IN COLLABORATION WITH

SCHOOL OF ARCHITECTURE, COMPUTING AND ENGINEERING
(ACE)

BSc (Hons) Business Information System

Programme Handbook

Academic Year 2018-19

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1 INTRODUCTION / WELCOME FROM THE PRINICIPAL

This handbook will be a useful source of information while commencing your programme but you should also keep it for reference purposes throughout your stay here. It is, however, not intended to provide all you need to know about the programme you are pursuing

We are sure you will make many new networks while you are studying with us, perhaps with other students following different programmes. During your study, there are lots of ways students can help each other - by discussing programme content before and after classes, by revising together, by swapping lecture notes etc. Students can also make suggestions for improvements to the programmes and help out, for example during induction and open days. If students and staff work together, co-operatively, the full benefits of a University experience can be realised. Doing this is also a preparation for life after university where 'teamwork' and 'commitment' are increasingly valued.

FTMS's focus on professional and entrepreneurial development ensures that its students pass their examinations and build strong foundations to succeed in their careers. This approach has resulted in producing students with distinctions at all levels. The research units ensure that a solid base of academic knowledge relevant to the ever-changing world underpins its programme. With over 25 years of excellence in providing the best in education and training worldwide, FTMS creates the learning space that not only enhances the students' learning experience but also brings out the very best in them. Through the Career Advisory Services, Student Counsellors guide students about the programmes and career prospects. FTMS's focus on developing world-class standard education will ensure that its organization will always be a leader.

The strategic decision to collaborate with the University of East London (UEL) was made a decade before during 2006 for the provision of two postgraduate degree programmes and three undergraduate degree programmes.

FTMS College is staffed by a team of enthusiastic and caring professionals, from varied disciplines namely teaching, administration & support staff to name few who would work hard to make your educational experience both successful & entertaining one. If you can match this by participating fully and giving your best then I am sure that your time as a student of both FTMS College and the University of East London will be both enjoyable and rewarding edutainment.

We wish you a very good luck in your studies!

Dr. Sajilal Divakaran
Principal

2 INTRODUCTION TO THE PROGRAMME

2.1 Programme duration and modes of study, i.e. full time/part time, block delivery

At FTMS College the BSc (Hons) Business Information System is offered in a full time mode. This degree will normally take three years to complete and each year will have two semesters. Students who joined this programme under the full time mode will study for three years and take three modules in each semester. A student cannot normally continue study on a programme after 4 years of study in full time mode unless exceptional circumstances apply and extenuation has been granted. The details about the modules can be found in the web Link.
http://www.ftms.edu.my/Main/en/Undergraduate_Student/

2.2 Programme aims

The aim of the programme is to provide a learning environment that allows students to:

- Gain appropriate knowledge and skills base to pursue a career managing and developing information systems in a contemporary business context.
- Gain an understanding of the operational, strategic and practical issues in information systems relevant to small, medium and large enterprises.
- Be aware of the management, economic, legal, social, professional and ethical issues relating to information systems.
- Learn and work both independently and within groups.
- Develop the necessary study skills and knowledge to pursue further study.

2.3 Program objective

1. To enable students to acquire knowledge of modern techniques, protocols, software tools and applications across the area of computer networks.

2. To allow students to develop the ability to use a wide range of techniques and methodologies and to critically compare and evaluate distributed systems.

3. To provide students with an understanding of and the ability to undertake the planning, structuring, development and presentation of a networked development project.

2.4 Programme Learning Outcomes

Knowledge

- Exploiting opportunities created by technology innovations
- Designing and managing enterprise systems
- Identifying and evaluating solutions and sourcing alternatives
- Understanding, managing and controlling IT risks

Thinking skills

- Problem solving
- Evaluation and critical analysis
- Self-appraisal and review of personal practice

Subject-Based Practical skills

- Managing and securing data and infrastructure
- Managing IT projects
- Preparation of essays, reports and presentations and production of major self-directed project

Skills for life and work (general skills)

- Communication skills
- Learning and working both independently and in groups

2.5 Programme structure diagram

Introduction

All programmes are credit-rated to help you to understand the amount and level of study that is needed.

One credit is equal to 10 hours of directed study time (this includes everything you do e.g. lecture, seminar and private study).

Credits are assigned to one of 5 levels:

3 Equivalents in standard to GCE 'A' level and is intended to prepare students for year one of an undergraduate degree programme.

4 Equivalent in standard to the first year of a full-time undergraduate degree programme.

5 Equivalent in standard to the second year of a full-time undergraduate degree programme.

6 Equivalent in standard to the third year of a full-time undergraduate degree programme.

7 Equivalent in standard to a Masters degree.

The programme consists of (9) nine (15) credit modules, (6) six (30) credit modules and one (1) forty five (45) credit module. All the modules in this programme are core modules, which mean they are compulsory to the programme route. Some modules are also prerequisite modules for some of the modules at the next level.

Credit rating

The overall credit-rating of this programme is 360 credits. The module structure of this programme is:

Level	Module Code	Module Title	Distance learning Y/N	Credits	Status*
4	CN4101	Information Systems Modelling and Design	N	30	Core
4	CN4102	Introduction to Software Development	N	30	Core
4	CN4106	Introduction to Web Technologies	N	15	Core
4	CN4107	Maths for Computing	N	15	Core
4	CN4104	Introduction to Computer Systems and Networks	N	30	Core
5	CN5101	Database Systems	N	30	Core
5	CN5109	Web Applications Development	N	30	Core
5	CN5110	Information Systems Management and Strategy	N	30	Core
5	CN5108	System Administration	N	15	Core
5	CN5104	Computing in Practice	N	15	Core

6	CN6107	Computer and Network Security	N	15	Core
6	CN6112	Project Management	N	15	Core
6	CN6111	Enterprise Architecture	N	15	Core
6	CN6103	Project	N	45	Core
6	CN6113	Information Security and Risk Management	N	15	Core
6	CN6108	Business Intelligence Analysis	N	15	Core

PR = Pre-requisite

*****Please Note – A core module for a programme is a module which a student must have passed (i.e. been awarded credit) in order to achieve the relevant named award. An optional module for a programme is a module selected from a range of modules available on the programme.

Intermediate Awards

For the BSc (Hons) Business Information System programme listed above, in order to gain an honours degree you will need to obtain 360 credits including:

A minimum of 120 credits at level one or higher
A minimum of 120 credits at level two or higher
A minimum of 120 credits at level three or higher

In order to gain an ordinary degree you will need to obtain a minimum of 300 credits including:

A minimum of 120 credits at level one or higher
A minimum of 120 credits at level two or higher
A minimum of 60 credits at level three or higher

In order to gain a Diploma of Higher Education you will need to obtain:

At least 240 credits including a minimum of 120 credits at level one or higher and 120 credits at level two or higher

In order to gain a Certificate of Higher Education you will need to obtain:

120 credits at level one or higher.

In order to gain an Associate Certificate you will need to obtain:

A minimum if 20 credits at level one or higher.

Award Classification

Where a student is eligible for a Bachelor's degree then the award classification is determined by calculating the arithmetic mean of all marks and applying the mark obtained as a percentage, with all decimal points rounded up to the nearest whole number, to the following classification

70% - 100%	Distinction
55% - 69%	Merit
40% - 54%	Pass
0% - 39%	Not Passed

Rationale

There is an increasing demand from employers for more specialist graduates. In particular, our graduates typically will follow one of these career patterns:

• The hybrid manager; combining business knowledge with technical skills and additional emphasis on one of the following;

• IT strategy issues for business, or; Issues in management and technology policy.

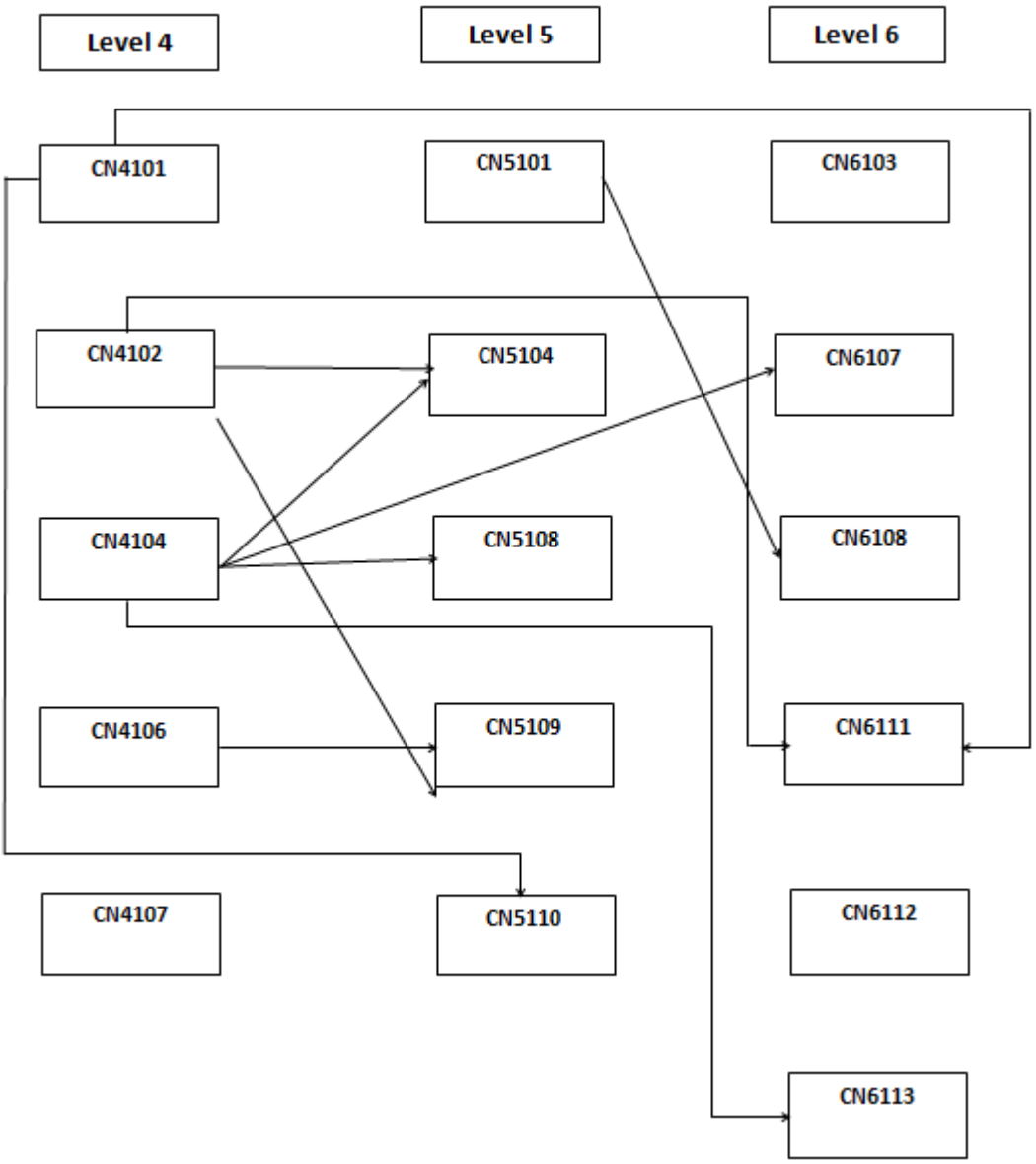
• The infrastructural manager; dealing with the technology associated with communications and data services within and between organisations.

• The analyst/designer; involved in the analysis, design and implementation of Information Systems projects.

• The software engineer; involved in the production of complex, rigorously specified and verified software.

• The qualified professional whose work requires an understanding of I.T. systems design or development coupled with another academic discipline such as Accountancy, Law, Languages or Business Administration.

BSc (Hons) Business Information System Module Map



Those modules without arrows do not have a pre-requisites.

Those modules with an arrow shows which module(s) are their pre-requisite

e) Web link to the programme specification

http://www.ftms.edu.my/Main/ftms_files/BSc_BIS_Programme_Handbook_2018_2019.pdf

3 KEY STAFF AND CONTACT DETAILS

a) Relevant Dean of School at partner

Mr. Trevor Ward : Academic Manager
: Tel (603) 8310 9355 Extn: 251
: Email: ***Trevor@ftms.edu.my***

b) Programme leader

Ms. Sangeetha Elango : Senior Lecturer
: Tel (603) 8310 9355 Extn: 262
: Email: ***sangeetha@ftms.edu.my***

c) Relevant local academic and administrative staff

Ms Poovaie : Registrar
: Tel (603) 8310 9355 Extn: 220
: Email: ***poovaie@ftms.edu.my***

Ms Alicia : Assistant Registrar
: Tel (603) 8310 9355 Extn: 225
: Email: ***Alicia@ftms.edu.my***

d) Link person at each institution.

Mr. Zainudin Johari : Academic Link (FTMS)
: Head of School (SOECS)
: Tel (603) 8310 9355 Extn: 252
: Email: ***Zainudin@ftms.edu.my***

Dr. Sin Wee Lee : Academic Link (UEL)
: Senior Lecturer
: Tel (044) 02082232871
: Email: ***s.w.lee @uel.ac.uk***

e) Contacts for non-academic issues

Mr. Joey Teh : System Manager
: Tel (603) 8310 9355 Extn: 305
: Email: ***Joey@ftms.edu.my***

3.1 Circumstances in which student can access UEL directly

You will find that for most issues that arise during the course of your studies academic and administrative staff at your location of study will be able to help, and further details are provided in this handbook. If however you have concerns that lie outside the remit of these staff you can contact the UEL link person in the first instance who will be able to re-direct your enquiry as appropriate.

The UEL Link Person is appointed to manage the relationship between the Programme Leader at FTSM College and UEL. At any Circumstance if the students feels to contact the UEL link person for any reason than they have to first contact the assistant registrar Ms Alicia at graduate school office at FTMS College. The Student can contact assistant registrar through email: ***Alica@ftms.edu.my***. The assistant registrar will facilitate the meeting with the UEL link person.

Please contact Ms Alicia at graduate school office in FTMS College if you have any queries, in the first instance. If you have been advised by the school office to contact UEL then please send an e-mail to the **UEL Academic Partnerships Office** at ***apo@uel.ac.uk***.

4 PROGRAMME OPERATION AND STUDENT REGISTRATION

4.1 Local arrangements for student registration, including UEL Direct.

All Malaysian and international students who are intending to apply for admission to FTMS College have to fulfil the entry qualification requirement for the programme interested in and fulfil the following requirements. FTMS has three intake points: September, January and May. You may opt to start their programme at any one of these points. The table below shows when a module is delivered.

Level	***Semester A Modules***	***Semester B Modules***
Level 4	**CN4101** **CN4102** **CN4104** **CN4106**	**CN4101** **CN4102** **CN4104** **CN4107**
Level 5	**CN5101** **CN5103** **CN5109** **CN5120**	**CN5101** **CN5104** **CN5109** **CN5121**
Level 6	**CN6103** **CN6107** **CN6121** **CN6120**	**CN6103** **CN6204** **CN6211**

It is essential that you log in to UEL direct and enrol with UEL using the UEL student number that you have be given prior to attending any lectures. Once you have gained admission to the programme you must login to the UEL direct page using your student username which will be your UEL ID number and password and complete the on-line enrolment. FTMS College will assist and ensure that you complete your online enrolment task promptly. UEL Direct is available at
https://www.uel.ac.uk/students

For the assistance concerning enrolment, you must contact Assistant Register at FTMS College for guidance or send an e-mail Alicia ***alicia@ftms.edu.my***.

