	4
6. Mid-Term I	1	1
7. Transformations: o 2-D Transformation: Translation, Rotation. Scaling. Shearing, Reflection.	1	4
8. Viewing: o Inverse Transformation, Homogenous coordinate system, Matrices Transformation, Composite Transformation	1	4
9. Clipping Algorithms: o Windowing & Clipping: World Coordinate System, Screen Coordinate System, Viewing Transformation. Line Clipping & Polygon Clipping Algorithms	1	4
10. Modelling: o Structures, Basic Modelling and Hierarchical Modelling.	1	4
11. 3D Transformations: o 3-D Transformations: Translation, Rotation and Scaling	1	4
12. Mid-Term II	1	1

13. Projections: c: Types of Parallel & Perspective Projection. Hidden surface elimination: Depth comparison	1	4
14. Shading: c: Phuong Shading, Gourmand shading, Ray Tracing, Color models like RGB, YIQ, CMY, HSV.	1	4
15. Detection: c: Back face Detection Algorithm, Painter's Algorithm, Z-Buffer Algorithm. Curve generation, Bezier and B- spline methods.	1	4

أهداف المقرر :

Course Description:

This course is an amalgamation of the various basic concepts of Computer Graphics involving algorithms and practical sessions with JAVA (2D and 3D API's). A strong part of this course is the use of of Blender (Open Source) to teach the concepts of graphics in details and making the students work on the system. Project design and conceptual ideas will be used in the system to enhance the capability of the course taker in graphical designing and animation effects. All programs depending on the topics can be created in C/Java and some additional Blender project must be taken in practical sessions.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

1. Computer Graphics basic and advance Algorithms
2. Working with 2D and 3D API of Java to learn computer graphics
3. Use of Blender (Open Source) for making Animations and Graphical Systems

المكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

  Required:

1. Computer Graphics, C Version, Second Edition, Donald Hearn and Pauline Baker, Pearson

Publication house.

  Recommended:

  Parkeh, "Principles of Multimedia", Tata McGraw Hill.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

نموذج توصيف مقرر دراسي

إسم المؤسسة التعليمية: جامعة شقراء	تاريخ التوصيف: 1441-01-27
الكلية /القسم: العلوم والدراسات الإنسانية بحريملاء - اللغة العربية	

أ. التعريف بالمقرر الدراسي ومعلومات عامة عنه

1. اسم المقرر الدراسي ورمزه: التحرير العربي 103 عرب
2. عدد الساعات المعتمدة: 2
3. البرنامج (أو البرامج) الذي يقدم ضمنه المقرر الدراسي: (في حال وجود مقرر عام في عدة برامج، بين هذا بدلاً من إعداد قائمة بكل هذه البرامج)
4. السنة أو المستوى الدراسي الذي يعطى فيه المقرر الدراسي: المستوى الثالث في اللغة الإنجليزية ، والمستوى الرابعة الأقسام.
5. المتطلبات السابقة لهذا المقرر (إن وجدت): لا يوجد
6. المتطلبات المتزامنة مع هذا المقرر (إن وجدت): لا يوجد
7. موقع تقديم المقرر ، إن لم يكن في المقر الرئيس للمؤسسة التعليمية:

ج. وصف المقرر الدراسي (البرنامج)

وصف عام للمقرر:

توصيف المقرر الدراسي (ملاحظة: ينبغي إرفاق توصيف عام في الاستمارة المستخدمة في النشرة التعريفية أو الدليل).

1- الموضوعات التي ينبغي تناولها:

ساعات التدريس	عدد الأسابيع	قائمة الموضوعات
2	1	1-التعريف بالمقرر ، وبيان أهدافه والمنهج المتبع .
2	1	2- رسم الهمزة في أول الكلمة وآخرها .
2	1	3-رسم الهمزة في وسط الكلمة .
2	1	4-الحذف والزيادة في الحروف .
2	1	5-رسم الألف في آخر الكلمة .
2	1	6-التاءات المبسوطة والمربوطة .
2	1	7-صفات الألفاظ واختيارها واستعمالها .
2	1	8- مراجعة المعاجم .
2	1	9-التقويم الأول .
2	1	10-التدريب على الكتابة الوظيفية (الكتابة الوظيفية)
2	1	11- كتابة المقالة .
2	1	12- كتابة التلخيص والخلاصة والتقرير .

