



BSc (Honours) Graphic Design and Multimedia Programme Specifications

1. Programme Specification

Programme/award title(s)	BSc (Hons) Graphic Design and Multimedia
Awarding institution	Arab Open University (AOU)
Credit hours for the award	132 Credit Hours
To be offered in	Egypt, Lebanon and Jordan.
Duration of the programme for each mode of study (FT, P/T)	4-8 Years
Dual accreditation (if applicable)	N/A

1.1 Aims of the Programme

Faculty of Computer Studies at the Arab Open University (AOU) will soon include Undergraduate programme in “Graphic and Multimedia design” to its wide portfolio of degree level programmes. Arab Open University is working towards piloting this programme in Jordan, Egypt and Lebanon AOU Branches. “Graphic and Multimedia design” programme is a popular field of study for individuals who are interested in augmenting their artistic talent with the professional skills of this field. Multimedia Technology can be an exciting field for creative individuals who are also tech savvy. Successful professionals in the field of multimedia/graphics design are creative and effective at communicating thoughts and ideas, whether it be through a simple graphic, short film or multi-page website. The main aim of this programme is to provide students a keen grasp of graphic design and multimedia technology, including 3D model construction, lighting, and animation that will enable the interested individuals to create exciting, engaging, and interactive experiences. In addition, individuals will learn how to correct and enhance already developed images/multimedia and develop all types of graphic media including web pages, marketing campaign, advertising, instructional material, and multimedia projects. The programme will help in developing strong skills in artistic creativity, historical background of graphic/multimedia design, multimedia and graphic design standards, specialized theoretical background, business fundamentals, and mastering the relevant technologies and tools. Therefore, this programme balances the theoretical and the practical aspects, and the artistic and technology aspects.

1.2 Objectives of the Programme

The Graphic and Multimedia design programme will provide the students with essential knowledge and skills about the important field of Multimedia and Computer Graphics. Graduates of this program will be able to undertake web design and development projects involving advanced multimedia and graphics capabilities. Students will be able to apply their artistic and creativity skills towards developing computer graphic projects involving creativity and elegance. Students will be able to evaluate and select the appropriate design techniques and technological tools applicable for real world projects. Graduates of this programme will acquire the required skills to embed advanced multimedia and graphics capabilities for mobile devices.

1.3 Learning Outcomes of the Programme

The Learning Outcomes of the Program have been provided below for the three levels of study involved in this program.

Learning Outcomes for Level-1:

Knowledge and Understanding:

After completing their studies at Level-1, the students will be able to:

- Demonstrate basic knowledge of graphic design and multimedia.
- Understand basic concepts of digital photography
- Demonstrate knowledge of multimedia production techniques.
- Understand interactive design methodologies.
- Demonstrate basic computer programming concepts.
- Demonstrate basic artistic and creative skills.
- Understand the basic methods of advertising and marketing.

Specific Skills:

After completing their studies at Level-1, the students will be able to:

- Write basic computer programs for artistic projects.
- Produce basic graphic and multimedia content.
- Embed graphics and multimedia content in web design projects.
- Make use of graphics for effective visual communication.
- Make use of graphics and multimedia for artistic projects.

Key Transferable Skills:

After completing their studies at Level-1, the students will be able to:

- Demonstrate good communication skills using effective graphics and multimedia design.
- Display good time management and note taking skills.
- Demonstrate a basic ability to undertake independent studies.
- Work in a team on technical projects.

Learning Outcomes for Level-2:

Knowledge and Understanding:

After completing their studies at Level-2, the students will be able to:

- Understand the importance of interactive design for multimedia and modern communication devices.
- Understand the importance of artistic and creative elements in graphic design projects.
- Demonstrate basic knowledge of 3D design, computer aided design and modeling techniques.
- Describe the importance of various aspects of visual communication design.
- Demonstrate knowledge about key aspects of media aesthetics and illustration.

Specific Skills:

After completing their studies at Level-2, the students will be able to:

- Apply a wide range of design practices for the production of effective graphic and multimedia content.
- Undertake projects involving graphics and multimedia capabilities.
- Design interactive graphical user interfaces for effective usability.
- perform analysis and evaluation of web design and development projects involving graphics and multimedia
- Participate in undertaking artistic and creative graphics and multimedia projects.
- Apply visual communication and design techniques in project work.

Key Transferable Skills:

After completing their studies at Level-2, the students will be able to:

- Undertake high degree of independent self-studies.
- Demonstrate effective communication skills concerning graphic design and multimedia technologies.
- Demonstrate efficient time management and note taking skills.
- Work effectively as team member on technology based projects.

Learning Outcomes for Level-3:

Knowledge and Understanding:

After completing their studies at Level-3, the students will be able to:

- Describe the various design techniques related to 3D Animation Systems
- Understand the challenges involved in designing graphics and multimedia content for specific devices.
- Demonstrate knowledge of various design packaging procedures.
- Demonstrate knowledge of integrating graphic design and multimedia technologies into effective project work.

- Understand the importance of artistic and creative skills in the design of graphic & multimedia content.

Specific Skills:

After completing their studies at Level-3, the students will be able to:

- Evaluate and select suitable software tools and technologies required to undertake graphic design and multimedia project.
- To select, organize and implement their project within the allocated resources and budget constraints.
- Undertake project work involving advanced graphic design techniques and animation.
- Perform effective presentation before a panel of experts.
- Undertake project work involving artistic and creative graphic design techniques.

Key Transferable Skills:

After completing their studies at Level-3, the students will be able to:

- Undertake independent studies and practice lifelong learning.
- Demonstrate efficient project planning and implementation skills.
- Demonstrate efficient team work and collaboration.
- Undertake graphic design and multimedia projects work.