4.2 Local arrangements for programme administration (and contact details)

The organisation and administration of the programme will be carried out by a team consisting of the FTMS Programme Leader, UEL Academic Link Tutor and Administrators. With the exception of the UEL Academic Link Tutor, it is these people who are responsible for day-to-day running of the programme.

1. Mr. Trevor Ward	: Academic Manager : Tel (603) 8310 9355 Extn: 251 : Email: ***Trevor@ftms.edu.my***
2. Mr. Zainudin Johari	: Academic Link (FTMS) : Head of School (SOECS) : Tel (603) 8310 9355 Extn: 252 : Email: ***Zainudin@ftms.edu.my***
3. Ms. Sangeetha Elango	: Senior Lecturer : Tel (603) 8310 9355 Extn: 262 : Email: ***Sangeetha@ftms.edu.my***

4.3 *Local Attendance and Engagement policy (provide guidance and further information for students in Appendix C)*

You have made a commitment to work towards achieving academic success by enrolling on your programme and registering on your modules. We know, as you do, that in order to achieve ultimate success in your studies it is important that you participate in, and engage fully with, all your scheduled activities such as lectures, workshops and seminars. We therefore regard attendance as essential, as we are sure you will.

Punctuality is also crucial (if you turn up late you may find you will not be allowed to enter – late attendance causes disruption for others). Other aspects of behaviour are important as well – for instance, no food or drink should be consumed in lectures or classes and all mobile phones should be turned off.

Recording Attendance

We are obliged to keep records of your attendance. For all teaching activities specified by your School (lectures, tutorials, workshops, seminars, practicals etc.) a record will be kept. You must ensure that you can demonstrate your attendance through this recording process.

If you cannot attend

If you cannot attend you should let us know, either beforehand or as soon as possible afterwards. You should notify your Programme Administrator at FTMS. You should give your name, student number and the class for which you were unable to attend.

If you do not attend regularly

If you do not attend regularly or do not keep us informed of occasional non-attendance you will find that the School will contact you to discuss the matter with you. It is important that you take this communication seriously and make contact immediately.

Students who are unable to attend classes or other prescribed activities for any reason must inform the School as soon as practicable, and in any case within seven working days. Students who are absent without permission from classes or other prescribed activities on three consecutive occasions and/or whose attendance falls below 75% at any time will be de-registered from the module to which the classes or other prescribed activities apply. Students who are de-registered from two or more modules in one semester may be withdrawn from our University. We will also inform any sponsors about the situation.

5 TEACHING, LEARNING AND ASSESSMENT

5.1 Details of local teaching and learning approaches

Various teaching methods are employed on each programme, including lectures, tutorials, seminars and laboratory work. In a lecture period, a member of the academic staff or a visiting lecturer presents ideas or information to a body of students. In a seminar, ideas are discussed by a group of students. The discussion is led by a member of the staff or a nominated student and moderated by one or more members of staff. In a tutorial the students solve problems under the personal of a member of staff with whom they can also discuss information presented in a previous lecture.

In each subject area the time allocated during the semester to lecture, tutorials, seminars and laboratory work is left to the discretion of the lecturer involved. While more formal instruction (lectures and laboratory work) necessarily constitutes an important aspect of the work, tutorials, and to a lesser extent seminar, are of value in providing time for students to discuss their problems with members of staff.

You'll have access to first-class teaching and learning facilities and a wide range of computing resources. We use specialised labs to study operating system environments such as Windows Server and Linux, as well as networking and web technologies. You'll be given software tools for programming, database development, internet access and web-based development.

In your final year, you'll work on a year-long individual project of your choice. It's a chance to follow your own interests, though our research team are there to offer ideas, inspiration or advice.

Throughout the course, you'll be supported by a personal tutor. There are also specialist support services for students with dyslexia or English as a second language, as well as advice services for an accommodation, finance, career, IT training and learning resources.

5.2 Details of local assessment arrangements, i.e. administration submission, deadlines, Assessment Boards, notification of results, timing of reassessment, marking, feedback etc.

All assessments at FTMS for this programme will be conducted in accordance with UEL's Assessment Policy. Assessment is a fundamental part of your learning experience, and is the general description for a set of processes which measures the success of your education and learning.
In order to serve the above purposes, assessment should be treated in accordance with the following principles and be:

• Based on learning outcomes and assessment criteria
• Integral to programme design
• Fair and free from bias
• Valid, transparent and reliable
• Timely and incremental
• Consistent
• Demanding yet manageable and efficient.

In compliance with UEL's Assessment Policy, all students have four (4) opportunities to pass a module. If at the first opportunity you do not pass a module – you will be afforded a second opportunity to take the assessment on the component you have failed - this is called a resit. If after the resit, you are still have not passed the module, you will be given another opportunity to retake the entire module (3rd opportunity) – this is done with attendance and normally you will have to pay to retake the module. If you fail the retake module again – we still allow you to take the failed components - this is called a resit (4th opportunity). We hope by this time you would have passed! Your Programme Leader will provide you with more details on this,

Assessment Administration

The assessments will be set and prepared by FTMS staff; they are verified by UEL and approved by the External Examiners before they are issued to you. This ensures that the assessments are valid, set at the right level, and meet the programme learning and assessment objects.

All assessments are first marked by FTMS staff and an internal verification process is adhered to by FTMS. Samples of your marked assessments are sent to UEL and the External Examiners for further scrutiny. Again this assures and ensures that your work was marked fairly and accurately.

Assessment Submission

All the coursework should be submitted on or before the deadline. The student should submit their coursework in Tunitin as an electronic submission since FTMS College follows the Green marking strategy. Your module leader will create a class in Turnitin and will add you in the class. It's your responsibility to submit your coursework in Turnitin on or before the deadline. If you face any problem in the submission of the coursework then you have to contact your module leader and you have to discuss with him about the problem. Hard copy submission will not be accepted.

Assessment Deadlines

We strongly suggest that you try to submit all coursework by the deadline set as meeting deadlines will be expected in employment. However, in our regulations, FTMS has permitted students to be able to submit their coursework up to 24 hours after the deadline. The deadline will be published in the first page of your coursework. Coursework which is submitted late, but

within 24 hours of the deadline, will be assessed but subjected to a fixed penalty of 5% of the total marks available (as opposed to marks obtained).

Please note that if you submit twice, once before the deadline and once during the 24 hour late period, then the first submission will not be marked whilst the second submission will be marked and 5% deducted.

Assessment Board

Assessment Boards control, consider and adjudicate upon all assessments undertaken by students. The Board comprises a Chair (usually the head of department), all those substantially involved as tutors and/or examiners and the external examiner(s). The assessment board will be conducted by the FTMS College to finalise the marks after all the marking is completed by the module leaders. Once the marks are been finalised at the assessment board meeting than those assessment will be verified by UEL. and the final marks will be released by the University after the assessment board meeting at UEL. The students can log into UEL Direct to view their result.

Timing of reassessment

The timings of reassessments are at agreed and published time scales. The assistant registrar Ms Alicia in FTMS College will inform you through your email once the dates are agreed and finalised by the University. The time sheet about the reassessment will be displayed in the notice board too.

Feedback

Assessment and feedback are fundamental parts of your learning experience. The FTMS Assessment and Feedback Policy seek to:

- Actively promote student success and academic achievement;
- Provide clear, accurate, accessible information and guidelines to all staff and students on assessment and feedback;
- Maximise the potential for consistency and fairness in assessment;
- Locate assessment and feedback as an integral part of learning and teaching processes.

Every component of assessment that contributes to an award, at all levels, is subject to internal (i.e. FTMS academic staff) and External Examiner moderation. This ensures the maintenance of standards both internally and in comparison with similar programmes delivered at other higher education institutions. The FTMS Assessment and Feedback Policy outline the process for the various stages of the marking process, as listed below.

Stage 1 – internal moderation. Anonymous marking is a process undertaken to avoid the possibility of unconscious bias entering the marking process. Wherever possible, the identity of students will be masked from markers and

work only identified by student number. Where the method of assessment does not allow anonymous marking (e.g. dissertations, oral presentations, oral examinations, practical examinations, laboratory tests, performance etc.)

Stage 2 - Second marking as sampling or moderation (conducted by FTMS academic staff). A minimum of 10% or 10 individual pieces of each assessment task, (whichever is the greater) will be second marked. Where assessment does not allow anonymous marking, all work will be second marked.

Stage 3 - External Examiner moderation. A minimum of 10% or 10 individual pieces of each assessment task (whichever is the greater) will also be made available to the External Examiner (from another higher education institution) for moderation.

a) Reference to student policies available at*:*

http://www.ftms.edu.my/Main/en/Undergraduate_Student/

The electronic version of "Cite Them Right: *the essential referencing guide"* 9th edition, can be accessed whilst on or off campus, via UEL Direct. The book can only be read online and no part of it can be printed nor downloaded.

b) Reference to Appendix E containing information on Academic Misconduct and Plagiarism
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch06.pdf

http://www.ftms.edu.my/Main/Student_Handbook_2/

http://www.ftms.edu.my/Main/en/Undergraduate_Student/

c) Reference and web link to Assessment and Feedback Policy

http://www.ftms.edu.my/Main/en/Undergraduate_Student/

http://www.ftms.edu.my/Main/ftms_files/BSc_BIS_Programme_Handbook_2018_2019.pdf

d) Assessment criteria or reference to where this information can be found in the module guides.

As you progress in your degree you will be assessed in a number of different ways. You might be asked to write an essay or a report, to give a presentation or a demonstration of a piece of software. Each piece of assessed work will be issued to you with clear marking criteria. These criteria will indicate how you are being assessed for that piece of work. The section below gives you a general guideline of what we are looking for at different levels of the programme.

Knowledge is assessed by

- examinations, both unseen and based on previously supplied case studies
- extended essays and reports
- multiple choice tests

Thinking skills are assessed by

- all assessment tasks set, particularly those requiring critical evaluation
- self-appraisal of performance
- use of appropriate problem solving skills

Practical skills are assessed by

- assessment tasks requiring use of general and specialised IT applications
- use of equipment in practical's and presentations

Skills for life and work (general skills) are assessed by

- evidence of group and team working
- ability to work to time constraints

Students in level 6 complete a year long academic project. This is a major piece of individual work that allows the students to choose the direction of their study, allowing students to develop their own ideas and integrate the various subjects studied.

Students are encouraged to provide their own ideas for the project, but there is always a collection of topics provided by staff from which students can choose.

6 MODULE SPECIFICATION

The following descriptions are intended only as a guide to the modules offered. For a more comprehensive and up to date description you should refer to the Module Handbooks.

LEVEL1 MODULES

<table>
<tr><td colspan="2">Module Title:
Information Systems Modelling and Design</td><td>Module Code:
CN4101
Level: 4
Credit: 30
ECTS credit: 15</td><td>Module Leader:
Ms. Sangeetha Elango</td></tr>
<tr><td colspan="2">Pre-requisite: None</td><td colspan="2">Pre-cursor: None</td></tr>
<tr><td colspan="2">Co-requisite: None</td><td colspan="2">Excluded Combination: None</td></tr>
<tr><td colspan="4">Locations of delivery: FTMS</td></tr>
<tr><td colspan="4">Main Aim(s) of the Module:
• To promote an understanding of the characteristics of information and the different methods of developing information systems.
• To introduce and provide practical experience of requirement analysis, system analysis and modelling using appropriate tools and techniques.
• To develop skills and techniques required for analysing, modelling and designing information systems.
• To enable students to develop adequate skills in object-oriented techniques for designing and modelling computer applications for business and industry.
• To enable students to develop competencies in an object-oriented approach for the design and development of computing applications.
• To promote an understanding of the legal, social, ethical and professional issues relating to the development and use of computer-based information systems.</td></tr>
<tr><td colspan="4">Main Topics of Study:
• Types of information systems and their role in Computing and their economic impacts in Business/Organisation;
• The component parts of Information Systems (hardware, software, networks etc) and their operations;
• Development of information systems – Requirement Analysis;
• Introduction and comparison of A/D methodologies (SDLC, RAD, OOA/D), models and methods used in A/D (Analysis and Design)
• RAD methods i.e. prototyping, time-boxing etc
• Object Oriented Technology - Features, OO terminologies & techniques;
• Introduction to Object Oriented A/D and UML;
• System Requirement Analysis using Object Oriented techniques / UML tools;
• Use Case Modelling, States & Activity modelling;
• Legal, ethical, economic and professional issues relating to Information Systems (IT law, computer ethics, professional bodies etc.).</td></tr>
</table>

- Issues about individual privacy, intellectual property and legal obligations relative to information systems
- The impact of Information Systems in everyday life (e.g. socioeconomic disparities, health issues, etc.)

Learning Outcomes for the Module

At the end of this module, students will be able to:

Knowledge

1. Describe the various A/D methodologies, methods and tools used for the modelling, design and development of information systems.
2. Identify the key pieces of legislation and the role of professional bodies in the context of IT.
3. Explain the concepts and principles of object oriented technology.

Thinking skills

4. Contrast the roles of management information's and decision support systems in an organisation.
5. Assess the impact of ICT systems on individuals, organisations and Society at large.
6. Analyse problems associated with modelling and designing Information Systems.

Subject-based practical skills

7. Apply object-oriented methods in the design, modelling and evaluation of computer-based applications.
8. Design and model a simple information system using object oriented models and tools.

Skills for life and work (general skills)

9. Work effectively as a member of a team in developing prototype models for a given scenario.
10. Identify the ethical, legal and economic issues involved in Information Systems development.
11. Evaluate and interpret underlying concepts and principles, where appropriate, handling numerical or other data.
12. Express a range of ideas, demonstrating understanding of academic writing conventions and styles.
13. Demonstrate appropriate academic integrity, avoiding plagiarism and/or collusion and/or other forms of academic misconduct, by use of citation and reference, using their own academic voice.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures/tutorials/practical sessions/workshops. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
Coursework: Group Work		
Part 1: Information system requirements specification and analysis task (1500 words). Part 2: Design and modelling exercise (1500	50%	6,7,8, 9, 11, 12 & 13

words) **TCA** TCA 1: (60 minutes) TCA 2 (60 minutes)	50%	1, 2, 3, 4, 5 & 10

Reading and resources for the module:

Core

Bennett, S., McRobb, S. and Farmer, R. (2010) *Object-oriented system analysis and design using UML.* 4th edn. London: McGraw Hill.

Britton, C and Doake, J. (2000) Object -Oriented Systems Development - a gentle introduction. McGraw Hill.

Recommended

Whiteley, D. (2013) *Introduction to Information Systems.* London: Palgrave Macmillam

Bocij, B. Greasley, A. and Hickie, S (2008) *Business Information Systems*. 4th edn. London: Prentice Hall.

Kelly Rainer, R and Casey, G. (2012) *Introduction to Information Systems.* 4th edn. Hoboken: John Wiley & Sons

Laudon, K. Laudon, J. (2013) *Management Information Systems.* 6th edn. Pearson Education.