نموذج توصيف مقرر دراسي . مركز ... حسن ... المملكة العربية ... نوفمبر 2017م

1

2	1	13- كتابة الرسالة الإدارية والسيرة الذاتية .
2	1	14- التقويم الثاني .
2	1	15-مراجعة لما سبق دراسته عن طريق التطبيق على نمارين كتابة الهمزة ، كتابة الرسالة والتلخيص والمقالة ، السيرة الذاتية .

1. إجمالي عدد ساعات المقرر وتوزيعها:

المجموع	أخرى	تطبيق	معامل أو استديو	دروس إضافية	محاضرات	
					30	ساعات التدريس الفعلية
					30	الساعات المعتمدة

كلية العلوم والدراسات الإنسانية بحرملاء

رقم المقرر ورمزه : ٤١٠ عال	اسم المقرر : المترجمات
لغة التدريس : اللغة الإنجليزية	المتطلب السابق : ٣٠١ عال
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : السابع

وصف المقرر :

1 Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Overview of Computer Languages: Introduction, How Languages are Implemented?, Why So Many Languages?, Language Evaluation Criteria	1	4
2. Overview of Compiler: Phases of compilers. Compiler Architecture	1	4
3. Lexical Analysis (Scanning): The scanning process, Regular expressions	2	8
4. Lexical Analysis (Scanning): Finite automata (skip NFAs), From regular expressions to DFAs (skip NFAs), Implementation of a scanner.	1	4
5. Context-Free Grammars and Parsing: The parsing process, Context-free grammars, Parse trees and abstract syntax trees, Ambiguity, Extended notations	1	4
6. Mid-Term I	1	1
7. Top-Down Parsing: Recursive Descent parsing, Predictive parsing (LL(1) parsing)	1	4
8. Bottom-Up Parsing: Overview, Finite automata of LR(0) items, SLR(1) parsing, LR(1) and LALR(1) parsing. Using yacc (will be covered in a lab session), FIRST and FOLLOW sets	1	4
9. Semantic Analysis: Attribute grammars and scope checking. The symbol table, Type checking	1	4

10. Run-Time Environments: Memory organization during execution. Fully static environments, Stack-based environments	1	4
11. Code Generation: Intermediate code and data structures for code generation, Basic code generation techniques, Code generation for data structure references, Code generation for control statements and logical expressions, Code generation for procedure/function calls, A survey of code optimization techniques.	1	4
12. Compiler Backend: Code optimization techniques, Machine code generation, Register allocation, Data flow analysis	1	4

أهداف المقرر :

Course Description:

This module introduces topics include compiler design, lexical analysis, parsing, symbol tables, declaration and storage management, code generation, and optimization techniques. The aim of this module is to show how to apply the theory of language translation introduced in the prerequisite courses to build compilers and interpreters. It covers the building of translators both from scratch and using compiler generators. In the process, the module also identifies and explores the main issues of the design of translators. The construction of a compiler/interpreter for a small language is a necessary component of this module, so students can obtain the necessary skills.

مخرجات التعليم : الفهم والمعرفه و المهارت الذهنية والعملية

1. The students will learn about the syntactic and semantic elements of programming languages.
2. The students will learn about grammars and their use in describing languages.
3. The students will learn the basic algorithms used by compilers to translate high-level
4. Programming languages into machine languages.
5. The students will learn how to implement a compiler through a programming project.
6. The students will learn to use compiler construction tools.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

- Compiler Construction Principles and Practice by Louden.

- Compilers Principles, Techniques and Tools, Second Edition by Alfred V. Aho, Ravi Sethi,

   Jeffery D. Ullman.

Recommended:

- Modern compiler construction in Java 2nd edition Advanced Compiler Design and   Implementation by Muchnick.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

...

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

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رقم المقرر ورمزه : ٤١١ عال	اسم المقرر : تحليل و تصميم الخوارزميات
لغة التدريس : اللغة الإنجليزية	المتطلب السابق : ٢٠٧ رياض،٢١٩ عال
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : السابع

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Introduction: ○ What is an algorithm? ○ Analyzing Algorithms ○ Designing Algorithms ○ Incremental Approach ○ Divide and Conquer Approach	2	8
2. Mathematical Background: ○ Growth of Functions and ○ Asymptotic Notation ○ Summations Review ○ Recurrences ○ Substitution Method ○ Iteration Method ○ Master Method	2	8
3. Sorting Algorithms: ○ Incremental: Bubble, Insertion ○ and Selection Sort. ○ Divide and Conquer: Merge ○ and Quick-Sort ○ Linear Time: Counting , Bucket ○ Sort and radix ○ heap data structure and heap ○ sort	2	8
4. Mid-Term I:	1	1
5. Searching Algorithms: ○ Sequential search (Unsorted and ○ Sorted lists) ○ Binary Search and Operations ○ on Binary search tree ○ Text Search (Brute-Force ○ method)	1	4

