



University/Academy: Arab Academy for Science and Technology & Maritime Transport  
Faculty/Institute: College of Computing and Information Technology  
Program: B. Sc. In Computer Science

Course title	Human Computer Interaction
Course code	CS451

Form no. (11A)  
Knowledge and skills matrix for a course

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
Introduction to Interaction Design.	1	<ul style="list-style-type: none"><li>• Apply a variety of interaction design processes and techniques and know when they are appropriate</li><li>• Identify the relevant terminologies and principles.</li><li>• Explain the fundamental concepts involved in Human Computer Interaction.</li><li>• Apply the concepts of Human Computer Interaction to the system development lifecycle.</li></ul>			G1

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
Understanding and Conceptualizing Interaction.	2	<ul style="list-style-type: none"> <li>Examine an interactive product and explain what is good and bad about it in terms of the concepts, goals, and principles of interaction design</li> </ul>			G1
Understanding Users.	3	<ul style="list-style-type: none"> <li>Understand the role of social dynamics in interaction and how it applies in design, including concerns such as privacy, power, and accessibility</li> </ul>	<ul style="list-style-type: none"> <li>Use the fundamental concepts involved in Human Computer Interaction.</li> </ul>		G1
Designing for Collaboration and Communication.	4	<ul style="list-style-type: none"> <li>Determine relations between different instances and generalizations.</li> </ul>			G1, G7

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
Formal Methods of Interaction.	5				G1, G7
Models and Paradigms: Ergonomic issues and Interaction Approaches.	6	<ul style="list-style-type: none"> <li>Understand cognitive factors that affect usability</li> </ul>			G1, G7
Interfaces and Interactions	7	<ul style="list-style-type: none"> <li>Understand existing techniques and future trends for interface design and development.</li> </ul>			G1
7 <sup>th</sup> week exam	8				G1
Data Gathering.	9				G1
Identifying Needs and Establishing Requirements	10				G1
Prototyping and design cycle: rules and principles.	11		<ul style="list-style-type: none"> <li>Incorporate HCI into systems cycles development.</li> </ul>	<ul style="list-style-type: none"> <li>Ability to work in a team and build applications through prototyping and toolkits.</li> </ul>	G1

Course content	Week study	Knowledge	Intellectual skills	Professional skills	General skills
12 <sup>th</sup> Week Exam	12				
User Interfaces: Standards and Guidelines.	13	<ul style="list-style-type: none"> <li>Apply different methodologies of Interface Design.</li> </ul>	<ul style="list-style-type: none"> <li>Apply an understanding of the existing tools for interface development.</li> </ul>		G1
Evaluation: Methods and Models.	14	<ul style="list-style-type: none"> <li>Apply usability evaluation methods and know when they are appropriate.</li> <li>Apply different methodologies of Evaluation.</li> </ul>	<ul style="list-style-type: none"> <li>Apply an understanding of designing, implementing and evaluating interfaces.</li> </ul>		G1
Revision & project presentations	15			<ul style="list-style-type: none"> <li>Present work and findings</li> </ul>	G1

**Course Instructor**

Name:

Signature:

**Head of Department**

Name:

Signature:

