جامعـة الـزيتونــة الأردنيــة
Al-Zaytoonah University of Jordan
كلية العمارة والتصميم
Faculty of Architecture and Design

" عراقة وجودة"
"Tradition and Quality"

Brief course description- Course Plan Development and Updating Procedure.Department Multimedia Technology	QF10/0409-3.0E

Faculty	Architecture and Design	Academic Department	**Multimedia Technology**	Number of the course plan (20212022)
Number of Major requirement courses		Date of plan approval	2021/07/28	

This form is just for the major requirement courses

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003344	**3**	**Design and processing digital video**	**Scenario and character design and backgrounds**

This course aims to provide students with the technical skills and knowledge to work in the business of film making. Students will learn how to script, plan, produce, film, and edit digital video while creating video production projects both individually, and in groups. In addition, this course helps students understand and work with basic through advanced concepts and features of Adobe Premiere Pro CC 2019 from beginning to end and learn to organize media, add audio, create transitions, produce titles, and add effects.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003213	**3**	**Technical Writing & Research Skills**	**communication skills in English**

This introductory course in technical writing aims to help students report technical information clearly, completely, and persuasively. The primary objective of this course is to prepare students for writing at work. The writing process allows the students to learn more about the principles and procedure of technical writing; attention to analyzing audience and purpose, organizing information, designing graphic aids, and writing specialized forms as abstracts, instructions, and proposals

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003300	2	Audio engineering and applications	Managing and operating studios

A basic audio course helps students to understand students the fundamentals of recording and sound production techniques, the use of microphones, sound characteristics, acoustical principles and design objectives in audio projects. Also discuss psychoacoustics, which has to do with how people perceive sound, and waveform physics, which describes how sound works.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003211	**3**	**Human Computer Interaction**	**Principles of 2D and 3D design**

This course aims to study the interaction between human and computer, evaluate software user interfaces using heuristic evaluation and user observation techniques, conduct simple formal , periments to evaluate usability hypotheses , apply user centered design and usability engineering principles as they design a wide variety of software user interfaces and provides a broad survey of designing, implementing, managing, maintaining, training, and refining the user interface of interactive systems, especially mobile devices.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003327	2	Ergonomics	Human Computer Interaction

This course instructs students When performing work in awkward postures or with excessive effort,

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who experience fatigue, discomfort, and musculoskeletal disorders (MSDs). The basic principles of ergonomics introduced in this course should be a vital component in every industry. The main components in this course include risk factor identification, basic workstation design options, and hazard control strategies to eliminate or reduce risk factors

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003472	6	**Graduation Project**	**Department Approval**

Application of the practical part of theoretical research in cooperation with the competent supervisor. The project provides its final technical form in 3D models with animation, animation, digital media design and is visualized and displayed through screens or digital media available and digitally saved

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
Department Approval	3	**Filed Training (1)**	**1003473**

Training in a production studio or company specialized in the fields of video, audio, photography, editing or any area specialized in multimedia technology. The training must be for an eight-week continuous period in coordination with the department. The purpose of the field training is to supervise the students through practical experience from the labor market is a compilation of the student's knowledge, experience and skill from a purely practical environment. It also contributes to the preparation of the personality of the student and know about the future stage and is the working environment.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
Department Approval	3	**Filed Training (2)**	**1003474**

Training in a production studio or company specialized in the fields of video, audio, photography, editing or any area specialized in multimedia technology. The training must be for an eight-week continuous period in coordination with the department. The purpose of the field training is to supervise the students through practical experience from the labor market is a compilation of the student's knowledge, experience and skill from a purely practical environment. It also contributes to the preparation of the personality of the student and know about the future stage and is the working environment.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003221	3	**2D animation**	1003267

This course develops the basic skills necessary for the student to understand and produce a 2D animation. The students will learn and experience the arts of storytelling, animation and cinematography while developing a critical eye towards the use of these concepts in current media venues. A variety of software tools including Photoshop, Illustrator and adobe animate will be used to develop concepts after a careful planning and scripting process. The student will learn the basic tools

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necessary to draw 2d animation using either adobe animate or adobe illustrator. Additionally, they will learn how to past their own work and convert them to vector-based images which will be used later for animation.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003347	3	**3D engineering industries**	1003345

In this course, the students will learn to design different type of publication, which include the book cover, business card, leaflet, brochure and other printable template using Adobe InDesign, additionally, they will learn to Visualize branding, packaging, and logo designs in 3D. Drag and drop a vector graphic or image onto a 3D model to see it in a real context using Adobe Dimension and adobe illustrator.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003248	3	**Motion graphic**	1003221