6. Divide and Conquer Approach:
   o Linear Time Selection(Practical
   o randomized algorithm ,
   o theoretical algorithm)
   o MINMAX
   o Multiplication of Large Integers
   o Strassen's Matrix Multiplication
	1	4

7. Greedy Approach:
   o Introduction
   o Disjoint sets data structures (union, find).
   o Minimum Cost Spanning Trees
   o (Kruskal's Algorithm Prim's Algorithm)
   o The Knapsack Problem (Fractional)
   o Single-source Shortest Path (dijkstra's)
   o Task Scheduling Algorithm
   o Text Compression (e.g. Hoffman Code)
	1	4

8. Mid-Term II:	1	1

9. Content Providers:
  o Introduction to Content Providers
  o Content URIs
  o Create Content Provider
	1	4

10. Fragments:
  o Introduction to Fragments.
  o Fragment Life Cycle
  o How to use Fragments?
	1	4

11. Event Handling:
  o Event Listeners & Event Handlers
  o Event Handling Examples
  o Working with listeners and events
	1	4

12. Dynamic Programming:
   o Introduction
   o Fibonacci
   o The Longest Common
   o Subsequence Problem
   o Matrix Chain Multiplication.
   o The All-Pairs Shortest Path
   o Problem (Floyd-Warshall)
   o The Knapsack Problem (0-1)
   o Single-source Shortest Path (Bellman
	1	4

13. Graph Algorithms:		
○ Introduction		
○ Depth-First Search and Directed	1	4
○ Acyclic Graph		
○ Breadth-First Search		
○ Topological Sort		

أهداف المقرر :

Course Description:

This course introduces formal techniques to support the design and analysis of algorithms, focusing on both the underlying mathematical theory and practical considerations of efficiency.
Topics include asymptotic complexity bounds, techniques of analysis, and algorithmic strategies such as Divide and Conquer, Greedy approach and etc.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

This course primarily contributes to Computer Science program outcomes that develop student abilities to:

1. Understanding what are Algorithms and Importance in Computation.

2. Understanding the concepts of time and space complexity, worst case, average case and best case complexities and the big-O notation

3. Learning a wide range of searching and sorting algorithms

4. Greedy Strategies and Problem Solving.

5. Dynamic Programming and Uses

6. Divide and Conquer Approach, Advance Data Structures.

7. General Algorithmic Problems and their solutions..

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

· Anany Levitin, Introduction to the Design and Analysis of Algorithms, 3rd addition, Pearson

Education, 2007.

Recommended:

- Ullmann Text, Analysis & Design of Algorithm

· Horowitz & Sahani, Text, Analysis & Design of Algorithm

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

اسم المقرر : التفاعل بين الانسان والحاسب	رقم المقرر ورمزه : ٤١٢ عال
المتطلب السابق : ٢٢١ نما، ٤٠٤ تقن، ٢٢٠ عال	لغة التدريس : اللغة الانجليزية
مستوى المقرر : السابع	الساعات المعتمدة : ٣ ساعات

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Introduction to the course and to HCI: ○ Information input and its evolution on the cell phone ○ Output displays and their problems ○ Other interface considerations ○ Do all roads lead to a hand-held portable device? ○ Future designs.	1	4
The human brain vs. the computer mechanisms of memory: ○ Humans and the engineering trap. ○ The user as an information processing system. ○ Differences between humans and computers: Brains vs. Circuit Boards. ○ Three forms of human memory: sensory buffers, short-term memory (working memory), and long-term memory (LTM).	Cont.	
Human memory continued: ○ How information gets to LTM: Rehearsal, unconscious consolidation, meaningful associations. ○ Two types of LTM: Declarative and implicit memory. ○ Ways to improve the learning/storage process. ○ Forgetting: Is memory loss due to decay, interference, or access problems? ○ Information access/retrieval: recall vs. recognition. ○ Methods for improving recall: Association, categorization, and imagery ○ Reasoning and logic structures: Humans vs. computers	1	4
An overview of computer input devices: ○ HCI factors to consider Pros and cons of direct and indirect Interfaces. ○ Basic input devices: text entry, touchpads, touchscreens, and absolute and isometric joysticks. ○ Complex input devices: gesture and voice recognition, handwriting and eye-gaze interfaces future variants?	Cont.	

