

## ARAB OPEN UNIVERSITY

# FCS-Student Handbook



# Arab Open University Faculty of Computer Studies

# B.Sc. Degree Programme in Information Technology and Computing (ITC)

# ITC Programme Student Handbook

January, 2017

The BSc Programme in Information Technology and Computing [BSc (Hons) ITC] has been developed and is delivered by the Arab Open University (AOU). It has been validated through a process of external peer review by the Open University (OU), UK as being of an appropriate standard and quality validated award of BSc. (Hons) ITC by Centre of Inclusion and Collaborative Partnerships (CICP)

# Note

Please note that information in this handbook is subject to change and continuous updating. Please check for updates at our website:

http://www.arabou.edu.kw

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**Prof. Ashraf Hussein** 

**Dean, Faculty of Computer Studies** 

**Arab Open University** 

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#### Welcome and introduction

#### Welcome

The Faculty of Computer Studies (FCS) is one of four Faculties at the Arab Open University, which has been established in 2002. FCS provides its graduates with high quality education, which meets the market needs in the areas of Information Technology and Computing (ITC), Computer Science (CS), Networking & Security (N&S), Computing with Business (CwB) and Web Development (WD). FCS provides learning opportunities to students who are working and have families and cannot afford full-time study. Our graduates receive two awards of their academic degree; an AOU local award and an award that is validated by the Open University, UK.

Our curricula depend on the teaching/learning material, which are adapted from the OU, UK in addition to the locally designed material. ITC programme satisfies the local accreditation bodies and ministries in the AOU operating countries. FCS uses the Blended Learning mode to deliver technology enhanced education and bridge the barriers of time, space and different learning styles. Quality Assurance is one of our main tools to assure the provision of high quality education, which meets the expectations of our students and the job offering organisations.

The FCS at AOU prepares its graduates for careers in the continuously growing ITC area. A very unique characteristic of our graduates is that they are prepared for lifelong learning and are armed with both communication and technology skills, which help them, face the challenges of the fast developing ITC field.

I urge all of our students to exercise good academic and ethical practices and to work hard towards achieving the programme intended goals.

Prof. Ashraf Hussein Dean, Faculty of Computer Studies Arab Open University

#### 1. Introduction

Arab Open University is a distributed Pan Arab university operating in 8 Middle Eastern countries, including Kuwait, KSA, Oman, Bahrain, Jordan, Lebanon, Egypt and Sudan with its central Headquarters in Kuwait. The FCS Deanship at the Headquarters provides academic leadership to all 8 branches thus enabling them to act as one university in a unified manner. As an Open Education Institution, AOU adopts the Blended Mode of education delivery, consisting of 25% face-to-face teaching and the remaining consists of independent learning on part of the students. By virtue of operating in 8 branches, offering a number of academic programmes and different requirements of the local accreditation bodies, the AOU's academic organization represents great deal of challenges and complexities.

The Faculty of Computer Studies (FCS) at AOU offers B.Sc. - an Undergraduate Programme in Information Technology and Computing (ITC) with a core of 360 Points (96 Credit Hours). The Bachelor of Science in Information Technology and Computing has five pathways, designed to meet the needs of the modern society and the employment market. The students who are applying to the Programme will have the option to choose one of the following five pathways:

- Information Technology and Computing (ITC)
- Computer Science (CS)
- Network & Security (N&S)
- Web Development (WD)
- Computing with Business (CwB)

#### Partnership with OU, UK

Our graduates will be awarded two Honors degrees: one from the Open University, UK and the other one from AOU through one of our 8 local branches; Kuwait, Kingdom of Saudi Arabia, Bahrain, Egypt, Jordan, Lebanon Oman and Sudan.

Enhancing the student experience is one of the main objectives of FCS. Therefore, the student will be equipped with practical and soft skills in addition to the ethical practices, to be ready for the real world as well as the employment market.

#### Why Study ITC?

According to the World Economic Forum Report entitled "The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution" which is published in 2016 by World Economic Forum, Information Technology and Computing is expected to have a great role in the industrial revolution. For instance, Mobile, Internet and Cloud Technology, Advances in Computing Power and Big Data, Internet of things, Advanced Robotics and Autonomous Transport and Artificial Intelligence and Machine Learning are rated as top trend by 34%, 26%, 14%, 9% and 7% respectively between 2015-2020.

Our Information Technology and Computing Programme provides a strong theoretical infrastructure, along with deep technical focus to ensure that graduates have the right combination of theoretical background and technical ability. This unique combination of theoretical knowledge and technical capabilities are equipped to enjoy significant rewards in the world's most challenging industry. Our Deanship and the corresponding departments in AOU operating country campuses have an excellent network of contacts within industry to ensure smooth transition from university into the real world.

