قسم هندسة الحاسبات ونظم التحكم

دليل البرامج التعليمية

كلية الهندسة – جامعة المنصورة

2013

دليل البرامج التعليمية

أولا : كلمة السيد الأستاذ الدكتور : عميد الكلية

ثانياً: كلمة رئيس مجلس القسم العلمى

أبنائى طلاب قسم هندسة الحاسبات ونظم التحكم

السلام عليكم ورحمة الله وبركاته
إن ما يعطي علم هندسة الحاسبات أهميتها العلميه والمجتمعية هو تطورها وانتشارها السريع وتغلغلها فى شتى مناحى الحياة العملية والتطبيقية والاجتماعية
انه لمن دواعي فخري واعتزازي ان نكون متفقين جميعاً على أن علم هندسة الحاسبات والتحكم ووتطويره له عظيم الاثرها في تقدم شتى مناحى العلم حيث أنه من أوليات الأسس العلمية التي ساهمت في تطور الإبداع البشري ونموه.
إن رسالة قسم هندسة الحاسبات ونظم التحكم تعمل جاهده لتنهل من ينابيع المعرفة ولتمد المجتمع بالكوادر العلمية المرموقة لتذليل العقبات والمشاكل العلمية التي تواجه مؤسسات الدولة كافه
يتميز قسم هندسة الحاسبات ونظم التحكم بمواكبة للتقدم العلمي والثقافي وقيامه بعقد العديد من المناقشات والحلقات الدراسية والمؤتمرات التي تتناول آخر مستجدات العلوم الهندسية لكونه يمتلك كل الإمكانات العلمية والموارد البشرية وبكفاءات تدريسية وبحثيه متطورة ومن خلالها شهد القسم تطوراً كبيراً على كافة الأصعدة العلمية والتقنية والإدارية نتيجة لتفاعل وتعامل جميع التخصصات فيما بينها لجميع أعضاء القسم كعائله واحده. وهو دوماً في حالة تجدد مستمر منذ تأسيس القسم حتى اصبح اليوم يرفد المجتمع بالكوادر العلمية المتقدمة سنويا بالكثير من حملة شهادات الدكتوراه والماجستير بالإضافة إلى العديد من حملة البكالوريوس.

ثالثاً: كلمات رموز القسم العلمى

ا.د. على ابراهيم الدسوقى

ولد قسم هندسة الحاسبات والتحكم عملاقا منذ نشأته ليحتل موقع الصدارة بين العديد من الأقسام المناظرة وكل ما أرجوه مدوامة السعى للحفاظ على تقدم القسم وتطوره

أ.د. فايز فهمى جمعة

أ.د. مفرح محمد سالم

ترتبط علوم القسم ارتباط وثيقا بتطور المجتمع وكل ما علينا مراقبة ومتابعة الجديد من العلوم وتطوير لوائح القسم ومقرراته لمواكبة النهضة الحاسوبتية

رابعاً: تاريخ نشأة القسم العلمي

تم تأسيس القسم عام 1985 مواكبة للتطور التعليمي والتكنولوجي في مجال الحاسوب وتكنولوجيا المعلومات لرفد حاجة الصناعة التكنولوجية محليا وعربيا وإقليميا بالكوادر البشرية المؤهلة بالمنهج التعليمي والعملي المبدع المستند إلى المعايير المثلى والمستقرئ لحاجة المنطقة إلى التميز في مجالات برمجيات الحواسيب وبنائها وتصميم شبكات الحاسوب وتطبيقات متعددة الوسائط وقواعد

البيانات والنظم المضمنة وغيرها من المواضيع المتخصصة في هذا المجال. وتتبع أهمية هذا التخصص من التوجه العالمي إلى حوسبة نظم المعلومات في قطاعات عريضة من مؤسسات المجتمع المدني بحيث أصبح هذا العلم نواة عصر العولمة وأساس إقتصاديات المعرفة وآلة تشكل العالم الرقمي و يفخر القسم بهيئة تدريس تضم أساتذة علي قدر عالٍ من العلم والكفاءة نالوا درجاتهم العلمية من أرقي الجامعات المصرية والعالمية ، كما أثروها بخبرة عملية ، كما تستعين الكلية بالعديد من الأساتذة لإثراء الحياة العلمية به

التعريف بالتخصص

هندسة الحاسبات هو أحد فروع الهندسة الكهربائية وهو الاختصاص الذي يجمع بين الهندسة الإلكترونية و علوم الحاسب .مهندسو الحاسبات هم عبارة عن مهندسو إلكترونيات أساساً، و لديهم معلومات إضافية وتدريب وخبرة في مجال تصميم البرمجيات والعتاد الصلب للحاسوب، خصوصا في مجال تكامل البرمجيات مع العتاد. يشارك مهندسو الحاسبات في جميع مجالات الحوسبة من تصميم المعالجات الصغرية، والحواسيب الشخصية و الحواسب الفائقة supercomputer وحتى تصميم الدارات والشيبات بالإضافة لتكامل الأنظمة الحاسباتية مع انواع أخرى من الأنظمة (مثل المركبات ذات المحركات والأنظمة الرقمية .(يساهم مهندسو الحاسب أيضاً في كتابة الشفرات البرمجية البرمجيات المضمنة embedded software للمتحكمات الصغرية microcontrollerذات الزمن الحقيقي ، تصميم شيبات VLSI ، العمل على الحساسات التماثلية analog sensors، تصميم أنظمة التشغيل و حتى لوحات الدارات circuit board و الروبوتات.

خامساً: التخصصات العلمية داخل القسم العلمى

يضم قسم هندسة الحاسبات والنظم – كلية الهندسة – جامعة المنصورة تخصصين رئيسين وهما هندسة الحاسبات و هندسة التحكم الألى

سادساً: اللائحة الداخلية للقسم العلمى

Preparatory Year-First Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
BAS1011	Mathematics-1	4	3	0	7	3	45	0	130	175		7					
BAS1012	Physics-1	4	1	1	6	3	40	10	100	150		5	1				
BAS1013	Mechanics-1	3	2	0	5	2	35	0	90	125		4	1				
BAS+PRE1014	Engineering drawing	2	0	3	5	2	40	0	60	100	1				1		3
BAS1015	Chemistry-1	3	1	1	5	3	35	10	80	125		2	2	1			
BAS1016	English	0	2	0	2	2	10	0	40	50	2						
Total		16	9	5	30	15	205	20	500	725	3	18	4	1	1	0	3

Preparatory Year-Second Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
BAS1021	Mathematics-2	4	3	0	7	3	45	0	130	175		7					
BAS1022	Physics-2	4	1	1	6	3	40	10	100	150		5	1				
BAS1023	Mechanics-2	2	2	0	4	2	30	0	70	100		2	2				
BAS+PRE1024	Engineering drawing	1	3	0	4	4	35	0	90	125		3					1
PRE1025	Production engineering	2	2	0	4	2	20	10	70	100	1	1	1	1			
CSE1026	Introduction to computer programming	2	1	0	3	2	25	0	50	75	1	1			1		
BAS1027	Humanity-1	2	0	0	2	2	0	0	50	50	2						
Total		17	12	1	30	18	195	20	560	775	4	19	4	1	1	0	1

First Year-First Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
BAS3111	Mathematics 3	4	4	0	8	3	40	0	110	150		8					
CSE3112	Human Relations in Systems Engineering 2	2	0	0	2	2	0	0	75	75	2						
COM3113	Electronics Concepts	3	2	0	5	3	20	15	90	125			5				
CSE3114	Logic & Digital Design 1	3	2	0	5	3	30	20	100	150			3	2			
CSE3115	Programming Languages 1	3	2	0	5	3	20	15	90	125				3	2		
CSE3116	Control Engineering 1	3	2	0	5	3	20	15	90	125		1	4				
Total		18	12	0	30	17	130	65	555	750	2	9	12	5	2	0	0

First Year-Second Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
BAS3121	Mathematics 4	4	4	0	8	3	40	0	110	150		8					
CSE3122	Technical Reports in System Engineering	0	2	0	2	2	0	0	50	50						2	
EE+COM 3123	Electrical & Electronic Engineering	3	2	0	5	3	20	15	90	125			3	2			
CSE3124	Computers Operating System Eng.1	3	2	0	5	3	30	20	100	150			3	2			
CSE3125	Introduction to Computer Networks	3	2	0	5	3	30	20	100	150			3		2		
CSE3126	Control Engineering 2	3	2	0	5	3	20	15	90	125			5				
Total		16	14	0	30	17	140	70	540	750	0	8	14	4	2	2	0

Second Year-First Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
BAS3211	Mathmatics.5	4	4	0	8	3	40	0	110	150		8					
CSE3212	Human Relation In Systems Engineering.3	2	0	0	2	3	0	0	75	75	2						
CSE3213	Logic & Digital Design.2	3	2	0	5	3	20	15	90	125			3	2			
CSE3214	Programming Language.2	3	2	0	5	3	30	20	100	150				3	2		
CSE3215	Measurement Devices & Sensors	3	2	0	5	3	20	15	90	125			5				
CSE3216	Systems Modeling & Simulation	3	2	0	5	3	20	15	90	125			3			2	
Total		18	12	0	30	18	130	65	555	750	2	8	11	5	2	2	0