2 Program Structure

This programme is comprised of University Requirements (27 Credit Hours), Faculty Requirements (22 Credit Hours) and Specialization Core Requirements (83 Credit Hours). The complete structure of the programme has been provided in Table1 toTable7.

Table 1: Degree Requirements (132 Credit Hours)

Requirements	Credit Hours
University Requirements / Mandatory	18
University Requirements / Elective	9
Faculty Requirements / Mandatory	16
Faculty Requirements / Elective	6
Specialisation Requirements / Mandatory	74
Specialisation Requirements/Electives	9
Total	132

Table 2: University Requirements / Mandatory (18 Credit hours)

Course Code and Title	Credit Hours	Prerequisites
EL099 - English Orientation Program (Level 3)	3	
AR113 – Arabic communication skills	3	
GB102 – Entrepreneurship Principles for Non-Specialists	3	
GT101 – Learning and Information Technology	3	
GR118 – Life skills and coexistence	3	
EL111 – English communication skills I	3	EL099
EL112 – English communication skills II	3	EL111
Total	18	

Table 3: University Requirements / Elective (9 Credit hours)

Course Code	Course Title	Credit Hours	Prerequisites
GR111	Arab Islamic Civilization	3	--
GR131	General Branch Requirement	3	--
GR112	Issues and Problems of Development in the Arab Region	3	--
GR115	Current International Affairs	3	--
EL118	Reading	4	EL111
CH101	Chinese for Beginners (I)	3	--
CH102	Chinese for Beginners (II)	3	--
SL101	Spanish for Beginners (I)	3	--
SL102	Spanish for Beginners (II)	3	--
FR101	French for Beginners (I)	3	--
FR102	French for Beginners (II)	3	--
GE111	Introduction to Art Market	3	EL111
GE213	General Design Culture	3	EL111
Total		9	

Table 4: Faculty Requirements / Mandatory (16 Credit hours)

Course Code	Course Title	Credit Hours	Prerequisites
G103	College Mathematics	3	N/A
JM132	Linear Algebra	3	N/A
G102	Introduction to ICT	3	GT101
G121	Design Basics	4	EL111
G212	Introduction to Computer Aided Design	3	G121
Total		16	

Table 5: Faculty Requirements /Electives (6 Credit hours)

Table 6: Specialization Requirements / mandatory (74 Credit Hours)

Course Code	Course Title	Credit Hours	Pre-requisite
M131	Discrete Mathematics	3	EL111
G113	Statistics	3	EL111
M133	Numerical Analysis	3	G103, JM132
T103	Computer Organization and Architecture	3	EL111, G103
G101	History of Graphic Design	3	EL111
G111	Design Literacy	3	EL111
G123	Instructional Design	3	EL111
Total		6	

Level	Code	Course Title	Credit Hours	Pre-requisite
1	G131	Digital Foundations	3	EL111
	G141	Elements and Compositions	3	EL111, GT101
	G151	Introduction to Interactivity and Media Arts	3	EL111
	G161	Introduction to Media Production	4	E111, G102
	JM105	Introduction to Programming	3	EL111, G102
	G171	Typography I	3	EL111
	G181	Digital Photography	3	EL111
	G191	Introduction to Advertising	3	EL111
Sub Total			25	
2	G201	Digital Visualization Studio	3	G121, G141, G171
	G211	Visual Communication Design	4	G121, G141, G171
	G221	Digital and Emerging Media Design I	4	G102, G151, G121
	G202	Computer Graphics and Imaging	4	G103, JM132
	G231	Illustration	4	G151, G171
	G241	Applied Media Aesthetics	4	G151, G141
Sub Total			23	
3	G301	Typography II	3	G171
	G311	3D Modelling and Animation Techniques	3	G202, G231
	G321	Digital and Emerging Media Design II	3	G221, G202
	G331	Visual Effects and Compositing	3	G202, G231, G241
	G341	Sound Production for Mixed Media	3	G102, G241
	G351	Packaging Design	3	G131, G161
	G361	Graduation Project	8	Should complete all level 2 courses, and level 3 are co-requisite
Sub Total			26	
Total			74	

Table 7: Specialization Requirements /Electives (9 Credit Hours)

Level	Course Code	Course Title	Credit Hours	Pre-requisite
1	M180	Data Structures and Algorithms	3	JM105, M131
	GE101	Storyboarding	3	EL111
	Subtotal		3	
2	GE201	Design Practice	3	G151, G171, G141
	GE202	Introduction to Relational Databases	3	JM105, M131
	GE212	Programming for Digital Media	3	JM105, G161
	GE203	Critical Thinking and Creativity	3	G121, G141, G151
	GE221	Comics	3	G121, G131, G141
	Subtotal		3	
3	GE302	Web Application Development - Server Side	3	JM105, M131
	GE301	Interactive Media Design for Mobile Devices	3	G221, G231, G241
	GE312	Image Processing	3	G103, JM132, G181
	GE311	Graphic Identity and Branding	3	G201, G231
	GE303	e-Commerce	3	G102, G131, G221
	GE321	Design Management	3	G201, G221, G231
	GE331	Artistic Direction	3	G201, G211, G231
	Subtotal		3	
Total			9	

3 Recommended Year-wise Study Plan

3.1 Calendar Year 1

Semester-1	Course Code	Course Title	Credit Hours	Pre-requisite
	GT101	Learning and Information Technology	3	
	GB102	Entrepreneurship Principles for Non-Specialists	3	
	AR113	Arabic communication skills	3	
	EL111	English communication skills I	3	
	G103	College Mathematics	3	
		University Requirement/Elective	3	
	Sub Total		18	
Semester-2	GR118	Life skills and coexistence	3	AR113
	EL112	English communication skills II	3	EL111
	JM132	Linear Algebra	3	
	G102	Introduction to ICT	3	GT101
		University Requirement/Elective	3	
		Faculty Requirement/Elective	3	
	Sub Total		18	