According to Linked in 2016, majority of the needed jobs in 2016-2017 are related to IT and Computing. Therefore, studying ITC will enable the students to the face the future and find jobs in the challenging employment market. In addition, AOU, ITC Programme not only prepares students to work in the traditional working environment, but also provides them with needed skills to have their own entrepreneurial endeavors. In this way, our programme has an edge over the programmes offered by others in providing students with skills to succeed both in the traditional professions as well as in their ITC based business/entrepreneurship.

The ITC programme provides its graduates with the top and the most in-demand skills around the globe, including:

- 1. Mobile and Cloud Computing
- 2. Big Data
- 3. Web Architecture and Development

- 4. Internet of Things
- 5. Middleware and Integration of Software
- 6. User Interface Design
- 7. Network and Information Security
- 8. Data Presentation
- 9. SEO/SEM Marketing
- 10. Storage Systems and Management
- 11. Economic, e-banking and e-finance
- 12. Business Computing

#### 2. Academic Calendar

The FCS follows the general academic calendar of the AOU, which consists of 2 main semesters of Fall and Spring and a shorter semester of Summer. The Fall and Spring Semesters are normally of 16-week duration whereas the Summer Semester is of about 10-week duration. The Fall Semester usually starts in October and ends in February whereas the Spring Semester runs from March till July. The Summer Semester usually runs from July till September. The assessment dates are clearly marked in the Academic Calendar. The module calendars for individual modules are based on the Academic Calendar of the AOU. A representative Academic Calendar is given in "Appendix A".

#### **Teaching and Learning Methodology**

Knowledge and understanding is acquired from specially prepared teaching texts for majority of modules, supported by self-assessment and in-text questions, reference texts, multi-media packages, directed reading, computer mediated conferencing, web-based resources, and video and audio recordings. Students work independently with the teaching materials but they are encouraged to form self-help groups with other students, communicating face-to-face, by telephone, email and computer conferencing. Details about Learning and Teaching Strategy at AOU is available in the following link <a href="https://www.arabou.edu.kw/images/reg/final\_learning\_strategy.pdf">https://www.arabou.edu.kw/images/reg/final\_learning\_strategy.pdf</a>

# 3. List of programme director and academic staff, their contact details and availability arrangements

The programme team leader for the B.Sc. in Information Technology and Computing is the Dean of FCS, Prof. Ashraf Hussein (dean.it@arabou.edu.kw). The lists of programme director at the AOU Headquarters and academic staff at the branches are available electronically on the AOU's website at <a href="http://arabou.edu.kw/">http://arabou.edu.kw/</a> and is given here in "Appendix-B". The academic staff at the FCS is available to you during the 25% face-to-face tutorial sessions and also during the office hours.

## 4. List of support staff (technical and administrative)

Support staff at the Headquarters and at the branches are ready to support you in your studies. Their contact details are available at branch websites (please refer to "Appendix C").

#### 5. Details of External Examiners

Name	Position	Institution
Prof. Irfan Awan	Head School of Electrical	Department of Computing, University
(Chief External	Engineering and	of Bradford.
Examiner)	Computer Science	I.U.Awan@bradford.ac.uk
Dr. Alistair Duffy	Professor of	De Montfort University, The
(External Examiner)	Electromagnetics, Faculty	Gateway, Leicester.
	Head of Research and	apd@dmu.ac.uk
	Innovation	
Dr. Philip Davies	Senior Lecturer	University of South Wales.
(External Examiner)		phil.davies@southwales.ac.uk
Dr. Shakeel Ahmed	Senior Research Fellow	School of Engineering and
(External Examiner)		Sustainable Development Faculty of
		Technology, De Montfort University.
		shaarza@gmail.com

#### 6. Introduction to the programme

The Faculty of Computer Studies (FCS) started offering the Information Technology and Computing (ITC) Programme of study since the establishment of the Arab Open University (AOU) in the year 2002. This programme was initially offered at 3 AOU Country Campuses i.e. Kuwait, Lebanon and Jordan. Soon after, it was offered in 3 more country campuses to include Egypt, Saudi Arabia and Bahrain. Oman was the next country campus to offer the ITC Programme of study in 2008, followed by Sudan in 2014. The ITC Programme at FCS was validated by the OUVS in the year 2003. Then, the programme was successfully revalidated in 2007 with major updates in its modules along with the introduction of four pathways, including Information Technology and Computing (ITC), Information and Communication Technology (ICT), Computing (C), and Computing with Business (CWB). From the 4 pathways, the ITC pathway of study has attracted majority of student enrolments. The ITC Programme was successfully revalidated once again in 2012 with major updates in the programme, keeping same pathways. Recently, the FCS Deanship has collaborated with a local research team to conduct extensive surveys with the aim of satisfying the opinions of the majority of working alumni across AOU Country Campuses in addition to the market/industry needs. These researches have led to changing the programme pathways to be Information Technology & Computing (ITC), Computer Science (CS), Networking & Security (NS), Web Development (WD) and Computing with Business (CwB).