. An overview of computer input devices continued:
  o Benefits and problems of current output devices
  o Output devices: Types of visual displays
  o Output devices using other modalities: Touch, speech, and
  o auditory displays
  o The importance of multimodal displays
  o Optical character recognition (OCR) and scanning
  o Future variants?
		1	4

. Interaction styles and design principles:
  o Types of interaction (or dialog style)
  o Advantages. disadvantages, and
  o design factors of Command-line, menus, natural
  o language interaction. Point and-click,
  o 3-D, and WIMP interfaces
  o Three levels of the HCI design
  o cycle: User, design, evaluation
  o Interaction models: Norman's seven stages of interaction
	Cont.		

. Design and usability:
  o Why physical design is easier than HCI design: Human error and mistakes
  o Know your user: What they want, how they think, how to implement Designer bias/egocentrism
  o Techniques to gather user needs: Interviews, focus groups, observation, participatory design
  o Use of persona, scenarios, and storyboards during the design process
  o Three types of prototyping design: Throw-away, Incremental. and Evolutionary
		1	4

. Design rules:
  o Authority vs. generality
  o Principles. standards, and guidelines Golden rules and heuristics
  o Three categories of primary usability principles: Learn ability, flexibility, and robustness
	Cont.		

. Implementation Support:
  o Programming tools associated with designs and usability principles.
  o Windowing systems are a central environment for both the programmer and user of an interactive system.
  o Interaction toolkits
  o User interface management systems
		1	4

0. User Support:
  o Available but unobtrusive
  o Accurate and robust
  o Consistent and flexible.
  o User support comes in a number of styles.
	Cont.		

1. Mid-Term I		1	1

2. Design Evaluation and Empirical methods of experimental evaluation:
   ○ Two forms of design evaluation: Expert analysis and user participation
   ○ Approaches to expert analysis: Cognitive walkthroughs, heuristic
   ○ evaluation, model based evaluation, and evaluation based on existing research Lab vs. field research
   ○ Types of user-based evaluation: Observational methods, query
   ○ techniques, physiological and direct recording, and experimental methods
	Cont.	

3. Universal Design (UD):
   ○ Universal design is not specialized design: UD = good general design
   ○ Approaches to universal design implementation
   ○ Seven Universal Design principles: Overlap with general design principles
   ○ Tips for improving visual, auditory, haptic, and multimodal displays
   ○ Speech recognition and speech synthesis (TTs)
   ○ Universal design on the web
	1	4

4. Multimodal Interfaces:
   ○ Multimodal displays: providing feedback, supporting different learning styles, cross-modal interactions
   ○ Better realism
   ○ Behavioral and physiological evidence
	Cont.	

5. Mid-Term II	1	1

6. HCI and the Web:
   ○ HCI challenge: Many different users, tasks, and technologies
   ○ What is good web design?
   ○ Some guidelines and good practices.
	Cont..	

7. Human-vision and visual displays:
   ○ Difference between sensation, perception, and cognition: Relation of each to HCI design.
   ○ Physiology of visual system, information transduction, and cortical representation.
   ○ Perceptual distortions and visual illusions
   ○ Visual design issues
   ○ Guidelines for font and reading, color usage, and display structure and layout
   ○ Good design for buttons, icons, and lists
	1	4

8. Human audition and auditory displays:
   ○ Auditory sensation, perception, and cognition.
   ○ Physiology of hearing
   ○ Auditory displays: verbal interfaces vs. 3D specialized sound
   ○ Other uses of auditory interfaces
	Cont.	