Duquenoy, P. (2008) *Ethical, Legal and Professional Issues in Computing*. Thompson Learning

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**
1.Student/Tutor interaction, some of which may be online: 48 hours 48 hours	Lectures Tutorials/Practicals
2.Student Learning Time: 204 hours	Essential and background reading, private study and practical work; Tutorial preparation, assignment planning and preparation.
Total hours(1 and 2):	300 hours

Module Title: Introduction To Software Development	**Module Code:** CN4102 **Level:** 4 **Credit:** 30 **ECTS credit: 15**	**Module Leader**: Ms. Sangeetha Elango

Pre-requisite: None	**Pre-cursor:** None
Co-requisite: None	**Excluded Combination:** None

Locations of delivery: FTMS

Main Aim(s) of the Module:

- To explain the activities involved in the design, implementation and testing of software
- To introduce the procedural and object-oriented programming methodologies
- To furnish students with the necessary skills to produce programs using a high-level language
- To familiarise students with a selection of computing algorithms
- To promote the use of effective and appropriate documentation

Main Topics of Study:

- Program compilation
- Data types, variables and assignments
- Control structures
- Arrays
- Procedural programming
- Software algorithms
- Object-orientated programming
- Classes and objects
- Inheritance
- Interfaces and Abstract Classes
- Graphical user interfaces and event-driven programming
- Exceptions
- Collection Classes
- Software design and documentation

Learning Outcomes for the Module

At the end of this module, students will be able to:

Knowledge

1. Explain the activities involved in producing a software application
2. Explain the need for, and produce, suitable software documentation

Thinking skills

3. Identify the appropriate programming concepts to solve programming problems

Subject-based practical skills

4. Design and implement programs using an appropriate design and modelling methodology
5. Design and implement programs in a suitable high level language
6. Design and implement event-driven programs with graphical user interfaces;

7. Make use of a variety of software algorithms

Skills for life and work (general skills)

8. Find solutions to complex problems

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures will be used to introduce the basic programming concepts. Continuous assessment during practical sessions will be used to reinforce understanding of the material. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
TCA	50%	
(TCA1 60 minutes, TCA2 60 minutes)	50%	1 - 5, 7
Coursework		
In class practical tasks (70 hours of student effort)		2 - 8

Reading and resources for the module:

Core

Charatan, Q. and Kans, A. (2009) *Java in Two Semesters.* 3rd edn. Berkshire: McGraw-Hill.

Recommended

Horstmann, C.S. (2013) *Big Java (early objects).* 5th edn. London. Wiley

Bates, B and Sierra, K. (2005) *Head First Java, Brief*. 2nd. O'Reilly

Somerville, I. (2011) *Software Engineering*. 9th edn. Harlow, London: Addison-Wesley.

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**
1.Student/Tutor interaction, some of which may be online: 48 hours 48 hours	Lectures Practicals
2.Student Learning Time: 204 hours	Essential and background reading, private study and practical work
Total hours(1 and 2):	300 hours

Module Title: Introduction to Computer Systems and Networks	**Module Code:** **CN4104** **Level: 4** **Credit: 30** **ECTS credit: 15**	**Module Leader**: Ms. Noris
Pre-requisite: None		**Pre-cursor:** None
Co-requisite: None		**Excluded combinations :** None
Location of delivery: FTMS		

Main aim(s) of the module:

- To provide a basic understanding of computer architecture and the relationship between the hardware and software components of a computer system.
- To equip students with an understanding of the fundamentals of computer networking theory.

Main topics of study:

Computers and Systems
Number systems
Data representation
Operations on data
Computer architecture and organisation
Computer networks and the Internet
Network hardware and transmission media
Network topologies and technologies
Network layers and protocols
IP addressing
Operating systems
Language translation tools

Learning Outcomes for the module

At the end of this module, students will be able to:

Knowledge

1. Describe the purpose and function of the main components of computer systems and networks including hardware, software and protocols.
2. Understand the binary nature of digital computers, and how bit patterns can be used to represent such things as characters, numbers and instructions.
3. Explain the significance of standard network models such as the TCP/IP model.

Thinking skills

4. Explain the characteristics and operation of a variety of computer system and network components.
5. Explain the various methods used to represent data in a computer and manipulate numbers in a range of bases.

Subject-based practical skills

6. Design a basic network using structured cabling.
7. Write simple assembly language programs.

Skills for life and work (general skills)

8. Conduct a research project.
9. Present the findings of the conducted research in a group presentation.
10. Demonstrate an awareness of the physical properties of ICT equipment and its safe handling.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:
Lectures, tutorials, practicals and computer simulations. Extensive use will be made of the University's virtual learning environment. Feedback will be provided throughout the module in the form of both formative and summative work

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
TCAs (TCA1 60 minutes, TCA2 60 minutes)	**50%**	1,2,3,4,5,7
Coursework Group Based Research Project and Presentation (20 minutes) Practical Exercises (25 minutes)	**50%**	6,8,9,10

Reading and resources for the module:

Core

Englander, I. S. (2013) *The architecture of computer hardware, systems software and networking: an information technology approach.* 5th edn. Oxford: Wiley-Blackwell.

Tomsho, G. (2011) *Guide to Networking Essentials*. 6th edn. Boston: Course Technology, Cengage Learning.

Recommended

Stallings, W. (2012) *Computer organisation and architecture: designing for performance*. 9th edn. London: Pearson Education.

Tanenbaum, A. and Wetherall, D.J. (2013) *Computer Networks*. 5th Edition, Pearson New International Edition, ISBN: 978-1292024226.

Tanenbaum, A. and Austin, T. (2012) *Structured Computer Organization*. 6th edn. London: Pearson.

Dye, M., McDonald, R. and Rufi, A. (2011) *Network Fundamentals, CCNA. Exploration Companion Guide.* Indianapolis, Ind: Cisco Press.

Indicative learning and teaching time (10 hrs per credit):	**Activity**

Student/Tutor interaction, some of which may be online: 48 hours 48 hours	Activity: Lectures Practical/ Tutorials
Student learning time: 204 hours	Activity: Essential and background reading, tutorial and practical preparation, practical assessment preparation, examination revision and preparation.
Total hours (1 and 2):	300 hrs

Module Title: Introduction to Web Technologies	**Module Code:** CN4106 **Level:** 4 **Credit:** 15 **ECTS credit: 7.5**	**Module Leader**: Ms. Sudhasini
Pre-requisite: None	**Pre-cursor:** None	
Co-requisite: None	**Excluded Combination:** None	
Locations of delivery: FTMS		

Main Aim(s) of the Module:

Through research and practice, to develop an understanding of the techniques used to build web sites:

- To examine the requirements for web applications and to select appropriate tools and techniques with which to design and build them.
- To use those selected tools and techniques to design, implement and test web pages.
- To provide professional documentation for the web pages produced.
- To use appropriate tools and techniques for the development of web pages.
- To develop and demonstrate a web project.
- To discuss the legal aspects in web development.

Main Topics of Study:

- Web standards: W3C technologies
- Working with mark-up languages
- Web development tools
- Designing, implementing, testing and evaluating web pages
- Documentation requirements
- Legal and ethical issues associated with development

Learning Outcomes for the Module

At the end of this module, students will be able to:

Knowledge

1. Demonstrate an understanding of the key principles in the design and implementation of web pages and the associated technologies, standards and legal requirements.

Thinking skills

2. Elicitate, identify, analyse and specify the requirements for business oriented projects
3. Select appropriate techniques for building web sites

Subject-based practical skills

4. Design and implement a business oriented web site.

Skills for life and work (general skills)

5. Evaluate, document and present the multimedia website.
6. Demonstrate evidence of reflection on academic performance by implementing feedback given.
7. Identify, access, and collate evidence from university and eternal sources, including textbooks and articles
8. Demonstrate appropriate use of technology to facilitate studies e.g. use of information resources, production of coursework, communication with tutors and peers.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

This is intended to be a practical 'hands-on' approach enabling Level 4 students to learn through doing and to work at their own pace but within the weekly framework of planned milestones. Lectures, practical sessions and other directed practical tasks based on a workshop approach will be used. Feedback will be provided throughout the module in the form of both formative and summative work

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
TCA (30 mins)	**30%**	1
Individual assignment– develop, evaluate and document a prototype website (70 hours)	**70%**	2, 3, 4, 5, 6, 7 and 8

Reading and resources for the module:
Core:
- Duckett, J. (2011) *HTML & CSS: design and build websites.* Indianapolis: John Wiley & Sons, Inc.
Recommended:
- Sarris, S. (2013) *HTML5 Unleashed*. Washington: Pearson Education, Inc.
-Castro, E. and Hyslop, B. (2013) HTML and CSS: Visual QuickStart Guide (Visual QuickStart Guides). 8th ed. London: Pearson Education.

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**
1.Student/Tutor interaction, some of which may be online: 24 hours 24 hours	Lectures Practicals
2.Student Learning Time: 102 hours	Essential and background reading, private study and practical work
Total hours(1 and 2):	150 hours

Module Title: Maths for Computing	**Module Code:** CN4107 **Level:** 4 **Credit:** 15 **ECTS credit: 7.5**	**Module Leader**: Mr. Mohamed Ismail

Pre-requisite: None	**Pre-cursor:** None
Co-requisite: None	**Excluded Combination:** None

Locations of delivery: FTMS

Main Aim(s) of the Module:

- To provide students with an understanding of foundational mathematics material for computer science.
- To prepare students for the more advanced mathematics they will encounter on their degree.

Main Topics of Study:

- Integers, indices and index laws
- Floating point arithmetic and standard form
- Number bases and conversion
- Number representation in computer systems
- Set theory
- Functions and relations
- Propositional and predicate logic and proof techniques
- Combinatorics and Probability
- Statistics, graphs, charts
- Matrices

Learning Outcomes for the Module

At the end of this module, students will be able to:

Knowledge

1. Explain the difference between different types of number and number bases and describe how numbers are represented in computer systems.
2. Identify the ways in which mathematical logic and set theory underpins the principles of computing.

Thinking skills

3. Utilise mathematical, statistical and logical methods to solve problems

4. Interpret and analyse data.

Subject-based practical skills

5. Construct graphs, matrices and charts, interpret them, and draw appropriate conclusions.

Skills for life and work (general skills)

6. Communicate complex ideas with clarity.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures will be used to introduce the fundamental mathematical principles. A combination of lectures and tutorial exercises will be used to reinforce understanding of the fundamental principles and to provide students with opportunities to apply the various mathematical techniques to solve real world problems of relevance to computer scientists. Feedback will be provided throughout the module in the form of both formative and summative work		
Assessment methods which enable students to demonstrate the learning outcomes for the module: **Exam** (60 minutes) **Coursework** In class assessments (75 minutes)	**Weighting:** 50% 50%	**Learning Outcomes demonstrated** 1,2,3,4,5, 6 3, 4, 5

Reading and resources for the module:

Core

Makinson, D. (2012) *Sets, Logic and Mathematics for Computing*, 2ND edn. Springer

Recommended

Grossman, P. (2009) *Discrete Mathematics for Computing* Palgrave MacMillanHaggerty, R. (2001) *Discrete Mathematics for Computing* Addison-Wesley.

Lipschutz, S. (1982) *Schaum's Outline of Essential Computer Mathematics* McGraw-Hill.

Olive, J. (2003) *Maths: A Student's Survival Guide,* 2nd edn. Cambridge University Press.

Pallant, J (2010) SPSS Survival Manual: A Step by Step Guide to Data Analysis using SPSS, 4th edn. Open University Press.

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**
1.Student/Tutor interaction, some of which may be online: 24 hours 24 hours	Lectures Tutorials
2.Student Learning Time: 102 hours	Essential and background reading, tutorial preparation, assignment planning and preparation, examination revision.
Total hours (1 and 2):	150 hours

LEVEL 2 MODULES

Module Title: Database Systems	**Module Code:** CN5101 **Level:** 5 **Credit:** 30 **ECTS credit:** 15	**Module Leader**: Mr. Mohamed Ismail
Pre-requisite: None	**Pre-cursor:** None	
Co-requisite: None	**Excluded Combination:** None	
Locations of delivery: FTMS		

Main Aim(s) of the Module:

- To provide an understanding of methods of data organisation and retrieval.
- To provide students with the concepts for understanding information systems and the skills for modelling data and functions.
- To develop students' knowledge of the fundamental principles of Database Management Systems.
- To provide students with the skills to design, implement and manage databases.

Main Topics of Study:

- Development of information systems – requirements, analysis and design
- Use case modelling
- System requirements analysis using Unified Modelling Language (UML) tools
- Data system concepts
- Data modelling techniques (Entity Relational Modelling)
- The relational model and relational algebra
- Structured Query Language (SQL)
- Enhanced ER modelling (E-ERM)
- Data organisation and retrieval techniques
- Data normalisation
- Transaction management
- Data warehousing
- Legal, moral and ethical issues of acquiring and storing data
- Query optimisation
- Transaction processing
- Recovery management
- Introduction to Procedural Language/SQL (PL/SQL)
- Introduction to NOSQL databases

Learning Outcomes for the Module

At the end of this module, students will be able to:

Knowledge

1. Describe and evaluate the structure and underlying principles of a relational DBMS.
2. Assess the security, legal and ethical issues in database design.

Thinking skills

3. Describe, analyse and apply techniques for obtaining a normalised relational model from a conceptual model.
4. Recognise legal, social, ethical & professional issues in data management

Subject-based practical skills

5. Identify and implement database models.
6. Examine and design a data model for a given scenario.
7. Describe and apply SQL to create tables and generate queries.
8. Design, develop and implement advanced database solutions using SQL statements.
9. Design, develop and implement advanced database solutions using procedural languages.

Skills for life and work (general skills)

10. Demonstrate good time management as a team, in the application of problem solving techniques in relation to database management.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures/tutorials/practical sessions/workshops. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
Coursework	60%	
Group task to design and implement a database system with (3000 words) documentation + 15 minutes presentation.	40%	5-10
Exam		1-5
Examination (1hr 45 minutes)		

Reading and resources for the module:

Core

Connolly T, M. and Begg C. E. (2015) *Database Systems: A Practical Approach to Design, Implementation and Management,* 6/E, Pearson/Addison Wesley.

Earp, R. and Bagui, S. (2002) *Learning SQL: a step-by-step guide using Oracle.* Addison Wesley. ISBN-10: 0201773637 or ISBN: 13: 978-0201773637

Recommended

Rob, P., Coronel, C. and Morris, S. (2013) *Database principles: fundamentals of design, implementation and management.* 2nd Edition, Cengage Learning. ISBN: 978-1-4080-4863-4

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**

1.Student/Tutor interaction, some of which may be online: 24hours 48 hours	Lectures Tutorials/Practicals/Workshops and student presentations assessment
2.Student Learning Time: 228 hrs	Essential and background reading, tutorial preparation, unsupervised laboratory work, assignment planning and preparation, examination revision.
Total hours (1 and 2):	300 hrs

<table>
<tr><td>Module Title:

Computing in Practice</td><td>Module Code: CN5104
Level: 5
Credit: 15
ECTS credit: 7.5</td><td>Module Leader:

Ms. Sudhasini</td></tr>
<tr><td colspan="2">Pre-requisites:
CN4101 and CN4102</td><td>Pre-cursor: None</td></tr>
<tr><td colspan="2">Co-requisite: CN5101</td><td>Excluded combinations : None</td></tr>
<tr><td colspan="3">Location of delivery: FTMS</td></tr>
<tr><td colspan="3">Main aim(s) of the module:
To equip students with skills that are needed to make successful job applications
To provide students with opportunities to
gain experience of working effectively in groups
apply their knowledge of systems development methods, tools and techniques, gained elsewhere in their programmes, to the development of a non-trivial system</td></tr>
<tr><td colspan="3">Main topics of study:
The IT graduate labour market, IT employer needs and expectations
The job application process; job searching, CV writing, covering letters, application forms, assessment centres and interview skills
Communication skills and the use of social media
Professional behaviour and conduct
Basic project management
Time management
Personal development planning
Working in groups effectively; negotiation skills, recognising and respecting different perspectives, assessing one’s own capabilities and those of others in a positive manner
The identification, specification and development of a non-trivial system or application</td></tr>
</table>

Learning Outcomes for the module

At the end of this module, students will be able to:

Knowledge

1. Demonstrate an awareness of the current state of the IT job market, future trends and the commercial needs of IT employers.