3.2 Calendar Year 2

Semester-1	Course Code	Course Title	Credit Hours	Pre-requisite
	G121	Design Basics	4	EL111
	G131	Digital Foundations	3	EL111
	G141	Elements and Compositions	3	EL111, GT101
	G151	Introduction to Interactivity and Media Arts	3	EL111
	G191	Introduction to Advertising	3	EL111
	Sub Total		16	
Semester-2	G161	Introduction to Media Production	4	EL111, G102
	JM105	Introduction to Programming	3	EL111, G102
	G171	Typography I	3	EL111
	G181	Digital Photography	3	EL111
		University Requirement/Elective	3	
	Sub Total		16	

3.3 Calendar Year 3

Semester- 1	Course Code	Course Title	Credit Hours	Pre-requisite
	G211	Visual Communication Design	4	G121, G141, G171
	G221	Digital and Emerging Media Design I	4	G102, G151, G121
	G202	Computer Graphics and Imaging	4	G103, JM132
		Specialization Requirement/Elective	3	
	Sub Total		15	
Semester- 2	G201	Digital Visualization Studio	3	G121, G141, G171
	G212	Introduction to Computer Aided Design	3	G103, JM132, G121
	G231	Illustration	4	G151, G171, G141
	G241	Applied Media Aesthetics	4	G151, G141
		Faculty Requirement/Elective	3	
	Sub Total		17	

3.4 Calendar Year 4

Semester- 1	Course Code	Course Title	Credit Hours	Pre-requisite
	G301	Typography II	3	G171
	G311	3D Modelling and Animation Techniques	3	G202, G231
	G321	Digital and Emerging Media Design II	3	G221, G202
	G331	Visual Effects and Compositing	3	G202, G231, G241
		Specialization Requirement/Elective	3	
Semester- 2	Sub Total		15	
	G341	Sound Production for Mixed Media	3	G102, G241
	G351	Packaging Design	3	G131, G161
	G361	Graduation Project	8	Should complete all level 2 courses, and level 3 are co-requisite
		Specialization Requirement/Elective	3	
	Sub Total		17	

4 Course Description of University Requirements/ Mandatory

4.1 GR101: Independent Study Skills

Unit	Unit's Title	Unit's content
Unit One:	Open Education and Distance Learning	<ul style="list-style-type: none">▪ Main Concepts▪ Direct and indirect media▪ International models of Distance Learning Institutions▪ Learner in Open Education
Unit Two:	Communication and Thinking Skills	<ul style="list-style-type: none">▪ Communication and Self Learning▪ Planning and Organizations▪ Skills of discussion, Problem Solving▪ Cooperative work
Unit Three:	Planning for Self Learning Skills	<ul style="list-style-type: none">▪ Time organizing and control▪ Aims and Self control▪ Time and Self control
Unit Four:	Reading Skills and Self Learning	<ul style="list-style-type: none">▪ Reading concepts, aims and skills▪ Reading analysis▪ SQ3R strategy steps
Unit Five:	Writing Skills for Self Learning	<ul style="list-style-type: none">▪ Writing skills, descriptive writing▪ Analytical writing▪ Writing reports▪ Structuring an essay▪ Writing drafts
Unit Six:	Examinations in Distance Learning	<ul style="list-style-type: none">▪ Importance of Evaluation▪ Doing well in examinations▪ Effective revision▪ Revision strategies▪ Dealing with stress▪ Managing stress

4.2 GT101: Learning and Information Technology

This is an introductory course which introduces students to the essential concepts related learning online and computing with confidence. This is a fundamental course for all students enrolled in AOU.

Aims of the module:

- To develop basic skills of “Learning”
- To know e-Learning: meaning, accessibility, skills, and resources
- To familiarize with the basic concepts of Information Technology: Internet, Web, and Systems
- To familiarize with basic computer system applications: software and hardware
- To learn some practical skills for using computers
- To introduce the concepts of: Security and Ethics

4.3 AR113: Arabic Communication Skills

Arabic 111 is a three credit-hour university requirement, and is the first in a two-course series. The course aims to enable students acquire the language skills needed at the university level, with special emphasis on the following subject areas:

- Essentials of Arabic syntactic structures
- Knowledge of grammatical inflectional markers and case endings in spoken and written Arabic
- Ability to read Arabic texts in different disciplines with understanding, analytical skills, deduction, and evaluation
- Looking up meanings of words in Arabic dictionaries
- Adequate training and involvement in writing activities, with the proper use of punctuation marks and avoiding spelling mistakes.

4.4 EL111: English Communication Skills (I)

As an integrated skills syllabus, EL111 continues to develop the communication skills – listening, speaking reading and writing- together with functions, vocabulary and grammar. However, special emphasis is placed on the two major skills of READING and WRITING through which structure, vocabulary, etc. can be integrated and developed. The course is learner-centered and seeks to introduce thematic topics which aim at developing critical thinking skills. It emphasizes the skill of reading through the application of learning strategies such as prior knowledge, scanning for specific information, skimming for main idea, and getting meaning from context. The course helps students to become more independent learners through extensive reading and writing practice.

4.5 EL112: English Communication Skills (II)

EL112 is an advanced integrated skills course which builds on experience gained from EL111. The course continues to develop the four communication skills of listening, speaking, reading and writing, while stressing aspects of vocabulary and grammatical structure through the two major skills of READING and WRITING. Special emphasis is placed on the skill of WRITING where students will be prepared to write longer essays and be introduced to research paper writing.

