Faculty of Computers and Information

Information Systems Department

Menoufia University

BACHELOR OF COMPUTERS AND INFORMATION

(Information Systems)

Program and Courses Specification

2024 – 2025

Faculty of Computers and Information

Information Technology Department

Menoufia University

BACHELOR OF COMPUTERS AND INFORMATION

(Information Technology)

Teaching Institution:	Faculty of Computers and Information Menoufia University, Menoufia, Egypt
Awarding Institution:	Menoufia University
Degree Award:	Bachelor of Computers and Information (Information Systems)
Length and Mode:	4 years / Full semester time
Program Coordinator:	Prof. Asmaa Haroon

Assistant Coordinator:	

Contents:

PROGRAM SPECIFICATIONS 4

PROGRAM SPECIFICATIONS

Program Specification

A- Basic Information

1- Program title:	Information Systems
2- Program type:	Single
3- Department (s):	Information Systems
4- Coordinator:	
5- External evaluator(s):	Not assigned yet
6- Program specifications approval:	/ / 2025

B- Professional Information

1- Program aims

1. Ability to integrating information technology solutions and business processes to meet the information needs of businesses and other enterprises, enabling them to achieve their objectives in an effective, efficient way.
2. gain the ability to generate, process, and distribute information.
3. Gain a broad business and real-world perspective.
4. Develop strong analytical and critical thinking skills.
5. Demonstrate strong ethical principles and have good interpersonal communication and team skills.
6. Ability to design and implement information technology solutions that enhance organizational performance.

2- The Attributes of Information Systems Graduate

After successfully completing the Information systems program, the graduate should be able to:

7. Recognize problems that are amenable to computer information systems, and knowledge of the tools necessary for solving such problems.
8. Understand fundamentals of systems development life cycle (SDLC), information networks, information security, data mining, e-commerce, geographical information systems, and crisis management.
9. Managing and exploiting organizational data and information; designing data and information models, Managing information systems development resources and projects
10. Implement solutions, including use of appropriate programming languages, web-based systems and tools, design methodologies, and database systems.
11. Apply the principles of effective information management, information organization, information mining, and information-retrieval skills to information of various kinds, including text, images, sound, and video.
12. Know the fundamentals of intelligent information systems technologies.
13. Specify, design, and implement computer-based information systems, and evaluate them in terms of general quality attributes and possible tradeoffs presented within the given problem.
14. Apply IS solutions to functional, inter-organizational, operational, managerial, and executive problems and opportunities.
15. Describe characteristics of various components of information systems, use the appropriate tools and techniques to analyze, design, and construct information systems.
16. Communicate effectively by oral, written and visual means.
17. Work effectively as an individual and as a member of a team.
18. Perform independent and efficient time management.
19. Aware of key ethical issues affecting information systems and their responsibilities as information science professionals.

3- Intended learning outcomes (ILOs)

K-Knowledge and understanding:

K1 A core of analysis, algebra, applied mathematics and statistics.
K2 Information systems, data and Information Management, enterprise architecture, IS project management, IT infrastructure, systems analysis and design, and IS strategies.
K3 Principles and techniques of database management systems, management, data mining, geographical information systems, multimedia, application development, business process management, enterprise systems, human computer interaction, object-oriented analysis and design, e-technologies, multimedia, image processing, information and infrastructures security and computer graphics techniques.
K4 Issues such as quality, reliability, enterprise, employment law, accounting and health.
K5 Awareness of organizational, human and economic sides of modern organizations..
K6 Principles of Information communication and information security.
K7 Specification, analysis, design, implementation and operation and maintenance of IS solutions.
K8 Modeling organizational processes and data, defining and implementing technical and process solutions, managing projects, and integrating systems
K9 Types and alternatives of global information systems architectures, and their differences in terms of service and cost consequences, and their implications for the organizational support needed.

I- Intellectual skills

I1 Define traditional and nontraditional information systems problems, set goals towards solving them, and. observe results.
I2 Perform comparisons between (methods, techniques...etc).
I3 Identify attributes, components, relationships, patterns, main ideas, and errors.
I4 Restrict solution methodologies upon their results.
I5 Select the suitable tools, methods and techniques for modeling, analyzing IS, establishing criteria, and verify solutions.
I6 Identify a range of solutions and critically evaluate and justify proposed design solutions.
I7 Solve IS problems with pressing commercial, time, and industrial constraints.
I8 Suggest an innovative design to solve a problem containing a range of commercial and industrial constraints.
I9 Perform problem analysis from written descriptions; derive requirements specifications from an understanding of problems (analysis, synthesis).