Second Year-Second Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
CSE3221	Statistical Applications	2	2	0	4	3	30	0	70	100		4					
CSE3222	Computers Operating System.2	3	3	0	6	3	30	20	100	150				3	3		
CSE3223	Programming Language.3	3	2	0	5	3	20	15	90	125				3		2	
EE3224	Electric Power & Machines	3	2	0	5	3	20	15	90	125	1		3				1
CSE3225	Systems Components Identification	3	2	0	5	3	20	15	90	125			3		2		
CSE3226	Digital Control Systems	3	2	0	5	3	20	15	90	125				3		1	1
Total		17	13	0	30	18	140	80	530	750	1	4	6	9	5	3	2

Third Year-First Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
CSE3311	Computer Architecture Eng.-1	3	2	0	5	3	20	15	90	125				3			2
CSE3312	Data Structure & Algorithms	3	2	0	5	3	20	15	90	125				3		2	
CSE3313	Data Base-1	3	2	0	5	3	20	15	90	125			1	1	1	2	
CSE3314	Modern Control Theory	3	2	0	5	3	20	15	90	125				3	2		
CSE3315	Artificial Intelligent	3	2	0	5	3	20	15	90	125	1		1	2	1		
CSE3316	Programmable Logic Control	3	2	0	5	3	20	15	90	125				3	2		
Total		18	12	0	30	18	120	90	540	750	1	0	2	15	6	4	2

Third Year-Second Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
CSE3321	Data Base-2	3	2	0	5	3	20	15	90	125	1		1	1		2	
CSE3322	Computer Systems Design & Analysis	3	2	0	5	3	20	15	90	125	1		1	1	2		
CSE3323	Computer Graphics	3	2	0	5	3	20	15	90	125	1			2	2		
CSE3324	Computer Based Control-1	3	2	0	5	2	20	15	90	125				3	2		
CSE3325	Elective Course-1	3	2	0	5	3	20	15	90	125				3			2
CSE3326	Elective Course-2	3	2	0	5	3	20	15	90	125	1			1	1	2	
Total		18	12	0	30	17	120	90	540	750	4	0	2	11	7	4	2

Forth Year-First Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
CSE3411	Computer Architecture Eng.-2	3	2	0	5	3	30	20	100	150				3			2
CSE3412	Network Design & Programming	3	3	0	6	3	30	20	100	150	1			1	1	3	
CSE3413	Machine Learning	3	2	0	5	3	30	20	100	150	1			2	2		
CSE3414	Elective Course-3	3	2	0	5	3	20	15	90	125	3		2				
CSE3415	Elective Course-4	3	2	0	5	3	20	15	90	125	3		2				
CSE3416	Project *	2	2	0	4	0	40	10	0	50						2	2
Total		17	13	0	30	15	170	100	480	750	8	0	4	6	3	5	4

Forth Year-Second Semester:

Code	Course Name	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
		Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
CSE3421	Computer Maintenance	3	3	0	6	3	30	30	90	150	1			2	1	1	1
CSE3422	Distributed Computers Systems	2	3	0	5	3	20	15	90	125				1		4	
CSE3423	Computer Based Control-2	2	3	0	5	3	20	15	90	125				3			2
CSE3424	Elective Course-5	2	2	0	4	3	15	15	70	100	2		2				
CSE3425	Elective Course-6	2	2	0	4	3	15	15	70	100	2		2				
CSE3426	Project *	2	4	0	6	Discussion	40	10	100	150						2	4
Total		13	17	0	30	15	140	100	510	750	5	0	4	6	1	7	7

Total teaching hours and subjects distribution over the subject areas:

Semester	Teaching Hours				Wr. Exam Dur.	Marking				Subject Area						
	Lectures	Exercises	Practical	Total Hours		Year Work	Practical Exam	Written Exam	Total	Hum. & Soc. Sc.	Math. & B. Sc.	B. Eng. Sc.	App. Eng. & Des.	Comp. App. & ICT	Proj. & Practice	Discretionary
Preparatory year/ 1st semester	16	9	5	30	15	20	20	50	72	3	18	4	1	1	0	3
Preparatory year/ 2nd semester	17	12	1	30	18	19	20	56	77	4	19	4	1	1	0	1
First year/1st semester	18	12	0	30	17	13	65	55	75	2	9	12	5	2	0	0
First year/ 2nd semester	16	14	0	30	17	14	70	54	75	0	8	14	4	2	2	0
Second year/1st semester	18	12	0	30	18	13	65	55	75	2	8	11	5	2	2	0
Second year/ 2nd semester	17	13	0	30	18	14	80	53	75	1	4	6	9	5	3	2
Third year/1st semester	18	12	0	30	18	12	90	54	75	1	0	2	15	6	4	2
Third year/ 2nd semester	18	12	0	30	17	12	90	54	75	4	0	2	11	7	4	2
Fourth year/1st semester	17	13	0	30	15	17	10	48	75	8	0	4	6	3	5	4
Fourth year/ 2nd semester	13	17	0	30	15	14	10	51	75	5	0	4	6	1	7	7
Total of Five Years	168	126	6	300	168	1490	700	5310	7500	30	66	63	63	30	27	21
% of Five Years	56	42	2	100						10	22	21	21	10	9	7
% NARS										9-12	20-26	20-23	20-22	9-11	8-10	6-8

ELECTIVE COURSE (1) : IN COMPUTER ENGINEERING

CSE 1 PROGRAMMING OF COMPUTER PERIPHERAL
CSE 2 DATA PROCESSING
CSE 3 OBJECT ORIENTED PROGRAMMING
CSE 4 SLANDERED PACKAGE
CSE 5 COMPUTER PERIPHERALS
CSE 6 COMPUTER APPLICATIONS

ELECTIVE COURSE (2) IN CONTROL SYSTEMS

CSE 1 DYNAMIC SYSTEMS
CSE 2 INDUSTRIAL MEASUREMENTS
CSE 3 ROBOTICS
CSE 4 CONTROL MEASUREMENTS
CSE 5 INDUSTRIAL ELECTRONICS
CSE 6 MACHINE INTELLIGENCE

ELECTIVE COURSE (3) : IN COMPUTER ENGINEERING

CSE 1 INFORMATION TECHNOLOGY AND DECISION SUPPORT SYSTEM

CSE 2 NATURAL LANGUAGE PROCESSING
CSE 3 IMAGE PROCESSING
CSE 4 COMPUTER SECURITY
CSF 5 COMPILER DESIGN
COM 6 INFORMATION THEORY AND ENCRYPTION

ELECTIVE COURSE (4) IN CONTROL SYSTEMS

CSE 1 DYNAMIC ANALYSIS
CSE 2 IDENTIFICATION
CSE 3 REAL TIME SYSTEMS
CSE 4 COMPUTER AND CONTROL SYSTEMS
CSE 5 CONTROL SYSTEMS APPLICATIONS
CSE 6 KNOWLEDGE ENGINEERING

ELECTIVE COURSE (5) : IN COMPUTER ENGINEERING

CSE 1 PROGRAMMING OF PARALLEL ARCHITECTURE
CSE 2 MULTIMEDIA
COM 3 WIRELESS AND OPTICAL NETWORK
CSE 4 ADVANCED SOFTWARE ENGINEERING
CSE 5 INTERNET AND ADVANCED APPLICATIONS
CSE 6 ADVANCED COMPUTER APPLICATIONS
CSE 7 SYSTEM PERFORMANCE AND EVALUATION
CSE 8 STANDARD SPECIFICATIONS
CSE 9 MICROPROCESSORS

ELECTIVE COURSE (6) IN CONTROL SYSTEMS

CSE 1 COMPUTER VISION
CSE 2 EXPERT SYSTEMS
CSE 3 TRAJECTORY PLANNING AND CONTROL
CSE 4 ADAPTIVE CONTROL
CSE 5 FUZZY CONTROL
CSE 6 OPTIMAL CONTROL
CSE 7 NEURAL NETWORKS
CSE 8 ADVANCED CONTROL APPLICATIONS

Attributes

1. Apply knowledge of mathematics, science and engineering concepts to the solution of engineering problems.
2. Manipulate with the electronic circuits, all the way from the discrete components level, circuits' analysis and design, to the troubleshooting with emphasis on electronic power devices.
3. Design a system; component and process to meet the required needs within realistic constraints.
4. Design, operate and maintain digital and analog communication, mobile communication, coding, and decoding systems.
5. Design and conduct experiments as well as analyze and interpret data.
6. Identify, formulate and solve fundamental engineering problems.
7. Use the techniques, skills, and appropriate engineering tools, necessary for engineering practice and project management.
8. Work effectively within multi-disciplinary teams.
9. Communicate effectively.
10. Consider the impacts of engineering solutions on society & environment.
11. Demonstrate knowledge of contemporary engineering issues.
12. Display professional and ethical responsibilities; and contextual understanding
13. Engage in self- and life- long learning.
14. Demonstrate inductive reasoning abilities, figuring general rules and conclusions about seemingly unrelated events
15. Use current advanced techniques, skills, and tools necessary for computing practices to specify, design, and implement computer-based systems.
16. Recognize the information requirements of various business activities on both operational and decision making levels.
17. Tackling business problems using system analysis tools and techniques.
18. Managing projects related to computer systems in diverse fields of applications.
19. Implementing phases of the computer system development life cycle, procurement and installation of hardware, software design, data manipulation and system operations

Intended Learning Outcomes (ILO's)

Knowledge and Understanding

The graduates of the Communications and Information Engineering program should be able to demonstrate the knowledge and understanding of:

A1. Concepts and theories of mathematics and sciences, appropriate to the discipline.
Principles of Analyzing and design of electronic circuits and components;
A2. Principles of Analyzing and design of control systems with performance evaluation;
A3. Biomedical instrumentation;
A4. Communication systems
A5. Basics of information and communication technology (ICT).
A6. Characteristics of engineering materials related to the discipline.
A7. Principles of design including elements design, process and/or a system related to specific disciplines.
A8. Methodologies of solving engineering problems, data collection and interpretation.