#### Philosophy:

Throughout the life of the ITC Programme life in AOU, the deanship philosophy of running the programme is to keep it up-to-date with the latest technical advancements, satisfying the relevant market/employer needs. In addition, the AOU in general is keen to keep its programmes revalidated from the OU, UK to provide our students with extra international recognition to maximize their employability possibilities. The FCS Deanship is also working towards obtaining international recognition for its ITC programme across the AOU Country Campuses. For example, our Kuwait country campus has obtained its first international accreditation from the Institution of Engineering and Technology (IET).

#### 6.1 Programme Pathways

#### • Information Technology and Computing (ITC)

Students will acquire knowledge and key skills about important topics in the field of ITC, including Communication and Information Technologies, Object Oriented Programming, Software Engineering, Data Management and Analysis.

#### • Computer Science (CS)

Through the study of this pathway, the students will gain in depth knowledge about the key Computer Science areas such as Object Oriented Programming, Data Structures and Algorithms, Operating Systems, Computer Graphics and Multimedia, Data Management and Analysis, Changing Work Environments and Flexible working arrangements and Artificial Intelligence.

#### • Network & Security (N&S)

This pathway provides students with opportunities to study specialized topics related to Networking and Security, including study of CISCO Networking, Advanced Networking, Applied Network Security, Communication Technology and Changing Work Environments and Flexible working arrangements.

#### • Web Development (WD)

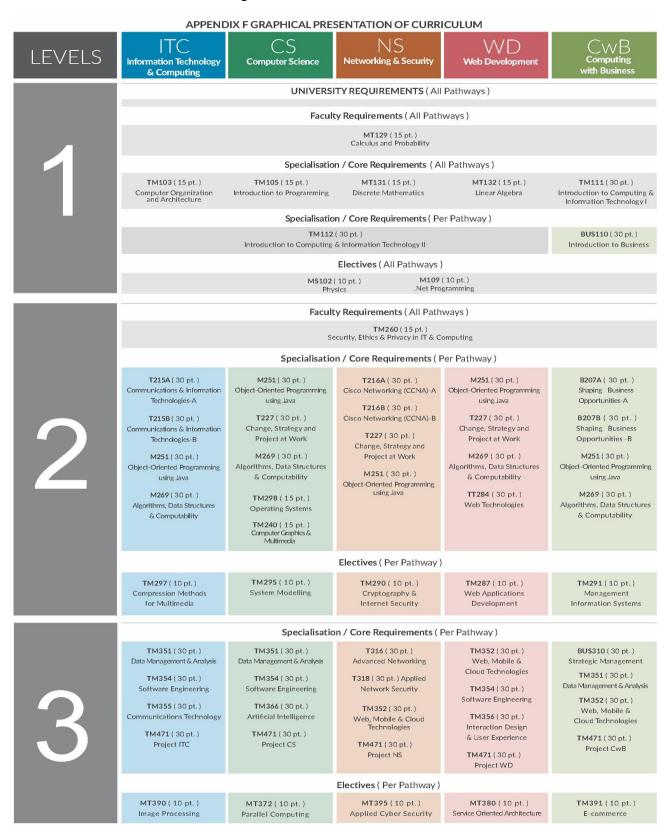
This important pathway enable students to undertake study of specialized topics related to Web Development including, Changing Work Environments and Flexible working arrangements, Object Oriented Programming, Web Technologies, Algorithms and Data Structures, Mobile and Cloud Technologies and Interaction Design and User Experience.

#### • Computing with Business (CwB)

This pathway is a good blend of Computing and Business concepts, and students will acquire knowledge about important topics, including Object Oriented Programming, Data Management and Analysis, Web Mobile and Cloud Technologies, Business Opportunities and Strategic Management.

#### 6.2 Graphical Presentation of the Programme

The following figure shows the composition of the programme Pathways, including the different levels of modules along with their classification.