Thinking skills

2. Compare and contrast their own skills, behaviour, attitudes and competences with those prized by graduate employers, and propose personal actions to bring these closer together.

Subject-based practical skills

3. Construct an appropriate CV and complete a job application form to a professional standard.
4. Apply suitable methods, tools and techniques to the development of an application or system.

Skills for life and work (general skills)

5. Develop personal professionalism, identifying appropriate job and/or training opportunities.
6. Apply previous learning gained whilst working in team roles so as to illustrate an understanding of team working in the workplace and recognising and respecting differing perspectives.
7. Identify graduate selection processes relevant to the chosen field and consider the process of applying for a job.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures will be used to provide an overview of the IT job market, employer needs and expectations, the job application process, the skills required to successfully apply for graduate jobs and the basic principles of working effectively in groups. Tutorials and practicals will be used to reinforce the students' understanding of the material presented in the lectures and to provide students with opportunities to apply their knowledge to the solution of a group-based practical task. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
Practical Tasks Consisting of i) a group-based and assessed task and ii) an individually assessed task. i) will involve the development and documentation of a non-trivial system or application, accompanied by project management documentation (max 1,000 words) and ii) will require submission of a portfolio containing a CV, job application form and a personal development plan (max 2,000 words)	**100%**	1, 4 & 6 1 – 3, 5 & 7

Reading and resources for the module:

Core

Maun, R. (2012) *Job Hunting 3.0: Secrets and Skills to Sell Yourself Effectively in the Modern Age*. Marshall Cavendish International

Recommended

Cottrell, S. (2010) *Skills for Success: Personal Development and Employability*. 2nd ed. Palgrave Macmillan

Done, J. and Mulvey, M. R. (2013) *Brilliant Graduate Career Handbook*. 2nd ed. Pearson

Evans, C. (2008) *Time Management for Dummies*. Wiley

Kuhnke, E. (2012) *Communication Skills for Dummies*. Wiley

Maginn, M. (2004) *Making Teams Work: 24 Lessons for Working Together Successfully*. McGraw-Hill

Newton, R. (2007) *Project Management Step by Step: How to Plan and Manage a Highly Successful Project*. Pearson Business

Indicative learning and teaching time (10 hrs per credit):	**Activity**
1. Student/Tutor interaction, some of which may be online: 24 hours 24 hours	Activity: Lectures Tutorials/Practicals
2. Student learning time: 102 hrs	Activity: Essential and background reading, private study and group-based work including assessment preparation
Total hours (1 and 2):	150 hrs

Module Title:	**Module Code:** **CN5108**	**Module Leader**:
Systems Administration	**Level: 5** **Credit: 15** **ECTS credit: 7.5**	Mr. Joshua Samuel

Pre-requisite: CN4104	**Pre-cursor:** None
Co-requisite: None	**Excluded combinations :** None

Location of delivery: FTMS

Main aim(s) of the module:

- To furnish students with a detailed understanding of the roles and responsibilities of a system administrator.
- To provide students with opportunities to administer both Windows and Linux-based computer networks.

Main topics of study:

- The role of the systems administrator
- Managing workstations, servers and mobile devices
- Managing networks, services and the physical environment
- Managing users and dealing with management
- Managing change in an IT environment
- Codes of conduct, good practice and ethical systems administration
- Hands-on administration of Windows-based systems
- Hands-on administration of Linux-based systems
- Hands-on administration of heterogeneous environments
- Hands-on administration of virtualised environments

Learning Outcomes for the module

At the end of this module, students will be able to:

Knowledge

1. Describe, in detail, the role and various responsibilities of a system administrator.

Thinking skills

2. Compare and contrast Windows- and Linux-based networks in terms of how they are managed.

Subject-based practical skills

3. Configure small networks consisting of both Windows and Linux--based systems.

Skills for life and work (general skills)

4. Distinguish between ethical and unethical behaviour and professional and unprofessional conduct in the working environment.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:
Lectures will be used to introduce a framework and a set of principles within which the administration of computer systems and networks can be studied. During laboratory sessions, students will have an opportunity to put into practice the principles outlined in the lectures by installing and configuring both Windows and Linux--based systems. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
Practical A time-constrained (25 minutes), laboratory-based assessment involving the configuration of a computer system	**40%**	3
Examination (60 minutes)	**60%**	1, 2 & 4

Reading and resources for the module:

Core
Limoncelli, T., Hogan, C. And Chalup, S. (2007) *The Practice of System and Network Administration*, 2nd edn., Addison Wesley.
Recommended
Minasi, M., Greene, K., Booth, C., Butler, R., McCabe, J., Panek, R., Rice, M. and Roth, S. (2014) *Mastering Windows Server 2012 R2*, John Wiley and Sons.
Nemeth, E., Snyder, G., Hein, T. and Whaley, B. (2010) *Unix and Linux System Administration Handbook*, 4th edn., Prentice Hall.
Schaumann, P. (2013) *An Introduction to Design for Professional System Administration (Quantitative Software Engineering Series),* Wiley-Blackwell.

Indicative learning and teaching time (10 hrs per credit):	**Activity**
1. Student/Tutor interaction, some of which may be online: 24 hours 24 hours	Activity: Lectures/Tutorials Practicals
2. Student learning time: 102 hrs	Activity: Essential and background reading, private study including assessment preparation
Total hours (1 and 2):	150 hrs

Module Title: Web Applications Development	**Module Code:** CN5109 **Level:** 5 **Credit:** 30 **ECTS credit: 15**	**Module Leader**: Mr. Harris
Pre-requisite: CN4102 and CN4106	**Pre-cursor:** CN4101	
Co-requisite: None	**Excluded Combination:** None	
Locations of delivery: FTMS		

Main Aim(s) of the Module:

This module will provide students the core theoretical and practical background necessary for multi-tier web applications development

Main Topics of Study:

- Applications and programming languages for multi-tier web development
- The characteristics, advantages and disadvantages of different web development stacks
- Development methodologies for web application development and programming
- Testing methods appropriate to multi-tier environments
- Professional software documentation
- Software licenses and copyright implications

Learning Outcomes for the Module

At the end of this module, students will be able to:

Knowledge

1) Discuss and evaluate the main components of multi-tier web development architectures
2) Demonstrate knowledge and understanding of server side languages used in the implementation of web pages.

Thinking skills

3) Make appropriate decisions on the implementation aspects of multi-tier web development applications including legal and professional considerations

Subject-based practical skills

4) Design and implement scripts and/or components for a multi-tier application
5) Test and document the software produced to professional standards

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures. Small group practical sessions. Independent study. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:** 40%	**Learning Outcomes demonstrated**

2 x TCA (50 minutes each) Individual development of a multi-tier web application (120 hours)	60%	1-2 2-5

Reading and resources for the module:

Core

Welling, L. and Thomson, L. (2015) *PHP and MySQL web development*. 5th edn. London: Addison Wesley.

Recommended

Davis, M. E. and Phillips, J. A. (2007) Learning PHP & MySQL. 2nd edn. Sebastopol, CA: O'Reilly Media.

DuBois, P. (2008) MySQL (developer's library). 4th edn. London: Pearson Education.

Somerville, I. (2011) Software engineering. 9th edn. London: Addison-Wesley.

The PHP documentation group (2013) PHP manual [Online] Available at: http://www.php.net/manual/en/ [Accessed 08th January 2013].

The Apache Software Foundation (2013) Apache HTTP server documentation. [Online] Available at: http://httpd.apache.org/docs/ [Accessed 08th January 2013].

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**
1.Student/Tutor interaction, some of which may be online: 24 hours 48 hours	Lectures Practicals
2.Student Learning Time: 228 hours	Essential and background reading, private study and practical work
Total hours(1 and 2):	300 hours

Module Title: Information Systems Management and Strategy	**Module Code:** CN5110 **Level: 5** **Credit: 30** **ECTS credit: 15**	**Module Leader**: Ms. Sudhasini
Pre-requisite: CN4101		**Pre-cursor:** None
Co-requisite: None		**Excluded combinations :** None
Location of delivery: FTMS		

Main aim(s) of the module:

- To promote an understanding of the role of Information Systems (IS) in the strategic management and planning of an enterprise;
- To promote an understanding of the interaction of IT with the structure, operating principles and culture of an enterprise;
- To equip students with an understanding of the application of emerging Information Technologies to business processes.
- To promote an understanding of the need for, and the techniques of, introducing change and innovation into an organisation, especially the introduction and extention of IT systems.
- To enable students to develop skills needed to design and model Decision Support Systems (DSS) for industrial computing applications.

Main topics of study:

- Classification of Business Information Systems (BIS).
- Business Information System concepts, processes and their role in organisations.
- Competitive Strategies, IS economic theories and organizational structure used in Management Information Systems i.e. Porters' model
- Enterprise Business Systems, collaboration and enterprise architecture;
- Information Systems and emerging Information Technologies (IT).
- The role of Information Systems in management decision making and planning.
- Techniques required for the development of DSS, (i.e. optimization, AI etc)
- Designing, modeling and developing DSS models;
- Data analysis and business intelligence using mathematical/statistical methods and software packages;
- Developing Business/IT Strategies for culture, risk and change management in BIS;
- Security and ethical challenges associated with Information System Management ;

Learning Outcomes for the module

At the end of this module, students will be able to:

Knowledge

1. Explain the types of business processes and information systems used in business operations.
2. Critically review the strategic techniques used in the planning, design and implementation of information systems.
3. Analyse the impact of innovative technology, structural and cultural change in organisations.
4. Identify the ethical, legal and professional issues involved in Information system management.

Thinking Skills

5. Evaluate the role of IT in the application and implementation of modern information systems.
6. Assess the use information systems and IT for the management of change and innovation in organisations.
7. Appraise the use of different techniques, tools and models for the design of Information systems and DSS.

Subject-based practical skills

8. Communicate the managerial and organisational context of IT and information systems to participants in the systems development process.
9. Apply appropriate techniques and tools for the development of information systems and DSS.

Skills for life and work (general skills)

10. Apply modelling techniques and software packages for business Intelligence purposes.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures, tutorials, practical sessions and workshops. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
TCA:- TCA 1: (30 minutes) **and** TCA 2 (90 minutes)	**50%**	1, 2, 3, 4, 5
Coursework: Part 1: critical evaluation of IS themes and practices in IT (1500 words). Part 2: development of DSS application based on a specific case study of student's own choice (1500 words)	**50%**	1 to 10

Reading and resources for the module:

Core

Laudon, K.C. and Laudon, J.P. (2011). *Management information systems.* 12th edn. London: Pearson Education. ISBN-10: 0273754599 and ISBN-13: 9780273754596.

Recommended

Brown, C., DeHayes, D., Hoffer, J., Martin, E. and Perkins, W. (2011) *Managing information technology.* 7th edn. New Jersey: Pearson Education. ISBN-10: 0132146320 or ISBN-13: 978-0132146326.

O'Brien, J. and Marakas, G. (2008) *Management and information s*ystems. 8th edn. New York: McGraw-Hill.

Indicative learning and teaching time (10 hrs per credit):	**Activity**
1. Student/Tutor interaction, some of which may be online: 24 hours 48 hours	Activity: Lectures Tutorials/Practicals
2. Student learning time: 228 hrs	Activity: Essential and background reading, private study including assessment preparation
Total hours (1 and 2):	300 hrs

LEVEL 3 MODULES

<table>
<tr><td>Module Title:
Project</td><td>Module Code:
CN6103
Level: 6
Credit: 45
ECTS credit: 22.5</td><td>Module Leader:

Mr. Joshua Samuel</td></tr>
<tr><td colspan="2">Pre-requisite:
90 Credits at Level 5 of the student's programme</td><td>Pre-cursor:
120 Credits at Level 5 of the student's programme</td></tr>
<tr><td colspan="2">Co-requisite: None</td><td>Excluded Combinations:</td></tr>
<tr><td colspan="3">Location of Delivery: FTMS</td></tr>
<tr><td colspan="3">Main Aim(s) of the Module:
To enable students to undertake a sizeable piece of individual academic work in an area of their own interest relevant to, and demonstrating technical skills acquired in, their programme of study. Students will normally need to research one or more academic topic areas and then apply their findings to the construction of a computer-based system. Students should take account of ethical, legal, social, and professional issues in the construction of their system.
The project requires appropriate research, analysis, design, implementation, quality assurance, evaluation and project management.</td></tr>
<tr><td colspan="3">Main Topics of Study:
Students cover the following topics by applying knowledge and understanding of them to their chosen project:
• Identification of a suitable project topic
• Research methods
• Literature surveys, searches and reviews
• Plagiarism and referencing
• Project planning, monitoring, risk assessment and control
• Effectively engaging with academic research
• Academic writing and presentation skills
• The development, to a professional standard, of a large, non-trivial computer-based system or the critical evaluation of a recent development in the field of computing
• The documentation, to a professional standard, of a significant, problem-focused computing task including the study of the application domain, a detailed analysis of the problem and a solution to the problem.</td></tr>
</table>

Learning Outcomes for the module

At the end of this module, students will be able to:

Knowledge

1. Select and apply appropriate research and development methodologies, tools and techniques
2. Demonstrate a sound knowledge and understanding of the subject area to which their project relates

Thinking skills

3. Frame a research topic and develop a project proposal
4. Critically reflect on the ethical, legal, and social considerations of a chosen project topic
5. Critically reflect on both the research of others and their own project work

Subject-based practical skills

6. Construct a literature review and analyse the problem domain to which the project relates
7. Gather relevant information and data for the purposes of research
8. Construct and implement a realistic research timetable
9. Specify, design and implement a solution to a non-trivial computing or software engineering problem

Skills for life and work (general skills)

10. Deliver a presentation on a chosen project topic
11. Demonstrate an ability to organise, manage, and document a sizeable piece of independent academic work

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures will used to provide an overview of the project, its requirements and organisation and an introduction to research methods, literature surveys and referencing. In addition, every student will be allocated a supervisor at an early stage within the module. The supervisor will support the student for the duration of the project. Project supervision will be supplemented by i) meetings with the Learning Achievement Advisors (LAAs) who will help students develop their research skills and ii) participation in project surgeries, the purpose of which is support students during the implementation stage of their projects. Feedback, in the form of formative assessment, will be provided by both supervisors and LAAs on a regular basis. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable student to demonstrate the learning outcomes for the Module:	**Weighting:**	**Learning Outcomes demonstrated:**
i. Supporting Project Material • A 10 minutes' project progress presentation includes project plan and proof of engaging with supervisor – online assessment log - – 25% of this component	25%	1 - 11

• Initial literature review and project plan (1,000 words) – 30% of this component • A working demonstration and poster of the project work during the annual demonstration showcase/ assessment event and a 15 minutes' viva presentation – 45% of this component **ii. Main Project Report** • A project report of 10,000 words Threshold mark: a pass mark of 40% is required for each component.	75%	1, 2, 3, 4, 5, 6, 7, 8, 9, 11

Reading and resources for the module:

Core

Dawson, C. W. (2015) *Projects in Computing and Information Systems: A Student's Guide.* 3rd ed. Harlow, Essex: Pearson Education.