A9. Quality assurance systems, codes of practice and standards, health and safety requirements and environmental issues.
A10. Coding and decoding techniques
A11. Microwave applications
A12. Antenna and wave propagation
A13. Nanotechnology application
A14. Usage of optical fiber
A15. Business and management principles relevant to engineering.
A16. Current engineering technologies as related to disciplines.
A17. Topics related to humanitarian interests and moral issues.
A18. Technical language and report writing.
A19. Professional ethics and impacts of engineering solutions on society and environment.
A20. Contemporary engineering topics.
A21. Engineering principles in the fields of logic design, circuit analysis, machine and assembly languages, computer organization and architectures, memory hierarchy, advanced computer architectures, embedded systems, signal processing, operating systems, real-time systems and reliability analysis.
A15. Related research and current advances in the field of computer software and hardware.

Intellectual Skills

The graduates of the Communications and Information Engineering program should be able to:

B1. Select appropriate mathematical and computer-based methods for modeling and analyzing problems.
B2. Select appropriate solutions for engineering problems based on analytical thinking.
B3. Think in a creative and innovative way in problem solving and design.
B4. Combine, exchange, and assess different ideas, views, and knowledge from a range of sources.
B5. Assess and evaluate the characteristics and performance of components, systems and processes.
B6. Investigate the failure of components, systems, and processes.
B7. Solve engineering problems, often on the basis of limited and possibly contradicting information.
B8. Select and appraise appropriate ICT tools to a variety of engineering problems.
B9. Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact.
B10. Incorporate economic, societal, environmental dimensions and risk management in design.
B11. Analyze results of numerical models and assess their limitations.
B12. Create systematic and methodic approaches when dealing with new and advancing technology.
B13. Select the appropriate mathematical tools, computing methods, design techniques for modeling and analyzing computer systems;
B14. Select, synthesize, and apply suitable IT tools to computer engineering problems.
B15. Proposing various computer-based solutions to business system problems. Cost-benefit analysis should be performed especially in sensitive domains where direct and indirect costs are involved.
B16. Identifying symptoms in problematic situations.

B17. Innovating solutions based on non-traditional thinking and the use of latest technologies
B18. Capability of integrating computer objects running on different system configurations.

Professional and Practical Skills

On successful completion of the program, the graduates of the Communications and Information Engineering program should be able to:

C1. Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems.
C2. Professionally merge the engineering knowledge, understanding, and feedback to improve design, products and/or services.
C3. Create and/or re-design a process, component or system, and carry out specialized engineering designs.
C4. Practice the neatness and aesthetics in design and approach.
C5. Use computational facilities and techniques, measuring instruments, workshops and laboratory equipment to design experiments, collect, analyze and interpret results.
C6. Use a wide range of analytical tools, techniques, equipment, and software packages pertaining to the discipline and develop required computer programs.
C7. Apply numerical modeling methods to engineering problems.
C8. Apply safe systems at work and observe the appropriate steps to manage risks.
C9. Demonstrate basic organizational and project management skills.
C10. Apply quality assurance procedures and follow codes and standards.
C11. Exchange knowledge and skills with engineering community and industry.
C12. Prepare and present technical reports.
C13. Design and operate computer-based systems specifically designed for business applications.
C14. Use appropriate specialized computer software, computational tools and design packages throughout the phases of the life cycle of system development;
C15. Write computer programs on professional levels achieving acceptable quality measures in software development.
C16. Conducting user support activities competently.

General and Transferrable Skills

The graduates of the Communications and Information Engineering program should be able to:

D1. Collaborate effectively within multidisciplinary team.
D2. Work in stressful environment and within constrains.
D3. Communicate effectively.
D4. Demonstrate efficient IT capabilities.
D5. Lead and motivate individuals.
D6. Manage tasks and resources efficiently.
D7. Search for information and adopt life-long self learning.
D8. Acquire entrepreneurial skills.
D9. Refer to relevant literature effectively.

Matrix

ثامناً: المحتوى العلمى للمقررات

COMPUTER ENGINEERING AND CONTROL SYSTEMS FIRST YEAR FIRST SEMESTER (Courses layout)

BAS 3111 MATHEMATICS (3)

Application of partial derivatives-Extreme values of functions of several variables-Multiple integrals and its applications-Infinite series and functions expansion-Convergence and divergence concepts-First order ordinary differential equations- Second order ordinary differential equations: with constant coefficients, with variable coefficients, Laplace transform and its application in solving differential equations

CSE 3112 HUMAN RELATIONS IN SYSTEMS ENGINEERING (2)

Project economy analysis – management principles – modern management – levels and types of management – planning and decision making – quantities and specifications - purchase methods - contracts

COM 3113 ELECTRONICS CONCEPTS

Atomic structure, principal of Quantum mechanics , crystal structure of solid material , Energy Bands and charge carriers in semiconductors, Light absorption , carrier combination , PNjunction diode and BJT transistors, isolation materials and isolation constant, polarization , piezo electricity dissipation in isolation materials, properties of magnetic materials, ferromagnetic materials, magnetic effects in superconductors.

CSE 3114 LOGIC DESIGN (1)

Numeric Systems- Boolean Algebra - Logic Gates- Boolean Function simplification - Sequential Logic Circuit – Large and Small Digital Integrated Circuit – Synchronized Sequential components

CSE 3115 PROGRAMMING LANGUAGE (1)

Introduction to structure Programming – Data Types – File handling – Functions – Pointers – Data structure - - Procedure – Memory handling – Implemtion via recent programming language.

CSE 3116 INTRODUCTION IN CONTROL ENGINEERING

Introduction to control systems – study of some natural systems – open and closed loop control systems – transfer function – block diagram – signal flow – frequency response – routh stability analysis.

COMPUTER ENGINEERING AND CONTROL SYSTEMS FIRST YEAR SECOND SEMESTER (Courses Layout)

CSE 3121 MATHEMATICS (4)

Fourier series- Periodic function and Euler's laws- Fourier integral-Vector analysis-Gauss's and stroke's theorem – Orthogonal coordinates-Functions of complex variables- Analytical functions-Derivatives-Line integrals-Green's and Cauchy theorem and its applications-Principles of numerical analysis-Least squares method and curve fitting-Numerical solution of algebraic equation.

CSE 3122 TECHNICAL REPORTS IN SYSTEM ENGINEERING

Scripts in computer and systems – scientific and practical reports – summery preparation for specialized manuscripts – discussions and training for students – summery preparation from read manuscripts.

COM 3123 ELECTRONICS CIRCUITS

PN diode circuits and its applications , BJT configurations and applications , feedback circuits , transistor small signal amplifiers and gain – frequency response , oscillators and signal generators , wave shaping , photo – voltaic cells , laser types, optical switches and optical fiber and their applications .

CSE 3124 OPERATING SYSTEM ENG. (1)

Introduction to Operating system – File system – access methods and data location – Resources management system – tasks- managing , processing and scheduling (task -process – memory – secondary storage – cache memory) – sequential execution – system selection consideration – studying of recent operation system.

CSE 3125 INTRODUCTION TO COMPUTER NETWORKS

Introduction to data communication – network architecture – communication protocol – layered model – local area network LAN – Wide area network WAN – Centralized and distributed network – Network design algorithms – routing algorithm – digital integrated network system- Practical studying and exercises

CSE 3126 ELEMENTS OF CONTROL SYSTEMS

Input elements – differentiators – integrators – proportional control – differential control – integral control- proportional integral differential (PID) control – output elements – hydraulic engine – electric elements – dc motor – ac motor.

COMPUTER ENGINEERING AND CONTROL SYSTEMS SECOND YEAR FIRST SEMESTER (Courses Layout)

BAS 3211 MATHEMATICS (5)

Series solution of differential equations-Special functions-Gamma, Beta and error functions-Bessel and Legendre functions- Solution of partial differential equations using seperation of variables-Principles of probability theorem for conditional and unconditional propbabilities-Random variables-Probability distribution functions-Polynomial approximation of functions-Introduction to numerical methods to solve linear and differential equations-Eigen problem.