#### **Attendance requirements**

The FCS follows the hybrid model of open education at AOU which requires 25% face-to-face tutorial attendance in a class room environment. The 25% face-to-face tutorial sessions are mandatory and if you fail to attend 3 consecutive tutorial sessions without due cause you will be suspended from the module. The 25% face-to-face tutorial sessions are clearly marked in individual module calendar's using the following guidelines:

<b>Number of Credit Hours</b>	Points	No. Hours/Tutorial Sessions
3	10	1 hour tutorial every week
4	15	1 hour tutorial every week
8	30	2 hours tutorial every week
16	60	4 hours tutorial every week

# Opportunities available to students on completion of the programme (Employment, further academic study, etc).

On successful completion of the B.Sc. degree you will be able to get employment opportunities in both the Middle Eastern (ME) markets and the international markets since this B.Sc. programme would be validated by the CICP. This degree opens up the world of technology and an array of exciting careers in a wide range of sectors for you.

It will help you to become a dominant player in the field of Information Technologies and Computing; to analyse, develop, test, maintain, integrate and use hardware and/or software or hybrid systems; to participate in innovating new solutions to meet specific market or organisation needs. A choice of pathways through the degree will enable you to concentrate your studies on Information Technologies and Computing, Computer Science, Web Development, Networking & Security or Computing with Business. Some of the key areas in which you can find employment opportunities include the following:

- System Analysis Development and Integration including hardware, software and web based systems
- Software Industry
- Network Design, Development and Maintenance

- Information and Cyber Security
- Mobile, Web and Cloud Technologies
- Internet of Things
- Health Informatics
- Financial Sector including Banking
- Management Informatics
- Digital Advertising and Media Sector

On successful completion of the ITC programme, the students with a GPA of 3.5 and above will be eligible to conduct Postgraduate study in Computing (MSc. in Computing) (2 Pathways: Software Development or Information Security and Forensics) currently offered in AOU Lebanon campus. In future, AOU Egypt and KSA branches are expected to offer the M.Sc. in Computing Programme.

# 7. Programme Specification

Programme Core Modules matrix displaying the 5 pathways of the ITC Program and the associated modules is presented below. The table shows the 360 points of the Core Modules of study for each pathway. It is clear from the table that all pathways share common modules at the Level-1 stage of study. However, each pathway has more specialized modules at the higher Level-2 and Level-3 stages. All pathways require students to complete the project module T471 in order to successfully complete the ITC programme of study. The project module T471 includes completion of an extensive piece of practical project, which has to be completed on an individual basis. The table also shows the pre-requisites for each of the core modules of the ITC Programme. The Elective Modules involved in the study of the 5 Pathways of the ITC Programme are shown in the Electives Table below. The Level-1 electives are available for all 5 pathways. It is clear from the table that the Level-2 and Level-3 elective modules are pathway specific and students are not allowed to select more than one elective module from certain level.