Recommended

Cottrell, S. (2011) *Critical Thinking Skills: Developing Effective Analysis and Argument.* 2nd edn. Basingstoke: Palgrave-Macmillan.

Denzin, N. K. and Lincoln, Y. S. (2012) *The Landscape of Qualitative Research*. 4th ed. London: SAGE.

Murray, N. and Hughes, G. (2008) *Writing Up Your University Assignments and Research Projects: A Practical Handbook.* Maidenhead, UK: Open University Press

Pears, R. and Shields, G. (2013) *Cite Them Right: The Essential Referencing Guide.* 9th edn. Basingstoke: Palgrave Macmillan.

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**
Student/Tutor interaction, some of which may be online: 24 hours 6 hours 6 hours	 Lectures Consultation with project supervisor Consultation with Learning Achievement Advisors (LAAs) and participation in project surgeries
Student Learning Time: 414 hours	Essential and background reading, private study, tutorial and coursework preparation.
Total hours:	450 hours

Module Title: Computer and Network Security	**Module Code:** **CN6107** **Level: 6** **Credit: 15** **ECTS credit: 7.5**	**Module Leader**: Mr. Joshua Samuel
Pre-requisite: CN4104		**Pre-cursor:** None
Co-requisite: None		**Excluded combinations :** None
Location of delivery: FTMS		

Main aim(s) of the module:

- To furnish students with a detailed understanding of the methods used by attackers to compromise computer system and network security.
- To enable students to compare and contrast the various tools and techniques that can be used to protect computer systems and networks from attack and to select appropriate tools and techniques for dealing with specific attacks.

Main topics of study:

- The cost of security breaches to organisations and business
- Attackers: Who are they and what motivates them?
- General security concepts and principles
- Methods of attack; malware, social engineering and TCP/IP based attacks
- Physical and logical access controls
- Network devices, services and protocols from a security perspective
- Security technologies; virtual private networks, firewalls, intrusion detection systems and anti-malware
- System and application hardening
- Cryptography: applications and protocols

Learning Outcomes for the module

At the end of this module, students will be able to:

Knowledge

1. Identify the various tools and techniques used by attackers and the types of attack that can be launched by using these tools or techniques.

Thinking skills

2. Distinguish between the various types of attack and their consequences.
3. Compare and contrast the various tools and techniques that can be used to protect computer systems and networks from attack and to select appropriate tools or techniques for dealing with specific attacks.

Subject-based practical skills

4. Set up and configure a range of network security tools and devices.

Skills for life and work (general skills)

5. Analyse a problem and devise one or more solutions to it.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures will be used to introduce a framework within which computer and network security concepts can be studied. During laboratory sessions, students will have an opportunity to experience some of the tools used by attackers and to use some of the tools designed to protect systems from attack. Tutorials will reinforce the concepts covered in the lectures and will be conducted via the University's virtual learning environment. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
Practical Configuration of a network security tool under time-constrained, (20 minutes) laboratory conditions	**45%** **55%**	4 & 5 1 - 3
Examination (75 minutes)		

Reading and resources for the module:

Core

Gibson, D. (2011) *CompTIA Security+: Get Certified Get Ahead: SY0-301 Study Guide*, CreateSpace Independent Publishing Platform

Recommended

Dulaney, E. (2011) *CompTIA Security+ study guide: exam SY0-301*. 5th edn. Wiley.

Harper, A., Harris, S., Ness, J., Eagle, C., Lenkey, G. and Williams, T. (2011) *Gray Hat Hacking The Ethical Hackers Handbook*, 3rd ed., McGraw-Hill Osborne

Kennedy, D., O'Gorman, J., Kearns, D. and Aharoni, M. (2011) *Metasploit: The Penetration Tester's Guide*, No Starch Press

McClure, S., Scambray, J. and Kurtz, G. (2012) *Hacking Exposed 7: Network Security Secrets and Solutions*, 7th ed., McGraw-Hill

Schneier, B. (2004) *Secrets and Lies: Digital Security in a Networked World*. Wiley-Blackwell.

Indicative learning and teaching time (10 hrs per credit):	**Activity**
1. Student/Tutor interaction, some of which may be online: 12 hours 24 hours 6 hours	Activity: Lectures Practicals Tutorials conducted via the virtual learning environment
2. Student learning time: 108 hrs	Activity: Essential and background reading, tutorial preparation and participation, preparation for assessment
Total hours (1 and 2):	150 hrs

Module Title: Business Intelligence Analysis	**Module Code:** CN6108 **Level:** 6 **Credit:** 15 **ECTS credit: 7.5**	**Module Leader**: Mr. Mohamed Ismail

Pre-requisite CN5101	**Pre-cursor:** None
Co-requisite: None	**Excluded Combination:** None

Location of delivery: FTMS

Main Aim(s) of the Module:

- To investigate state of the art and research trends in business intelligence analysis techniques and related topics.
- To expose students to the skills, techniques and methodologies that yield modern enterprise solutions that support business performance management.

Main Topics of Study:

- **Data mining concepts:** training examples, learned concepts, generalisation search, noisy data, discretisation, over-fitting.
- **Data analysis techniques:** decisions trees, classification rules, association rules, Bayesian classifier
- **Modelling of Business Intelligence solutions:** SAS Enterprise Basic, using query builder, sorting, filtering and combining data, producing report, statistical analysis

Learning Outcomes for the Module

At the end of this module, students will be able to:

Knowledge

1. Describe the principles of data mining
2. Demonstrate knowledge of the steps in data mining processes.
3. Critically evaluate the current state of research in the area.

Thinking Skills

4. Demonstrate a thorough understanding of the role and importance of business intelligence in organisations.
5. Develop a critical understanding of the issues associated with the application of Business Intelligence technologies.
6. Effectively use Business Intelligence tools and techniques to address business issues through the critical analysis of specific case studies / data sets.

Subject-based practical skills

7. Demonstrate competence in applying Business Intelligence concepts and techniques through implementation based on various existing technologies.

Skills for life and work (general skills)

8. Report writing and presentation of analysis results
9. Use software packages for business Intelligence and Enterprise Management solutions.

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes: Lecture, Tutorial/Practical. Feedback will be provided throughout the module in the form of both formative and summative work.		
Assessment methods which enable students to demonstrate the learning outcomes for the module: **Coursework** A case study based practical using business intelligence tools (2000 words) **Practical TCA** A time-constrained (30 minutes), laboratory-based assessment involving modelling using BI software solution	**Weighting:** 60% 40%	**Learning Outcomes demonstrated:** 1, 2, 6, 8, 9 3, 4, 5, 7
Reading and resources for the module: **Core** Witten, I. H, Frank, E. and Hall, M. (2011) Data Mining: Practical Machine Learning Tools and Techniques, 3rd Edition, Morgan Kauffman. Delwiche, L. and Slaughter S. (2012) The Little SAS Book: A Primer, 5th ed., SAS Institute **Recommended** Han, J. and Kamber, M. (2001) Data Mining Concepts and Techniques. San Francisco: Morgan Kaufmann.		

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**
1.Student/Tutor interaction, some of which may be online: 12 hours 24 hours	Lectures Tutorials/Practical
2.Student Learning Time: 114 hours	Essential and background reading, private study, tutorial and coursework preparation.
Total hours(1 and 2):	150 hours

Module Title: Enterprise Architecture	**Module Code:** CN6111 **Level:** 6 **Credit:** 15 **ECTS credit: 7.5**	**Module Leader**: Ms. Sudhasini
Pre-requisite: CN4101 and CN4102		**Pre-cursor:**
Co-requisite: None		**Excluded Combinations:**
Location of Delivery: FTMS		

Main Aim(s) of the Module:

Introduce the concepts and principles of Enterprise Information System Architecture used in business applications. To understand the supporting technologies, portals and collaboration tools used for the development of Enterprise Architecture. Examine the relationship between Enterprise frameworks and Web based Enterprise Architecture.

To equip students with the skills needed to develop Enterprise portal and analyse different Enterprise Architectures. Evaluate the methods used for developing and or simulating web portals using software packages and associated platforms. Review future industrial and research trends in information systems development by examining established and upcoming concepts and techniques COBIT, ITIL.

Main Topics of Study:

Enterprise Information System Architecture

- Types of Enterprise Architecture; Business Processes and Business Architecture;
- Principles of Enterprise Architecture Frameworks; Systems integration models and Service Oriented Architecture;
- Enterprise information Portal, Enterprise resource software, technologies and tools;
- Techniques for modelling and development of Software Enterprise Architecture;
- Information system development using AGILE methodology, Enterprise data model, information architecture and data integration.
- Enterprise Information system deployment and testing use of cloud computing and emerging technologies (Software as a service);
- Risk management; IT control and management frameworks, Monitoring and metrics for infrastructure and business processes
- Development and or simulation of web based portal applications using different software packages and or platforms;

Learning Outcomes for the module

At the end of this module, students will be able to:
Knowledge

1. Discuss theoretical and practical issues associated with the concepts in Enterprise Information System Architecture.
2. Explain the principles and challenges of the different Enterprise Architecture and Frameworks.

Thinking skills

3. Evaluate well established information system development paradigms (Service Oriented Architecture). Compare and contrast the different types of information system development paradigms ;
4. Critically analyse the use of new technologies and collaboration tools in development of Enterprise Portal;
5. Evaluate the issues in Enterprise systems including benefits and drawbacks.
6. Critically analyse the risk, security and protection in information system design and Enterprise Portal deployment.

Subject-based practical skills

7. Implement or simulate and test prototype desktop or web based Enterprise Portal using appropriate software packages and or platforms;

Skills for life and work (general skills)

8. Group work using software packages, documentation/report writing skills and working to meet deadlines;

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:
Lectures, Interactive Sessions Classroom based (Supervised), Lab Sessions (Supervised) Set tasks/Research (Unsupervised). Feedback will be provided throughout the module in the form of both formative and summative work

Assessment methods which enable student to demonstrate the learning outcomes for the Module:	**Weighting:**	**Learning Outcomes demonstrated:**
Coursework	40%	3, 4, 6-8
Group work:- development of desk top or web-based Enterprise Architecture task (1500 words)	60%	1-6
TCA (75 min)		

Reading and resources for the module:

Core

1 Giachetti R. E. (2010); Design of Enterprise Systems: Theory, Architecture, and Methods. CRC Press, FL., USA

Recommended

2 Reynolds Chris (2009); Introduction to Business Architecture, NY, USA: Cambridge University Press

<table>
<tr><td colspan="2">Gomaa, H. (2011) Software modelling and Design: UML, Use Cases and Software Architectures. NY, USA: Cambridge University Press.

Salmre, I. (2005) Writing mobile code: essential software engineering for building mobile applications. London: Addison Wesley.</td></tr>
<tr><td>Indicative Teaching and Learning Time (10 hrs per credit):</td><td>Activity</td></tr>
<tr><td>Student/Tutor interaction, some of which may be online:
12hours
24 hours</td><td>

Lectures
Tutorials/practical</td></tr>
<tr><td>Student Learning Time:
114hours</td><td>Essential and background reading, private study, tutorial and coursework preparation.</td></tr>
<tr><td>Total hours:</td><td>150 hours</td></tr>
</table>

Module Title: Project Management	**Module Code:** CN6112 **Level:** 6 **Credit:** 15 **ECTS credit: 7.5**	**Module Leader**: Mr. Mohamed Ismail

Pre-requisite None	**Pre-cursor:** None
Co-requisite: None	**Excluded Combination:** None

Location of delivery: FTMS

Main Aim(s) of the Module:

- To provide students with a thorough understanding of the role of ICT projects in the context of an enterprise environment.
- To expose students to the critical challenges in managing a project in meeting organizational objectives and satisfying the requirements of a project portfolio.
- To develop a professional approach towards utilizing standard methodologies, tools and techniques in managing information systems projects.

Main Topics of Study:

- Project life cycles and methodologies
- Project management tools
- Project planning tools and techniques: Gantt chart, PERT diagram, critical path
- People management and team organization
- Cost and effort estimation
- Risk analysis and management System
- Quality management including security, reliability and safety
- Use of research in the planning and implementation of projects
- Professional and ethical issues in managing projects

Learning Outcomes for the Module

At the end of this module, students will be able to:

Knowledge
1. Select and justify methodologies to achieve project objectives

Thinking Skills
2. Develop project plans taking into account quality, time and cost requirements
3. Evaluate project management practice within the organizational objectives

Subject-based practical skills
4. Employ resource estimation and scheduling techniques in project planning
5. Employ management techniques to support decision making in planning and operation.

Skills for life and work (general skills)

6. Use tools and techniques to produce clear, complete and consistent project plans

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lecture , Tutorial/Practicals. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated:**
Coursework Coursework of a reflective analysis of case study on project management (1500 words)	50%	1, 3, 5, 6
TCA 1 hour	50%	2, 4, 5

Reading and resources for the module:

Core

Schwalbe, K. (2010) Managing information technology projects. 6th edn. London: Cengage Learning.

Recommended

Belbin, R.M. (1981) Management teams: how they succeed and why they fail. Oxford: Butterworth-Heinemann.
Gray, C. and Larson, E. W. (2003) Project management, the managerial process. NY: McGraw Hill.
Highsmith, J. (2004) Agile project management. London: Addison Wesley.
Maylor, H. (2006) Project management. London: Pitman.
Turney, R. J. and Simister, S. J. (2000) Handbook of project management. 3rd edn. Ashgate: Gower.
Van Vliet, H. (2008) Software engineering - principles and practice. Chichester: John Wiley & Sons.

Journals

http://www.computer.org/itpro/IEEE IT Professional
http://www.computer.org/software IEEE Software
http://www.computer.org/tse/ IEEE Transaction in Software Engineering
http://www.acm.org/tosem/ ,ACM Transactions in Software Engineering and Methodology
International Journal of Project Management, Elsevier (publishers)
Project Management Journal, Project Management Institute (publishers)
Information and Software Technology, Elsevier (publishers)

Indicative Teaching and Learning Time (10 hrs per credit):	**Activity**
1.Student/Tutor interaction, some of which may be online: 12 hours 24 hours	 Lectures Tutorials/Workshop/Seminars
2.Student Learning Time: 114 hours	Essential and background reading, private study, tutorial and coursework preparation.
Total hours(1 and 2):	150 hours

<table>
<tr><td>Module Title:

Information Security and Risk Assessment</td><td>Module Code:
CN6113

Level: 6

Credit: 15
ECTS credit: 7.5</td><td>Module Leader:

Ms. Sudhasini</td></tr>
<tr><td colspan="2">Pre-requisite: CN4104</td><td>Pre-cursor: None</td></tr>
<tr><td colspan="2">Co-requisite: None</td><td>Excluded combinations : None</td></tr>
<tr><td colspan="3">Location of delivery: FTMS</td></tr>
<tr><td colspan="3">Main aim(s) of the module:
The module aims to provide a thorough understanding of and core theoretical background to information security and risk assessment. It aims to equip students with the ability to assess information security risk and critically evaluate the protection mechanisms used to secure systems.</td></tr>
<tr><td colspan="3">Main topics of study:

• An introduction to business driven information security
• Information security management system standards such as ISO 27001:2005
• Risk management frameworks, qualitative and quantitative risk assessment
• Risk treatment, monitoring and risk evolution
• Information security policy and technology trade-offs in developing secure information systems
• Legal and ethical aspects
• Information security management system audit</td></tr>
</table>

Learning Outcomes for the module

At the end of this module, students will be able to:

Knowledge

1. Recognise the significance of information security to today's business environment

Thinking skills

2. Demonstrate an in-depth understanding of information security risk management practice
3. Critically evaluate information assets and assess their vulnerabilities and threats

Subject-based practical skills

4. Develop and evaluate information security policies
5. Critically assess and audit information security gaps in business continuity plans

Skills for life and work (general skills)

6. Document and explain risk management and audit results in a professional manner

Teaching/ learning methods/strategies used to enable the achievement of learning outcomes:

Lectures, tutorials
Research based tasks, e.g. information security incidents, attacks, risk etc.
Independent study using learning materials. Feedback will be provided throughout the module in the form of both formative and summative work.