9. Human touch and tactual displays.			
o Three subsystems of touch: Cutaneous, kinesthetic, and haptic			
o Mechanoreceptors most relevant to HCI and touch based interfaces	1		4
o Consideration of exploratory procedures			
o Perceptual illusions with touch			
o Types of touch-based interfaces			
0. Brain-Computer Interaction (BCI) and Neuroprosthetics:			
o What is BCI? BCI and brain plasticity			
o Neuroergonomics and Neurocognitive Engineering	Cont		
o Medical applications of BCI:			
o Commercial Applications of BCI			
o Ethical implications of these interfaces			
1. Sensory Substitution:			
o Neuroprosthetics vs. sensory substitution			
o Components of sensory substitution devices	1		4
o HCI challenge: natural mapping of one modality to another			
o Demonstrations of auditory to vision substitution			
2. Cell phones and HCI:			
o Information input and its evolution on the cell phone			
o Output displays and their problems	Cont.		
o Other interface considerations			
o Do all roads lead to a hand-held portable device?			
o Future designs.			
3. Augmented reality and virtual reality:			
o Overview of VR technology			
o Uses of virtual reality: Research tool, training, and manufacturing	1		4
o Augmented reality: what it is and how it works			
o Future technology			
4. Ubiquitous computing and wearable devices:			
o What is ubiquitous computing and ambient intelligence?			
o Wearable devices and the miniaturization of computing platforms	Cont.		
o Uses and benefits of these technologies			
o Disadvantages and problems			
5. Future Directions of HCI:			
o Future of HCI Themes?	1		4
o How will they change from those discussed in this course?			

أهداف المقرر :

Course Description:

Human-computer interaction is an interdisciplinary field that integrates theories and methodologies from computer science, cognitive psychology, design, and many other areas. The course is intended to introduce the student to the basic concepts of human-computer interaction. It will cover the basic theory and methods that exist in the field. The course will unfold by examining design and evaluation.

Case studies are used throughout the readings to exemplify the methods presented and to lend a context to the issues discussed. The students will gain principles and skills for designing and evaluating interactive systems.

Students will gain theoretical knowledge of and practical experience in the fundamental aspects of human perception, cognition, and learning as relates to the design, implementation, and evaluation of interfaces. Topics covered include: interface design, usability and universal design, multimodal interfaces (touch, vision, natural language and 3-D audio), virtual reality, and spatial displays.

مخرجات التعليم : الفهم والمعرفه والمهارث الذهنية والعملية

1. Students will learn the basic physiological, perceptual, and cognitive components of human learning and memory.
2. Students will gain theoretical knowledge of and practical experience in the fundamental aspects of designing and implementing user interfaces.
3. Students will learn to analyze interaction problems from a technical, cognitive, and functional perspective.
4. Students will develop an awareness of the range of general human-computer interaction issues that must be considered when designing information systems.
5. Students will know and have practiced a variety of simple methods for evaluating the quality of user interfaces and spatial displays.

الكتاب المقرر والمراجع المساندة :

1. Required:

  - Human-Computer Interaction (3rd Ed): by Alan Dix, Janet E. Finlay, Gregory D. Abowd, and Russell Beale.

Recommended:

  - Human-Computer Interaction: An Empirical Research Perspective Author: I. Scott MacKenzie

2. List Essential References Materials (Journals, Reports, etc.)

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3 List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

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1. Required:

  - Human-Computer Interaction (3rd Ed): by Alan Dix, Janet E. Finlay, Gregory D. Abowd, and Russell Beale.

رقم المقرر ورمزه : ٤٣٢ عال	اسم المقرر : مواضيع مختارة في علوم الحاسب ١
لغة التدريس : اللغة الإنجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : السابع

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Introduction to Android: o Brief history of Android o What is Android? o What is OHA? o Advantages of Android o Android features o Android Market	1	4
2. Getting started with the Android: o Setting up Android Development Environment o Downloading and installing Eclipse o Downloading and Installing Android Studio o Steps to Create Android Project o Running Your Application o Android store basics	1	4
3. Android Architecture: o Linux kernel o Libraries o Android Runtime o Application Framework o Applications	2	8
4. Applications Component: o What is Activity o Activity Life Cycle o The ManifestFile.xml o Layout Resources o Project File and Folder	1	4

5. Organizing & Accessing the Resources: o Organize Resources o Alternative Resources o Accessing Resources o Accessing Resources in Code o Accessing Resources in XML	1	4
6. Mid-Term I	1	1
7. Android Layouts: o Grid Layout o Linear Layout o Relative Layout o Frame Layout	1	4
8. Broadcast Receivers: o Creating the Broadcast Receiver o Registering Broadcast Receiver o Broadcasting Custom Intents	1	4
9. Content Providers: o Introduction to Content Providers o Content URIs o Create Content Provider	1	4
10. Fragments: o Introduction to Fragments. o Fragment Life Cycle o How to use Fragments?	1	4
11. Event Handling: o Event Listeners & Event Handlers o Event Handling Examples o Working with listeners and events	1	4
12. Mid-term II	1	1
13. Introduction to iOS: o Introduction to iOS o Installing Xcode, o iOS main components and services o Creating an XCode Project o Model View Controller o Application lifecycle o Apple store basics	1	4