	Programme Core Modules								
Code	Core Modules	Points	CHrs	ITC	cs	N&S	WD	CwB	Prerequisties
TM103	Computer Organization and Architecture	15	4	✓	✓	✓	✓	✓	EL111
TM105	Introduction to Programming	15	4	1	✓	1	1	1	EL111
BUS110	Introduction to Business	30	8					X	EL111
TM111	Introduction to Computing and Information Technology I	30	8	✓	✓	1	✓	1	EL111
TM112	Introduction to Computing and Information Technology II	30	8	<b>✓</b>	✓	✓	<b>✓</b>		TM111
MT131	Discrete Mathematics	15	4	✓	1	✓	✓	✓	EL111
MT132	Linear Algebra	15	4	1	1	1	1	1	EL111
B207A	Shaping Business Opportunities-A	30	8						BUS110
8207B	Shaping Business Opportunities-B	30	8						B207A
T215A	Communications and Information Technologies-A	30	8	✓					TM112
T215B	Communications and Information Technologies-B	30	8	✓					T215A
T216A	Cisco Networking (CCNA)-A	30	8			✓			TM112
T216B	Cisco Networking (CCNA)-B	30	8			✓			T216A
T227	Change, Strategy and Projects at Work	30	8		1	✓	✓		TM112
M251	Object-Oriented Programming using Java	30	8	✓	✓	✓	✓	✓	TM105
M269	Algorithms, Data Structures and Computability	30	8	✓	✓		✓	✓	TM105 & MT131
TT284	Web Technologies	30	8				✓		TM112
TM298	Operating Systems	15	4		✓				TM105 &TM103
TM240	Computer Graphics and Multimedia	15	4		✓			amere	MT132 & TM105
BUS310	Strategic Management	30	8					X	82078
T316	Advanced Networking	30	8			✓			T216B
T318	Applied Network Security	30	8	_		✓			T216B & TM260
TM351	Data Management and Analysis	30	8	✓	✓	_		V	M269 & M251
TM352	Web, Mobile and Cloud Technologies	30	8	_		<b>✓</b>	Ý	✓	M251 OR TT284*
TM354	Software Engineering	30	8	Ý	✓	_	✓		M251
TM355	Communications Technology	30	8	<b>✓</b>					T215B
TM356	Interaction Design and User Experience	30	8		_		✓		TT284
TM366	Artificial Intelligence	30	8	_	✓				M269
TM471	Project (ITC)	30	8	✓	_	1			TM355 OR TM354 OR TM351**
TM471	Project (CS)	30	8		✓	_			TM354 OR TM366 OR TM351**
TM471 TM471	Project (N&S) Project (WD)	30 30	8			✓	-	1	T316 OR T318 OR TM355**
1101471	Project (WD)	30					_		TM352 OR TM354 OR TM356**
TM471	Project (CwB)	30	8					1	(TM351 & BUS310) OR (TM352 & BUS310)**
	mber of Points per Pathway				360	360	360	360	
Differentiation from other Pathway in Points				360				300	
Different				360 120	90	150	90	120	
				_	90	150	90		
*	ilation from other Pathway in Points Based on the selected Pathway			_	90	150	90		
	tiation from other Pathway in Points			_	90	150	90		
*	Based on Academic Advising	1- Fl-		_	90	150	90		
*	ilation from other Pathway in Points Based on the selected Pathway	ts Elec	tive	_	90	150	90		
*	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen			120				120	Prorequicties
* ** Code	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules	Points	CHrs	120	90 CS		90 WD	120	Prerequisties F1111
* **  Code MS102	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics	Points	CHrs 3	120	CS	N&S	WD	120 CwB	EL111
* ** Code	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  NET Programming	Points	CHrs	120 ITC  ✓	CS ✓	N&S ✓	WD	120 CwB ✓	
* **  Code MS102 M109 TM297	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics	Points 10 10	CHrs 3 3	ITC ✓	CS ✓	N&S ✓	WD	120 CwB ✓	EL111 EL111
* **  Code MS102 M109	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  NET Programming  Compression Methods for Multimedia	10 10 10	CHrs 3 3 3	120 ITC  ✓	CS ✓	N&S ✓	WD	120 CwB ✓	EL111 EL111 TM112&MT131
* **  * *  * *  *  Code MS102 M109 TM297 MT390	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  NET Programming  Compression Methods for Multimedia  Image Processing	Points	CHrs	120 ITC  ✓	CS ✓	N&S ✓	WD	120 CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251
* **  Code MS102 M109 TM297 MT390 TM295	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics .NET Programming Compression Methods for Multimedia Image Processing System Modelling	Points 10 10 10 10 10 10	CHrs	120 ITC  ✓	CS /	N&S ✓	WD	120 CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132
* **  Code MS102 M109 TM297 MT390 TM295 MT372	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing	Points  10  10  10  10  10  10  10	CHrs	120 ITC  ✓	CS /	N&S	WD	120 CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251
* **  Code M5102 M109 TM297 M1390 TM295 M1372 TM290	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security	Points 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD	120 CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112
* **  Code M5102 M109 TM297 MT390 TM295 MT372 TM290 MT395	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security	Points 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	120 CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260
* **  Code MS102 M109 TM297 MT390 TM295 MT372 TM290 MT395 TM287	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules Physics .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	120 CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105
* **  **  Code MS102 M109 TM297 MT390 TM295 MT372 TM290 MT395 TM287 MT380	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules Physics .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251
**  **  Code MS102 M109 TM297 MT390 TM295 MT372 TM295 MT372 TM290 MT395 TM287 MT380 TM291	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules Physics .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture Management Information Systems	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251 BUS110 & TM105
***  **  **  **  **  **  **  **  **  *	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules Physics .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture Management Information Systems	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251 BUS110 & TM105
***  **  **  **  **  **  **  **  **  *	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture Management Information Systems E-commerce	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251 BUS110 & TM105
**  **  Code MS102 M109 TM297 MT390 TM295 TM295 MT372 TM290 MT395 TM287 MT380 TM291	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules Physics .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture Management Information Systems	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251 BUS110 & TM105
**  **  Code MS102 M109 TM297 MT390 TM295 TM295 MT372 TM290 MT395 TM287 MT380 TM291	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture Management Information Systems E-commerce	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251 BUS110 & TM105
**  **  Code MS102 M109 TM297 MT390 TM295 TM295 MT372 TM290 MT395 TM287 MT380 TM291	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules Physics .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture Management Information Systems E-commerce  OU Modules	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251 BUS110 & TM105
***  Code MS102 M109 TM297 MT390 TM295 MT372 TM295 MT395 TM287 MT380 TM291	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules  Physics  .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture Management Information Systems E-commerce	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251 BUS110 & TM105
***  Code MS102 M109 TM297 MT390 TM295 MT392 TM295 MT395 TM287 MT380 TM291	Based on the selected Pathway Based on Academic Advising  Faculty Requiremen  Core Modules Physics .NET Programming Compression Methods for Multimedia Image Processing System Modelling Parallel Computing Cryptography and Internet Security Applied Cyber Security Web Applications Development Service Oriented Architecture Management Information Systems E-commerce  OU Modules	Points 10 10 10 10 10 10 10 10 10 10 10 10 10	CHrs 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	120 ITC  ✓	CS /	N&S	WD ✓	CwB ✓	EL111 EL111 TM112&MT131 MT132 & M251 MT132 M269 & M251 TM112 TM260 TM105 M251 BUS110 & TM105

For details refer to AOU Website at <a href="http://arabou.edu.kw">http://arabou.edu.kw</a> . A master plan for the ITC programme with all 5 pathways is given in "Appendix H".

# 8. Module Specifications

For details refer to AOU Website at  $\underline{\text{http://arabou.edu.kw}}$  .

# 9. Student support, guidance and advice

Well experienced tutors are available across AOU country campuses to provide proper academic advice and guidance to students. The contact information of those staff members is available at the local country campuses. The following table gives an overview about the available services and support to ITC students across AOU country campuses. You are encouraged to identify with guidance, to reflect on your own learning needs and you are offered the following support as appropriate to those needs:

Service	Detail
Student induction day	Student induction day that focuses on the requirements for the
	B.Sc.'s modules and graduation project.
Student handbook	AOU student handbook containing the main information
	related to the university, and the various programmes of study.
LMS	A virtual learning environment to support students remotely via
	teaching/learning material, supplementary material, frequently
	asked questions and collaborative tools and technologies.
Support/Teaching/Management Staff	Access to support, teaching and management staff.
Online Resources	Access to AOU resources e.g. physical library/digital library,
	eLearning materials – outside normal class times.
Appeals and Complaints	Online access to student services through the Student Support
System	System (SSS) at https://sis.arabou.edu.kw/engonline/
Disability and Dyslexia	AOU provides all students the necessary services to enable
Support Services (DDSS)	them to fulfill the intended learning outcomes of their study in
	a friendly educational and social environment. Students with
	disabilities and learning difficulties are paid special attention.
	The services provided to our students are dealt with
	confidentially and are not disclosed to a third part without the
	student's written consent. This DDSS online system provides
	the students with all information about the services and
	facilities made available to them by AOU and is accessible at
	Https://sis.arabou.edu.kw/engonline/
Financial aids	Financial aid and advice is provided to our students
Learning support	Access to a large collection of reading material, simulations,
	Java applets, video clips, elibrary, LMS and secrets of student
	success to enhance your study skills is made available to our
	students at https://arabou.edu.kw/.
Career Advise	A collection of video clips on choosing a career, writing a CV
	and preparation for interview is accessible at:
	http://arabou.edu.kw/fcs/aouvc/openbook.php?crsid=60
	Appendix-G includes a guide to careers in Information
	Technology and Computing.
	Most in demand skills in 2017:
	Most in demand skills - 2017
	Skills that can get you hired in 2017:
	Skills that can get you hired

# 10. Opportunities for personal development planning

By virtue of being an Open Education institution, the AOU encourages students to prepare Personal Development Planning (PDP) for themselves. The PDP provides opportunity to students to plan their studies according to the goals and objectives that they want to achieve from their studies. It enables them to track their achievements and goals in a systematic manner. It provides a platform to them to reflect on their studies and measure their progress towards intended objectives that they want to achieve. The PDP is a valuable tool in Open Education since it supports the process of developing Independent Learning which is the key for success in Open Education environment.

### 11. Opportunities and support for study abroad

The current proposal of the B.Sc. programme requires completion of all modules of study at the FCS at AOU. In case you wish to transfer to another institution you would be required to inquire about the transfer of credits provisions at that institution.

### 12. Work placement information

There is no work placement requirement in the current study plan of the B.Sc. programme. The main practical work involved is the individual practical work required during the preparation of the Tutor Marked Assignment (TMA), one of the assessment components per module, in addition to the practical work required for the Final Graduation Project (TM471).