Assessment methods which enable students to demonstrate the learning outcomes for the module:	**Weighting:**	**Learning Outcomes demonstrated**
Course work (Word length: 2000 words). A background scenario will be given. Learners will perform a critical analysis of existing information system security practice and risk management for the given context)	**60%** **40%**	**4,5,6** **1,2,3**
Exam **(50 minutes)**		

Reading and resources for the module:

Core

- Wheeler, E. (2011), Security Risk Management: Building an Information Security Risk Management Program from the Ground Up, ISBN-13: 978-1597496155, Elsevier.

Recommended

- Pfleeger, C. P. and Pfleeger, S. L.(2007) Security in Computing.4th edition. Prentice hall.
- Whitman, M. and Mattord, H. (2010) Management of Information Security. 3rd ed. Course Technology. Cengage Learning, ISBN 10: 0-8400-3160-2.
- Jones, A. and Ashenden, D.(2005) Risk Management for Computer Security: Protecting your Network and Information Asssets, Elsevier
- Certified Information Systems Auditor, CISA Review Manual 2012.
- Information Technology- Code of Practice for Information Security Management, BSi ISO/IEC 17799:2000
- Information Security Management System Standard ISO 27001:2005

Indicative learning and teaching time (10 hrs per credit):	**Activity**
Student/Tutor interaction, some of which may be online: **12 hours** **24 hours**	**Activity:** **Lectures** **Tutorials**
Student learning time: **114 hours**	**Activity:** Essential and background reading, preparation of and participation in tutorial work, preparation for assessment.
Total hours (1 and 2):	150 hours

UNDERGRADUATE PROGRAMME SPECIFICATION
BSc (Hons) Business Information Systems

Programme Title	BSc (Hons) Business Information Systems
Intermediate awards available	Cert. H. E, Dip. H. E., BSc
Teaching Institution(s)	FTMS Malaysia
Alternative Teaching Institutions	N/A
UEL Academic School	School of Architecture, Computing and Engineering
UCAS code	-
Professional Body Accreditation	-
Relevant QAA Benchmark statements	Computing
Additional Versions of This Programme	N/A
Date specification last up-dated	July 2018

7 PLACEMENT REQUIREMENTS (WHERE APPLICABLE)

Placement will be encouraged but it is not from part of the programme.

7.1 Aims and objectives,

The aim of the programme is to provide a learning environment that allows students to:

- Develop skills in analysis, design, implementation and evaluation appropriate to their chosen programme.
- Become proficient in relevant technical skills.
- Be aware of trends and new developments.
- Be able to learn and work both individually within groups.
- Develop effective communication skills.
- Produce work of a professional standard.
- Be equipped to pursue further study.
- Be aware of the legal, social, ethical and professional issues in information systems and related areas.

7.2 Learning outcomes, status of the placement within the programme of study

- Evaluate, document and present the work related to network.
- Find solutions to complex problems.
- Demonstrate appropriate use of technology.
- Conduct a small research project.
- Analyze a set of requirements.
- Evaluate a proposal against an established set of requirements.
- Present the results of an investigation in a written report.

7.3 Support for students prior to application for placements; writing CVs, sourcing of placements, interview techniques, completing application forms.

Apart from giving individual advice, FTMS College runs regular workshops on topics like postgraduate study, how to put together a CV and covering letter, and improving students‟ application and interview techniques.

8 PROGRAMME MANAGEMENT

8.1 Information on how the programme is managed on a daily basis

The BSc (Hons) Business Information System programme is managed in accordance with UEL rules, policies, procedures and practices. These include (but not limited to): programme enrolment, module registration, assessment design, assessment marking and moderation, extenuation, attendance, teaching and learning, and issuance of awards.

This is facilitated by the programme being allocated the following:

- Academic Manager
- Programme Leader
- Module Leaders (these may also be teaching on other programmes)
- Personal Tutors
- Administrator
- Programme Committee

Following a degree programme inevitably takes a number of years and many things will happen to you during the time you are studying. Some events are predictable, but others are unexpected. Some are relatively insignificant, but others can seriously affect your studies.

8.2 Programme Committee- refer to terms of reference in appendix D

The Programme Committee consists of staff teaching on the programme, Programme Leader, Programme Administrator, a Technician, Library Representative and the Programme Representatives. It provides a forum for discussing operational and policy issues and meets at least once a semester. Programme Committees provide a formal structure for student participation and feedback on their programme of study. Programme committees provide a forum in which students can express their views about the management of the programme, and the content, delivery and assessment of modules, in order to identify appropriate actions to be taken. Terms of reference are provided in Appendix D.

8.3 Student involvement - student representation on committees, details of student feedback mechanisms including module evaluation and any student surveys.

Students can and do make a vital contribution to the development of the programme. You can do this through informal discussion with various members of staff and through the following formal mechanisms. The Programme Committee shall meet at least once per academic semester and shall have the following terms of reference:

• To ensure a regular and formal exchange of views between students and staff on the progress of the programme;

• To highlight any operational difficulties affecting the programme and to monitor progress in overcoming such difficulties;

• To receive the annual Review and Enhancement Process report prior to its submission to the University;

• To recommend modifications to the programme structure for inclusion in future proposals for revision of the scheme.

Student representation on committees

Students are elected to represent each 'year' of the programme. Programme Representatives meet with Programme Leaders and other teaching staff at least once a semester to give feedback and comments and may raise specific issues at any time. While Programme Representatives are a channel for airing grievances we also see them as partners in the process of programme development. As such they make suggestions for improvements, may undertake some project work and participate in a number of activities.

Student feedback mechanisms

There are regular surveys to gauge student attitudes and obtain feedback and suggestions from as wide a cross-section of students in the programmes as possible.

If you do have a comment or complaint about a particular module it is usuall best to discuss it immediately with the module leader for that module. Do not feel you have to wait to go through the formal mechanisms. Remember that a considerate and constructive approach is likely to be most effective.

It is, of course, just as important to offer praise and support where this is warranted - through formal and informal mechanisms. We are always on the lookout to generalise 'best-practice' and students can often be in the best position to point out something that could usefully be disseminated.

9 STUDENT SUPPORT

9.1 Local arrangements for academic and pastoral care for students

FTMS creates the learning space that not only enhances the students' learning experience but also brings out the very best in them. Through the Career Advisory Services, Student Counsellors guide students about the programmes and career prospects. At FTMS, our learning environment provides:

- Excellent academic support
- Excellent classroom facilities
- Excellent IT infrastructure
- Excellent student recreation facilities
- Excellent personal and professional development

FTMS College's Student Services provides students with the opportunity to receive help with any problems they may experience. Since a high proportion of FTMS College's students are foreign students, issues such as feeling lonely, homesick, anxious, depression and stress, are generally handled by the Service.

The Student Services at FTMS College provides a comprehensive service to all students offering information, help and advice on a wide range of different subjects including external problems involving, financial difficulties, legal questions, immigration problems, and also with internal problems with the University's procedures and regulations. The institute also has established many contacts with outside agencies so that, where necessary, specialist referrals can be made.

Pastoral Care

FTMS College's pastoral care system is applied to the practice of looking after the personal and social wellbeing of all students. It can encompass a wide variety of issues including health, social and moral education, behaviour management and emotional support.

9.2 Local Personal Tutor support

Every student is assigned a personal tutor during the first two weeks of them commencing their programme. The Personal Tutors can provide advice on any matter, whether it relates to coursework, assessment, regulations or even personal problems. If a tutor cannot deal with an issue personally, they will be able to recommend someone who can.

9.3 Local Careers Advice

Apart from giving individual advice, FTMS College runs regular workshops on topics like postgraduate study, how to put together a CV and covering letter, and improving students‟ application and interview techniques.

9.4 Local arrangements for supporting students with disabilities/dyslexia

FTMS College welcomes applications from disabled students. Special arrangements are made to ensure that students benefit fully from the academic, social and recreational experiences. The entrance at ground floor and even the disabled washroom is ready for the disable students. Students with particular individual requirements are invited to consult centre managers directly.

9.5 Local English Language support offered at FTMS College

The following English programs are offered to the students to meet their needs which suits many franchise program requirements.

- Intensive English
- Test of English as a Foreign Language (TOEFL)
- Business English
- Diploma in TESOL
- International English Language Testing System (IELTS)

9.6 Information on local accommodation facilities.

When you're moving overseas to study, you and your parents want to know that you'll be living somewhere comfortable, pleasant and secure. At FTMS College we can offer you a wide range of accommodation options, from hostel to accommodation in the private sector.

FTMS College provides apartment type accommodation located close to the campus with full condominium facilities, which includes swimming pool, launderettes, clubhouses, restaurants, 24 hr security and etc. All units are furnished with basic amenities, including a living room set, dining room set, air conditioning, washing machine, kitchen and bedroom furniture. Internet Access is complementary for Deluxe Accommodation.

Student can also rent apartments on their own. Rental of a 3-bedroom furnished apartment unit at Vista Komanwel Apartments ranges from RM1,500 to RM1, 800 per month. On a six-student per unit sharing basis, rental for each student ranges between RM 170 to RM 700 per month. Condominium facilities such as cafeteria, swimming pool, laundrette and convenience stores are available for students. 24-hour security coverage is provided to ensure the safety of residents and students. More Information is given in the web link: ***http://www.ftms.edu.my/Main/Accomodation/ http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch05.pdf***

9.7 Refer to Appendix F: Student Entitlements, for support available at UEL

10 RESOURCES

10.1 local library and IT resources

The Library provides a "Total Learning Environment" to develop confidence and bring out the best in students, by providing the finest academic support and facilities in Cyberjaya Campus.

Operating Hours:
Mondays – Friday - 8.30 am – 7.00 pm*
Saturday - 8:30 am – 5.00pm
Sundays and Public Holidays – Closed

IT Resources

Below listed are some of the very useful online library resources:

No.	Name	Address Link
1	FTMS Online Journal	http://www.ftms.edu.my/journals/
2	UEL Library Online (Personal ID&Password required)	https://uel-sso-01.uel.ac.uk/sso/uel.portal

FTMS ensures students are exposed to the latest technologies, providing real life hands-on experience. The IT infrastructure is continuously enhanced through the injection of new technologies, keeping pace with changing demands. The IT platforms are well supported by networked computers, which include facilities such as:

- I.T. laboratories
- High Speed Internet Connections
- WIFI
- Printing Kiosk
- Video-conferencing

Resource: S/W Listing

Microsoft Server 2008
Microsoft Windows 2000 Server
Microsoft Windows Mobile
Microsoft Windows 8 Professional
Microsoft Windows 7 Professional
Microsoft Windows XP Professional
Microsoft Windows 2000 Professional
Microsoft Windows NT Server
Microsoft Windows NT
Microsoft Windows 98
Microsoft Windows 95
Microsoft Exchange Server 5.5
Microsoft Exchange 5.5

Microsoft SQL Server 2008
Microsoft SQL Server 2005 Enterprise
Microsoft SQL Server 2000
Microsoft SQL Server 7.3
Microsoft SQL 7.0
Macintosh 8.5
Macintosh 9.0
Mandrake Linux 8.0
SUSE Linux Enterprise 10

Resource: H/W Listing

Lotus Domino Server 5.10
Lotus Notes 5.1.2
Lotus Notes 6.5.1
Magic Software for Student Registration
MailMarshal Software
ASSP 1.3.3.8
ActivePerl 5.8.8
Real VNC 4
Hamachi 1.0.2.5
Norton Antivirus 5.0
Norton Antivirus 2005
Libwin97
Omnipage Professional 9.0
Netscape Proxy Server 2.51
Oracle 9i
Oracle 10g
Oracle SQLPlus
Virtual PC
Juzt-Reboot SW
InnoDesk Version 1.1.17
PrimoPDF 2.0
doPDF 6
Wireshark Network Protocol Analyzer 0.99.6a
Mozilla FireFox

Resource: Applications

Microsoft Office 2013
Microsoft Office 2010
Microsoft Office 2007
Microsoft Office 2000
Microsoft Office 97
Microsoft Office 98 Macintosh
Microsoft Project 2000

Microsoft Project 98
Microsoft Publisher 2000
Microsoft Visual Studio 2010
Microsoft Visual Studio 2008
Microsoft Visual Studio.Net Professional
Microsoft Visual Studio 2005 Professional
Microsoft Visual Studio 6.0
Microsoft Visual C++
Microsoft Visual J++
Turbo Pascal
Foxit Reader
Adobe Acrobat Reader 9
Adobe Photoshop
Adobe Illustrator
Adobe Pagemill
iMovie
Macromedia Director 6
Macromedia Director 7
Macromedia Authorware 4
Macromedia Authorware 5
Macromedia Freehand 7
Macromedia Freehand 8.0.1
Macromedia FGS 6
Macromedia FGS 7
Macromedia Backstage Internet Studio 2
Lotus 123 Millennium
Lotus FastSite Millennium
Lotus Word Processor Millennium
Lotus Organizer Millennium
Lotus Freelance Graphics Millennium
Lotus Approach Millennium
Lotus ScreenCam Millennium
Lotus SmartCenter Millennium
Textpad 4.6
Nero Burning Rom V4.0
Autodesk AutoCAD 2006
Autodesk CIVIL 3D 2006
Autodesk MAP 3D 2006
Autodesk Maya 8.5
DarkBasic
POV-Ray 3.6.1c
FPSCreator 1

iTune
DivX Player
RealOnePlayer

10.2 Access to resources at UEL, if relevant (Refer to Appendix F: Student Entitlements at UEL)

You are entitled to access all UEL online Library and Learning Resources (subject to licence allowances) once you have received your UEL ID number. If you have requested a UEL ID card, you can also access the Library and Learning Resources in person at the UEL campuses in London, UK.

11 INFORMATION ABOUT QUALITY AND STANDARDS

11.1 Assuring the quality and standards of the award

You are enrolled on a programme of study leading to the award of a degree of the University of East London (UEL). As such, you are regarded as a student of the University of East London as well as FTMS College and both institutions work together to ensure the quality and standards of the programme on which you are registered. The final responsibility for all quality assurance, validation and standards' matters rests with UEL.

Some of the ways in which we ensure the quality and standards of the programme include:

Approval of the programme and institution at which you are studying
Before the programme started, our University, through an approval process, checked that:

- there would be enough qualified staff to teach the programme;
- adequate resources would be in place;
- the overall aims and objectives were appropriate;
- the content of the programme met national benchmark requirements, where applicable
- the programme met any professional/statutory body requirements if applicable;
- the proposal met other internal quality criteria covering a range of issues such as admissions policy, teaching, learning and assessment strategy and student support mechanisms.

Appointment of external examiners
The standard of this programme is monitored by at least one external examiner external to UEL, appointed by UEL. External examiners have two primary responsibilities:

- To ensure the standard of the programme;
- To ensure that justice is done to all students.

External examiners fulfill these responsibilities in a variety of ways including:

- Approving exam papers/assignments;
- Attending assessment boards;
- Reviewing samples of student work and moderating standards;
- Ensuring that regulations are followed;
- Providing feedback to the University through an annual report that enables us to make improvements for the future.

Review and Enhancement Process
This annual review includes the evaluation of and the development of an action plan based on:

- external examiner reports and accreditation reports (considering quality and standards);
- statistical information (considering issues such as the pass rate);
- student feedback obtained via programme committee and module evaluation questionnaires.

Periodic reviews of the partnership and programme
This is undertaken by a panel that includes at least two external subject specialists. The panel considers documents, looks at student work, speaks to students and speaks to staff before drawing its conclusions.

Award certificates
Issuing transcripts of results to students, and award certificates to successful students on programmes.

a) clarification on who issues award certificate (UEL or partner)

Issuing transcripts of results to students and award certificates to successful students on this programme will be supplied by UEL under its UK Charter.

b) clarify whether students will have the opportunity to attend the UEL award ceremony

If you want to attend the UEL award ceremony, you are most welcomed to do that. Please inform the Academic Link Tutor at least two months before the event – which is normally held in November.

Equality and Diversity

FTMS is committed to equality of opportunity. The aim is to create an environment in which students and staff treats each other with mutual respect, regardless of: age, disability, family responsibility, marital status, race, colour, ethnicity, nationality, religion or belief, gender, gender identity, transgender, sexual orientation, or political activity. FTMS also complies with UEL's Equality and Diversity Policy which is given in Appendix B.

12 ACADEMIC APPEALS

12.1 Students who wish to appeal against a decision of an Assessment Board may appeal in accordance with the procedure for *Appeals against Assessment Board decisions* (Manual of General Regulations, Part 7).

12.2 An appeal may only be made on the following grounds:

(a) The assessment was not conducted in accordance with the current regulations for the programme, or there has been a material administrative error or some other material irregularity relevant to the assessments has occurred.

(b) For a student with a disability or additional need, the initial needs assessment was not correctly carried out, or the support identified was not provided, or the agreed assessment procedures for that student were not implemented.

12.3 Appeals **will not be accepted** on the grounds of disagreement with the academic judgement of an assessment board. These remain the exclusive prerogative of the Assessment Board.

12.4 Any student who wishes to appeal against the decision of an Assessment Board must:

1. Notify the assistant registrar Ms Alicia at graduate school office in FTMS College (***Alicia@ftms.edu.my***) **within ten working days of the publication of results**.

2. Complete all sections of the notification of appeal form (please contact Institutional graduate school office if you require the form in a different format).

3. Attend a conciliation meeting with the Chair of the Assessment Board to attempt to resolve your appeal (the meeting should be convened within 10 working days of lodging the appeal).

12.5 If you are dissatisfied with the outcome of the conciliation meeting you should submit the completed notification of appeal form to the Institutional Quality Assurance and Enhancement Office **within five working days of the conciliation decision** and Institutional Compliance will formally investigate your appeal.

13 COMPLAINTS

13.1 If you feel that you have not received the standard of service which it would be reasonable to expect, you may be entitled to lodge a complaint, in accordance with section 14 of the *Manual of General Regulations*. The Complaints Procedure should be used for serious matters, and not for minor things such as occasional lapses of good manners or disputes of a private nature between staff and students. A complaint may be submitted collectively by a group of students who should nominate a spokesperson who will be the channel of communication for the group; however, a complaint may not be lodged by a third party on behalf of the complainant. The complaints procedure is an internal process.

13.2 Separate procedures exist for the following, which therefore cannot form the substance of a complaint:

- appeals against the decisions of Assessment Boards
- appeals against annual monitoring reviews, transfer of research degree registration or oral examination decision for postgraduate research students
- appeals against the decisions of the Extenuation Panel
- complaints against the Students' Union
- appeals against decisions taken under disciplinary proceedings (see Part 12 of the Manual of General Regulations);
- complaints about businesses operating on school premises, but not owned by our school (contact the Deputy Vice-Chancellor and Chief Operating Officer);
- complaints about the behaviour of other
- appeals against the decisions of Academic Misconduct Panels
- appeals against the decisions of Attendance Appeal Panels

13.3 FTMS College has a complaints process which adheres to the four stages of the University of East London complaints process. The four possible stages of the complaint process are:

STAGE 1: Local Resolution
STAGE 2: Formal Complaint
STAGE 3: Review

13.4 All stages of the complaints procedure, including issuing of Completion of Proceedings letters, will be administered by FTMS College. FTMS College is responsible for keeping the University of East London informed of all complaints received.

13.5 Stages 1 and 2 will be administered by FTMS College and the University of East London will administer Stage 3, including the issuing of a Completion of Proceedings letter in response to each Stage 3 complaint.

FTMS College is responsible for keeping the University of East London informed of all complaints received.

13.6 Complainants are strongly advised to make every reasonable effort to resolve their complaint informally through meeting with the member of FTMS College staff most directly concerned with the matter, such as the Programme or Module Leader, before proceeding to Stage 2 and submitting a formal complaint.

13.7 Complaints must normally be lodged within set time limits (please see Complaints Procedure for further details). This ensures that the people involved still remember the case, and the facts can be established.

13.8 If you would like to lodge a formal complaint or have any queries, please email to Academic Manager Mr Trevor Ward at FTMS College ***trevor@ftms.edu.my.***

14 EXTENUATION

General Information about extenuation can be found at ***http://www.ftms.edu.my/Main/ftms_files/BSc_BIS_Programme_Handbook_2016_2017.pdf***

- The students can apply for the extenuation by filling up the extenuation form which will be available at FTMS College graduate school office with the independent evidential documentary support, of their claim for extenuation.
- The judgement as to whether extenuation is granted or declined is made by a panel of senior persons in the organisation who make this judgement on the basis of the evidence the student provides (not on their knowledge of the student) – where possible the identity of the student is not made available to the panel.
- The effect of the panel in granting extenuation for an examination is to nullify any mark obtained and to allow the student to be reassessed in the exam without capping the module. This is independent of any mark achieve or not by the student. It is important that claiming extenuation is not viewed by the student as insurance 'just in case they have failed'.
- In the case of coursework extenuation is NOT used to grant extensions to deadlines. Rather if extenuation is granted, work will be accepted up to a week late, or if submitted later or not submitted at all the student will have reassessment work but their module will remain uncapped.
- It is less likely that extenuation is granted for coursework than for examinations. The nature of coursework, with its long lead times, makes it unlikely that events which occur cannot be compensated for by proper planning by the student. It is essential that you manage your own time effectively. Serious and lengthy illness should result in the student being withdrawn from the modules to re-register at a later occurrence (rather than using the extenuation procedures).
- *Web link:*

http://www.ftms.edu.my/Main/ftms_files/BSc_BIS_Programme_Handbook_2018_2019.pdf

The University of East London has agreed, through Academic Board, procedures governing extenuation for students concerning the assessment process.

The BSc (Hons) in Business Information System will be subject to equivalent procedures, with the process being administered by, and the panel being held within, FTMS Global College.

If granted by the panel, **Extenuation can**

(i) Allow students to hand in coursework up to 7 days late.

or

(ii) Allow students to proceed to their next attempt uncapped.

Extenuation doesn't

(i) Give students more attempts to pass a module
(ii) Reschedule exams
(iii) Uncap a capped module
(iv) Give students a higher mark.
(v) Allow students to hand in work over 7 days late.

The basic principle is that extenuation should put you in the same position that you would have been in had you not missed the exam or handed in the assessment late – it does not confer any advantages.

UEL decided that its procedures would be

- Evidentially based
- Handled centrally by an panel of senior staff (not devolved to various parts of the organisation)
- Retain student anonymity where possible

The extenuation procedures are intended to be used rarely by students not as a matter of course.

The procedures govern circumstances which

- Impair the performance of a student in assessment or reassessment
- Prevent a student from attending for assessment or reassessment
- Prevent a student from submitting assessed or reassessed work by the scheduled date

Such circumstances would normally be

- Unforeseeable - in that the student could have no prior knowledge of the event concerned
- Unpreventable - in that the student could do nothing reasonably in their power to prevent such an event
- Expected to have a serious impact

Examples of circumstances which would normally be regarded as serious are:

- *A serious personal illness* (which is not a permanent medical condition – this is governed by disability procedures)
- *The death of a close relative immediately prior to the date of assessment*

Examples of circumstances which would *not* normally be regarded as extenuating circumstances are:

- Failure of computer equipment / USB stick
- Transport problems, traffic jams, train delays
- Misreading the exam timetables / assessment dates
- Minor illnesses

The judgement as to whether extenuation is granted is made by a panel of senior persons in the organisation who make this judgement on the basis of the evidence the student provides (not on their knowledge of the student) – where possible the identity of the student is not made available to the panel. The judgement is made on the basis that the circumstances could reasonably be thought to be the sort of circumstances which would impair the performance of the student etc. The actual performance of the student is not considered and is not available to the panel.

It is the responsibility of the student to notify the panel, with independent evidential documentary support, of their claim for extenuation. The students can apply for the extenuation by filling up the extenuation form which will be available at FTMS College graduate school office.

Appendix A

ACADEMIC CALENDAR 2018-19

ACADEMIC CALENDAR
UNDERGRADUATE PROGRAMMES
FOR SESSIONS 2018 / 2019 / 2020

2018/2019 SEMESTER B	Date From	Date To
Induction	Tue, 22 January 2019	Sat, 26 January 2019
Lectures	Mon, 28 January 2019	Sat, 4 May 2019
Study Break	Mon, 6 May 2019	Sat, 11 May 2019
Exam Weeks	**Mon, 13 May 2019**	**Sat, 18 May 2019**
Semester Break	Mon, 20 May 2019	Sat, 8 June 2019
Re-sit Exam	**Tues, 21 May 2019**	**Mon, 27 May 2019**
Public Holidays	1 January 2019 (New Year's Day) 5 – 6 Feb 2019 (Chinese New Year) 21 January 2019 (Thaipusam) 1 May 2019 (Labour Day) 19 May 2019 (Wesak Day)	Public Holidays

SEMESTER 2	Date From	Date To
Induction	Mon, 27 May 2019	Sat, 1 June 2019
Lectures	Mon, 10 June 2019	Sat, 3 August 2019
Study Break	Mon, 5 August 2019	Sat, 10 August 2019
Exam Weeks	**Tue, 13 August 2019**	**Mon, 19 August 2019**
Semester Break	Tue, 20 August 2019	Sat, 14 September 2019
Re-sit Exam	**Mon, 29 July 2019**	**Sat, 3 Aug 2019**
Public Holidays	22 May 2019 (Nuzul al-Quran) 5 & 6 Jun 2019 (Hari Raya Puasa) 11 August 2019 (Hari Raya Qurban) 31 August 2019 (National Day) 1 Sept 2019 (Awal Muharam)	Public Holidays

SEMESTER 3	Date From	Date To
Induction	Tue,10 September 2019	Sat, 14 September 2019
Lectures	Tue, 17 September 2019	Sat, 21 December 2019
Study Break	Mon, 23 December 2019	Sat, 4 January 2020
Exam Weeks	**Mon, 6 January 2020**	**Sat, 11 January 2020**
Semester Break	Mon, 13 January 2020	Sat, 25 January 2020
Re-sit Exam	**Mon, 13 January 2020**	**Sat, 18 January 2020**
Public Holidays	9 Sept 2019 (Agong's Birthday) 16 September 2019 (Malaysia Day) 27 October 2019 (Deepavali) 9 November 2019 (Maulidur Rasul) 11 December 2019 (Sultan Selangor Birthday) 25 December 2019 (Christmas)	Public Holidays

FTMS College, Malaysia reserves the right to make changes and amendments to the above information, as it deems necessary.

USEFUL WEB PAGES **APPENDIX B**

Announcements
http://www.ftms.edu.my/Main/en/Announcement/

Turnitin Report Guideline
http://www.ftms.edu.my/Main/en/Undergraduate_Student/

Harvard Referencing Guideline
http://www.ftms.edu.my/Main/en/Undergraduate_Student/

Module Informations
http://www.ftms.edu.my/Main/en/Undergraduate_Student/

Application Procedures
http://www.ftms.edu.my/Main/Application_Procedures/

Accomodations
http://www.ftms.edu.my/Main/Accomodation/

Immigration Information
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch04.pdf

Students Funding
http://www.ftms.edu.my/Main/en/Student_Funding/

Useful Contacts
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch12.pdf

Guidance & Support Service
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch05.pdf

Offences Frequently Committed By International Students
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch06.pdf

Our Programmes
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch09.pdf

Life in Malaysia
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch03.pdf

Campus Location
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch11.pdf

Places of Interest
http://www.ftms.edu.my/Main/file/Int%20Stud%20Hbookv5-2016-Ch08.pdf

Student Services
http://www.ftms.edu.my/Main/Student_Services/

My Scholarship
http://www.ftms.edu.my/DatoAhmadAbdullahSholarship/

Research
http://www.ftms.edu.my/journals/

Alumina
http://www.ftms.edu.my/Main/Alumni/

Job Placements
http://www.ftms.edu.my/Main/Job_Placement/

Convocation information
http://www.ftms.edu.my/Convocation2016/

APPENDIX C

Student Attendance and Engagement Policy – Guidance for Students
Attendance and Punctuality

Students' active participation in the scheduled academic activities has a great impact on achieving the learning outcomes. Accordingly, the Student Attendance Policy is designed to improve the quality of the graduates passing out from FTMS by encouraging and enforcing their participation in the scheduled academic activities.

Attendance Requirement and Consequences

Minimum of 85% participation in all scheduled academic activities for a module is mandatory to sit for the module examinations/ assessments and/ or to establish validity of examinations/ assessments already taken. Students may be permitted to be absent for valid reasons with prior approval or on medical grounds provided an acceptable medical certificate is submitted within 7 days from the date(s) of absence. However, the concession granted will be limited and a minimum attendance requirement of 70% will be enforced under such circumstances.

Each student enrolled in a module should meet the attendance requirement in addition to other requirements stipulated in the module descriptor to complete the module satisfactorily. Failure to meet the attendance requirement will result in the student being barred from sitting the module examinations/ assessments and/ or declaring the examinations/ assessments already taken null and void. Further, the student will be considered as having made an unsuccessful attempt on the module and will be required to repeat the module with attendance and payment and retake the examinations/ assessments as a second attempt.

In case students are found to be irregular in their attendance, without notice, they should provide evidence in writing for reason of absenteeism at the earliest opportunity by completing the Non-Attendance Form available from the student service counter. Student who fails to do so, letter will be sent to parent or Embassy (for foreign student).If there is any circumstance beyond the control of the student that has affected the academic performance of the student (medical, bereavement, etc.); this should be informed in writing (Non-Attendance Form), as per the campus regulations.

Monitoring and Advice

The module lecturers shall record the attendance of students enrolled in a module at scheduled academic sessions. This information would be available in the Student Services Department and Student Services Executive shall send warning letters to students/parents.

Enforcement

At the end of the term, Academic Administration shall compute student attendance for each module and determine the eligibility of students to sit for examinations/ assessments and/or submit in-course assessments and communicate student eligibility by publishing a list of eligible students in the Academic Administration notice board.

