

نموذج رقم (١٢)

جامعة: دمياط
كلية: الحاسبات والمعلومات
قسم: تكنولوجيا المعلومات

توصيف مقرر دراسي فصل ثاني

١- بيانات المقرر :		
المستوي: الثالث	اسم المقرر: تطبيقات الانترنت	الرمز الكودي: ٣٨١ تمع
عدد الساعات المعتمدة: (٣) نظري: (٢) تمارين/عملي: (٢)		التخصص: تكنولوجيا المعلومات

<p>By the end of this course the student be able to:</p> <ol style="list-style-type: none"> 1- Understand and apply the principles and practices of IOT technologies. 2- Identify the different Block chain implementations. 3- Understand IOT Network Architecture. 4- Provide education and training of Block chain elements. 5- Understand IOT access Technology. 6- Demonstrate different Block chain standards. 7- Explain IOT applications. 8- Understand Block chain in Healthcare. 	<p>2- Course Objectives أهداف المقرر</p>
<p>3- Intended Learning Outcomes of Course (ILOs) المخرجات التعليمية المستهدفة من المقرر</p>	
<p>By the end of this course the student be able to:</p> <ol style="list-style-type: none"> a.1 Describe the main concepts, definitions of IOT applications. a.2 Define smart objects. a.3 Recognize Block chain with Privacy. a.4 List Data and Analytics for IOT. a.5 Recognize Block chain benefits. 	<p>a. Knowledge and Understanding المعرفة/ الفهم</p>
<p>By the end of this course the student be able to:</p> <ol style="list-style-type: none"> b.1 Manipulate and apply appropriate theories, principles and concepts relevant to different sensor networks. b.2 Compare and evaluate between different Block chain technologies. b.3 Apply appropriate IOT architecture. b.4 Explain and apply the knowledge of design of secure computations. b.5 Assess different solutions for digital block information system. 	<p>b. Intellectual /Cognitive Skills القدرة الذهنية</p>
<p>By the end of this course the student be able to:</p> <ol style="list-style-type: none"> c.1 Design, configure/construct, test and evaluate different IOT and Block chain applications. c.2 Identify benefits and drawbacks of Block chain. c.3 Apply different IOT use cases. c.4 Use appropriate applications and devices for IOT topology. c.5 Present specialized research reports for Block chain. 	<p>c. Professional and Practical Skills مهارات مهنية و عملية</p>
<p>By the end of this course the student be able to:</p> <ol style="list-style-type: none"> d.1 Demonstrate ability to work as a team member. 	<p>d. General and transferable skills المهارات العامة</p>

<p>d.2 Solve problems relevant to IOT architectures using ideas and techniques some of which are at the forefront of the discipline.</p> <p>d.3 Learn Critical thinking.</p> <p>d.4 Acquire and use communications and research skills.</p> <p>d.5 Learn within a setting of self-learning through discussion.</p>						والقابلة للنقل	
Part I: Theoretical						4- Course Contents محتويات المقرر	
م	المحتويات	الأسبوع	نظري	تمرين	عملي		المجموع
1	Introduction to IOT, IOT and Digitization, IOT Impact, Convergence of IT and OT, IOT Challenges.	1	2	0	0		2
2	IOT Network Architecture and Design, Comparing IOT Architectures, Smart Objects: The “Things” in IOT	2	2	0	0		2
3	Sensors, Actuators, and Smart Objects, Sensor Networks, Sensor Networks.	3	2	0	0		2
4	Communications Criteria, IOT Access Technologies, Application Protocols for IOT	4	2	0	0		2
5	Data and Analytics for IOT, Machine Learning, Big Data Analytics Tools and Technology.	5	2	0	0		2
6	Securing IOT, IOT in Industry, Utilities.	6	2	0	0		2
7	Smart and Connected Cities, Transportation, Mining, Public Safety.	7	2	0	0		2
8	Midterm Exam.	8					
9	Introduction to Block chain, Block chain benefits, Key elements of Block chain technologies.	9	2	0	0		2
10	Types of Block chain, Block chain Protocols, Consensus algorithms in Block chain.	10	2	0	0		2
11	Block chain Standards, Architecture for Block chain Implementation, IOT and Block chain.	11	2	0	0		2
12	Comparison of Block chain and IOT, Applications of Block chain in TOT.	12	2	0	0		2
13	Challenges of Block chain IOT, Block chain in Healthcare, Block chain with Secure Computation.	13	2	0	0		2
14	Block chain with Privacy, Digital Block Information system. Block chain using 5G – Enabled IOT	14	2	0	0	2	
Part II: Practical							
م	المحتويات	اسبوع	نظري	تمرين	عملي	مجموع	

1	2	0	0	1	Oracle APEX Concepts, Introduction to Oracle APEX, Why Use Oracle APEX? Oracle APEX Advantages, Anatomy of Oracle APEX, Workspace, Applications, Page, Region, Items, Buttons.	1
1	2	0	0	2	Oracle APEX Development Environment, Browser Requirements, Page Designer, Toolbar, Tree Pane, Central Pane, Property Editor, Understanding Oracle APEX URL Syntax, Friendly URL Syntax, Substitution Strings and Bind Variables.	2
1	2	0	0	3	Start Building the Application, Create Database Objects, Add Data to Database Tables. Create Application Components, The Shared Components, Application Definition Attributes, Application Processes, Authentication Schemes, Authentication Schemes, List of Values.	3
1	2	0	0	4	Plug-Ins, Shortcuts, Lists, Navigation Menu, Breadcrumb, Navigation Bar List, and User Interface Attributes, Themes and Templates, Static Application/Workspace Files. Report Queries, Report Layouts, and Globalization Attributes.	4
1	2	0	0	5	Translate Application, Create Lists, and Modify Desktop Navigation Menu List, Reports List, Order Wizard List, Desktop Navigation Bar, List of Values (LOV), and CATEGORIES LOV.	5
1	2	0	0	6	PRODUCTS WITH PRICE LOV, STATES LOV, NEW OR EXISTING CUSTOMER LOV, Images, Prepare Application Dashboard, About the Home Page, Modify the Home Page, Modify Page Attributes, Create Regions, Top Orders by Date.	6
1	2	0	0	7	Create Buttons, View Orders Button, Add Order Button, View Orders For This Month Button, View Customers Button, Add Customer Button, View Products Button, Add Product Button, Styling Page Elements, Managing Customers, Create Pages to Manage Customers, Modify Region Properties, Create Button, Modify Page Items Properties, Change Item Type and Attach LOV.	7
				8	Midterm Exam.	8
1	2	0	0	9	Apply Input Mask to Items, Create Validation - Check Customer Credit Limit, Create Validation, Add Dynamic Action, Explore Interactive Grid, Column Groups, Editing Data in Interactive Grid, Changing Column Type, Protecting Rows in Interactive Grid, Scroll Paging, Master Detail, Handling Image, Create a Process Under Processing.	9

1	2	0	0	10	Upload and View PDF, Taking Orders, Create Order Master and Order Detail Pages, Modify Orders Page, Modify Interactive Report. Create Alternative Report, Create Public Report, Modify Order Details Page, Modify Details Region's Properties, Create a Page to Enter a New Order.	10	
1	2	0	0	11	Create a Sub Region, Create Dynamic Action, Create Branch, Create Hidden Item, Create Processes, And Create Branches. Sending Email from Oracle APEX Application, Looping Through Interactive Grid, Interactive Grid Native PDF Printing Interactive Grid.	11	
1	2	0	0	12	Graphical Reports & Mobile Integration, Graphical Reports, Gantt Chart. Data Workshop, Create Gantt Chart, Box Plot Chart, Create Single Series Box Plot Chart, Create Multi-Series Box Plot Chart, Pyramid Chart, Mobile Application Design	12	
1	2	0	0	13	Reports Optimized for Mobile Environments, Produce Advance Reports, Download and Install BI Publisher Desktop, Create Report Template in Microsoft Word, Conditional Formatting, Managing Users & Application Access, Administer Applications in Oracle APEX	13	
1	2	0	0	14	Oracle APEX administrators, creating users, Implement Authorization, Faceted Search, Theme Roller, Styling Buttons, Deploying APEX Applications, Export Application, Export/Import Data, Prevent Application Modification and Remove Developers Toolbar,	14	
1. Lectures: 2 Hours per week (2H/W) 2. Practical: 2 Hours per week (2H/W) 3. Discussion							٥- أساليب التعليم والتعلم :
لقاءات خاصة خلال الساعات المكتبية.							٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة :
٧- تقويم الطلاب:							
Types		Assessment				أ. الأساليب المستخدمة:	
Midterm exam		a1, a2, a3, b1, b2, c1, c2, c3, d1, d2.					
Practical exam		a3, a4, b2, b4, c1, c2, c3, c4, c5, d4.					
Oral Exam		a1, a2, b2,b3, c1,c2,d1					
Final written exam		a1, a2, a3, a4, a5, b1,b2,b3,b4,b5, c2,d2				ب. التوقيت :	
Assessment 1		Midterm exam		Week 8			
Assessment 2		Practical exam		Week 15			
Assessment 3		Oral exam		Week 16			
Assessment 4		Final written exam		Week 16		ج. توزيع الدرجات:	
Midterm examination:				20 %			
Practical/laboratory examination:				20 %			

Oral examination	10%	
Final term examination:	50 %	
Total:	100 %	
٨- قائمة الكتب الدراسية والمراجع:		
Lecture notes prepared by academic staff members in the department.		أ. مذكرات
1- IOT Fundamentals: Networking Technologies, Protocols, and Use Cases for the Internet of Things, by David Hanes, Gonzalo Salgueiro , Patrick Grossetete , Robert Barton , Jerome Henry, Cisco Press, 2017. 2- Block chain Technology, Fundamentals, Applications and case studies, by Golden Julie, J. Jesu Vedha, Noor Zaman, CRC Press, 2021. 3- Oracle APEX 20 For Beginners by Riaz Ahmed, 2020.		ب. كتب ملزمة
1- Fundamentals of IoT and Wearable Technology Design, by Haider Raad , IEEE Press, 2021. 2- Understanding Oracle APEX 20 Application Development, by Edward Sciore, APress, 2020.		كتب مقترحة
1- https://www.tutorialspoint.com/internet_of_things/index.htm 2- https://www.codementor.io/learn/blockchain 3- https://apex.oracle.com/en/learn/tutorials/		ج. دوريات علمية أو نشرات... الخ

أستاذ المقرر

د/ أحمد محمد ربيع سيد