CSE 3212 HUMAN RELATIONS IN SYSTEMS ENGINEERING (3)

Rights and privileges – owner rights – crime in computer systems – computer viruses – security in computer systems.

CSE 3213 DIGITAL LOGIC DESIGN (2)

Registers – Counters – Memory unit – processor logic design – Controller logic design – Asynchronous Sequential components.

CSE 3214 PROGRAMMING LANGUAGE (2)

Advanced programming via object oriented language - object oriented language properties – inheritance - Polytheism – object construction – using and reusability – application on using previous concepts via recent object oriented language.

CSE 3215 MEASUREMENT DEVICES AND SENSORS

Digital measuring devices – oscilloscopes – automatic measuring devices – noise in measuring systems – different types of sensors.

CSE 3216 MODELING AND SIMULATION

Modeling based on state variables – feedback elements – Stability based on reasoning – Root analysis – advanced angle

COMPUTERS Engineering AND CONTROL SYSTEMS SECOND YEAR SECOND SEMESTER (Courses Layout)

CSE 3221 STATISTICAL APPLICATIONS

Basic concepts – correlation analysis – distribution analysis – confidence intervals and hypothesis tests – nonparametric analysis – time series – applications in electric signals.

CSE 3222 OPERATING SYSTEM (2)

Synchronized process management – Computer security - Distributed Operating –System - Processors management and control – secondery storage management – Lab exercises

CSE 3223 PROGRAMMING LANGUAGE (3)

Advanced properties of the structure language and object oriented programming language application based on the previous concepts.

EE 3224 ELECTRIC POWER AND MACHINES

Generation , distribution and Transmission Electric Power – protection systems – Transformers – DC machines – AC machines – speed control – linear motors – small and special motors – Applications .

CSE 3225 SYSTEMS IDENTIFICATION

Compensators and their designs – state and time analysis – linear control systems and sensitivity – non-linear control systems – phase plane analysis.

CSE 3226 DIGITAL CONTROL SYSTEMS

Introduction for digital control systems – transfer function for digital systems – digital systems representations – frequency response – stability analysis for digital systems.

COMPUTER ENGINEERING AND CONTROL SYSTEMS THIRD YEAR FIRST SEMESTER (Courses Layout)

CSE 3311 COMPUTER ARCHITECTURE ENGINEERING (1)

Integrated and digital Circuit components - data representation - –- Register and processing - Computer organization and design – microprocessors programming - microprocessors programming control .

CSE 3312 DATA STRUCTURE AND ALGORITHMS

Introduction to Data Structure – Data representation - Data Structure (Array – Stack – Queue – hierarchy tree – table) - Data Structure storing – Search , ordering and sorting algorithm - evaluation and analysis of the studied algorithm using prestudied language.

CSE 3313 DATABASE (1)

Database Concepts - Data Structure handling – File system – Database management System DBMS – Data modeling – Relationship types – Structure Query Language SQL – Schema and process of (Creation – Deletion – modification – retrieving) - Relationship types design – E/R model – Database programming – parctical implementation using advanced DBMS

CSE 3314 MODERN CONTROL THEORY

Introduction for modern control theory – Lyaponove stability concept –

first method – second method – krasoveski method – optimal control systems –

controllability and observability - applications.

CSE 3315 ARTIFICIAL INTELLIGENT

Introduction to Artificial Intelligent and its importance – fact and knowledge representation – Natural Language processing – Computer vision – Robotic usage in practical area – Introduction to expert system – using computer in fact representation.

CSE 3316 PROGRAMMABLE LOGIC CONTROL

Principles of logic control – sequential control – switching signals – hydraulic

systems – electric systems – industrial systems.

COMPUTER ENGINEERING AND CONTROL SYSTEMS THIRD YEAR SECOND SEMESTER (Courses Layout)

CSE 3321 DATABASE (2)

Advanced concepts in database – data integrity and security – Data recover within system failure – Transaction – Query optimization algorithm – Query processing problem – Concurrency execution - Distributed Database system – OO Database system – Forth generation database system – Practical implementation using powerful DBMS.

CSE 3322 COMPUTER SYSTEM DESIGN AND ANALYSIS

Computer system definition- Problem definition and analysis- System analysis methods – System Design method - Analysis of the system performance - Practical implementation for a given specific problem.

CSE 3323 COMPUTER GRAPHICS

Computer Graphics advantages and usage in practical area – Hardware and Software in Computer Graphics – Basic of Computer Graphics (Monitor – Pixel – resolution – brightness – intensity) - Computer Graphics language – permitive components drawing - Interactive methods – Animation creation – Image format - Practical implementation using high level language.

CSE 3324 COMPUTER BASED CONTROL (1)

Principles of signal digitization – compensators using computers – real time systems

improvement – languages in real time systems – factors used in computer based

control components selection.

CSE 3325 ELECTIVE COURSE (1)[IN COMPUTER ENGINEERING]

Details are given after 4 th year courses

CSE 3326 ELECTIVE COURSE (2)[IN CONTROL ENGINEERING]

Details are given after 4 th year courses

COMPUTER ENGINEERING AND CONTROL SYSTEMS FOURTH YEAR FIRST SEMESTER (Courses Layout)

CSE 3411 COMPUTER ARCHITECTURE ENGINEERING (2)

Central Processing Unit CPU – Vector processing - Pipeline processors - Input / output organization and management – Multiprocessors system – Performance evaluation of the computer architecture – Simulation and practical studying .

CSE 3412 NETWORK DESIGN AND PROGRAMMING

Network Design and programming basic and concepts – (client/server) system – Remote procedure call – Socket programming – Load balancing algorithm – File transferee algorithm – browser architecture – Web programming – Practical implementation using web programming language

CSE 3413 MACHINE LEARNING

Introduction – history of machine learning – inductive learning – deductive learning

abductive learning – modeling and simulation.

CSE 3414 ELECTIVE COURSE (3)[IN COMPUTER ENGINEERING]

Details are given after 4 th year courses

CSE 3415 ELECTIVE COURSE (4)[IN CONTROL ENGINEERING]

Details are given after 4 th year courses

CSE 3416 PROJECT

The student chooses a project approved by the department committee in computer

engineering and control systems then plans the project and its literature review under the supervision of a stuff member in the department.

COMPUTER ENGINEERING AND CONTROL SYSTEMS FOURTH YEAR SECOND SEMESTER (Courses Layout)

CSE 3421 COMPUTER MAINTENANCE

Computer Failure types and reasons – Computer peripherals and SW – Problem recovery and different solutions - Practical Studies

CSE 3422 DISTRIBUTED SYSTEMS

Distributed systems Basic and concepts – Basic of distributed hardware (Bus based – switched based) – Distributed database system – Distribution problems and solving and design issues - Computer network operating system – Processors scheduling and communication in distributed system environment – Memory management in distributed system – Communication and synchronization – Parallel processing - Distributed systems language - Design issue – Different example of Distributed systems. Practical study

CSE 3423 COMPUTER BASED CONTROL (2)

Principles of signal digitization – compensators using computers – real time systems

improvement – languages in real time systems – factors used in computer based

control components selection

CSE 3424 ELECTIVE COURSE (5)[IN COMPUTER ENGINEERING]

Details are given after 4 th year courses

CSE 3425 ELECTIVE COURSE (6)[IN CONTROL ENGINEERING]

Details are given after 4 th year courses

CSE 3426 PROJECT

The student completes the theoretical and practical analysis for the project started in the first term then realized before being completed after the exams of the second term.

COMPUTER ENGINEERING AND CONTROL SYSTEMS ELECTIVE COURSES

COMPUTER ENGINEERING AND CONTROL SYSTEMS THIRD YEAR SECOND SEMESTER

ELECTIVE COURSE (1) : IN COMPUTER ENGINEERING

CSE 1 PROGRAMMING OF COMPUTER PERIPHERAL

Computer Peripheral (Input / Output and other) Programming – Design of operating system of the real time system application – Practical experimental

CSE 2 DATA PROCESSING

Data interchange in the computer system – data storage and retrieving methods - advanced topics in data processing – handling of the distributed database- Expert system in the data processing – practical implementation

CSE 3 OBJECT ORIENTED PROGRAMMING

Object Oriented Programming methods and technique – algorithms – object models – Design model - practical implementation

CSE 4 SLANDERED PACKAGE

Studying of the different package – studying and analysis and evaluation of an example of such package

CSE 5 COMPUTER PERIPHERALS

Introduction to Computer Peripheral – (Input / output devices such as Keyboard printers scanner , storage device driver Camera CD ROM drive) installation - practical implementation

CSE 6 COMPUTER APPLICATIONS

Implementation of engineering application by using advanced computer programming language – using of the slandered SW package .