P- Professional and practical skills

P1 Use appropriate programming languages, web-based systems and tools, design methodologies, and database systems.
P2 Use quantitative analysis techniques appropriately.
P3 Justify technological, methodological and management choices for an information system project for a given organization.
P4 Plan and manage an information systems project from inception to final implementation and cut-over.
P5 Produce acceptable reports and technical and user system documentation.
P6 Perform information acquisition and management, using the scientific literature and Web sources.
P7 Apply the principles of effective information acquisition, information management, organization, and information-retrieval to text, images, sound, and video.
P8 Apply the principles of human-computer interaction to the evaluation and construction of a wide range of materials including user interfaces, web pages, and multimedia systems.
P9 Using tools to automate IS development phases.
P10 Analyze and documenting the feasibility of various options and comparing solution options.
P11 Maintaining existing information systems

d- General and transferable skills

d1-	Explain the IT problems and their solutions, and effective skills in management of IT projects. Demonstrate a range of basic skills required to work effectively in communications and IT industry, understand the need for continuing professional development and lifelong learning in order to cope with rapidly changing communications technology
d2-	Provide effective technology explanations for audio/visual, computer, multimedia, voice, video, and web based applications and services to all areas of the college,
d3-	Explain the use of mathematical modeling to predict the behavior of a physical system, develop an analytical approach to understanding complex systems
d4-	Describe how computer vision is implemented, Explain the characteristics of signal and image processing algorithms, computer animation, the ability to apply algorithms and approaches of pattern recognition for real application
d5-	Explain the qualities of the software and software documentation
d6-	Describe the computer network structures, protocols and services, traffic analysis,
d7-	Describe the explain the digital network structure and services,
d8-	Describe and explain how parameters of statistical data are calculated and tested, the methods of statistical data analysis, solving problems associated with statistical data.

d9-	Group working to apply data mining techniques to simple and complex problems, Use of technological tool to preprocess and prepare data for knowledge discovery, Use of technological tool to clean, integrate, transform, and reduce data, Use of technological tool to design graphical user interfaces based on a data mining query language
d10-	Demonstrate and explain concepts of Artificial Intelligence, analysis of searching techniques, basic knowledge of genetic algorithms and neural networks basic idea.

4. Academic standards

The academic standards outlined in this specification are derived from the National Academic Reference Standards (NARS) for Computing and Information, as approved by the National Authority of Quality Assurance and Accreditation of Education in October 2010.

5- Curriculum Structure and Contents

a) Program duration

Program duration: 146 credit hours.

b) Program structure

No. of compulsory credit hours: 125 hours.

No. of Elective credit hours: 21 hours.

c) Program course categories

Components of the Program

Subject Area Credit Hours Credit % Tolerance

Humanities, ethical and Social

- Program courses

6.1- 1st year Semester 1

A. Compulsory

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
CS101	Computer Introduction	4	2	1	1	A2, C8, D7, D8

GN111	English Language-1	4	2	1	1	A3, A5, A7, B2, C1, C2, C3, D1, D2
MA111	Mathematics-1	4	2	-	2	A1, B1, D6
MA131	Discrete Mathematics	4	2	-	2	A1, A4, B1, D6
GN121	Arabic Language	4	2	-	2	A3, A5, B2, C1, C2, C3, D1, D2

B. Elective- number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None			Major			

C- Optional number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

6.2- 1st year Semester 2

A. Compulsory

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
CS121	Logic Design-1	6	3	2	1	B1, B2, C6, C8, D4, D7
CS141	Algorithms & Flowcharts	6	3	-	3	A2, A4, B2, B7, C5, D1, D2, D3, D6, D7
MA112	Mathematics-2	6	3	-	3	A1, B1, D6

PH111	Physics	6	3	2	2	A3, B4
ST111	Statistics & Probabilities	6	3	-	3	A1, A4, B1, D6

B- Elective- number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

C- Optional number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

6.3- 2nd year Semester 1

A. Compulsory

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
CS222	Logic Design-2	4	2	1	1	B1, B2, C6, C8, D4, D7
CS231	Computer Software	4	2	-	2	A4, B1, B4, B5, D1, D2, D3, D9
CS211	Computer Peripherals	4	2	1	1	A3, B2, C8, D2
CS241	Data Structure	4	2	-	2	A2, B1, B2, B6, C5, D1, D2, D3, D9
OD201	Organization Fundamentals	4	2	-	2	A2, A7, B7, D6

B- Elective- number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

C- Optional number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

6.4- 2nd year Semester 2

A. Compulsory

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
CS232	Operating Systems-1	6	3	3	-	A4, B1, B2, B7, C5, C6, C8, D1,D2
CS251	File Organization	6	3	3	-	A2, A3, B5, B6, C5, C8, D8, D9
CS243	System Analysis-1	6	3	-	3	A2, A3, B2, B3, B4, C1, C2, C3, C7, D1, D2, D7, D8
ST221	Statistical Methods	6	3	-	3	A1, A7, B1, D6
OD211	Operations Research-1	6	3	-	3	A2, A7, B7, D6