APPENDIX D

UNIVERSITY OF EAST LONDON

TITLE: PROGRAMME COMMITTEE (COLLABORATIVE)

TERMS OF REFERENCE

To be responsible for assuring and enhancing the quality of the student experience at programme level by:

- Providing a forum in which students can express their views about the management of the programme, and the content, delivery and assessment of modules, or equivalent, in order to identify appropriate actions to be taken in response to the issues raised and to ensure that the implementation of these actions is tracked.

- Providing formal yearly student feedback on the programme as input into the preparation of the Programme REP.

- Reviewing programme questionnaire results and making recommendations and changes arising from these.

- Receiving, considering and approving the Programme REP and identifying responsibilities for action to be taken before it is considered by School Learning and Teaching Quality Committee.

- Reviewing progress on REP action plans at each meeting.

- Reviewing the relevant documentation and other evidence prepared for Academic and collaborative Institutional Review and other external review processes.

- Reviewing proposals for modification of the programme structure (validated programmes only) and noting implementation arrangements for modifications.

- Advising the Programme Leader on mechanisms by which University policy statements, which have an impact on programme design and delivery, are implemented.

MEMBERSHIP

Programme Leader (Chair)
Administrator/Servicing Officer (ex-officio)
Programme staff making a significant teaching contribution to the programme
Learning Support Services representative
Technician representative (for laboratory based programmes)
Dean of School/department or equivalent (ex officio)
UEL Dean of School/Associate Dean of School, or equivalent (ex officio)
UEL link person (ex officio)
Two student representatives for each level and at least one part-time student (where appropriate)

The meeting will be held once per semester/term and will be quorate if 40% of the members are present.

Updated Aug 8, 2018

APPENDIX E

ACADEMIC MISCONDUCT AND PLAGIARISM

For the purposes of university's regulations, academic misconduct is defined as any type of cheating in an assessment for the purposes of achieving personal gain. Examples of such misconduct are given below: the list is **not** exhaustive and the use of any form of unfair or dishonest practice in assessment can be considered potential misconduct.

Coursework Submitted for Assessment

For coursework submissions, academic misconduct means:

(a) The presentation of another person's work as one's own with or without obtaining permission to use it.

(b) The inclusion within one's own work of material (written, visual or oral), originally produced by another person, without suitable acknowledgment.

(c) The submission, as if it were one's own work, of anything which has been offered to you for your use, but which is actually not your own work.

(d) The inclusion within one's work of concepts paraphrased from elsewhere without citing your source.

(e) The inclusion in submitted work of sections of text, whether from electronic or hard copy sources, without appropriate acknowledgement of the source.

(f) The submission of work that the student, as the author, has previously submitted, without suitable acknowledgement of the source of their previous work; this should not normally be more than a short quotation as the same work cannot be submitted for different assignments.

(g) Including or quoting the work of other students in one's work, with the exception of published work, or outputs held in the library as a learning resource, which should be cited and acknowledged appropriately.

(h) Being party to any arrangement whereby the work of one candidate is represented as that of another.

(i) The submission, as your own work, of any work that has been purchased, or otherwise obtained from others, whether this is from other students, online services, "cheat sites", or other agents or sources that sell or provide assignments.

(j) Practices such as 'cutting and pasting' segments of text into your work, without citing the source of each.

(k) For work not intended to be submitted as a collaborative assignment: producing work with one or more other students, using study practices that mean the submitted work is nearly identical, overall or in part, to that of other students.

(l) Offering an inducement to staff and/or other persons connected with assessment.

Examinations

For examinations, academic misconduct means:

(a) Importation into an examination room of materials or devices other than those which are specifically permitted under the regulations applying to the examination in question.

(b) Reference to such materials (whether written or electronically recorded) during the period of the examination, whether or not such reference is made within the examination room.

(c) Refusing, when asked, to surrender any materials requested by an invigilator.

(d) The application of an electronic device, unless this has been expressly permitted for that examination.

(e) Copying the work of another candidate.

(f) Disruptive behaviour during examination or assessment.

(g) Obtaining or seeking to obtain access to unseen examination questions prior to the examination.

(h) Failure to observe the instructions of a person invigilating an examination, or seeking to intimidate such a person.

(i) Offering an inducement to invigilators and/or staff and/or other persons connected with assessment.

Where academic misconduct is suspected, the matter will be dealt with under the *Procedure to be followed in the event of a suspected case of academic misconduct, Part 8, paragraph 4 (or, for postgraduate research students, Appendix I)* of the Manual of General Regulations .If it is determined that academic misconduct has taken place, a range of penalties may be prescribed which includes expulsion from the programme.
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PLAGIARISM - A GUIDANCE NOTE FOR STUDENTS

1. Definition of Plagiarism

Our University defines plagiarism and other academic misconduct in Part 8 of the UEL Manual of General Regulations (to which all students are referred upon joining UEL), which is reprinted in "The Essential Guide to the University of East London". In this document, the following example of an assessment offence is given:

The submission of material (written, visual or oral), originally produced by another person or persons or oneself, without due acknowledgement*, so that the work could be assumed to be the student's own. For the purposes of these Regulations, this includes incorporation of significant extracts or elements taken from the work of (an)other(s) or oneself, without acknowledgement or reference*, and the submission of work produced in collaboration for an assignment based on the assessment of individual work. (Such misconduct is typically described as plagiarism and collusion.)

The following note is attached:
*(Note: To avoid potential misunderstanding, any phrase that is not the student's own or is submitted by the student for a different assessment should normally be in quotation marks or highlighted in some other way. It should also be noted that the incorporation of *significant* elements of (an) other(s) work or of one's own work submitted for a different assessment, even with acknowledgement or reference, is unacceptable academic practice and will normally result in failure of that item or stage of assessment.)

2. Plagiarism in Greater Detail

Work that students submit for assessment will inevitably build upon ideas that they have read about or have learnt about in lectures. That is perfectly acceptable, provided that sources are appropriately acknowledged. It should be noted, however, that the wholesale reproduction of the ideas and words of others, however well referenced, is likely to lead to failure at assessment (see section 6 below)

The submission of work that borrows ideas, words, diagrams, or anything else from another source (or sources), without appropriate acknowledgement, constitutes plagiarism. Plagiarism is not limited to unattributed cutting-and-pasting; it includes the reproduction, without acknowledgement, of someone else's work, taken from a published (or unpublished) article, a book, a website, a friend's (or anybody else's) assignment, or any other source.

When an assignment or report uses information from other sources, the student must carefully acknowledge exactly what, where and how s/he has used them. If someone else's words are used, they must be within quotation marks and a reference must follow the quotation. (See section 6 for further guidance on referencing.)

Where a concept or argument in another source is paraphrased (rather than directly quoted), quotations marks should not be used, but it will still be necessary to acknowledge the source. Remember, however, that the making of simple changes to the wording of a source, while retaining the broad structure, organisation, content and/or phraseology of the source, is unacceptable academic practice and will probably be regarded as plagiarism. (For helpful tips on how to avoid plagiarism, see "The Study Skills Handbook" by Dr Stella Cottrell, pages 122-125.)

3. Collusion

Collusion is the term used to describe any form of joint effort intended to deceive an assessor as to who was actually responsible for producing the material submitted for assessment. Clearly, students are encouraged to discuss assignments with their peers, but each student must always ensure that, where an individual assignment is specified, the report/essay submitted is entirely the student's own. Students should, therefore, never lend work (in hard or electronic copy) to friends. If that work is subsequently plagiarised by a "friend", an act of friendship might lead to a charge of collusion.

4. When to Reference

Our regulations do not distinguish between deliberate and accidental plagiarism, but you will not be accused of plagiarism, provided that you properly reference everything in your work that was said, written, drawn, or otherwise created by somebody else.

You need to provide a reference:

- when you are using or referring to somebody else's words or ideas from an article, book, newspaper, TV programme, film, web page, letter or any other medium;
- when you use information gained from an exchange of correspondence or emails with another person or through an interview or in conversation;
- when you copy the exact words or a unique phrase from somewhere;
- When you reprint any diagrams, illustrations, or photograph

You do not <u>need</u> to reference:

- when you are writing of your own experience, your own observations, your own thoughts or insights or offering your own conclusions on a subject;

- When you are using what is judged to be common knowledge (common sense observations, shared information within your subject area, generally accepted facts etc.) As a test of this, material is probably common knowledge if

  - You find the same information undocumented in other sources.
  - It is information you expect your readers to be familiar with;
  - The information could be easily found in general reference sources.

5. How to Reference

Our University has agreed on a single version of the Harvard referencing system (the School of Psychology uses the American Psychological Association (APA) referencing style) and this (along with APA) can be found in Cite Them Right:

Pears, R. and Shields, G (2013) *Cite Them Right.* Newcastle: Pear Tree Press
Cite Them Right is available on line and hard copies can be found in our libraries and bookshops

6. Plagiarism or Unacceptable Academic Practice

If work that you submit for assessment includes substantial and significant elements of other sources and all of those sources are appropriately acknowledged, you will not have plagiarised, but you will be culpable of unacceptable academic practice, because there will be too little of your "own voice" to allow your knowledge to be assessed. Work that you submit for assessment must:

- use your own words;
- provide a critical commentary on existing literature;
- aim for novelty and originality;
- Demonstrate your understanding of the subject area by paraphrasing.
  Work that does not meet those criteria will fail.

APPENDIX F

COLLABORATIVE STUDENT ENTITLEMENTS AT UEL

This document outlines the University of East London services you are entitled to access as a student on one of our collaborative programmes **outside the UK.**
If you have any questions about any of the services you are entitled to at UEL, please contact the team at the Academic Partnership Office (APO) at UEL (***apo@uel.ac.uk***), who will be happy to advise you further.

UEL ID Card

If you so wish, you can be issued a UEL Student ID Card which would be given to you by your home institution. Please contact the relevant support services at your institution to let them know if you wish to receive a UEL ID card. This ID card will give you access to all appropriate UEL facilities in London, UK. Please note that the standard UEL fee for replacement ID cards apply in case your card goes missing or gets broken.

If you experience any difficulty in accessing the relevant UEL facilities, in person or online, please contact the Academic Partnership Office (apo@uel.ac.uk) for assistance.

Library and Learning Resources

You are entitled to access all UEL online Library and Learning Resources (subject to licence allowances) once you have received your UEL ID number. If you have requested a UEL ID card, you can also access the Library and Learning Resources in person at the UEL campuses in London, UK.

For more information on the UEL Library and Learning Resources, please see their website ***http://www.uel.ac.uk/lls/***.

Student Support

Student support will be offered to you by your home institution – UEL is unable to offer student support services to students studying at our collaborative partner institutions.
However, as a collaborative student you are entitled to access the UEL study skills service Skillzone online once you have received your UEL ID number. Please find more information on the resources available on the Skillzone website ***http://www.uel.ac.uk/skillzone***.

Student Records and Status Letters

You will be registered on the UEL student record system as a student studying at one of our collaborative partners at the start of your studies.

If you so require, the Academic Partnership Office will also be able to provide you with the following letters:

- an award confirmation letter (once your award is available on the student record system)
- a collaborative student status letter

If you require confirmation on professional body accreditation of your course, please contact the Academic Partnership Office to clarify whether they will be able to issue such confirmation for your course.

University of East London is unable provide you with any other letters – please contact your home institution for those.

Student Union (UELSU)
As a student at one of our collaborative partner institutions, you are not be a member of the University of East London Student Union, and will not be able to access their services. However, you can become a member of your home institution's Student Union where available.

Degree Certificate and Diploma Supplement
Your home institution will receive your degree certificate and a diploma supplement from UEL within 12 weeks from the confirmation of the award. Your home institution will then deliver the degree certificate and diploma supplement to you.

Graduation Ceremony
Your home institution may hold its own graduation ceremony at which UEL will be represented where possible.
You will also be invited to a UEL Graduation Ceremony. Please see our website for more information the graduation ceremony: ***http://www.uel.ac.uk/graduation/***.

Alumni Network
As a UEL graduate, you will have full access to our alumni services after you have been awarded your degree. For more information, please see the UEL Alumni Network website ***http://www.uel.ac.uk/alumni/***.

APPENDIX G

HEALTH AND SAFETY

Possessions

Students should be fully responsible for their personal belongings; FTMS will not be liable for loss of your personal items. Do not bring expensive items e.g. jewellery etc. to the Institute.
Please report immediately to the administration manager in the case of any losses or damages to personal property.

No Smoking Policy

For the reasons of health, safety and hygiene, the Institute has adopted a formal no smoking policy in all public areas. Disciplinary action will be taken against any student who violates this regulation which may even include expulsion from the Institute.

Individual Responsibility

You are asked to take individual responsibility for the following.

- Make sure that your work is carried out in the approved way and in accordance with the Institute's policy.
- Obey all instructions provided concerning health and safety.
- Offer any feedback or suggestions that you think may improve health and safety.
- Report all fires, incidents and accidents immediately to the Facility Manager.
- Familiarise yourself with the location of fire-fighting equipment, alarm points and escape routes, together with the fire procedures.
- If you are in doubt about any matter concerning health and safety, consult your mentor.

Computer Systems

A laboratory technician or authorised personnel only may carry out the installation or hardware modification of computers and peripheral equipment. Requests for such work should be made to the IT Manager or his duly appointed representative.

N.B

It is our policy to do all that is reasonably practicable to ensure the health, safety and welfare of all students, as well as people who may visit any of our premises. As such we comply with all relevant health and safety legislative requirements.

On the programme we will provide safe systems for learning, a safe environment for teaching and learning, adequate health and welfare arrangements and facilities, and the elimination of risks associated with health and safety.

A FINAL REMINDER

This document provides general guidelines on safety. You must be adhere to specific safety instructions, guidelines and procedures for specific activities at a specific locations (laboratories and other workplace).

If you are in doubt of any procedure or other safety matters, it is vital that you seek the advice of your supervisor, a member of staff or member of the JKKP as given at the back of this booklet.

Never be afraid to do this! Your life may depend on it.

SAFETY STARTS FROM ME!
Everyone Has Safety Responsibility.
There is ALWAYS enough time to do the job SAFELY.
SAFETY First !
Together in creating safe and healthy work culture.

References:
Akta Keselamatan dan Kesihatan Pekerjaan (Akta 514)
http://www.dosh.mohr.gov.my

Emergency Contact

FTMS Control Centre
FTMS College
Block 3420, Persiaran Semarak Api, Cyber 4,
63000 Cyberjaya, Selangor, Malaysia
Tel: (603) 8310 9355 (Ext. 231) Fax: (603) 8310 9211

HOSPITAL PUTRAJAYA
Pusat Pentadbiran Kerajaan Persekutuan
Presint 7, 62250 Putrajaya.
Telephone : 03-83124200

KLINIK KESIHATAN PUTRAJAYA PRESINT 9
No. 1, Jalan P9E, Presint 9,
Pusat Pentadbiran Kerajaan
Persekutuan, 62250 Putrajaya
+603-8888 3057 (Tel)

Police Station
Police Sepang
Telefon : 03-87062222

Fire Station (BOMBA), Cyberjaya
No. Tel : 03 - 8318 4944 / 8318 8944

KLINIK ALAM MEDIC
No 3 Block A, Jalan Gc/1
Glomac Cyberjaya
Cyberjaya
63200, Selangor
Phone:03-83226172

EMERGENCY STAFF CONTACT

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