



University/Academy:
Faculty/Institute:
Program:

Arab Academy for Science & Technology & Maritime Transport
College of Management & Technology
BIS – Management Information Systems

Form no. (11b)
Knowledge and skills matrix for a program

Course	Knowledge and understanding	Intellectual skills	Professional skills	General skills
S111 Introduction to Information Technology	<ul style="list-style-type: none"> - Understand and analyze the main computer concepts, theories and applications to solve business problems. - Explain the role of IT managers, the chief issues that influence IT investments decisions, and the implications of changing technologies. - Understand Operating system concepts, scheduling theories and multitasking as a means of understanding the operating system tasks sequence. - Use the scientific method of problem solving and decision-making in the various administrative levels. - Summarize foundations and concepts of policies, 	<ul style="list-style-type: none"> - Investigate the major management challenges facing development and implementation of information systems. 	<ul style="list-style-type: none"> - Apply IS concepts and techniques in varied business initiatives. - Apply the systems and modern scientific methods in the field of Business Administration 	<ul style="list-style-type: none"> - Assess and evaluate the integration between different computer applications and their components. - Assess business threats, opportunities, and expected outcomes associated with computer application (s)/ system (s).

Course	Knowledge and understanding	Intellectual skills	Professional skills	General skills
	strategies and plans and requirements used to meet the expectations of relevant parties of the Organization.			
S121Management Information systems	<p>-Define the major types of systems in a business and how information systems support the major business functions.</p> <p>-Identify benefits and challenges of using enterprise systems in competitive business environment.</p> <p>-Understand and analyze the main computer concepts, theories and applications to solve business problems.</p> <p>-Explain the role of IT managers, the chief issues that influence IT investments decisions, and the implications of changing technologies.</p> <p>-Identify a business problem and formulating a solution using a logical problem solving technique.</p> <p>-Propose project idea and chose project domain, and define a clear problem statement, system objectives, boundaries and business rules.</p>	<p>-Investigate the major management challenges facing development and implementation of information systems.</p> <p>-Analyze information and summarize the analytical outcomes to apply knowledge to address familiar and novel problems.</p> <p>-Develop models for business cases and provide business with the possible solution (s) according to business situation.</p>	<p>-Apply IS concepts and techniques in varied business initiatives.</p> <p>-Experiment different Operating Systems.</p> <p>-Use different decision makers' practical techniques to select the most appropriate solution among varied possible options (solutions).</p> <p>-Implement and use information systems successfully by managers and define computer processing and storage capability needed.</p>	<p>-Evaluate the difficulties of developing successful information systems in order to promote competitive advantage.</p> <p>-Assess and evaluate the integration between different computer applications and their components.</p> <p>-Assess business threats, opportunities, and expected outcomes associated with computer application (s)/ system (s).</p> <p>-Evaluate different IS problems and applications.</p> <p>-Evaluate the business problems in order to formulate and implement change for improving the quality of business decisions.</p> <p>-Share business knowledge, resources and information.</p> <p>-Generate, analyze, present and interpret data.</p>

Course	Knowledge and understanding	Intellectual skills	Professional skills	General skills
	<ul style="list-style-type: none"> - Use the scientific method of problem solving and decision-making in the various administrative levels. -Summarize foundations and concepts of policies, strategies and plans and requirements used to meet the expectations of relevant parties of the Organization. 			
S211 data bases	<ul style="list-style-type: none"> -Understand the basics of data modeling, management and administration. -Understand database technologies and their applications -Identify a business problem and formulating a solution using a logical problem solving technique. - Apply plans, programs and policies according to the requirements of institutions. - Summarize foundations and concepts of policies, strategies and plans and requirements used to meet the expectations of relevant parties of the Organization. 	<ul style="list-style-type: none"> -Investigate the major management challenges facing development and implementation of information systems. -Modeling databases at conceptual and physical levels of design. -Distinguish between file management and database. 	<ul style="list-style-type: none"> -Construct database design based on the current problem requirement. -Demonstrate and implement of a complete database system environment. -Apply IS concepts and techniques in varied business initiatives 	<ul style="list-style-type: none"> Evaluated different IS problems and applications. -Share business knowledge, resources and information. -Generate, analyze, present and interpret data.
S221 computer applications in	- Understand and analyze the main computer concepts,	- Analyze information and summarize the analytical	- Apply IS concepts and techniques in varied business	- Assess and evaluate the integration between different