B- Elective- number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

C- Optional number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

6.5- 3rd year Semester 1

A. Compulsory

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
ST331	Modeling & Simulation	6	3	-	3	A2, B3, C2, C2
IS331	Database Systems-1	6	3	3	-	A1, A3, B1, B3, C3, C4, D2, D6
IS352	IS for Administration	6	3	-	3	A4,A5, A8, B4, C1, C5, D4, D5
CS361	Computer Networks-2	6	3	3	-	A3, B1, B4, B5, C5, C6, D1, D2, D3, D9
	College Elective-1	6	3	-	3	A3, A6, B3, B6, C4, C6, C8, D4, D5, D7

B. Elective- number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
-	College Elective-1	6	3	-	3	A3, A6, B3, B6, C4, C6, C8, D4, D5, D7

B. Optional number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

6.6- 3rd year Semester 2

A. Compulsory

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
IS332	Database Systems-2	6	3	3	-	A1, A3, B1, B3, C3, C4, D1, D2, D6
IS311	Analysis of IS	6	3	-	3	A2, B3, C2, C2
IT371	I Storing and Retrieving	6	3	1	2	A4, B1, B4, B5, C5, C6, D1, D2, D3, D9
IS372	Artificial Intelligence	6	3	-	3	A3, B1, B4, B5, C5, C6, D1, D2, D3, D9

CS3xx	Elective-1	6	3	-	3	A3, A6, B3, B6, C4, C6, C8, D4, D5, D7

B. Elective- number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
IS322	Office Automation	6	3	-	3	A3, B2, C4, D2, D4
IS371	IS Economy	6	3	-	3	A2, B3, C5, C6, D5, D6
IS361	Computer Graphics	6	3	-	3	A3, B7, C7, C8, D2
IS382	Selected Topics	6	3	-	3	A3, A6, B3, B6, C4, C6, C8, D4, D5, D7

C. Optional number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

6.7- 4th year Semester 1

A. Compulsory

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
CS471	IS Design	4	2	-	2	A2, A6, B2, B3, B4, C1, C2, C3, C7, D1, D2, D7, D8
CS434	Multimedia	6	3	3	-	A4, B1, B2, C5, C6, C8, D1, D2

CS4xx	ES Development	6	3	-	3	A3, A6, B3, B6, C4, C6, C8, D4,D5, D7
	College Elective 2	6	3	3	-	A3, B3, D5, D7
-	Elective-2	6	3	-	3	A3, A6 B3, B6, C4, C6, C8, D4, D5, D7
CS481	Project	6	1	5	-	A5, A6, A7, B2, B3, B4, B5, B6, B7, C1, C2, C3, C4, C7, D1, D2, D3, D4, D7, D8, D9

B. Elective- number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
CS467	Internet Computing	4	2	-	2	A6, B6, C7, C8, D1, D2
IS434	Advanced Databases	4	2	-	2	A6, B6, C4, C7, C8, D1, D2
IS463	MM intelligent Systems	4	2	-	2	A6, B4, B5, B6, C4, C7, C8, D1, D2, D7, D8
IS482	Selected Topics	4	2	-	2	A3, A6, B3, B6, C4, C6, C8, D4, D5, D7

C. Optional number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

5.7- 4th year Semester 2

A. Compulsory

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
CS435	Distributed Database	6	3	-	3	A2, A7, B1, B2, C4, C5, C6, D1, D2, D6, D9
CS436	Graphic IS	6	3	3	-	A6, B3, B6, C1, C4, C5, C7, D1, D2, D9
CS454	I. Centers Administration	6	3	-	3	A3, A4, B1, B2, B7, C5, C6, C7, C8, D1, D2, D8
CS4xx	Elective-3	6	3	-	3	A3, A6, B3, B6, C4, C6, C8, D4, D5, D7
CS481	Project	6	1	5	-	A5, A6, A7, B2, B3, B4, B5, B6, B7, C1, C2, C3, C4, C7, D1, D2, D3, D4, D7, D8, D9

B. Elective- number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
CS467	Internet Computing	6	3	-	3	A6, B6, C7, C8, D1, D2
IS434	Advanced Databases	6	3	-	3	A6, B6, C4, C7, C8, D1, D2
IS463	MM intelligent Systems	6	3	-	3	A6, B4, B5, B6, C4, C7, C8, D1, D2, D7, D8
IS482	Selected Topics	6	3	-	3	A3, A6, B3, B6, C4, C6, C8, D4, D5, D7

C. Optional number required:

Code No.	Course Title	No. of units	Lecture H/W	Lab. H/W	Exercise H/W	Program ILOs Covered
None						

7- Program admission requirements

General Secondary School Certificate with Major in Mathematics with high academic reference, at secondary school marks of > 91%, or an equivalent certificate from a foreign institute recognized by the university. The programme is studied for a minimum of four years full-time.

The programme is arranged normally in 8 x 14 week semesters (2 semesters per year). There are normally 28 (2 x 14) study weeks (excluding examination periods and summer session) in each year. The programme is divided into 246 hours per week: 36 basic science hours per week, 162 specialized hours per week, 12 sciences and humanities hours per week, and 36 other hours per week. Currently there are no Optional courses on this programme.