5 Course Description of University Requirements/ Elective

5.1 GR111: Arab Islamic Civilization

- Overall views in the history of Arabic-Islamic Civilization.
- Concepts and Social Issues.
- The effect of Islamic Civilization on the European Renaissance.
- Trends of Stagnation in the Islamic Civilization.
- Modern Arabic Renaissance.
- Islamic Arts and Architecture.

Learning outcome: Acquaint students with the past influence and present importance of Arabic-Islamic civilization in world history.

5.2 GR131: General branch requirement

Example of a course: The historical and political history of the state and the factors that contributed to the formation of political, economic, social and cultural life, as well as political transformations and their impact on the social environment of the state, in addition to the geographical location and its impact from a strategic and regional perspective, the constitution of the state - women and political participation, the judiciary and its relationship with other authorities, judicial development, population phenomena and the structure of society, demographic features and social characteristics of the structure of the population of society and future expectations, governmental and non-governmental development institutions and organizations, their real challenges and their potential future, the role of these organizations in developing society, changes and globalization and their impact on civil society organizations, the historical development of the emergence of regional and international organizations and their objectives and organizational structure and areas of cooperation between the countries of the region.

GR112: Issues and Problems of Development in the Arab Region

- Introduction to the study of development, meaning and content
- The status of human development in the Arab world and its Social indicators.
- Status of the Arabic Culture, education, mass, media, human development, health, nutrition and environmental affairs, women, natural resources in the Arab World.

Learning outcome: Understanding developmental issues in the Arab World in their full contexts, whether social, cultural, economic or political.

5.3 GR115: Current International Affairs

The course examines the issues and problems which stand as global concerns in the interaction of civilizations, North-South relations, development of International and National Civil Society, Human Rights and Illegal Immigration.

Learning outcome:

- Analysis of the issues and problems which stand as global concerns.
- Understanding factors of these problems and their impact on the global, regional and national organizational structure.

5.4 EL118: Reading

Reading is a skill that engages students in recognizing the script of a language, identifying the meaning of the words and understanding the meaning in different contexts. Reading is a complex skill that needs to be developed through developing its sub-skills. Simultaneously, this can be achieved by making use of clues, understanding key concepts and relevant details, distinguishing main points from secondary points, and identifying facts from opinions.

This is a short course which aims to:

1. Equip you with the necessary reading skills that you need to function appropriately in academic, professional and social settings
2. Enable you to make sense of the complex nature of academic word learning
3. Improve your understanding of written English by enriching your vocabulary knowledge
4. Explore your thoughts, opinions, and reflection on a given text.
5. Build your confidence to discuss and share your ideas based on what you have read in an interactive environment

5.5 CHI101: Chinese for Beginners (I)

The course introduces the student to the basics of Chinese (Mandarin). These include the alphabet, common everyday expressions, simple sentences, short dialogues and small paragraphs. The four skills of reading, writing, listening and speaking will be equally emphasized. However, as we live in the age of the image, students will have ample exposure to a variety of audio-visual material which boost their command of the language at the beginner's level. The communicative approach is to be adopted in face-to-face tutorials and the various methods of enabling students to learn on their own will be prioritized.

5.6 CHI102: Chinese for Beginners (II)

The course builds on what the student has learnt in level (1). Toward this end, it introduces the student to more everyday expressions, more widely-used short sentences, some compound and complex sentences, medium-size dialogues, and short passages. While the skills of listening and speaking will be receiving adequate attention, more emphasis is to be placed on the skills of reading and writing. Face-to-face tutorials will be communicative and students will be empowered to learn on their own.

5.7 SL101: Spanish for Beginners (I)

The course introduces the student to the basics of Spanish. These include the alphabet, common everyday expressions, simple sentences, short dialogues and small paragraphs. The four skills of reading, writing, listening and speaking will be equally emphasized. However, as we live in the age of the image, students will have ample exposure to a variety of audio-visual material which boost their command of the language at the beginner's level. The communicative approach is to be adopted in face-to-face tutorials and the various methods of enabling students to learn on their own will be prioritized.

5.8 SL102: Spanish for Beginners (II)

The course builds on what the student has learnt in level (1). Toward this end, it introduces the student to more everyday expressions, more widely-used short sentences, some compound and complex sentences, medium-size dialogues, and short passages. While the skills of listening and speaking will be receiving adequate attention, more emphasis is to be placed on the skills of reading and writing. Face-to-face tutorials will be communicative and students will be empowered to learn on their own.

5.9 FR101: French for Beginners (I)

The course introduces the student to the basics of French. These include the alphabet, common everyday expressions, simple sentences, short dialogues and small paragraphs. The four skills of reading, writing, listening and speaking will be equally emphasized. However, as we live in the age of the image, students will have ample exposure to a variety of audio-visual material which boost their command of the language at the beginner's level. The communicative approach is to be adopted in face-to-face tutorials and the various methods of enabling students to learn on their own will be prioritized.

5.10 FR102: French for Beginners (II)

The course builds on what the student has learnt in level (1). Toward this end, it introduces the student to more everyday expressions, more widely-used short sentences, some compound and complex sentences, medium-size dialogues, and short passages. While the skills of listening and speaking will be receiving adequate attention, more emphasis is to be placed on the skills of reading and writing. Face-to-face tutorials will be communicative and students will be empowered to learn on their own.

5.11 GE111: Introduction to Art Market

On this course, the student will discuss and assess the value of art with dealers, curators and artists through visits to galleries and access to corporate and public collections and consultancies. It's an exciting opportunity for theoretical investigation, as well as getting plenty of practical advice on collecting contemporary art. Students will explore the logic of the art market and what drives this peculiar economy. They will also look at strategies for identifying emerging artists and building a unique collection of contemporary art.

5.12 GE213: General Design Culture

A basic introduction to Design Culture: is a critical unit demonstrating the emphasis of the design process on the development of visual language. It takes the student through a brief journey exploring the historic, scientific, economic, technical and cultural influences on the development of visual languages.

6 Course Description of Faculty Requirements/ Mandatory

6.1 G103: College Mathematics

The purpose of this course is to provide the foundation for mathematics course and to build the algebra skills needed to solve real-world and mathematical problems. Topics shall include: Real numbers and their properties, Linear equations and inequalities in one variable, Linear equations in two variables and their graphs, Exponents and polynomials, Factoring, Rational Expressions, System of linear equations, Radicals and rational exponents, Quadratic equations and inequalities, Elementary functions and their graphs, Exponential and logarithmic functions, and Complex numbers.

6.2 JM132: Linear Algebra

The course contains a range of ideas concerning matrices and its applications, including operations appropriate in specialized applications and some knowledge of relevant computing ideas that are widely used in data communication, digital signal processing and in scientific research. The course shows how to formulate algorithms to solve systems of linear equations for constructing important mathematical structures, illustrated by examples.

G102: Introduction to ICT

Information and Communication Technologies (ICT) have become an integral part of both every day personal life as well as day to day business activities. This course will introduce students to ICTs for personal and enterprise level usage. Students will be introduced to both fixed as well as mobile ICTs in the course. They will study about modern trends in ICTs, including computer networks, operating systems, mobile devices and technologies and social media trends.

6.3 G121: Design Basics

The course introduces the student to the translation of perception through delineation, drawing, and other descriptive media. Emphasis of the course is on the development of students' motor control by

means of freehand and mechanical drawing and by development of analytical and objective observation from life and three-dimensional objects. Also, the course will help the student to learn the basic principles of design, composition, using Colors, Lines and shapes as mediums.

6.4 G212 : Introduction to Computer Aided Design

The course will introduce to the student how to use a Computer Aided Design software. The student will be taught the basics of design using CAD, from initial simple model generation though to developing more complex three dimensional models using the computer as a tool for design.

7 Course Description of Faculty Requirements/ Electives

7.1 M131: Discrete Mathematics

This is an introductory level undergraduate course which introduces students to the basic principles of Discrete Mathematics. The course aims to: teach students notations used in Discrete Mathematics associated with computing- teach the rudiments of elementary mathematical reasoning - prepare students for the theoretical parts of further courses in computing - study logic from a mathematical perspective and relating it to computer applications - introduce basic set-theoretical notions: relations, functions, graphs, equivalence relations, partial orderings - introduce students to Graphs and Trees.

7.2 G113: Statistics

This course provides an introduction to statistics for those with little or no prior exposure to basic probability and statistics. Its simulation/resampling approach (drawing numbers or data from a hat) demystifies the traditional formulas, demonstrating the fundamental basis for statistical inference. Topics covered include probability, the Normal distribution, hypothesis testing, independence, conditional probability, Bayes Rule, 2-way tables, random sampling, and confidence intervals. Once you have completed this course you will be able to apply statistically valid designs to basic studies, and test hypotheses regarding proportions and means.

7.3 M133: Numerical Analysis

This course analyzed the basic techniques for the efficient numerical solution of problems in science and engineering. Topics spanned root finding, interpolation, approximation of functions, integration and direct and iterative methods in linear algebra. All the assignments involve practical work using the software package MATLAB.

7.4 T103: Computer Organization and Architecture

This course offers a clear and comprehensive survey about computer organization and architecture. It introduces the inner workings of a modern digital computer through an integrated presentation of fundamental concepts and principles. Aims of the module are as follows: To understand computer

organization - To understand computer architecture - To understand the different core concepts behind the hardware layer of a computer system.

7.5 G101: History of Graphic Design

Graphic images have been used from prehistory to the computer age. A lecture-discussion format presents the historical context for the graphic arts of calligraphy, typography, book design, diagramming, and illustration. Emphasis on the relationship of these applied arts to the fine arts, technology, and social history, as well as the application of this visual language to contemporary design problems.

7.6 G111: Design Literacy

This course introduces students to the ubiquity and multiplicity of purpose of graphic design and the applied arts in general. Students discover the cultural dimensions of visual and verbal elements and learn to appreciate international issues related to the globalization and localization of design messages. Students carry out hands-on projects to explore aesthetic and communicational aspects of design.

7.7 G123: Instructional Design

In this course, students will produce learning experiences using simple media and technologies. The course introduces instructional design theories and frameworks while working to develop short e-content, webinars, or applets about engaging topics. This course is helpful for those professionals who work directly or indirectly to support and improve learning in their organizations, or those lifelong learners who want to better understand how to use technology to manage their own learning.

8 Course Description of Specialization Requirements/Mandatory

8.1 G131: Digital Foundations

This course introduces students to fundamental principles and applications of design, emphasizing critical and cultural awareness of design issues and developing of technical skills. The notion of creative problem solving is particularly emphasized. Students develop expertise in major industry standard software packages. This course lays the foundation for further study of design.

8.2 G141: Elements and Compositions

This course will enable students to refine their drawing skills with visual elements and compositions, through using different specialized software tools. Additional challenges are added that partner original thought with learned practices.

8.3 G151: Introduction to Interactivity and Media Arts

This course is an introduction to the concepts of interactivity & the field of media art. It vitally concentrates on the act of perception of Arts & Design, following the history of multimedia & and digital tools as media for artistic exploration in relation to print, media art, & interactivity. The course includes discussion of the potential ideas related to interactivity, with focus on required skills for creating interactive work.

8.4 G161: Introduction to Media Production

Through this course the students will learn about various forms of media, how to make the best use of them, why one would choose one form of media over another, and finally, about all of the techniques used to create a media project. They will learn the basics of media production using the media tools of photography, film, video, audio, graphic production, and interactive media. Students apply these fundamentals by participating in hands-on group projects. Through the curriculum, individuals are given the opportunity to develop hands-on production skills, achieve technical proficiency, and make sophisticated choices in the creation of media art. The course is ideal for participants seeking to build media production skills, which participants will showcase through a final capstone of their work completed in the course.

8.5 JM105: Introduction to Programming

This course provides an introduction to the basic knowledge required to understand, design and write computer programs and the basic principles underlying the process of Software Engineering. No previous programming experience is assumed and the course proceeds via a sequence of lectures supported by hands-on-training and simple exercises designed to give practical experience of the concepts introduced in the lectures.

8.6 G171: Typography I

Students will explore creative, historical, theoretical, and applied principles of type. Through creative projects and exercises, students will explore the communicational impact of choosing typefaces, the expressive possibilities of type in static and kinetic media, as well as the foundations for hierarchy and composition for publication design. Students will also develop skills to enhance, clarify, and support meaning and the accessibility of typographic content. Creative studio practice combines with supporting readings, lectures, and software training.

8.7 G181: Digital Photography

This course introduces the student to the principles and practice of digital photography and photographic special effects, particularly photomontage. This theory is followed by practical workshops with an experienced professional photographer. Having learnt the basics the student will then produce a portfolio of digital photographs and a poster.

8.8 G191: Introduction to Advertising

Introduce students to the role of advertising in business. Students will learn basic concepts, regulations, ethics, and diversity associated with advertising as well as how advertising fits into the marketing structure of most industries.

8.9 G201: Digital Visualization Studio

This course explores the digital technology available to students of design for two dimensional (2D) representations. It starts with an exploration of the Design elements such as line, value, color, shape, form, texture and space. It demonstrates the 2D design types and it also discusses the language of visual design, digital photography, digital design processes. Moreover, it introduces Raster Image

Manipulation, including principles of image representation, digital color representation. Vector Illustration in 2D is also discussed including basics of typography and vector illustration. Intermediate drawing techniques and creating and manipulating complex Vector shapes. In addition, this unit covers all concepts relating to 3D form as well as related special issues. The unit will introduce the key skills and professional knowledge needed to creatively develop the built environment and the elements within it. Students will learn how to design real as well as virtual Objects and Products. Model-making, both analogue and digital, is an important part of this unit. Students are encouraged to experiment with materials and processes and to question the relationship between form and function. The course also examines ethical practice and the role of design in sustaining natural and social environments.

8.10 G211: Visual Communication Design

Students will engage in hands-on design practices, develop creative thinking strategies, and devise solutions to visual communication design challenges. The course familiarizes students with visual principles, essential software, and techniques that serve the basic designer needs. Students will also develop fluency in the principles of visual language to form a basis of aesthetic judgment and develop methods of analysis and inquiry for creative thinking. Students' practice is combined with class critiques of work, software tutorials, and supporting lectures.

8.11 G221: Digital and Emerging Media Design I

Students will develop applied creative projects and acquire technical skills to become adept at essential software, design principles and practices for screen-based digital and emerging media. Students will also learn foundations of front-end web coding such as HTML and CSS, and develop technical problem solving and organizational skills. Course lectures address the cultural backdrop of the Internet as it applies to design.

8.12 G202: Computer Graphics and Imaging

This course introduces image input and output devices such as cameras and displays, graphics hardware and software, input technologies and interactive techniques, typography and page layout, light and color representations, exposure and tone reproduction, image composition and imaging models, digital signal processing, sampling, aliasing and antialiasing, compression, two- and three-dimensional geometry and formations, modelling techniques including curves and surfaces, reflection models and illumination algorithms, and basic methods of animation.

8.13 G231: Illustration

Students explore illustration as a communicational concept delivery tool. From basic black-and-white techniques, including representational drawings and pictograms, to complex color, collage, and mixed media.

8.14 G241: Applied Media Aesthetics

This course offers students an introduction to the aesthetic concepts as applied directly to Image, video, and sound media. Using examples from these media, students will study, discuss, and analyze design and composition elements as they apply to the production process.

8.15 G301: Typography II

Students will create typographically focused design solutions to design challenges, and explore the relationship between type and image across print and digital media. The course emphasizes ideation of sophisticated design combining visual and verbal elements, as well as the development of advanced publication layout skills, grid-based typographic structures, and information design.

8.16 G311: 3D Modelling and Animation Techniques

This course will introduce principles and techniques used for creating three-dimensional content in virtual space. Students will learn principles of model creation, texture manipulation, scene rendering and animation to enable them to conceptualize and produce meaningful and artistic visualizations. The class will also explore the implications of the work produced as students engage in mutual critique.

8.17 G321: Digital and Emerging Media Design II

Through this course, students will prepare themselves for the world of professional web design. Through creative hands-on projects, exercises, and lectures students learn to conceptualize, design, and deploy successful web sites for clients. Course topics address intermediate web design concepts such as interface design, usability principles, web typography, information architecture, compliant front-end HTML, CSS, and JavaScript code.

8.18 G331: Visual Effects and Compositing

Visual Effects and Compositing is a very practical course where the student develops short video clips integrating live video footage, 3D animations and special effects. Each workshop session includes hands-on training in visual effects and compositing software. This module provides an introduction to the principles of visual communication. Examples of traditional and modern artefacts will be explored and discussed with regards to formal analysis and critical interpretation. Visual Effects and Compositing is a course aimed at those who want to learn about the visual effects process from green screen compositing and digital matte painting to title effects and 3D effects. This course aims to give students insight into the various techniques used in the industry as well as the necessary skills to perform compositing tasks. Using reasonable software tools, students will perform their own tests, experiments, and finished effects shots.

8.19 G341: Sound Production for Mixed Media

This course will help the students to acquire the technical knowledge and set procedures required of professional sound recordists and mixers in a wide range of field productions. The course covers all of the necessary equipment, set procedures and techniques for recording and mixing sound in the field. There are lectures, demonstrations and hands-on field exercises. Students develop their own sound aesthetic and learn how to work with various microphones, digital recorders, booms and support equipment to create a 'sound environment' for a variety of film and video productions.

8.20 G351: Packaging Design

Development of three-dimensional design solutions related to the presentation of objects and products. Students explore structural, production, and communicational aspects of packaging.

8.21 G361: Graduation Project

The final year project module, which is a substantial piece of work, is based on the students own personal interests. This may be building an interactive Web application, Game Development, 3D animation, authoring a CD-ROM or creating a DVD, on a theme usually associated with an industrial collaborator. Alternatively, you may wish to work on a project associated with the research of a member of the academic staff.

9 Course Description of Specialization Requirement / Electives

9.1 M180: Data Structures and Algorithms

This course aims to study the design, implementation, and application of data structures as a means for algorithmic problem solving. Each problem exhibits specific characteristics with respect to resource requirements, data representation, and software architecture. The study of data structures is primarily concerned with the following questions: How can a given problem be effectively expressed? What are suitable data representations for specifying computational processes? What is the impact of data and its representation with respect to time and space consumption? What are the reoccurring structural artefacts in software and how can we identify them in order to facilitate problem solving?

9.2 GE101: Storyboarding

This course will offer to the students a practice-based introduction to basic storyboarding and story presentation skills. This course aims to develop the student's formal pictorial skills in relation to a visual narrative and to develop student's awareness of narrative formalities. This course will introduce to the student the skills needed to sketch out the narrative and formal flow of an animation using a storyboard. They will be shown how to present local issues such as framing, camera movement, character movement and key visual essentials within the larger structure of the entire narrative. This course will also introduce the storyboard as a thinking tool, through which creative ideas are developed and given detail. The role of the storyboard within the animation pipeline and its relevance to such things as concept development, script development, animatics and production will be covered.

9.3 GE201: Design Practice

In this course, student will learn how to put into practice all that he has learned during the programme courses. Students will create various artworks in the different graphic design products that they have covered and successfully combine these skills in a final project.

9.4 GE202: Introduction to Relational Databases

Relational Databases are the most common way of storing data about entities such as people, products, organizations and the transactions that occur between these entities. The most common problem with relational databases is a poor database schema which limits the storage, maintenance, retrieval and performance of the database. This unit focuses on appropriate database design techniques using Entity Relationship Diagrams and Normalization techniques. Students design and build complex databases, then store, maintain and retrieve data using commercial relational database management tools. These skills are required by any persons who will interact with an existing database or will be involved in the design of new data storage and retrieval systems. Students who complete this unit of study should be able to: 1. Demonstrate key principles in database design. 2. Explain the fundamentals of the relational data model. 3. Use conceptual data analysis methods to produce and document a logical data model. 4. Design and generate and populate a simple database system using a commercial relational database management system tools.

9.5 GE212: Programming for Digital Media

This course is concerned with developing skills in object oriented modelling and user interface design. Practical skills needed to design and develop Java programs for networked environments are

developed. There is extensive practical work. Topics include: object oriented design, software engineering with Java and applet design.

9.6 GE203: Critical Thinking and Creativity

This course leads its participants through the engaging experience of tapping into their creativity; developing emerging ideas; evaluating the viability of these ideas through a process of critical thinking; linking in the synergistic potential of working with others and channeling the resulting strategies into reality. The course incorporates the profiling of personal thinking styles and comparisons with the styles and impact of colleagues and the drivers of thinking preferences. Participants will experience the power of positive thinking and communication approaches.

9.7 GE221: Comics

In this course, students will explore the comic book superhero as a literary genre and we will trace the history of its development, focusing on emerging social trends that have shaped the powerful creative industry it has become today. We will read comics, read about comics, write about comics, and talk about comics. After studying several literary heroes and comic book superheroes, each student will select a favorite comic book superhero and compile a profile from the comic book literature and commentary, in which they will explore the hero's origins, powers, vulnerabilities, exploits, and involvement with social issues, as well as such themes as secret identities and romantic involvements. At the conclusion of the course, students will answer the question: What is a hero? And reflect upon development of their own heroic traits.

9.8 GE302: Web Application Development - Server Side

The course aims to provide students with the knowledge and skills necessary to develop dynamic web applications using open source software tools such as PHP and MySQL on an Apache server. Specifically, students will learn to write server-side scripts in PHP language, process user data submitted from web forms, design and create databases for various kinds of web applications and design and implement 3-tier web apps using PHP and MySQL.

9.9 GE301: Interactive Media Design for Mobile Devices

This course introduces students to design elements and techniques for mobile applications. Through hands-on projects, exercises, and supporting lectures students learn how to conceptualize, design, prototype, and execute interactive experiences for portable digital devices. The creative projects place emphasis on developing the ability to clearly articulate complex information architecture while producing compelling and vibrant user interfaces.

9.10 GE312: Image Processing

This course introduces the basic theories and methodologies of digital image processing. Topics include intensity transformations for image enhancement, two-dimensional discrete Fourier transform, spatial and frequency domain linear image filtering, nonlinear image filtering, binary image processing, edge detection, image segmentation, and digital video processing basics. This course makes extensive use of software tools for analysis, design, and visualization tool.