COMPUTER ENGINEERING AND CONTROL SYSTEMS ELECTIVE COURSES

COMPUTER ENGINEERING AND CONTROL SYSTEMS THIRD YEAR SECOND SEMESTER

ELECTIVE COURSE (2) IN CONTROL SYSTEMS

CSE 1 DYNAMIC SYSTEMS

Nonlinear dynamic systems - discrete dynamic systems - nonlinear systems stability analysis - dynamic characteristics for discrete systems – dynamic improvement using compensators.

CSE 2 INDUSTRIAL MEASUREMENTS

Intelligent measurement devices - temperature measurements - weight and force

measurements strain measurements - flow measurements - speed measurements.

CSE 3 ROBOTICS

Mathematical modeling of robotic arms - robotic arms movement analysis in space applications.

CSE 4 CONTROL MEASUREMENTS

Analogue to digital converters and digital to analogue converters - measurement design and applications .

CSE 5 INDUSTRIAL ELECTRONICS

The thyristor an its application in current rectifying circuits - the transistor and its application as a fast response switch - dc regulators - uninterruptible power supply electronic controllers - computers peripherals - electronic devices and multimedia systems.

CSE 6 MACHINE INTELLIGENCE

Expert systems and their relation with knowledge base - expert systems examples -

knowledge presentation - production system as all example for knowledge presentation - problem solving - different types of knowledge and its presentation production methods - languages - levels of programming - a small know ledge base system design - theory - design - improvement - knowledge engineering -evaluation.

COMPUTER ENGINEERING AND CONTROL SYSTEMS ELECTIVE COURSES

COMPUTER ENGINEERING AND CONTROL SYSTEMSFOURTH YEAR FIRST SEMESTER

ELECTIVE COURSE (3) : IN COMPUTER ENGINEERING

CSE 1 INFORMATION TECHNOLOGY AND DECISION SUPPORT SYSTEM

Information Systems types - Information Technology - Decision Support System- Decision strategy level – system components – System design – Systems design and evaluation - practical implementation

CSE 2 NATURAL LANGUAGE PROCESSING

Introduction to Natural Language Processing – Syntax constrain – Various types of Natural Language Processing – Modeling and simulation – programming Language Processing – Studying an to understand of Natural Language Processing – translation machine -

CSE 3 IMAGE PROCESSING

Image Representation – Image conversion to digital data – primary processing methods – Image segmentation – linear and non-linear conversion – line and object description – Filtering –

encoding – Image compression – Image retrieval - Image shadow and rendering and animation – An application in signal processing

CSE 4 COMPUTER SECURITY

Computer Security system – Copyright – Access methods control – trusting and authorization control – privacy - random generation - Computer virus – firewall – security evaluation and analysis – Security protocol - - Applicatio (E-Commerce – intelligent card – ATM - electronic signature) – Computer security application and implantation in the real system.

CSE 5 COMPILER DESIGN

Interpreter – Compilers – Compiler types – Basic of Compiler Design – Steps of Compiler design – Compilations Steps – Token segmentation methods – Syntax and semantic methods- Binary Code Generation – Source – Code Conversion – Building small compiler .

COM 6 INFORMATION THEORY AND ENCRYPTION

Information theory – channel capacity and Entropy – probability of Error in digital communication channels – coding for Error Detection and Error correction– Matched filters Digital signal processing and Digital filters – Digital signal compression and expansion (speech compression – Image compression).

COMPUTER ENGINEERING AND CONTROL SYSTEMS ELECTIVE COURSES

COMPUTER ENGINEERING AND CONTROL SYSTEMS FOURTH YEAR FIRST SEMESTER

ELECTIVE COURSE (4) IN CONTROL SYSTEMS

CSE 1 DYNAMIC ANALYSIS

Multi input multi output dynamic systems – basic concepts for effective controller design – methods of design for multivariable systems – applications.

CSE 2 IDENTIFICATION

Pays theory for decision making – natural – pays theory for discrete functions – fefer linear equation – error minimization – linear programming – applications.

CSE 3 REAL TIME SYSTEMS

Concepts of real time design – examples – languages – real time software – programming cycle – design of real time system – communication and synchronization between tasks – tabular algorithms – analysis and evaluation – multiprocessing systems – applications.

CSE 4 COMPUTER AND CONTROL SYSTEMS

Discretization and z- transform , reconstruction of discretized signals , open loop systems, closed loop system , control and monitoring , digital controllers , digital filters , applications .

CSE 5 CONTROL SYSTEMS APPLICATIONS

Microcontrollers programming using different languages (Assembly , prolog , etc) , date processing , control and measurements applications .

CSE 6 KNOWLEDGE ENGINEERING

Knowledge system design – theories – small expert systems – large – knowledge system design and improvement – knowledge engineering – a complete expert system improvement – evaluation .

COMPUTER ENGINEERING AND CONTROL SYSTEMS ELECTIVE COURSES

COMPUTER ENGINEERING AND CONTROL SYSTEMS FOURTH YEAR SECOND SEMESTER

ELECTIVE COURSE (5) : IN COMPUTER ENGINEERING

CSE 1 PROGRAMMING OF PARALLEL ARCHITECTURE

Basic concepts of concurrent and Parallel Architecture - Parallel computations models- Operating system support such environment - Processors communication protocols - Parallel Architecture algorithms - Parallel Architecture scheduling algorithms - concurrent load balance - Case study.

CSE 2 MULTIMEDIA

Multimedia usage and programming (video - Audio - Image - Secondary storage computer interface - graphical layer interface - 3 d image - Image compressions encoding - data transferee protocol.

COM 3 WIRELESS AND OPTICAL NETWORK

Introduction to communication system – Analog and digital modulator and detection – pulse coded modulation (pcm, dpcm , dm) – channel coding noise in modulation system – fiber optic communication systems – mobile communication systems – satellite communication system – wireless computer networks – and protocols .

CSE 4 ADVANCED SOFTWARE ENGINEERING

Advanced Software Development and design – Assist Software -

Performance and quality of Software - Case Study

CSE 5 INTERNET AND ADVANCED APPLICATIONS

Internet applications development, design and programming - Internet Advanced Functions (Search - Chatting - e-mail- FTP) - Data security and protections.

CSE 6 ADVANCED COMPUTER APPLICATIONS

Application on using standard Software package in different area such numeric analysis - linear programming system design

CSE 7 SYSTEM PERFORMANCE AND EVALUATION

Hardware components and human resources - evaluation and planning of computer system - evaluation of the performance of the computer system methods optimization - Case Study

CSE 8 STANDARD SPECIFICATIONS

Study and analysis the standard specifications for computer systems and its components ; Hardware , Software , and Humanware .

CSE 9 MICROPROCESSORS

Architecture of the Microprocessor - Microprocessors Programming Programmable Integrated Circuit - Data acquisition system- Input/ Output Hardware alternative - Industrial Applications.

COMPUTER ENGINEERING AND CONTROL SYSTEMS ELECTIVE COURSES
COMPUTERS & SYSTEMS ENG . FOURTH YEAR SECOND SEMESTER

ELECTIVE COURSE (6) IN CONTROL SYSTEMS

CSE 1 COMPUTER VISION

Digital images and their types - unage processing - image preparation -

Transformations - image reconstruction - pattern recognition - pattern matching three dimensional vision - mathematical linear and nonlinear transformations - image compression - applications.

CSE 2 EXPERT SYSTEMS

Concepts of know ledge engineering - architecture of expert systems - survey of expert systems - languages and tools for expert systems - characterization of expert system.

CSE 3 TRAJECTORY PLANNING AND CONTROL

Different types of trajectory planning and control- trajectory planning usulg robotic languages - trajectory phnming languages - applications.

CSE 4 ADAPTIVE CONTROL

Dynamic system modeling – Random methods for ID systems Design and implementation.

CSE 5 FUZZY CONTROL

Fuzzy logic concepts - theories - applications.

CSE 6 OPTIMAL CONTROL

Hamilton theory-Pelgan theory - optimal control realization methods - applications.

CSE 7 NEURAL NETWORKS

Included are trainable Multi-layer feed forward structures for achieving data clustering - c1assification and generalization - selected recurrent networks for unsupervised learning.

CSE 8 ADVANCED CONTROL APPLICATIONS

Speed control - automatic methods - using artificial vision in testing and Identification - data transfer.