In this course, the student will learn how to develop the motion graphic on multiple software which include, adobe after effect and adobe character design. Furthermore, the student will learn the basic concepts of body rigging on adobe after effect, adobe character and motion capture and how to apply it to the character using X-sense technology. The student will be able to Identify the basic concepts of body rigging. Design a character to which he/she can control using facial expressions. Create Multiple triggers and frame by frame animation. Identify different walk cycle. Create mixed reality animation using the mentioned software: Record sound and edit sound

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003267	2	**Scenario, character design and backgrounds**	--------

This course explores the techniques and styles of illustrations as a form of visual communication in art and design and ways to employ them in graphic projects. Students write a dialogue script for a story and visualize it for story scenes through the storyboard to reach the application stage by designing traditional and digital illustrations, starting from idea development to formation. In the final, students explore appropriate artistic styles and techniques, methods of narrative expression and the emotional context of graphic content. Students' projects cover many topics using a variety of media.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003127	3	**Digital photography**	----------

This course will help the students become well rounded in the fundamentals of digital photography. Four areas of instruction will be emphasized: How cameras work, how composition works, how lighting works, how to use photo editing software. Students will, generally, receive basic instruction, demonstration, and see samples of the desired outcomes, at the beginning of each period. They will be allowed to go outside and shoot assignments, based on what they are learning.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003382	3	**Web page design and content**	1003242

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		management systems	

Brief description

This course develops the basic skills necessary for the student to understand and develop interactive web application using PHP language and HTML, the student will be introducing the basic concepts of internet, webpage design using HTML and development of web application using PHP.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003345	3	**3D modeling and Design**	1003345

This course is designed to help the student to create 3D content using specific software. Students will also learn the basics of modeling, material creation, animation, and viewer generation. Learn the capabilities of the user interface, how to work efficiently, and how to apply the toolkit in the workplace. This course introduces students from the basic to the intermediate level with the concepts of computer graphics, 3D drawing and transformations.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003433	3	١**Cinematic tricks and visual effects**	1003433

This course is designed to develop the skills needed to shoot video, graphics, and animation with the experience of adding cinematic effects. The students will learn how to incorporate text, graphics, and effects into their movies. Upon completion of this course, the student will have an excellent understanding of the tools that can be used in the video editors' software and the student will also be able to perform the work with a high level of efficiency.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003307	3	**Design and programming of 2D games**	1003461

This course is an introduction to the application design and programming of games which will cover the basic techniques for the formation and construction of games. Using the game engine and special programming language the student will develop a games programming skill which include 3D concepts for games, modeling and to take advantage of free international libraries to build and develop games. The course also aims at identifying the elements, principles and techniques of the digital gaming industry. Understanding the rules, storytelling and video game elements, how to design interfaces and simple programming, as well as how to promote the final product from playing in local and global markets

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003345	3	**3D Animation**	1003347

This course is designed to help the students to learn to move and simulate 3D objects using 3D software. Furthermore, they will learn animation, montage, simulation, export of scenes. and how to simulate natural movements. This course will move the student from the intermediate to the advanced level.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003241	3	**Principles of 2D and 3D Design**	**Introduction to Multimedia \ Parallel**

Brief description

This course introduces the tools and techniques for building Multimedia applications. Students will be

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taught how use Flash in developing interactive application in the aspect of animation cop concepts and how to use Cinema 4D tools to develop three-dimension movie.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003383	3	**Virtual Reality Technologies**	**2D/3D Games Development**

Brief description
This course is an introduction to Game Level Design using Unreal Engine 5, in which the students are expected to get a full understanding of how the software operates, and the basic techniques of game level design, with the ability to add VR Experience to the system.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003454	3	**Special Topics in Multimedia**	--

Brief description
This course is an introduction to Game Level Design using Unreal Engine 5, in which the students are expected to get a full understanding of how the software operates, and the basic techniques of game level design, and interactivity development using Blueprints.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003101	3	**Principles of Multimedia Design**	-----

This course aims to help students develop an understanding of the fundamental principles of multimedia systems and how they are being developed and applied. The course will explain the technologies underlying digital images, videos and audio contents, including various compression techniques and standards, and the issues to deliver multimedia content over the Internet. The course introduces the basic concepts and usage of multimedia elements: Text, Images, Sound, Animation, and Video. Sampling, quantization, colors encoding, and data compression algorithms are discussed. Hardware and Software issues are discussed. Students will be introduced to the development stages and the required skills (Skill set) for making Multimedia products.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003209	3	**Studios Operating and Management.**	1003209

This course aims to provide the student with basic skills in the field of studio management and the management of human resources working in studios, as well as helping the students to gain practical experiences related to the preparation and use of audio, video and montage equipment. It also aims to provide the students with the needed training skills to design studios and use the project management tools to conduct feasibility studies, prepare, isolate and install equipment in the studios. Besides that, it will allow the students to practice the instructions on how to deal with audio and video recording and develop their knowledge of the latest equipment and techniques used in studios.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
10003406	3	**Applications of Digital Image Processing**	1003242