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business	<p>theories and applications to solve business problems</p> <ul style="list-style-type: none"> -Explain the role of IT managers, the chief issues that influence IT investments decisions, and the implications of changing technologies. -Understand basic concepts of networks, and layer system -Getting familiar with development and designing tools. - Apply plans, programs and policies according to the requirements of institutions. 	<p>outcomes to apply knowledge to address familiar and novel problems.</p> <ul style="list-style-type: none"> -Analyzing OS concepts, memory and scheduling techniques. -Integrate network philosophies and theories with practice, into an operational environment. 	<p>initiatives.</p> <ul style="list-style-type: none"> -Apply appropriate practical techniques for communication and networks. 	<p>computer applications and their components.</p> <ul style="list-style-type: none"> -Assess business threats, opportunities, and expected outcomes associated with computer application (s)/ system (s). -Evaluate different IS problems and applications. Share business knowledge, resources and information. -Understand Central office Connectivity, switching and network security. -Generate, analyze, present and interpret data.

Course	Knowledge and understanding	Intellectual skills	Professional skills	General skills
S325 projects info systems (adv.db)	<ul style="list-style-type: none"> -Understand the basics of data modeling, management and administration. -Understand database technologies and their applications. -Identify a business problem and formulating a solution using a logical problem solving technique. -Define system requirements. -Propose project idea and chose project domain, and define a clear problemstatement, system objectives, boundaries and business rules. - Apply plans, programs and policies according to the requirements of institutions. 	<ul style="list-style-type: none"> -Distinguish between file management and database. -Investigate the major management challenges facing development and implementation of information systems. -Modeling databases at conceptual and physical levels of design. - Use the creative thinking and creative in the face of the various administrative positions. 	<ul style="list-style-type: none"> -Construct database design based on the current problem requirement. - Development and implementation of a complete database system environment. -Apply IS concepts and techniques in varied business initiatives. -Apply appropriate practical techniques to the problem solution using Object oriented approach. 	<ul style="list-style-type: none"> -Evaluate the difficulties of developing successful information systems in order to promote competitive advantage. -Evaluate different IS problems and applications. -Share business knowledge, resources and information.. -Manage time and resources within an individual project and a group project. - Generate, analyze, present and interpret data.
S225 introduction to computer	- Identify a business problem and formulating a solution	- Analyze information and summarize the analytical	- Use different decision makers' practical techniques	- Share business knowledge, resources and information.

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programming	<p>using a logical problem solving technique.</p> <ul style="list-style-type: none"> - Use the scientific method of problem solving and decision-making in the various administrative levels. - Apply plans, programs and policies according to the requirements of institutions. 	<p>outcomes to apply knowledge to address familiar and novel problems.</p> <ul style="list-style-type: none"> - Use the creative thinking and creative in the face of the various administrative positions. 	<p>to select the most appropriate solution among varied possible options (solutions).</p>	<ul style="list-style-type: none"> - Evaluate different IS problems and applications.
S226 information systems analysis	<ul style="list-style-type: none"> - Understand and analyze the main computer concepts, theories and applications to solve business problems. - Identify a business problem and formulating a solution using a logical problem solving technique. - Propose project idea and chose project domain, and define a clear problem statement, system objectives, boundaries and business rules. - Understand software engineering processes and management. - Define system requirements. 	<ul style="list-style-type: none"> - Analyze information and summarize the analytical outcomes to apply knowledge to address familiar and novel problems. - Understand the steps of the SDLC and how to apply them to a real system. - Develop models for business cases and provide business with the possible solution (s) according to business situation. 	<ul style="list-style-type: none"> - Construct database design based on the current problem requirement. - Development and implementation of a complete database system environment. - Apply IS concepts and techniques in varied business initiatives. - Create and use logical DFD to capture and analyze the current system. 	<ul style="list-style-type: none"> - Evaluate different IS problems and applications. - Share business knowledge, resources and information. - Manage time and resources within an individual project and a group project. - Generate, analyze, present and interpret data.
S327 networks and communication	<ul style="list-style-type: none"> - Understand basic concepts of networks, and layer system. 	<ul style="list-style-type: none"> - Integrate network philosophies and theories with practice, into an 	<ul style="list-style-type: none"> - Apply appropriate practical techniques for communication and 	<ul style="list-style-type: none"> - Understand Central office Connectivity, switching and network security.