تاسعاً: مشاريع التخرج

عناوين المشاريع لطلاب الفرقة الرابعة قسم هندسة الحاسبات والنظم (فى مجال الحاسبات ونظم التحكم)

التصنيف الرئيسي (حاسبات ونظم التحكم)	التصنيف الفرعي	المشروع	نبذة عن المشروع
	Image Processing	Airport Management And Control System	تغذية جهاز الحاسب بصورة وبناء برامج تقوم بمعالجة الصور المدخلة وبناء برمجيات تقوم تحليل ناتج المعالجة وارسالة من خلال داوئر متكاملة الى آلة تقوم بانتاج الصورة المدخلة المهارات المكتسبة: كيفية التعامل مع أوساط الإدخال المختلفة – كيفية معالجة الصور- كيفية التحكم فى خرج الحاسب للتحكم فى تشكيل منتج محدد – مهارات التعامل مع لغات الجرافيك
		Realization and Implementation of CNC Machine Based on New Interface mechanism Computer System	تغذية جهاز الحاسب بصورة وبناء برامج تقوم بمعالجة الصور المدخلة (Image Processing) وبناء برمجيات تقوم تحليل ناتج المعالجة وارسالة من خلال داوئر متكاملة الى آلة تقوم بانتاج الصورة المدخلة المهارات المكتسبة: كيفية التعامل مع أوساط الإدخال المختلفة – كيفية معالجة الصور- كيفية التحكم فى خرج الحاسب للتحكم فى تشكيل منتج محدد – مهارات التعامل مع لغات الجرافيك- Convert To G-Code- G-Code Interpreter
	Wireless communication	Implementation of Navigation system based on Wireless Computer Interface for security	بناء نظام للتحكم فى كائن متحرك من خلال اتصال لاسلكي يقوم فيه الشكل المتحرك بارسال اشارات الى الحاسب (من خلال كاميرا لاسلكية- مستشعرات) يقوم الحاسب بتحليل الإشارة واتخاذ القرار المناسب ويمكن أن يتم الاستفادة من هذا النظام فى توجيه الكائنات عن بعد لتأمين المنشاءات ضد السطو والأخطار الأخرى المهارات المكتسبة: كيفية استقبال الإشارات اللاسلكية – كيفية معالجة الصور – بناء دوائر للتحكم والسيطرة على كائن متحرك – تأمين المنشآت الكترونيا
		Movable Object Detection Using RADAR Principals	بناء نظام للتحكم فى كائن متحرك من خلال اتصال لاسلكي يقوم فيه الشكل المتحرك بارسال اشارات الى الحاسب (من خلال كاميرا لاسلكية- مستشعرات) يقوم الحاسب بتحليل الإشارة واتخاذ القرار المناسب ويمكن أن يتم الاستفادة من هذا النظام فى توجيه الكائنات عن بعد لتأمين المنشاءات ضد السطو والأخطار الأخرى المهارات المكتسبة: كيفية استقبال الإشارات اللاسلكية – كيفية معالجة الصور – بناء دوائر للتحكم والسيطرة على كائن متحرك – تأمين المنشآت الكترونيا
		Wireless charging implementation and design graduation project	Uses an electromagnetic field to transfer energy between two objects. Energy is sent through an inductive coupling to an electrical device, which can then use that energy to charge batteries or run the device.

Induction chargers typically use an induction coil to create an alternating electromagnetic field from within a charging base station, and a second induction coil in the portable device takes power from the electromagnetic field and converts it back into electrical current to charge the battery. The two induction coils in proximity combine to form an electrical transformer			
This project proposes a new invariant representation that is derived from the standard dichromatic reflection model for inhomogeneous dielectric and the extended dichromatic reflection model for homogeneous metal. The illumination color is estimated from the specular reflection component on inhomogeneous surfaces without using a reference white standard.	Invariant Representation for Color Images and its Applications		
In machine-vision applications, it is important to understand the characteristics of color spaces and choose the one that will yield the most effective results. Which color space to choose is application specific and depends on how precisely a system is required to discern one color from another. For example, a process where objects need to be sorted according to their color has very different requirements than a color-matching application, which involves identifying a specific shade of a color in an image.	Color Imaging System for Machine Vision Applications		
Building system to monitor and control all data and operations in personal computer remotely that enable us to do any specific task of transfer data and control devices, all is done through wireless technology to transfer data from and to PC and commands to control it.	بناء نظام تحكم عن بعد للحاسبات الشخصية بالاعتماد علي التقنيات اللاسلكية Building PC Remote System Based on Wireless Technology		
Designing GPS (Global Positioning System) system with android operating system to determine the position and the way to target destination and produce signals to control the direction movements of vehicle to reach the destination. The system consists of a constellation of nominally 24 satellites (29 satellites in 2006) with an orbit radius of 26,560km, giving the satellites a period of approximately 12 hours. All satellites have highly	تصميم و تنفيذ منصة عمل نظام تحديد المواقع العالمي القابلة للتجزئة Design and Implementation of		

synchronized onboard Rubidium or Cesium atomic clocks as a frequency reference.	Modular GPS Platform		
تصميم نظام مبني علي مجموعة حساسات تنتشر علي جسم المريض لقياس الضغط ونبضات القلب وحالة الرئة وهكذا ونقلها من خلال الجهاز الخلوي وال GPS إلي الدكتور لمعالج لمتابعة الحالة الصية للمريض بالاضافة لوجود برنامج لتخزين التاريخ المرضي لكل حالة والتقدم والتأخر والمتابعة الدورية لحالته المرضية مما يسهل علي المرضي وكبار السن من زيارة عيادة الدكتور كل فترة لإجراء الفحوصات الدورية وكذلك في حالة المرض يستطيع الدكتور احضار العلاج والمعدات اللازمة لاسعافه حيث انه يعرف حالته مسبقا من هذا النظام المهارات المكتسبة: التعامل مع أنواع الحساسات واستقبال الاشارات منها – إرسال البيانات من خلال ال GPS والخلوي – بناء برنامج به قاعدة بيانات لكل مريض	نظام مراقبة المرضى عن بعد من خلال نظام يعمل على الخلوي و GPS و مجموعة حساسات تنقل حالة الرئة و القلب و الضغط		
بناء تطبيق للتعاون بين ذوى الاحتياجات الخاصة من الصم والبكم والمكفوفين المهارات المكتسبة: كيفية التعامل مع أوساط الإدخال المختلفة واضافة حساسات مختلفة للادخال – اضافة دوائر HW الى تطبيقات الحوار	Away to connect between blind and deaf	Software systems	
This project is simply an interactive website that contains information about the products that produced by the company. Also it's provide a management of the information in the company such as how the company manage their offers, how they provides better services to its customers. This project enables students to use Visual Basic programming and SQL Server database management system to develop a program which recognizes the signature of a bank customer. Visual Basic will be used for developing the program, testing and debugging, and linking with the SQL Server database. Moreover, it enables students to use a new technology (RFID) as a data acquisition for completing the process Hardware Environment: PC	Management of stores Department based on RFID Technology تنظيم ادارة المخازن بالاعتماد على تقنية أر إ ف		

Operating Systems Environment: MS-Windows Network Environment: Intranet (TCP/IP) Technology : RFID			
Build system for distance learning through video conferencing is a synchronous audio and video telecommunications technology in which people are able to see and talk to others from two or more separate locations. It can also support the sharing of files, applications, and electronic workspaces. The two main types of video-conferencing systems are desktop and dedicated systems	بناء منظومة لنقل صور الفيديو للتعليم عن بعد Video Conferencing for Distance Learning		
Project team has a focus on offering quality solutions to many Engineering fields with the aim of improving organization performance & professionalism	Developing ISP Human Resources and Billing System		
Is an integrated management platform that helps you to easily and efficiently manage your datacenters, client devices, and hybrid cloud IT environments. It is the only platform to offer comprehensive management of applications, services, physical resources, hypervisors, software defined networks, configuration, and automation in a single offering. Provides a common toolset to manage infrastructure and applications across private, hosted, and public clouds.	Data Center Services Management and Configuration Framework		
Designing a system that can operate in any mobile device to enhance distance learning that is provided by media, chat, books … etc. It also has some features as it facilitate to register to be up to date for each change on it, give you feedback about your progress, has a large data base of references and researches that may help you in your studies, contacts to factories and labs to facilitate the practicing, all is done through software with database and has an upgrade to operate in all mobile devices.	بناء نظام تعليمى بالإعتماد على التقنيات المتنقلة An Implementation of Educational System based on Mobile Technology Infrastructure		
Project team has a focus on offering quality solutions to many Engineering fields with the aim of improving organization performance & professionalism	Design of Web Application to Manage Commercial Business Affairs.		