#### 13. Facilities and Services

All braches enjoy adequate resources, especially in light of:

- Operating in new building for most branches, including Kuwait, Egypt, Jordan, Bahrain, KSA (Riyadh), Lebanon (Antalias).
- Meeting the local standards of the local accreditation bodies and Ministries of Higher Education.
- Continuously updating and upgrading both the physical and electronic resources, including e-library, Learning Management System (LMS), Student Information System (SIS), etc. to support our students. In addition, wide range of supplementary material and video recordings are offered through the LMS.

- AOU provides enough computer labs for its students equipped with hardware and software resources to support the curriculum of the cloud programmes.
- Specialized labs are provided to AOU country campuses such as Cisco labs to support Networking modules. The new buildings offer seminar halls and dedicated spaces for libraries with at least one lab to access the e-library. It is interesting to point out that well-trained human resources are provided to help students, accessing either the physical or e-library. Regular workshops are held for students, especially new comers, to train them on how to use LMS and e-library and to provide them with the fundamental background about the good academic behaviour.
- The e-Library could be accessed at the AOU's website through the following URL: <a href="http://www.aou-elibrary.com/">http://www.aou-elibrary.com/</a>
- Appeals and Complaints system is inside Student Information System (SIS) on the AOU wbsite. The url is: http://sis.arabou.edu.kw/aronline/
- Central LMS link <a href="https://lms.arabou.edu.kw/">https://lms.arabou.edu.kw/</a>

# 14. Assessment and progression regulations

The assessment and progression regulations have been made available to you on the AOU's website at http://arabou.edu.kw/. In addition, assessment guides will be provided to you with the module material packages.

## 15. Graduation projects

The module TM471 is the final component of the B.Sc. Programme of study at FCS at AOU. Students undertake and complete the T471 Project work on individual basis. The project consists of a written report of about 10,000 to 15,000 words. This report is a culmination of about two semesters of research work by you individually under the guidance of your project supervisor. You must also complete 2 TMA's, project implementation and give 2 oral presentations.

In order to undertake the TM471 Project various software tools and packages would be required. It is your duty to consult your supervisor well in advance of project selection regarding the availability of both the software tools and the expertise available at FCS regarding the usage of the tools. You should agree with your supervisor regarding the Software Tools that would be required for TM471 projects in

advance to avoid any problems.

16. Determination of results

For various module work modules, the assessment usually consists of 3 components

i.e. Tutor Marked Assignments (TMAs), Midterm Assessment (MTA) and Final

Examination. The weighting of the assessment components is as follows:

• TMAs: 20 %

• MTA: 30 %

• Final Exam: 50 %

In order to pass the module, you must obtain at least 30% on the continuous

assessment (TMAs + MTA), at least 40% on the Final Exam and at least 50% on

overall result.

Your final result will be processed centrally at the Headquarters. Results will be

communicated to you by your branch authorities after approval from the Central

Examination Committee (CEC) at the Headquarters. The FCS at AOU follows a tiered

approach to examination boards and committees. There exist mainly 4 examination

committees at the AOU called the Branch Examination Committee (BEC),

ModuleAssessment Committee (CAC), the Faculty Examination Committee (FEC)

and the Central Examination Committee (CEC).

External Examiners are members of the FEC and the Chief External Examiner is

member of the CEC. The main role of the assessment boards is to standardize the

assessment processes and procedures at AOU and to ensure fair processing of student

grades.

16.1 How results are communicated

Final module results are announced on the university website (https://arabou.edu.kw/).

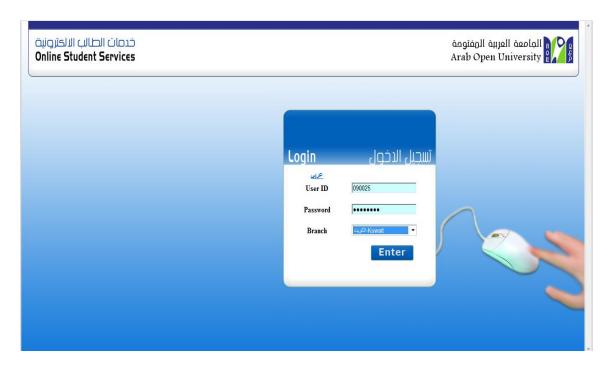
You can look at your results by logging in to the Student Information System (SIS)

with your credentials. This link can be found under the student services menu. The

following screens show you the steps:

1. Login to the online Student Services with your student number as a User ID

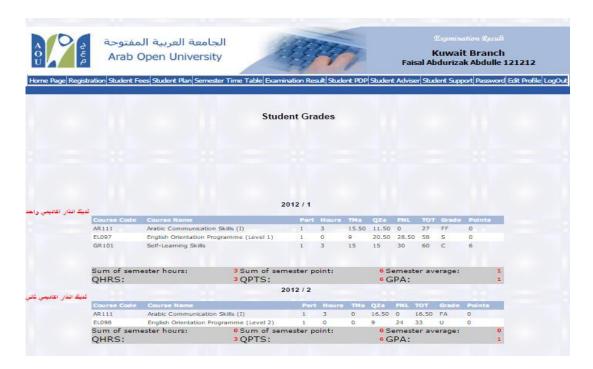
and your password and select the branch:



2. Once the student logs in, he/she can avail the benefits of the services appearing on the following screenshot.



- 3. The student will select the 1<sup>st</sup> Box titled grades in the 2nd row of the above screenshot in order to view his/her grades. On selecting Grades box, the following screen consisting of grades details will appear on his computer screen.
- 21 Student Handbook Information Technology and Computing Programme, 2017



# 17. Other institutional policies and regulations

Some of the information below may be given in the form of general brief statements that refer you to a separate generic institutional policy document.

- Disability statement
- Grounds and procedures for appeals
- Equal opportunities statement
- Data protection
- Health and safety issues

The AOU strongly believes in providing <u>equal opportunities</u> to all students studying at the university. It also makes efforts to provide a safe, secure, healthy and confidential environment to you (http://arabou.edu.kw/index.php). You have the right to appeal to the branch authorities. Processes and procedures for your appeals / complaints and disability and dyslexia enquiries are contained in the rules and regulations of the AOU and are accessible to you through the University's website at (http://sis.arabou.edu.kw/).

1. The student will select the last Box titled Student Support in the 2`nd row of the screenshot in order to view his/her grades.



2. On selecting Student Support box in the above screen shot, the following screen consisting of Appeals and Complaints details will appear on his computer screen.



# 18. Student participation and evaluation

You are strongly encouraged to participate in and evaluate the academic activities at AOU. Your feedback is solicited through various surveys such as students' views on

modules, tutors, and facilities etc. Also some students are members of the Student Staff Liaison Committee (SSLC). Your views are considered as a very important instrument which is continuously solicited and used in enhancing your learning experience at AOU.

AOU has finalized the bylaws of its Alumni association and it is expected that your feedback will contribute in enhancing all our programmes.

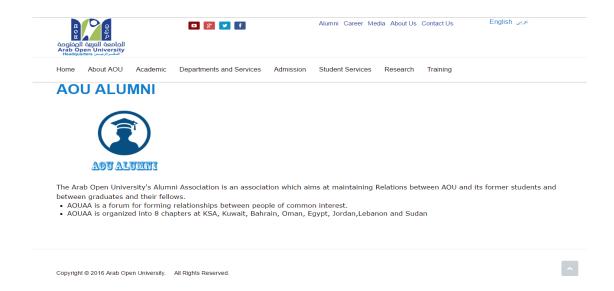
Student feedback is an essential element of the Quality Assurance (QA) process at AOU. The QA department solicits feedback from students through a variety of questionnaires and feedback forms, which are offered then through the Learning Management System (LMS). The QA department has Branch QA Coordinators (BQACs) who are responsible for collecting student feedback at each Branch. The aforementioned feedback is subjected to detailed analysis by both the AOU\_QA Department as well as by the Deanship to be included and concluded in the Annual Programme Evaluation that is submitted to the CICP.

The major areas on which student feedback is obtained include the following:

- Student evaluation of tutors
- Student evaluation of modules
- Student evaluation of branch resources and service

Student can also file appeals, which are dealt with through the online appeals and complaints system (part of the SIS-Student Information System).

The Arab Open University's Alumni Association (AOUAA) is an association, which aims at maintaining relations between AOU and its former students and between graduates and their fellows. AOUAA is a forum for forming relationships between people of common interest. AOUAA is organized into 8 chapters at KSA, Kuwait, Bahrain, Oman, Egypt, Jordan, Lebanon and Sudan. AOU Alumni Association Bylaws could be found on the university's website. FCS encourages you to register in the AOUAA.



## 19. General reading list (i.e. not module specific), including electronic resources

A general reading list has been compiled by FCS staff. The list indicates some important books and journals. This list has been made available to you at the following web link: <a href="https://www.arabou.edu.kw/index.php/faculty-programmes/undergraduate/itcprogramme/general-reading-list">https://www.arabou.edu.kw/index.php/faculty-programmes/undergraduate/itcprogramme/general-reading-list</a>

Electronic resources are available on the LMS at the AOU's website (http://arabou.edu.kw).