8- Regulations for progression and program completion

(For the students to be transferred from one academic year to the next, he/she is required to have successfully passed in all subjects. However, the student may still be transferred if he/she has failed in not more than two basic subjects from the same academic year or from previous years. In such cases, students " carrying" subjects from one year to the next should re-sit for their "failed" subjects in their proper respective semesters. Final year students who have failed in a maximum of two basic complementary ones in that year or from previous years can re-sit for their exams in those subjects in September of the same year. Should the student failed again, he/she has to re-sit for his/her exams in those subjects in their proper respective semesters thereafter as many times as necessary until he/she succeeds)

First Year/Level/Semester

- Moved to second Semester Passing in all courses of the year or fail in not more than two compulsive subjects

Second Year Semester 1 and 2

- Passing in all courses the year but at least tow related to first and second years

Third Year Semester 1 and 2

- Passing in all courses the year but at least tow related to first, second, and/or third years

Forth Year Semester 1, and 2

Passing in all courses or fail in not more than two compulsive subjects. In this case, the student is allowed to enter a September Exam in the same year.

By laws and Regulations for Undergraduate Students

"Enrollment opportunities/or "regular" and "external" students:

Academic year	Enrollment opportunities	
	Regular students	External students
First	Two opportunities	No opportunities
Second	Two opportunities	Two opportunities
Third	Two opportunities	Two opportunities
Fourth	Two opportunities	None limited when passes half year courses

Once the student exhausts the number of opportunities of a being a regular" student, he/she becomes an "external" student for a certain number of times according to the above table. Once an "external" student in a certain year succeeds in his/her exams for that year to allow him/her to be transferred to the following year, he/she automatically becomes registered as a regular student again.

8- Evaluation of program intended learning outcomes

Evaluator	Tool	Sample
1- Senior students	**questionnaire**	**Annex**
2- Alumni	**Feed back from graduates network workgroups**	**www.mufic.com**
3- Stakeholders (Employers)	**None**	
4-External Evaluator(s) (External Examiner(s))	**Review Report**	**Not yet received**
5- Other	**None**	**None**

Annex A:

Academic Standards

The following Figures Illustrates the Faculty programs Academic Standards compared with the IEEE& ACM 2005 Reference Standards. The programs Bench Marks could be concluded through the margins between both the standards

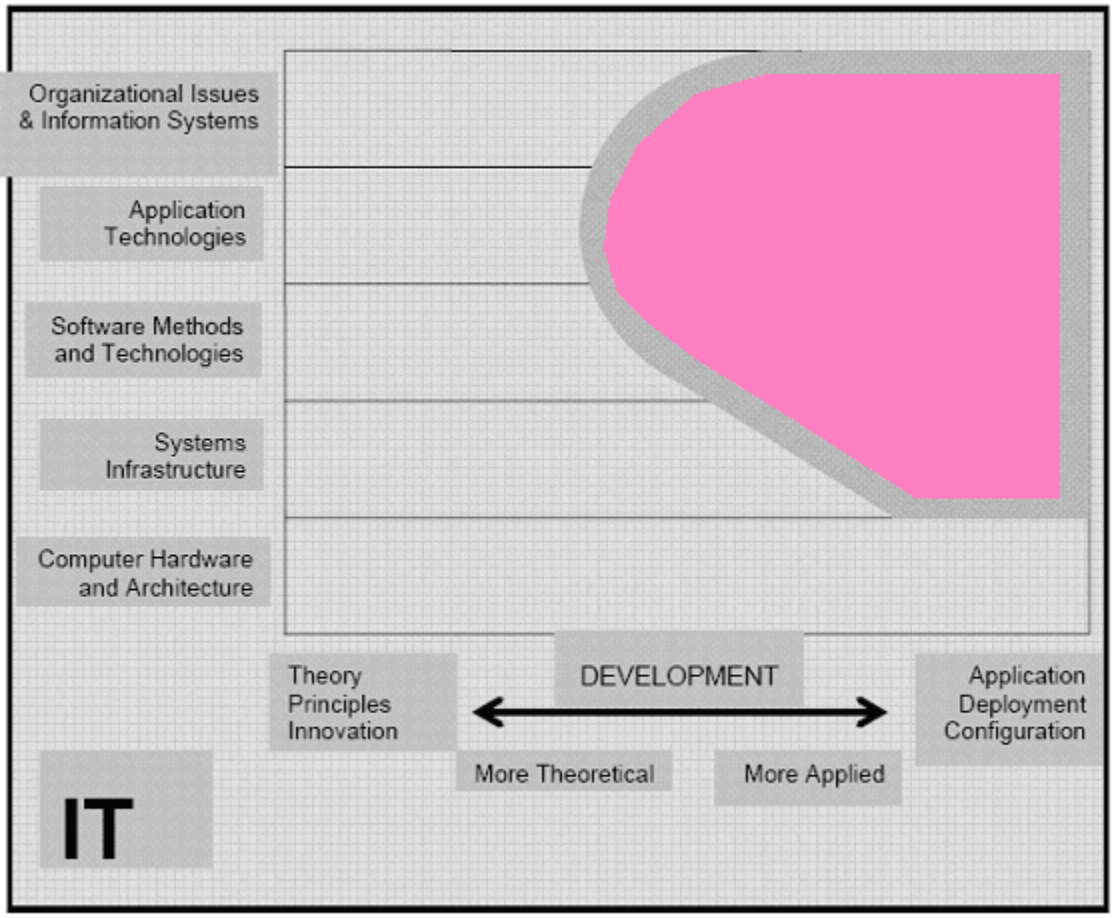


Figure H-1. Information Technology Program

Reference standards

Program Academic standards

Table H.1: Comparative weight of computing topics across the five kinds of degree programs