14. Objective C: o Introduction of objective C o Fundamentals of objective C o Working with objective C	1	4
15. iOS Application: o Creating iOS application. o Understanding different parts of applications. o Managing resource of the application	1	4

أهداف المقرر :

Course Description:

Mobile Application Development is a project oriented course which strongly emphasis on application development for the mobile operating systems. The theoretical part of the course covers all fundamental concepts of mobile development and the practical part teaches students how to build mobile's apps, for Android using Eclipse, Android Studio, and for iPhones using X-code & IOS SDK. At the end of the course students are expected to complete a major project with the goal of releasing an app on mobile apps Market place

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

By the conclusion of this course, students will be able to:

1. Describe those aspects of mobile programming that make it unique from programming for other platforms.
2. Program mobile applications for both the Android & iOS.
3. Deploy applications to the Market place for distribution.
4. Evaluate mobile applications on their design pros and cons.
5. Utilize rapid prototyping techniques to design and develop sophisticated mobile interfaces.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

  1. Android Application Development ,Tutorial Point

   (https://www.tutorialspoint.com/android/)

  2. IOS Application Development ,Tutorial Point (https://www.tutorialspoint.com/ios/

Recommended:

  1. Android Studio Development Essentials Android 6 Edition

  2. iPhone and iPad Application Development, Wrox publication

  3. iOS Programming: The Big Nerd Ranch Guide

  4. IOS App Development For Dummies

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or and software.

كلية العلوم والدراسات الإنسانية بحريملاء

رقم المقرر ورمزه : ٤٢٣ عال	اسم المقرر : اخلاقيات الحاسب
لغة التدريس : اللغة الانجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الثامن

وصف المقرر:

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Introduction to ethics	1	4
2. NDA none disclosure agreements	1	4
3. Intellectual Property	1	4
4. Information privacy: Privacy and the government.	1	4
5. Mid-Term I	1	1
6. Plagiarism / Copyright	1	4
7. Security / Ethical Hacking	1	4
8. Mid-Term II	1	1
9. Usage legal agreements	1	4
10. Ethical Theory and Professional Ethics in Computing and the Workplace	1	4
11. Legal Issues	1	4

أهداف المقرر :

Course Description:

The course is an introduction to the content for computer ethics undergraduate course to be taught at the computer science department. The course concentrates on theory and practice of computer ethics. The aim of the course is to study the basis for ethical decision making and the methodology for teaching ethical decisions concerning computing matters.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will:

1. Understand the need for computer ethics training and historical milestones.
2. Defining the field of computer ethics.
3. Developing the ethical analysis skills and Professional values.
4. Enhance the student research methodology using the research skills.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

• Computer Ethics, by Deborah G. Johnson

Recommended:

- Computer Ethics and Professional Responsibility, Terrell Ward Bynum (Editor), Simon Rogerson, ISBN: 978-1-85554-845-9

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

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4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

رقم المقرر ورمزه :421عال	اسم المقرر : التّشفير
لغة التدريس : اللغة الانجليزية	المتطلب السابق : لايوجد
الساعات المعتمدة : 3 ساعات	مستوى المقرر : 322نما

		1. Topics to be Covered
List of Topics	No. of Weeks	Contact hour
1. Introduction: History	1	
2. One time pad and stream ciphers: Perfect secrecy and the one time pad, Semantic security and stream ciphers.	1	
3. Block Ciphers: Case studies: Fiestel networks, DES. 3DES and AES, and Basic modes of operation: CBC and counter mode.	1	
4. Block-cipher abstractions PRPs and PRFs: Pseudo random permutations (PRP), Pseudo random functions (PRFs), Security against chosen plain text attacks (CPA), and Nonce-based CBC encryption and nonce-based counter mode.	1	
5. Attacks on block ciphers: Exhaustive search, time-space tradeoffs, differential & linear cryptanalysis, and meet in the middle, side channels.	1	
6. Mid-Term I	1	