This course is an introduction to the fundamental concepts and techniques in basic digital image processing and their applications to solve real life problems. The topics covered include Digital Image Fundamentals, Image Transforms, Image Enhancement, Restoration and Compression, Morphological Image Processing, Nonlinear Image Processing, and Image Analysis. Application examples are also included. The course will comprise of comprehensive understanding of signals, signal processing, digital imagery and digital image processing. Upon completion of this course, students will be familiar

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with basic image processing techniques for solving real problems.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003463	3	**Smart Systems**	1003242

This course introduces the concepts of artificial intelligence and smart systems related to multimedia technology and explains the recent methods to represent multimedia elements such as text, images, sounds, videos and animation in various applications and the related techniques of implementation through artificial intelligence algorithms, complex knowledge, grammar, search rules and expert systems. It also allows them to study different cases and examples that used artificial intelligence languages such as Python for building smart multimedia applications.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003242	3	**Programming multimedia applications**	1003211

This course aims to provide the student with the principles of programming using Java language. The student will learn sentences of input, output, selection sentences, repetition clauses and matrices. The completion of this course gives the student the basic knowledge and the tools necessary to learn Object-oriented programming using the language of Java and other language

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003308	3	**3D game design and programming**	1003347

This course is an introduction to the application design and programming of 3D games which will cover the basic techniques for the formation and construction of games. Using the game engine and special programming language the student will develop a games programming skill which include 3D concepts for games, modeling and also to take advantage of free international libraries to build and develop games.

The course also aims at identifying the elements, principles and techniques of the digital gaming industry. Understanding the rules, storytelling and video game elements, how to design interfaces and simple programming, as well as how to promote the final product from playing in local and global markets.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003212	3	**Project management**	1003300

This course covers project management, concept and project lifecycle, project manager function, project life cycle and how to manage it. Furthermore, it identifies risk management, estimating and managing project costs, quantity accounting, quality management, project time management, Management of human resources of the project and finding indicators of unusual cases. Finally, it identifies flexibility in planning and re-planning the project, accordingly, defining project activities in chronological order and how to successfully manage projects.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003484	3	**Augmented Reality Technologies**	1003383

Throughout the course, students will get a brief description of each of the supporting technologies, some

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history about when it first came into use, limitations and future potential for improvement, and how it's used for AR, VR, and MR. As the students learn about the technology, they will also develop hands on experience in the field along two tracks. First, they will use Unreal Engine 5 to build and run a simple XR application on smartphone: as a handheld Augmented Reality app. Second, they will brainstorm, define, visualize, and iterate their own original concept for an XR application, ending the course with a thorough and peer-reviewed XR Product Brief that they could use as the basis for future development.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003488	2	**Digital Marketing and Branding Techniques**	1003382

n this course, the students will learn to design different type of publication, which include the book cover, business card, leaflet, brochure and other printable template using Adobe InDesign, additionally, they will learn to Visualize branding, packaging, and logo designs in 3D. Drag and drop a vector graphic or image onto a 3D model to see it in a real context using Adobe Dimension and adobe illustrator

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003487	3	**Mobile Applications**	1003242

Mobile devices are widespread for many reasons. Among them, increasing performance and data storage, extending uptime while reducing hardware size as well as its cost. Currently, the Android operating system powers many devices all over the world and their number is only increasing. In this course the student will learn how to develop android application using android studio. In addition, the course relates to several perspectives including application development workflow with modern tools and technologies, debugging and deployment, concepts related to user interface, domain specific applications, distributed systems and more. Students will develop practical skills by doing guided problem-solving exercises throughout the course to reinforce the material presented in the form of lectures

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003491	3	**3D printing and laser cutting**	1003345

This course aims to learn about the new technologies of 3D printing and laser cutting that are used in the manufacture of products. It will also use a set of software to build 2D and 3D designs. In addition to the student's mastery of a set of skills such as: dealing with materials used in printing and cutting, simple maintenance of equipment, use of various software, production supervision, product proposals, cleaning 3D printers and cutting machines.

Course number	Credit hours	Title of the course	Prerequisite-co-requisite
1003492	3	**Engineering and technological applications in production processes**	1003406

Students will learn to design different type of publications including book cover, business card, flyer, brochure and printable template using Adobe InDesign, plus they will learn branding visualization, packaging and logo design in 3D. Drag and drop a vector or image into a 3D model to see it in real context using Adobe Dimension and adobe Illustrator

Approved by department council	Dr. AHMED ALSSWEY	Date of approval	1/2/2022

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