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	Use the scientific method of problem solving and decision-making in the various administrative levels.	operational environment.	networks.	
S315 applications in computer programming	<p>-Getting familiar with development and designing tools.</p> <p>- Apply plans, programs and policies according to the requirements of institutions.</p>	<p>-Analyze information and summarize the analytical outcomes to apply knowledge to address familiar and novel problems.</p>	<p>-Design the prototype of the proposed system and code the proposed modules functionality.</p> <p>-Use OOAD to capture and analyze the current system</p> <p>-Apply appropriate practical techniques to the problem solution using Object oriented approach.</p> <p>-Implement and use information systems successfully by managers and define computer processing and storage capability needed to handle the business transactions.</p>	<p>-Evaluate the difficulties of developing successful information systems in order to promote competitive advantage.</p> <p>-Evaluate different IS problems and applications.</p> <p>-Share business knowledge, resources and information.</p>
S316 information systems design	<p>-Understand database technologies and their applications.</p> <p>-Define system requirements.</p> <p>-Propose project idea and chose project domain, and define a clear problem statement, system objectives, boundaries and business rules.</p>	<p>-Modeling databases at conceptual and physical levels of design.</p> <p>-Analyze information and summarize the analytical outcomes to apply knowledge to address familiar and novel problems.</p> <p>-Understand the steps of the SDLC and how to apply them</p>	<p>-Construct database design based on the current problem requirement.</p> <p>-Development and implementation of a complete database system environment.</p> <p>-Apply IS concepts and techniques in varied business initiatives.</p> <p>-Apply appropriate practical</p>	<p>-Evaluate different IS problems and applications.</p> <p>-Share business knowledge, resources and information.</p> <p>-Manage time and resources within an individual project and a group project.</p> <p>-Generate, analyze, present and interpret data.</p>

Course	Knowledge and understanding	Intellectual skills	Professional skills	General skills
	<p>-Understand software engineering processes and management.</p>	<p>to a real system. -Develop models for business cases and provide business with the possible solution (s) according to business situation.</p>	<p>techniques to the problem solution using Object oriented approach. -Use OOAD to capture and analyze the current system.</p>	
S317 new trends (operating systems)	<p>-Understand Operating system concepts, scheduling theories and multitasking as a means of understanding the operating system tasks sequence. - Apply the basis of stimulation and motivation to the development of others.</p>	<p>-Analyzing OS concepts, memory and scheduling techniques.</p>	<p>-Experiment different Operating Systems.</p>	<p>-Evaluate the business problems in order to formulate and implement change for improving the quality of business decisions. -Share business knowledge, resources and information.</p>
S415 decision support systems	<p>-Define the major types of systems in a business and how information systems support the major business functions. -Identify benefits and challenges of using enterprise systems in competitive business environment. -Propose project idea and chose project domain, and define a clear problem statement, system objectives, boundaries and business rules. - Apply plans, programs and</p>	<p>-Develop models for business cases and provide business with the possible solution (s) according to business situation. - Use the creative thinking and creative in the face of the various administrative positions. Identify the link between environmental variables and patterns of decision making.</p>	<p>-Implement and use information systems successfully by managers and define computer processing and storage capability needed to handle the business transactions -Apply IS concepts and techniques in varied business initiatives. -Use different decision makers' practical techniques to select the most appropriate solution among varied possible options (solutions).</p>	<p>-Assess business threats, opportunities, and expected outcomes associated with computer application (s)/ system (s). -Share business knowledge, resources and information.</p>