Knowledge Area	*CS*		*IS*		*IT*		*OR*	
	min	*max*	*min*	*max*	*min*	*max*	*min*	*max*
Programming Fundamentals	4	5	2	0	0	4	5	5

Integrative Programming	1	3	2	0	2	5	1	3
Algorithms and Complexity	4	5	1	0	1	2	3	4
Computer Architecture and Organization	2	4	1	0	0	2	2	4
Operating Systems Principles & Design	3	5	1	0	2	2	3	4
Operating Systems Configuration & Use	2	4	2	0	1	5	2	4
Net Centric Principles and Design	2	4	1	0	0	4	2	4
Net Centric Use and configuration	2	3	2	0	2	5	2	3
Platform technologies	0	2	1	0	1	4	0	3
Theory of Programming Languages	3	5	0	0	0	1	2	4
Human-Computer Interaction	2	4	2	0	2	5	3	5
Graphics and Visualization	1	5	1	0	1	1	1	3
Intelligent Systems (AI)	2	5	1	0	0	0	0	0
Information Management (DB) Theory	2	5	1	0	2	1	2	5
Information Management (DB) Practice	1	4	4	0	1	4	1	4
Scientific computing (Numerical methods)	0	5	0	0	0	0	0	0
Legal / Professional / Ethics / Society	2	4	2	0	2	4	2	5
Information Systems Development	0	2	5	0	1	3	2	4
Analysis of Business Requirements	0	1	5	0	0	2	1	3
E-business	0	0	4	0	2	2	0	3
Analysis of Technical Requirements	2	4	2	0	1	5	3	5
Engineering Foundations for SW	1	2	1	0	0	0	2	5
Engineering Economics for SW	0	1	1	0	2	1	2	3
Software Modeling and Analysis	2	3	3	0	1	3	4	5
Software Design	3	5	1	0	0	2	5	5
Software Verification and Validation	1	2	1	0	2	2	4	5
Software Evolution (maintenance)	1	1	1	0	1	2	2	4
Software Process	1	2	1	0	0	1	2	5
Software Quality	1	2	1	0	2	2	2	4
Comp Systems Engineering	1	2	0	0	1	0	2	3
Digital logic	2	3	1	0	0	1	0	3
Embedded Systems	0	3	0	0	2	1	0	4
Distributed Systems	1	3	2	0	1	3	2	4
Security: issues and principles	1	4	2	0	0	3	1	3
Security: implementation and mgt	1	3	1	0	2	5	1	3
Systems administration	1	1	1	0	1	5	1	2
Optimization	0	2	0	0	0	2	4	6
Decision analysis	0	1	0	0	2	1	4	6
Support system	0	0	0	0	1	0	5	8
Simulation and modeling	0	2	0	0	0	2	3	5

Risk analysis	0	1	0	0	2	1	3	7
Multi objective decision making	0	0	0	0	1	0	4	8
Management of Info Systems Org.	0	0	3	0	0	0	0	0
Systems integration	1	2	1	0	2	5	1	4
Digital media development	0	1	1	0	1	5	0	1
Technical support	0	1	1	0	0	5	0	1

Table H.2: Comparative weight of non-computing topics across the five kinds of degree programs

Knowledge Area	*CS*		*IS*		*IT*		*OR*	
	min	*max*	*min*	*max*	*min*		*max*	
Organizational Theory	0	0	1	4	1	2	0	0
Decision Theory	0	0	3	3	0	1	0	0
Organizational Behavior	0	0	3	5	1	2	0	0
Organizational Change Management	0	0	2	2	1	2	0	0
General Systems Theory	0	0	2	2	1	2	0	0
Risk Management (Project, safety risk)	1	1	2	3	1	4	2	4
Project Management	1	2	3	5	2	3	4	5
Business Models	0	0	4	5	0	0	0	0
Functional Business Areas	0	0	4	5	0	0	0	0
Evaluation of Business Performance	0	0	4	5	0	0	0	0
Circuits and Systems	0	2	0	0	0	1	0	0
Electronics	0	0	0	0	0	1	0	0
Digital Signal Processing	0	2	0	0	0	0	0	2
VLSI design	0	1	0	0	0	0	0	1
HW testing and fault tolerance	0	0	0	0	0	2	0	0
Mathematical foundations	4	5	2	4	2	4	3	5
Interpersonal communication	1	4	3	5	3	4	3	4