7. Message integrity definition and applications: CBC-MAC and PMAC.	1	
8. Collision-resistant hashing: Merkle-Damgard and Davis-Meyer, Macs from collision resistance.	1	
9. Authenticated encryption: security against active attacks: Introduction to session setup using a key distribution center (KDC).	1	
10. Arithmetic modulo primes and cryptography using arithmetic modulo primes: Arithmetic modulo primes, Vanilla key exchange (Diffie Hillman); the CDH and discrete log assumptions.	1	
11. Mid-Term II	1	
12. Public-key encryption: Semantically secue ElGamal encryption, CCA Security.	1	
13. Digital Signatures: Definitions and Applications. How to sign using RSA?	1	

كلية العلوم والدراسات الإنسانية بحريملاء

أهداف المقرر :

Course Description:
This course is an introduction to the basic theory and practice of cryptographic techniques used in computer security. We will cover topics such as encryption (secret-key, and public-key), message integrity, digital signatures, user authentication, key management, cryptographic hashing, network security protocols (SSL, IPsec), public-key infrastructure, digital rights management, and a bit of zero-knowledge protocols.

مخرجات التعليم : الفهم والمعرفه والمهارات الذهنية والعملية

Upon the completion of the course, the students should be able to:

1. Understand modern concepts related to cryptography and cryptanalysis.
2. Analyze and use methods for cryptography and reflect about limits and applicability of these methods.
3. Implement some symmetric key ciphers of public key systems.
4. Reason about the details and design philosophy of modern symmetric and public key systems.
5. Have a better appreciation of the uses and limitations of the various categories of cryptographic algorithms and understand that great care is needed in the selection and use.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

   - KL: Introduction to Modern Cryptography (2nd edition) by J. Katz and Y. Lindell

Recommended:

- HAC: Handbook of Applied Cryptography by A. Menezes, P. Van Oorschot, S. Vanstone.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or and software.

رقم المقرر ورمزه : ٤٢٠ عال	اسم المقرر : النمذجة و المحاكاة
لغة التدريس : اللغة الانغليزية	المتطلب السابق : ٢١٣ عال ، ٢٠٧ريض
الساعات المعتمدة : ٣ ساعات	مستوى المقرر : الثامن

وصف المقرر :

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Objective/Introduction: What is System? Components, Definitions, Examples of Systems	1	4
Modelling and Simulation: Physical Models, Mathematical Models, Computer Models, Monte-Carlo Simulation,	1	4
Probability in Simulation: Basics, Discrete Random Variables, Probability Functions, Expected Values and Outcomes Parameters.	1	4
Probability in Simulation Advance: Distribution Functions, Random variables, Exponential Distribution, Mean Variance Distribution, CEP and PE.	1	4
Discrete Simulation: Generation of Random Numbers, Testing of Random Numbers, Normal Random Number Generator, Applications of Random Numbers.	1	4
Mid-Term 1	1	4
Continuous System Simulation: Continuous System Basics, Modelling the fluid flow, Dynamic Car Wheel Model, Shock wave Model, Pursuit Evasion Problem, Autopilot Problem,	1	4
Simulation for Aircraft Model: Mathematical Model, Probability Analysis, Vulnerabilities in System Design.	1	4

Aircraft Vulnerability Simulation: Probability Analysis of Landing Issue. Aircraft Vulnerability. Penetration Laws, Cumulative Kill Probability, Data Use.	1	4
. Queuing Simulation; Symbolizations, Kendal's Notation, Queuing of Requests at Server.	1	4
. Queuing System II: Queuing Arrival Service Model, Single service Queues Simulation.	1	4
. Mid-Term II	1	1
. System Dynamics: Growth Models, Decay Models, Logistics Models, Multi-Segment Models, Delay Model, Biological Models.	1	4
. Inventory Control Models: Finite-Infinite Delivery Rate Models, Probabilistic Inventory Models.	1	4
. Cost Effectiveness Models: Life Cycle, Cost Effective Aircraft and Missile Model, Ground Target Model.	1	4

أهداف المقرر :

Course Description:

This subject provides students with :
1. The basic system concept and definitions of system.
2. Techniques to model and to simulate various systems.
3. The ability to analyze a system and to make use of the information to improve the performance.

مادة ٢

مخرجات التعليم : الفهم والمعرفه والمهارات الذهنية والعملية

Upon completion of this course, students will:

1. Understand the basic concepts and how simulation works.
2. Understand the benefits and limitations of applying computer simulation in industry.
3. Use simulation software to examine the performance of a system.
4. Understand the system concept and apply functional modeling method to model the activities of a static system.
5. Understand the behavior of a dynamic system and create an analogous model for a dynamic system
6. Simulate the operation of a dynamic system and make improvement according to the simulation results.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

- Gregory L. Fenves, Frank Mckenna Axel Rod, R. (1977), "Data Model for Simulation".