9.11 GE311: Graphic Identity and Branding

The course is organized to introduce students to contemporary design practice, and the relative and contextual histories of the discipline so they can contemplate their place within it. Films, lectures/presentations, readings and studio work will help foreground how students develop their own creative practice(s) during their time in the course. All this is to avail to students how design can be an inspiring and productive force in the world they inhabit. Students will approach design as both problem-seeking and problem-solving activities, with particular emphasis on complex usage as well as constraints. Students will be introduced to different approaches and methodologies for designing visual identity systems, and how to apply these systems across a range of user needs from analog and digital to 2-D and 3-D applications. All of this will culminate in a visual identity standards manual designed to guide the application, integrity and maintenance of a visual identity system.

9.12 GE303: e-Commerce

This course introduces the concepts, vocabulary, and procedures associated with E-Commerce and the Internet. The student gains an overview of all aspects of E-Commerce. Topics include development of the Internet and E-Commerce, options available for doing business on the Internet, features of Web sites and the tools used to build an E-Commerce web site, marketing issues, payment options, security issues, and customer service.

9.13 GE321: Design Management

This course will enable you to encounter creative projects within a business context, nurture creativity and innovation, and develop key skills to build a dynamic culture, which produces effective creative solutions. The course promotes understanding, awareness and knowledge of the industry whilst encouraging creativity, innovation and ambition.

9.14 GE331: Artistic Direction

This course will enable students to learn the principles and techniques of art direction. Student will be able to work on briefs, and deliver creative concepts and ideas. His creative skills will be improved, powers of lateral thinking and general work performance.

10 Employment Opportunities:

On successful completion of the BSc degree students will be able to get employment opportunities in either regional or international markets. The successful graduate of Graphics and Multimedia design programme will be able to apply for positions such as scriptwriter for multimedia, web designer, multimedia producer, computer-based training designer, web script language developer, game designer/developer, creative director and more. There are many entry-level career opportunities with corporations, organizations, educational institutions, government agencies, entertainment, art galleries, creative design studios and advertising industries in addition to the high potential of entrepreneurship. The types of industry sector offering work are broadening for two reasons: the cost of multimedia software and hardware is falling and multimedia communications using the web are becoming mainstream. The uses of multimedia are becoming more diverse from games and entertainment to advertising, and training. The latest application is in the mobile sector with the up-to-date smart devices.

10.1 Job Opportunities in Graphic Design & Advertising:

- Advertising agencies
- Graphic design studios
- Printing houses
- Publishing houses
- Web design companies
- Freelance
- Teaching and research
- Television
- Animation studios
- Political communication offices
- Communications offices in major 'in house' commercial structures
- Illustration, storyboard and comics offices

10.2 Job Opportunities in Multimedia:

Potential job opportunities are found in the professional sectors of image production, based on the execution of projects in the field of audiovisual, motion picture, television, photography, theater and multimedia.

- Film production companies
- Making of movies and documentaries
- Web design and 2D and 3D animation production companies
- Commercial photographic production companies
- Sales and business relations in the field of photography
- Career in film and digital laboratories
- Newspapers
- Television channels or subsidiary production companies

10.3 Support for students and their learning:

(For apprenticeships this should include details of how student learning is supported in the 11 work place)

AOU provides various services to ensure that all students enjoy peaceful and calm stay, and assists them in dealing with any psychological, behavioural, social, educational, financial, health and safety problems. Students at AOU, including FCS students, are offered various methods of student support. These include:

Learning Management System (LMS)

LMS is a software application / Web-based technology that is used as the major media of communication between students and tutors. LMS main page gives up-to-date information about AOU branches to students from concerned programmes.

LMS features help students to post queries, search for information over a certain topic, read daily posts and comments. Some of the LMS features are as follows:

- Assignment submission through the TMAs submission links
- Discussion forum between all users
- Downloading and uploading processes
- Getting marks
- Using Moodle Instant Messages
- Doing online quizzes
- Accessing mock up exams
- Having access to the E-Library
- Adding course page for student/tutors (introduction, communication tools, announcement section, TMA & MTA grades section, contact your teacher section)
- Providing a free plagiarism online checker website on the LMS to help students in checking their TMA similarity.
- Check all university announcements through the LMS Home Page
- Joining LMS online training link
- Having access to all official social media accounts and YouTube channel through the LMS
- Availability of exams schedule and semester calendar etc.
- Availability of E-Books materials are available for all courses as a PDF files

SIS (Student Information System)

AOU established a centralized SIS that integrates data obtained from the branches' student databases. The SIS comprises security, student information, financial services, academic advising and online registration.

10.4 Academic Advising:

Proper academic advising is regarded as a very critical factor affecting student's success and retention and is given exceptional attention in all branches. Each student is assigned to an advisor. Each advisor should show his advisee the ultimate way to achieve his/her goal while taking into

account his strengths, weaknesses, and past performance.

Given that, AOU adopts a blended learning approach that fosters flexibility for the students; two types of advising are offered at the AOU: Face to face advising and E- Advising. Both are offered within certain context and in accordance to specific criteria and guidelines. Advising usually starts at the beginning of the semester, before registration, but continues throughout the semester, where students can meet their advisors in their office during the semester. Face to face advising is mandatory for new comers, and for old students who are not eligible for e-advising. The advisor takes into consideration several factors, among these factors, the financial situation of the student, his workload (part time/full time job), and the student's results in the placement test. The e-advising is offered for continuing students with good GPA and according to the academic advising policy.

10.5 Assessment Components, Weights, and Criteria:

The FCS follows the AOU's assessment policies, rules and regulations. The assessments at AOU comprise of 3 essential components with their relative weight as follows:

Tutor Marked Assignment (TMA)	20%
Mid-Term Assessment (MTA)	30%
Final Exam	50%