Table H.3. Relative performance capabilities of computing graduates by discipline

Area	*Performance Capability*	*CS*	*IS*	*IT*	*OR*
Algorithms	Prove theoretical results	5	1	0	3
	Develop solutions to programming problems	5	1	1	3
	Develop proof-of-concept programs	5	3	1	3
	Determine if faster solutions possible	5	1	1	3
Application programs	Design a word processor program	4	1	0	4
	Use word processor features well	3	5	5	3
	Train and support word processor users	2	4	5	2
	Design a spreadsheet program (e.g., Excel)	4	1	0	4
	Use spreadsheet features well	2	5	5	3
	Train and support spreadsheet users	2	4	5	2
Computer programming	Do small-scale programming	5	3	3	5
	Do large-scale programming	4	2	2	5

	Do systems programming	4	1	1	4
	Develop new software systems	4	3	1	5
	Create safety-critical systems	3	0	0	5
	Manage safety-critical projects	2	0	0	5
Hardware and devices	Design embedded systems	1	0	0	1
	Implement embedded systems	2	1	1	3
	Design computer peripherals	1	0	0	1
	Design complex sensor systems	1	0	0	1
	Design a chip	1	0	0	1
	Program a chip	1	0	0	1
	Design a computer	1	0	0	1
Human-computer interface	Create a software user interface	4	4	5	4
	Produce graphics or game software	5	0	0	5
	Design a human-friendly device	2	0	1	3
Information systems	Define information system requirements	2	5	3	4
	Design information systems	3	5	3	3
	Implement information systems	3	4	3	5
	Train users to use information systems	1	4	5	1
	Maintain and modify information systems	3	5	4	3
Information management (Database)	Design a database mgt system (e.g., Oracle)	5	1	0	4
	Model and design a database	2	5	5	2
	Implement information retrieval software	5	3	3	4
	Select database products	3	5	5	3
	Configure database products	2	5	5	2
	Manage databases	2	5	5	2
	Train and support database users	2	5	5	2
IT resource planning	Develop corporate information plan	0	5	3	0
	Develop computer resource plan	2	5	5	2
	Schedule/budget resource upgrades	2	5	5	2
	Install/upgrade computers	3	3	5	3
	Install/upgrade computer software	3	3	5	3
Intelligent systems	Design auto-reasoning systems	4	0	0	2
	Implement intelligent systems	4	0	0	4
Networking and communications	Design network configuration	3	3	4	2
	Select network components	2	4	5	2
	Install computer network	1	3	5	2
	Manage computer networks	3	3	5	3
	Implement communication software	4	1	1	4
	Manage communication resources	0	3	5	0
	Implement mobile computing system	3	0	1	3
	Manage mobile computing resources	2	2	4	2
	Manage an organization's web presence	2	4	5	2

Systems Development Through Integration	Configure & integrate e-commerce software	3	4	5	4
	Develop multimedia solutions	3	4	5	3
	Configure & integrate e-learning systems	2	5	5	3
	Develop business solutions	2	5	3	2
	Evaluate new forms of search engine	4	4	4	4

2- General standards

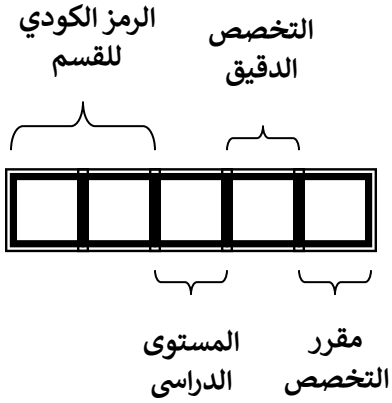
قواعد النظام الكودى لأرقام المقررات

1- يتكون كود أى مقرر من الرمز الكودى للقسم يلى ذلك عدد مكون من ثلاثة أرقام تفصيلها كالآتي :

(أ) الرقم أقصى اليسار يمثل المستوى الدراسى

(ب) الرقم فى خانة العشرات يمثل التخصص الدقيق للمقرر داخل التخصص العام للقسم

(ج) رقم الأحاد يستخدم لتمييز مقررات التخصص الدقيق والتى تدرس لنفس التخصص العام



2- الرمزى النظام للأقسام العلمية

مسلسل	القسم	الرمز
1	علوم الحاسب	CS
2	تكنولوجيا المعلومات	IT
3	نظم المعلومات	IS
4	بحوث العمليات ودعم القرار	OD