- N. Deo, "System Simulation", Prentice Hall of India.

- Averill M. Law, "Simulation Modeling and Analysis", (TMH).

- Sella, Ceric and Tadikamalla, "Applied Simulation Modeling", Cengage Learning.
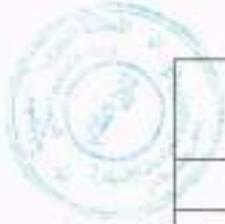
Recommended:

- System Modelling and Simulation. V.P. Singh, ISBN (13): 978-81-224-2924-4
- Gordon G., "System Simulation", Prentice Hall.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or and software.

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اسم المقرر : : مواضيع مختارة في علوم الحاسب٢	رقم المقرر ورمزه : ٤٤٣ عال
المتطلب السابق : لايوجد	لغة التدريس : اللغة الإنجليزية
مستوى المقرر : الثامن	الساعات المعتمدة : ٣ ساعات

وصف المقرر:

1. Topi

List of Topics	No. of Weeks
1. Revision of Mobile Application Devopment-1: Making and testing Android projects, Basic program structure, Java-based layout, XML-based layout, Hybrid layout, Project structure summary	1
2. Android - User Interface: UI Layouts, UI Controls, Event Handling, Styles, and Themes, Custom Components	1
3. User Interface Events: Event Handlers, and Event Listeners, Building Menus, Defining Menus in XML, Reacting to Touch Events, Listening for Fling Gestures, Using Multitouch Advanced, User Interface Libraries.	1
4. Android - Drag and Drop: The Drag/Drop Process, The Drag Event Class, Listening for Drag Event, Starting a Drag Event	1
5. Notifications and Location Based Services: Create and Send Notifications, The Notification.Compat.Builder Class, The Location Object, Get the Current Location, Get the Updated Location, Location Quality of Service, Displaying a Location Address.	1
6. Mid-Term 1	1
7. SQLite Database creation, insertion fetching: Using SQLite, Android SQLite resources, Accessing SQLite databases directly, Insertion Database, Fetching Database	1

8. Debugging: Built-in Debug Tools, Specifying a Run Configuration, Debugging Through Breakpoints, Using the Android Debug Bridge, Android System Debug Tools	1	
9. Publishing Android Application: Android development life cycle, Export Android Application Process, Google Play Registration, Signing Your App Manually	1	
10. Developing a Professional UI for iOS	1	
11. Swift for iOS: A Swift Primer, Program writing and advance concepts of swift, Bridging Swift and Objective C	1	
12. Integrating components with App: Implementing Local Notifications, Accessing the Address Book, Programmatically Accessing the Address Book, Working with emails ,sms, dialing and phone numbers.	1	
13. Mid-Term II	1	
14. Event Programming ,Building and Distribution: Creating an Event, Editing an Event, Deleting an Event, Stay Synchronized, App Store Review, Building for Ad Hoc, Distribution Building for App Store Distribution.	1	

أهداف المقرر :

Course Description:

This course is the continuation of the previous course "Introduction to the Mobile Application Development". The goal of this course is to provide a rich experience to the students for developing several types of mobile apps. These advanced topics give a much deeper understanding of the internals of mobile apps and explains more complex features of development. Topics include background services, security services, internet services, location-based services, cloud-integration, social framework, debugging and testing, using Bluetooth, gaming, and wireless networking for mobile Apps, and the latest frameworks to create advanced apps.

مخرجات التعليم : الفهم والمعرفه والمهارت الذهنية والعملية

Upon completion of this course, students will be having:

1. Hands on experience on real-time mobile application development.
2. Develop mobile application with advance features for Android and iOS.
3. Develop across platform application.
4. Deploy applications to the market place for distribution.
5. Evaluate mobile applications on their design pros and cons.

الكتاب المقرر والمراجع المساندة :

1. List Required Textbooks

- Advance Android Application Development ,Tutorial Point
(https://www.tutorialspoint.com/android/android_advanced_tutorial.pdf)

- [Pearson],The Android Developer's Cookbook Building Applications with the Android SDK.

Recommended:

- Professional iOS Programming ,Peter van de Put, Pertti Karjlainen

. Professional Swift, Michael Dippery.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.