COLLEGE OF INFORMATION TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY

COURSE SYLLABUS/SPECIFICATION

CODE & TITLE:	**ITMS 499 – Major Project**
WEIGHT:	**(0 - 6 - 3)**
PREREQUISITE:	**IERM 498 & ETHC 392**

DESCRIPTION: Each student is required to select a theoretical and/or a practical problem related to his major area, and work under the supervision of a faculty member. All stages of project development should be emphasized including problem identification, library search, planning, design and/or construction of equipment upon completion of the project, the student must submit a final written report outlining the various phases of the project and make an oral presentation.

OBJECTIVES:
1. To conduct an independent research project on certain chosen topic in the field of Multimedia that involves formulating a real-world problem, developing its requirements, developing, designing and testing dynamic web sites, or designing and developing a 3D animation or video movie, and finally writing a report highlight the results of the project.
2. To employ the knowledge of software engineering in the project development of a dynamic web sites or multimedia design in the project development of a 3D animation or video movie to a real-world problem.
3. To demonstrate independence, research ethics, academic integrity and originality, critical thinking and problem-solving, practical and written skills, as well as organization and time-management skills.

SEMESTER: **ACADEMIC YEAR:**
INSTRUCTOR:
OFFICE TEL.:
EMAIL:

INTENDED LEARNING OUTCOMES (ILOS)

Upon successful completion of the course, students should be able to:

	A. Knowledge and Understanding	NQF Descriptor/ Level
A2	Contemporary Trends, Problems and Research: Demonstrate an informed and critical awareness of research issues and methods, technological advancements, and current solutions related to some problems in the field of Multimedia.	Knowledge: theoretical understanding [Level 8]
A3	Professional Responsibility: Demonstrate cognition of and adhere to professional code of conduct as a Multimedia practitioner and researcher.	Knowledge: theoretical understanding [Level 8]

	B. Subject-specific Skills	NQF Descriptor/ Level
B1	Problem Solving: Solve IT and Multimedia problems; plan, design, and implement their computable solutions.	Knowledge: Practical Application [Level 8] Skills: Communication, ICT & Numeracy [Level 8]
B2	Modeling and Design: Design and develop models for computational systems, components, or processes to meet desired needs within realistic constraints.	Knowledge: Practical Application [Level 8]
B3	Application of Methods and Tools: Use effective research methods to gather data and demonstrate proficient use of scripting languages and software as required for the research being undertaken.	Knowledge: Practical Application [Level 8] Skills: Communication, ICT & Numeracy [Level 8]

	C. Critical-Thinking Skills	NQF Descriptor/ Level
C1	Analytic: Analyze problems; identify the appropriate computational resources (input) needed to solve them and analyze the effectiveness and efficiency of output accordingly generated.	Generic Problem Solving & Analytical skills [Level 8]

C2	Synthetic: Develop computerized solution to real life problem and document it in a well-structured project.	Generic Problem Solving & Analytical skills [Level 8]
C3	Creative: Create new or improve existing ideas, concepts, techniques, methods, tools, and theories in the field of Multimedia	Generic Problem Solving & Analytical skills [Level 8]

D. General and Transferable Skills (other skills relevant to employability and personal development)		NQF Descriptor/ Level
D1	Communication: Communicate ideas cogently, persuasively and effectively, in written and oral form, to a diverse range of audiences and stakeholders.	Communication, ICT and Numeracy Skills [Level 8]
D3	Organizational and Developmental Skills: Engage in life-long learning and continuing self-development to hone professional and organizational and time management skills to write a project within certain timeline.	Competence: Autonomy, Responsibility and Context [Level 8]
D4	Ethical and Social Responsibility: Follow research ethics and social responsibility and respond positively to the needs of society by employing effectively the advanced computing and information solutions and technologies.	Competence: Autonomy, Responsibility and Context [Level 8]

Course Structure (Outline)

The course consists of the following components that may span up to two semesters.
1. Writing and submitting project proposal that identify a problem in the field of Multimedia and highlight the research methods and tools to be used.
2. Conducting scientific research and writing project in consultation with the supervisor through regular meetings using Ahlia University's *Undergraduate Project Guidelines XXXX 499.* The timeline and the key milestones are typically as follows:

Key Milestones	Timeline

Introduction and Problem Definition
  ↟ Propose and study an important research topic/problem
  ↟ Define research problem, history, motivation, and objectives
  ↟ Write a draft introduction chapter and seek advice from supervisor
  ↟ Revise the chapter accordingly
	2 weeks

Literature Review
  ↟ Search and gather literature on the research topic/problem
  ↟ Study research methods and solutions developed for such research problem
  ↟ Write a draft chapter on Literature Review and discuss with supervisor
  ↟ Revise the chapter accordingly
	3 weeks

Approach, Conceptual Model, Research Method and Tools
  ↟ Select and study conceptual model and effective research methods to be used
  ↟ Choose and study any other requirements, e.g., scripting languages, software and other tools.
  ↟ Write a draft chapter on Conceptual Model, Research Methods and Tools
  ↟ Consult with supervisor and revise accordingly
	3 weeks

Software Development, Analysis and Implementation
  ↟ Solicit any software requirements and specifications if needed
  ↟ Design, implement and evaluate dynamic web sites, or 3D animation or video movie
  ↟ Study, analyze source code
  ↟ Discuss with supervisor results and conclusions and revise accordingly
	4 weeks

Drafting Main Chapters in Project
  ↟ Describe the development and implementation process of your dynamic websites and experiments, if any
  ↟ Discuss scientifically and critically your findings, implications and conclusions
  ↟ Document any limitations and possible future work
  ↟ Discuss the final chapters with supervise, revise and finalize the dissertation accordingly
	3 weeks

TEACHING MATERIALS:

TEXTBOOK(S):   N/A

HANDOUT(S):   *Undergraduate Project Guidelines*, Ahlia University.

REFERENCE(S):   Students are free to choose the references that support their research studies in consultation with their supervisors.

ASSESSMENTS:

The student research work, written project, oral presentation/defense, and other supplemented documentations or software is evaluated by an examination Committee as mentioned above according to University regulations described in the Project Presentation Guidelines XXXX 499, V. 2, Ahlia University. The student has to defend his/her project in front of the examination committee which consists of three examiners consisting of the supervisor, and two internal examiners. The student work will be evaluated as follows.

	Criteria	Marks	Total
Written Project	Problem Definition	14	**70%**
	Literature Search	14	
	Methodology & Analysis	14	
	Format	14	
	Documentation	14	
Oral Presentation	Organization, Eye Contact,& Delivery	10	**30%**
	Time Management & Presentation Skills	10	
	Questions & Answers	10	
Total		**100**	**100%**

Admissions	
Pre-requisites	**IERM 498 & ETHC 392**
Minimum number of students	**8**
Maximum number of students	**25**

Ahlia University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the Code of Student Conduct and Disciplinary Procedures (see www.ahlia.edu.bh/integrity for more information).