3- الرمزى النظامل‌مقررات الرياضيات والإحصاء والعلوم الانسانية

المقرر	الرمز
رياضيات	MA
إحصاء	ST
علوم إنسانية	HM
مقررات عامة	GN

4- اكواد المستويات الدراسية

المستوى الدراسى	الكود
الأول	1
الثاني	2
الثالث	3
الرابع	4

ثالثا : مقررات مرحلة البكالوريوس

المستوي الأول

الفصل الدراسى: الأول							التخصص : عام		
	اسم المقرر	Course Name	عدد الساعات الدراسية أسبوعيا			النهاية العظمى للدرجات		
			محاضرة	تمارين / عملى	عدد الساعات المعتمدة	أعمال فصل	عملى وشفهى	تحريرى
GN170	صياغة التقارير العلمية والفنية	Scientific & Technical Report Writing	3	-	3	40	-	60
MA111	رياضيات-1	Mathematics-1	2	2	3	20	20	60
OD111	تراكيب محددة	Discrete Mathematics	2	2	3	20	20	60
GNxx	اختياري - متطلبات عامة		3	-	3	40	-	60
CS110	أشباه الموصلات	Semiconductors	2	2	3	20	20	60
CS111	مقدمة فى الحاسبات	Computer Introduction	2	2	3	20	20	60
GN160	اساسيات الجودة	Fundamentals of quality	1	-	-	5	-	15
	إجمالى عدد الساعات الأسبوعية :		**15**	**8**	**18**			

الفصل الدراسى: الثاني							التخصص : عام		
	اسم المقرر	Course Name	عدد الساعات الدراسية أسبوعيا			النهاية العظمى للدرجات		
			محاضرة	تمارين / عملى	عدد الساعات المعتمدة	أعمال فصل	عملى وشفهى	تحريرى
IT181	تصميم منطقي - 1	Logic Design-1	2	2	3	20	20	60
MA112	رياضيات-2	Mathematics-2	2	2	3	20	20	60
GN112	مبادئ إدارة	Fundamentals of Management	3	-	3	40	-	60
PH111	مبادئ برمجة	Fundamentals of Programming	2	2	3	20	20	60
IS111	مقدمة نظم معلومات	Introduction to IS	2	2	3	20	20	60

ST190	إحصاء واحتمالات Statistics & Probabilities	2	2	3	20	20	60
HM110	حقوق إنسان Human Rights	1	-	-	5	-	15
	إجمالى عدد الساعات الأسبوعية :	**14**	**10**	**18**			

المستوي الثانـي

الفصل الدراسى: الأول **التخصص : عام**

	اسم المقرر	Course Name	عدد الساعات الدراسية أسبوعيا			النهاية العظمى للدرجات		
			محاضرة	تمارين / عملى	عدد الساعات المعتمدة	أعمال فصل	عملى وشفهى	تحريرى
IS251	تصميم وتطوير الويب	Web Design and Development	2	2	3	20	20	60
CS231	برمجة حاسبات - 1	Computer Programming – 1	2	2	3	20	20	60
CS211	تنظيم الحاسبات	Computer Architecture	2	2	3	20	20	60
CS212	هياكل البيانات	Data Structure	2	2	3	20	20	60
IT261	وسائط متعددة - 1	Multimedia-1	2	2	3	20	20	60
OD213	مقدمة فى بحوث العمليات ودعم القرار	Introduction to Operation Research & Decision Support	2	2	3	20	20	60
	إجمالى عدد الساعات الأسبوعية :		**12**	**12**	**18**			

الفصل الدراسى: الثاني **التخصص : عام**

	اسم المقرر	Course Name	عدد الساعات الدراسية أسبوعيا			النهاية العظمى للدرجات		
			محاضرة	تمارين / عملى	عدد الساعات المعتمدة	أعمال فصل	عملى وشفهى	تحريرى
CS261	نظم تشغيل - 1	Operating Systems-1	2	2	3	20	20	60
CS233	برمجة حاسبات - 2	Computer Programming-2	2	2	3	20	20	60

60	20	20	3	2	2	Modeling & Simulation	النمذجه والمحاكاه	OD342
60	20	20	3	2	2	Selected - 1	اختياري - 1	
60	20	20	3	2	2	Computer Networks-1	شبكات الحاسب - 1	IT211
60	20	20	3	2	2	System Analysis-1	تحليل نظم - 1	IS212
			18	**12**	**12**	**إجمالى عدد الساعات الأسبوعية :**		

المستوي الثالث : تخصص نظم المعلومات

الفصل الدراسى: الأول			**التخصص : نظم المعلومات**					
النهاية العظمى للدرجات		**عدد الساعات الدراسية أسبوعيا**				**Course Name**	**اسم المقرر**	الكود
تحريرى	عملى وشفهى	أعمال فصل	**عدد الساعات المعتمدة**	تمارين/ عملى	محاضرة			
60	20	20	3	2	2	Software Engineering-1	هندسة البرمجيات1-	CS251
60	20	20	3	2	2	Database Systems-1	نظم قواعد البيانات1-	IS221
60	20	20	3	2	2	Selected-2	أختياري - 2	
60	20	20	3	2	2	Database Systems-2	نظم قواعد البيانات2-	IS322
60	20	20	3	2	2	Systems Analysis and Design -2	تحليل وتصميم نظم -2	IS312
60	20	20	3	2	2	Selected-2	أختياري تخصصي - 2	
			18	12	12	إجمالى عدد الساعات الأسبوعية:		