		بنك الدم الآلي.	فكره النظام ارتباط مجموعه من المستشفيات التي تقع في نطاق جغرافي متوسط أي في مدينه واحده عن طريق ألشبكه الهاتفية وتكون جميع بيانات بنوك الدم الموجودة فيه مخزنه على النظام وفي حاله احتاج احد المستشفيات لنوع ماء من الدم فان موقع التوفر يكون موجود وسهل لجميع المستشفيات ويكون مهم في حاله حدوث أي حادث كبير وغير متوقع لهذه المستشفى وغيره.. وغيرها من الأفكار التي تقوم بالحماية القصوى الموسسه المعنية بالنظام
أنظمة التحكم (Control)	Robotics	Brain Computer Humanoid	بناء واجهة علي الكمبيوتر تستطيع فهم تعبيرات ونوايا الانسان من خلال الاشارات العصبية وترجمتها علي مجموعة اوامر يمكن من خلالها التحكم في روبوت لأداء وظيفة معينة وتستخدم في العمليات الجراحية الدقيقة وايضا في الملاحة وغيرها من التطبيقات. المهارات المكتسبة: استقبال الاشارات العصبية من عقل الانسان – كيفية معالجة هذه الإشارات وفهمها – تحويلها إلي اوامر تحكم – بناء ودراسة التحكم في الروبوت.
		Human Arm Robotic Simulator	Designing arm robot that simulating the human arm movements through sensors that record the move and translate it to signal to move arm robot. It can be used in danger places where arm robot must be used and simulate human movements.
		Learning Arm Robot	Designing a learning robotic arm that able to learn through an intelligent learning algorithm based on some experience gained from performing specific tasks, it has been fitted with a vision system to keep its working object under observation and to work on it accurately through capture images for object and process it to know its dimensions and fed this information to the learning algorithm to determine the best path. In addition to that the robotic arm can make flexible movements through its accurate control system with feedback to reach any point on space that simulate human arm movements. So, it can be used as an alternative to human in many industrial places.
	Security systems	Office automation System based a new verification technologies	بناء تطبيق لميكنة الأعمال الإدارية مع استخدام تقنيات متطورة للتحقق من المستخدم مثل (البصمة الصوتية – بصمة اليد---) المهارات المكتسبة: بناء أنظمة قواعد البيانات – تحليل الأنظمة – اضافة دوائر HW الى تطبيقات قواعد البيانات
		Lie Detector	بناء جهاز لكشف الكذب عن طريق قياس نبضات القلب وملمس الأصابع

المهارات المكتسبة: كيفية التعامل مع أوساط الإدخال المختلفة واضافة حساسات مختلفة للادخال – كيفية التحكم فى خرج الحاسب الآلي – مهارات البرمجة التعامل مع المداخل			
We study the architecture of a general SCADA system and analyze the potential attacks against it, then we use security patterns as a tool to design a secure SCADA system that is resistant to these attacks.	Build Secured SCADA System		
بناء نظام للتحكم فى مبنى من دوائر منتشرة فى مبنى على هيئة فندق يقوم فيه المدير للموقع بارسال اشارات الى الحاسب (من خلال كاميرا لاسلكية- مستشعرات) يقوم الحاسب بتحليل الإشارة واتخاذ القرار المناسب ويمكن أن يتم الاستفادة من هذا النظام فى حماية المبانى عن بعد لتأمين المنشاءات ضد السطو والأخطار الأخرى المهارات المكتسبة: كيفية استقبال الإشارات اللاسلكية – كيفية معالجة الصور – بناء دوائر للتحكم والسيطرة على كائن متحرك – تأمين المنشآت الكترونيا	Smart Hotel	Smart systems	
Create a pleasant, safe, and useful haven for baby with control everything in room lightening, color, bed motion and directions and smart toys. Through control system for all with alarm for any change or any danger.	Baby Smart Room		
يقدم هذا المشروع حل متكامل لكيفية السيطرة على العديد من الأجهزة والمعدات الموجودة فى آى مبنى والتحكم فيها من خلال ثلاث أشكال Locally- Via centralized computer – Via WAP المهارات المكتسبة : بناء داوائر السيطرة على الأجهزة وكيفية استلام اشارة مرتدة منها وارسالها للحاسب الآلى – بناء برامج لاستلام الآشارات والتعامل معها – تكنولوجيا WAP	Based Smart Building on WAP Technology		
Smart Gate uses face-recognition technology to confirm the user's identity using the digitized image of the user stored in card; It consists of 4 main steps are:1- Face recognition: It convert human picture which is taken by camera to binary data it use the extension of FBGP.2- DB It keeps records of users which contain those pictures, personal information and expiry date.3- Programming gate:-Connecting face recognition with DB Program e-card Microcontroller to control gate4- mechanical part: Controlling opening and closing gate using motors, sensors and microcontroller.	Smart Gate with face recognition technology		

Designing an elevator to be safety and comfortable, safeties are activated by a governor when the elevator moves too quickly. Most governor systems are built around a sheave positioned at the top of the elevator shaft. The governor rope is looped around the governor sheave and another weighted sheave at the bottom of the shaft. The rope is also connected to the elevator car, so it moves when the car goes up or down. As the car speeds up, so does the governor. Elevators also have electromagnetic brakes that engage when the car comes to a stop. The electromagnets actually keep the brakes in the open position, instead of closing them. With this design, the brakes will automatically clamp shut if the elevator loses power.	Smart Elevator System		
Tablet PC is a fully capable PC you can interact with in new and different ways. With its tablet pen and ink technology, your Tablet PC is a writing pad that lets you handwrite text and drawings into the computer. And with its speech recognition capabilities, your Tablet PC is a dictation machine that converts your voice into text. You can also use the pen and your voice to control your computer or if you prefer, you can control your Tablet PC with a standard keyboard and mouse. The following figures show an example of Tablet PC.	Building and design of School tablet	Control Systems	
تعتمد علي تركيب مستشعرات أو مايشبه السماعات علي رأس المستخدم ونقوم من خلالها باستخراج الاشارات الكهربائية الصادرة عن مخ الشخص ويتم تحليل هذه الاشارات علي الكمبيوتر ومن ثم التحكم في الكرسي الخاص بذوي الاحتياجات الخاصة من حيث الحركة والاتجاه لمساعدة اصحاب الاعاقة الكاملة والشلل الكلي وكبار السن لاستعادة قدرتهم علي الحركة من مكان لاخر دون مساعدة كبيرة من اخرين وبشكل آمن بدون اللجوء لاي شخص لفهم مايريد فعله او التنقل اليه وكذلك دون اللجوء لاي نوع من الاسلاك المعوقة للحركة.	التحكم الالي في الاجهزه المساعده لذوى الاحتياجات الخاصه		
Control all trains lines through scada system that enable to monitor all movements remotely and control it to avoid accidents, regulate all times and control the movements of the train slider.	Trains movements control via SCADA		
Designing control unit based on PLC to produce all control signals to control trains lines movements. A sensor is fixed at the track and will transmit the signal to PLC when receives a signal from the sensor, it will generate an output and transmit to the output devices.	Trains Movement Control via PLC		

Tracking is the problem of generating an inference about the motion of an object given a sequence of images. Good solutions to this problem can be applied to many applications. For example, if we can track a moving person accurately, then we can make an accurate record of his motion. Once we have this record, we can use it to drive a rendering process. This means that a single performer can produce sequences he would not want to do in person. In this project, we proposed two real–time tracking systems, which detect an object entering the field of view (FOV) of a camera and execute tracking of the detected object. In the first tracking system, we allow the model of the target to vary dynamically during the tracking process so that it can assimilate variations of shape and intensities of the target object. We also encode the tracking history into state parameters of a Kalman filter.	بناء نظام لتتبع الكائنات Building an Object Tracking System		
Designing distributed systems between all trains lines to share all information and synchronize the control signals for either movement or direction between them to avoid accidents and misleading control.	Using Distributed Control Systems (DCS) in Controlling Train Movement and direction.		
Designing a mechanical body of self-driving vehicle with machine vision and control unit to receive signals from camera and determine the suitable movement in the specific map. It also provided by photo resistor to detect the light, if the sun light exist it doesn't lightening as its resistance become infinity otherwise it lights and its intensity can be controlled through the resistance value.	مركبة ذاتية القيادة مزودة بنظام إضاءة ليلية أوتوماتيكيا Self - Driving Vehicle with Automatic Night Mode System		
Designing line follower which is a machine that can follow a path through sensors to detect path. The path can be visible like a black line on a white surface or vice-versa or it can be invisible like a magnetic field. It can detect any type of paths and switching between modes to follow the path, it has a lot of applications especially in autonomous applications.	النظم الذكية للتحكم في نظم تتبع الخطوط Smart Line Follower Automation System		
The control system consists of an onboard section with a self-made micro azimuth gradient sensor and a ground station. An open-loop control strategy named teaching by showing based control is proposed by stimulating a skilled human operator's manipulation of the aircraft, with the objective of learning operator's manipulation and then generating a set of command data to control	تصميم مركبة هوائية و التحكم فيها آليا Design and Control for Autonomous Hovering Air Vehicle		

autonomous hovering. A feed forward plus a PD feedback control is further employed to control the aircraft using the command data generated in the open-loop control. The PD control gains are tuned automatically according to the attitude of the vehicle by fuzzy logic theory.			
The main objective of this package is to provide the student whose, Study the first course of digital design, with simple program that simulate digital trainer.	Simulation Package for Digital Trainer Kit (SPDT) Based on Object Oriented Paradigm		

عاشراً: مجالات عمل الخريجين

1- مهندس instrumentation في شركات البترول.
2- مهندس صيانة في شركات البترول.
3- مهندس حاسبات في شركات الكهرباء
4- مهندس تحكم في شركات الكهرباء
5- مهندس صيانة في شركات الكهرباء.
6- مهندس شبكات.
7- مهندس برمجيات في شركات البرمجيات.
8- مهندس قواعد بيانات.
9- مصمم مواقع انترنت.
10- مهندس تحكم في اي مصنع.
11- مهندس اتصالات في شركات الاتصالات.
12- مهندس كهرباء في شركات الانشاءات.