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	<p>policies according to the requirements of institutions.</p> <ul style="list-style-type: none"> -Apply the basis of stimulation and motivation to the development of others. 			
S416 information analysis (project 1)	<ul style="list-style-type: none"> -Understand database technologies and their applications. -Understand and analyze the main computer concepts, theories and applications to solve business problems. -Understand the role of IT managers, the chief issues that influence IT investments decisions, and the implications of changing technologies. -Identify a business problem and formulating a solution using a logical problem solving technique. -Define system requirements. - project idea and chose project domain, and define a clear problem statement, system objectives, boundaries and business rules. -Getting familiarwith development and designing tools. 	<ul style="list-style-type: none"> -Modeling databases at conceptual and physical levels of design. -Analyze information and summarize the analytical outcomes to apply knowledge to address familiar and novel problems. -Understandthe steps of the SDLC and how to apply them to a real system. 	<ul style="list-style-type: none"> -Construct database design based on the current problem requirement. -Development and implementation of a complete database system environment. -Implement anduse information systems successfully by managers and define computer processing and storage capability needed to handle the business transactions. -Apply IS concepts and techniques in varied business initiatives. -Apply appropriate practical techniques to the problem solution using Object oriented approach. -Create and use logical DFD to capture and analyze the current system. -UseOOAD to capture and analyze the current system -Experiment different 	<ul style="list-style-type: none"> -Evaluate the difficulties of developing successful information systems in order to promote competitive advantage. -Evaluatedifferent IS problems and applications. -Evaluate the business problems in order to formulate and implement change for improving the quality of business decisions. -Manage time and resources within an individual project and a group project. -Generate, analyze, present and interpret data.

Course	Knowledge and understanding	Intellectual skills	Professional skills	General skills
	<ul style="list-style-type: none"> -Understand software engineering processes and management. - Apply plans, programs and policies according to the requirements of institutions. -Apply the basis of stimulation and motivation to the development of others. 		<p>Operating Systems.</p> <ul style="list-style-type: none"> - Prepare feasibility studies and project evaluation. - Apply the systems and modern scientific methods in the field of Business Administration 	
S326 information systems management	<ul style="list-style-type: none"> -Define the major types of systems in a business and how information systems support the major business functions. -Understand the basics of data modeling, management and administration. -Identify a business problem and formulating a solution using a logical problem solving technique. -Propose project idea and chose project domain, and define a clear problem statement, system objectives, boundaries and business rules. -Getting familiar with development and designing tools. -Understand software engineering processes and management. 	<ul style="list-style-type: none"> -Understand the steps of the SDLC and how to apply them to a real system. -Develop models for business cases and provide business with the possible solution (s) according to business situation. Investigate the major management challenges facing development and implementation of information systems. 	<ul style="list-style-type: none"> -Construct database design based on the current problem requirement. -Apply IS concepts and techniques in varied business initiatives. -Apply appropriate practical techniques to the problem solution using Object oriented approach. -Create and use logical DFD to capture and analyze the current system. - Apply the systems and modern scientific methods in the field of Business Administration 	<ul style="list-style-type: none"> -Evaluate the difficulties of developing successful information systems in order to promote competitive advantage. -Share business knowledge, resources and information. -Manage time and resources within an individual project and a group project. -Generate, analyze, present and interpret data.

Course	Knowledge and understanding	Intellectual skills	Professional skills	General skills
S426 information system planning	<ul style="list-style-type: none"> - Understand database technologies and their applications. - Getting familiar with development and designing tools. - Apply plans, programs and policies according to the requirements of institutions. 	<ul style="list-style-type: none"> - Investigate the major management challenges facing development and implementation of information systems. - Develop models for business cases and provide business with the possible solution (s) according to business situation. - Integrate network philosophies and theories with practice, into an operational environment. 	<ul style="list-style-type: none"> - Construct database design based on the current problem requirement. - Apply IS concepts and techniques in varied business initiatives. - Apply appropriate practical techniques to the problem solution using Object oriented approach. - Create and use logical DFD to capture and analyze the current system. - Apply the systems and modern scientific methods in the field of Business Administration 	<ul style="list-style-type: none"> - Evaluate the difficulties of developing successful information systems in order to promote competitive advantage. - Assess and evaluate the integration between different computer applications and their components. - Assess business threats, opportunities, and expected outcomes associated with computer application (s)/ system (s). - Evaluate different IS problems and applications. - Evaluate the business problems in order to formulate and implement change for improving the quality of business decisions. - Share business knowledge, resources and information. - Learn Central office Connectivity, switching and network security Manage time and resources within an individual project and a group project.

Responsible of Program Report

<i>Name</i>	<i>Signature</i>	<i>Date</i>
Dr. Nermine Khalifa		1/8/2012

Program Coordinator:

<i>Name</i>	<i>Signature</i>	<i>Date</i>
Dr. Walid Abd El.Moez		2/8/2012