الفصل الدراسى: الثانى							التخصص : نظم المعلومات		
الكود	اسم المقرر	Course Name	عدد الساعات الدراسية أسبوعيا			النهاية العظمى للدرجات			
			محاضرة	تمارين/ عملى	عدد الساعات المعتمدة	أعمال فصل	عملى وشفهى	تحريرى
IS331	ذكاء الأعمال	Business Intelligence	2	2	3	20	20	60
IS355	إسترجاع المعلومات	Information Retrieval	2	2	3	2	20	60
IS426	نظم قواعد بيانات حديثة	Modern Database Systems	2	2	3	20	20	60
IS465	تنقيب البيانات	Data Mining	2	2	3	3	-	70
	أختياري تخصصي - 2	Selected-2	2	2	3	3	-	70
	أختياري تخصصي - 2	Selected-2	2	2	3	3	-	70
	إجمالى عدد الساعات الأسبوعية :		12	12	**18**			

المستوي الرابع : تخصص نظم المعلومات

الفصل الدراسى: الأول							ا لتخصص : نظم المعلومات		
الكود	اسم المقرر	Course Name	عدد الساعات الدراسية أسبوعيا			النهاية العظمى للدرجات			
			محاضرة	تمارين/ عملى	مجموع	أعمال فصل	عملى وشفهى	تحريرى

IS426	نظم قواعد بيانات حديثة	Modern Database Systems	2	2	3	20	20	60
IS463	أمان المعلومات	Information Security	2	2	3	20	20	60
IS435	حوسبة سحابيه	Cloud computing	2	2	3	20	20	60
	أختياري تخصصي - 2	Selected-2	2	2	3	20	20	60
	أختياري تخصصي - 2	Selected-2	2	2	3	20	20	60
	مشروع	Project	1.5	3	3	-	-	-
			11.5	3	3			

الفصل الدراسى: الثانى ا **لتخصص : نظم المعلومات**

الكود	اسم المقرر	Course Name	عدد الساعات الدراسية أسبوعيا			النهاية العظمى للدرجات		
			محاضرة	تمارين/ عملى	عدد الساعات المعتمدة	أعمال فصل	عملى وشفهى	تحريرى
IS433	إدارة البيانات الموزعة	Distributed Data Management	2	2	3	20	20	60
IS462	نظم المعلومات الجغرافية	Geographic IS	2	2	3	20	20	60
	أختياري تخصصي - 2	Selected-2	2	2	3	20	20	60
	أختياري تخصصي - 2	Selected-2	2	2	3	20	20	60
	أختياري تخصصي - 2	Selected-2	2	2	3	30	-	70
	مشروع	Project	1.5	3	3	40	60	-
	إجمالى عدد الساعات الأسبوعية :		11.5	13	**18**			

يختار المقررات أما ،بالكلية الأخرى الأقسام مقررات بين من كلية اختيارى مقرر الطالب ولا المادة ساعات بإجمالى ذلك يخل ولا ، التالى الجدول من اختيارها فيتم التخصصية الاختيارية .الأسبوعية الساعات

النهاية العظمى للدرجات			عدد الساعات الدراسية أسبوعيا			Course Name	اسم المقرر	
تحريرى	عملى وشفهى	أعمال فصل	عدد الساعات المعتمدة	تمارين / عملى	محاضرة			
60	20	20	3	2	2	Enterprise Resource	أنظمة الشركات	IS341
60	20	20	3	2	2	E-Business	الأعمال الإلكترونية	IS373
60	20	20	3	0	3	IS Strategy, Management &	مقدمة نظم المعلومات	IS111
60	20	20	3	2	2	Web Information	تصميم وتطوير الويب	IS251
60	20	20	3	2	2	Intelligent IS	الذكاء الاصطناعي	IS361
60	20	20	3	2	2	Multimedia IS & Digital Libraries	نظم معلومات الوسائط المتعددة و المكتبات	CS371
60	20	20	3	2	2	Multimedia 1	وسائط متعددة - 1	IT261
60	20	20	3	2	2	Business Process Management	إدارة العمليات التجارية	IS373
60	20	20	3	2	2	IS Project Management	إدارة مشروعات نظم المعلومات	IS445
60	20	20	3	2	2	Knowledge Management	إدارة المعرفة	IS447
60	20	20	3	2	2	Social Informatics	المعلوماتية المجتمعية	IS467
60	20	20	3	2	2	Bioinformatics	المعلوماتية الحيوية	IS465
60	20	20	3	2	2	IS Innovation and New Technologies	نظم معلومات مبتكرة وتقنيات جديدة	IS479
60	20	20	3	2	2	Selected Topics in IS - 1	موضوعات مختارة - ١	IS381
60	20	20	3	2	2	Big Data	البيانات الضخمة	IS482

60	20	20	3	2	2	Data Science علم البيانات	IS483