13- مهندس تحكم في شركات تصميم انظمة التحكم

حادى عشر: الإمكانيات المادية بالقسم

بيان توزيع بالسادة المشرفين والمهندسين والإداريين على معامل قسم هندسة الحاسبات ونظم التحكم

م	المعمل	المشرف	النشاط	أمين المعمل	المهندس
1	هندسة البرمجيات	ا.د. هشام عرفات	تمارين عملية للطلاب+ بحوث+ خدمة مجتمع (دورات)	سامح فهمى	
2	معمل الحاسبات (ا)	أ.د صبرى سرايا	تمارين عملية للطلاب+ خدمة مجتمع (دورات)	فاطمة عبدالمحسن	فريد سمير
3	معمل الحاسبات (ب)	أ.د صبرى سرايا	تمارين عملية للطلاب+ خدمة مجتمع (دورات)	أمل عبد الرحمن	
4	معمل الحاسبات (ج)	أ.د صبرى سرايا	تمارين عملية للطلاب+ خدمة مجتمع (دورات)	معار مؤقتا	
5	حاسبات مصغرة	د. أحمد صالح	تمارين عملية للطلاب+ بحوث	ا.سنسبيل هلال	فريد سمير
6	الكترونيات رقمية	ا.د. هشام عرفات	تمارين عملية للطلاب+ بحوث	وليد	
7	حاسبات مترابطة	د.عبدالحميد فوزى	تمارين عملية للطلاب+ بحوث	أ.نعيمة عبد العاطى أ.محمد أبوبكر	*م.مارى
8	معمل المنحة من HP	ا.د. هشام عرفات	تمارين عملية للطلاب+ بحوث		
9	الإلكترونيات الصناعية	د. محمد شريف	تمارين عملية للطلاب + خدمة مجتمع (دورات)	أ.أمينة كامل	فريد سمير
10	التحكم التعاقبى	د. مصطفى الحسينى	تمارين عملية للطلاب + بحوث	*أ.فاتن عبد الغفار	
11	المحاكاة الصناعية	د. أميرة هيكل	تمارين عملية للطلاب + بحوث	*أ.نادية عرفة	

مسئولية أمين المعمل إدارى المعمل

متابعة العهد والحفاظ عليه
جرد دوري وتكهين ما يلزم
متابعة سير إشغال المعمل
متابعة الدخول من قبل الطلاب ورصد غياب الطلاب
الإبلاغ عن الأعطال احتياجات الصيانة

مسئولية مهندس المعمل

متابعة حالة الأجهزة والتجهيز الفنى للمعمل
المشاركة فى أعمال الجرد والتكهين
حل مشاكل التشغيل
الإبلاغ عن المشاكل المتعلقة بالكهرباء ووصلات شبكة الإنترنت
على جميع العاملين الإلتزام بالدور المكلف به والتواجد طوال فترة الدوام بمقار عملهم

اسم المعمل	الموقع	المساحة	عدد الأجهزة	ملاحظات	متطلبات لتحسين الأداء
هندسة البرمجيات C2111	الناحية الشرقية	108 متر	17 حاسب شخصى	من طراز قديم وبحاجة الى تحديث فورى	المعمل بحاجة الى ترميم والتخلص من أنابيب التكييف القديم وتغيير الأرضيات
الحاسبات الشخصية (أ) C2112	الناحية القبلية	150 متر	32 حاسب شخصى	20 برنامج التطوير المستمر CIQAP	المعمل بحاجة الى ترميم والتخلص من أنابيب التكييف القديم وتغيير الأرضيات
الحاسباتالشخصية (ب) C2113	الناحية القبلية	150 متر	24 حاسب شخصى	من طراز قديم وبحاجة الى تحديث فورى	المعمل بحاجة الى ترميم والتخلص من أنابيب التكييف القديم وتغيير الأرضيات
الحاسبات المصغرة C1114	الناحية البحرية	120 متر	23 حاسب شخصى	برنامج التطوير المستمر CIQAP	المعمل بحاجة الى ترميم الأسقف
الحاسبات الرقمية C1115	الناحية البحرية	120 متر	17 جهاز حاسب شخصى(طراز قديم) 3 سويتش+ 3 روتر	هدية من شركة سيسكو	
الحاسبات المترابطة C1116	الناحية البحرية	120 متر	21 جهاز B.C. Tablet 20 جهاز حاسب شخصى	هدية من شركة HP جائزة مشروع مقدم للقسم	المعمل بحاجة الى تغيير الأرضيات
الألكترونيات الصناعية C1117	الناحية البحرية	120 متر	10 وحدات PLC 5- SEMENIS S300 شاشات اسكرين تاتش – 5 وحدات محاكاة – 5 وحدات PA SENSOR 5 وحدات AC DRIVER- 5 كمبروسور	هدية من شركة سيمنز	
التحكم التعاقبى C1118	الناحية البحرية	120 متر	ا ميكرو كنترول شركة أتمل 2 وحدة ميكرو كنترول شركة ميكرو اتش – 6 PLC شركة بد – 2 PLC شركة LG		
المحكاه الصناعية C1119	الناحية البحرية	120 متر	20 حاسب شخصى	5أجهزة برنامج التطوير المستمر CIQAP	المعمل بحاجة الى تغيير الأرضيات

ثاني عشر: القوى البشرية

م		الأسم	الدرجة	ملاحظات
1	**الأساتذة العاملون**	هشام عرفات على خليفة	أستاذ	رئيس مجلس القسم الحالى ووكيل الكلية لشئون التعليم والطلاب
2	**الأساتذة المتفرغون**	مفرح محمد سالم محمد	أستاذ متفرغ	رئيس مجلس القسم الأسبق
3		فايز فهمى جمعه عريض	أستاذ متفرغ	رئيس مجلس القسم الأسبق
4		على ابراهيم الدسوقى ابراهيم	أستاذ متفرغ	رئيس مجلس القسم الأسبق
5	**أستاذ مساعد**	صبرى فؤاد سرايا	أستاذ مساعد	رئيس مجلس القسم السابق
6	**المدرسون**	محمد شريف مصطفى ابو المجد القصاص	مدرس	منسق القسم بوحدة ضمان الجودة
7		لبيب محمد لبيب عفيفى	مدرس	أجازة رعاية زوجة 15 عام
8		حافظ شفيق على خفاجه	مدرس	أجازة رعاية زوجة 13 عام
9		شريف السيد حسين المتولى	مدرس	عائد من أجازة بتاريخ قبراير 2013
10		أحمد ابراهيم صالح	مدرس	نائب وكيل الكلية لشئون التعليم والطلاب
11		تامر عبد الغنى طلبه حجازى	مدرس	أجازة مهمة علمية
12		أميرة يسن محمد هيكل	مدرس	مدير وحدة التدريب بالكلية
13		مروى فايز فهمى جمعه عريض	مدرس	
14		عبد الحميد فوزى عبد الحميد ابراهيم		نائب مدير وحدة ضمان الجودة
15		مصطفى عبد الخالق الحسينى	مدرس	
16		رائف شكرى شفيق شحاته	مدرس	أجازة مرافق زوجة
17		عمرو محمد ثابت علي الدين	مدرس	
18	**م مساعد**	وائل عبد الرحمن عبد الرحمن	مدرس مساعد	أجازة رعاية أسرة
19		جون فايز ونيس زكى		أجازة رعاية أسرة
20		محمد معوض عبده عبد السلام		
21		محمد أحمد صادق عبدالله		أجازة مرافق زوجة
22		عبد الرحمن يحى عبد الفتاح حسن		أجازة (منحة خاصة لدراسة الدكتوراه)
23		محمود محمد محمود بدوى		
24		حسام محمد عبد الواحد عبد الغفار		أجازة (منحة خاصة لدراسة الدكتوراه)
25		أحمد سليمان نعيم سليمان		أجازة (منحة خاصة لدراسة الدكتوراه)
26		محمد صبرى فؤاد سرايه		
27		نهى أحمد محمد محمد صقر		
28		هشام حلمى السيد جاد		
29		نهله بشرى عبد المؤمن عبد الحميد		
30		محمود محمد سعفان السيد موسى		
31		أحمد محمد عبد العليم غانم		
32	**معيد**	مها حسن السيد الشاوي	معيد	
33		محمد محمود محمد سليمان سمره	معيد	
34		هبه محمود هلال عطيه	معيد	
35		هناء يوسف عبد الرحمن عبده زين الدين	معيد	
36		ندي عادل السيد نصر أحمد ضيف	معيد	
37		ايمان محمد انور الجندي	معيد	
38		محمد نزيه محمد ابراهيم شحاته	معيد	
39		أمل لطفى الحسينى يوسف	معيد	أجازة (منحة خاصة لدراسة الماجستير)
40		سماح عرفات عبد العاطي علم الدين	معيد	أجازة مرافق زوجة
41		علاء الدين عبدالباقى	معيد	
42		مرام جمال اسماعيل	معيد	
		نورهان		