

MSc Telecommunications with Internet of Things – E538 (Part-Time) (Under Review)

1. Context and Objectives

Telecommunications has evolved drastically over the past two decades and has transformed the way we communicate. Nowadays, telecommunications is no longer about connectivity alone but it can also provide a range of digital products and services using technologies such as the Internet of Things (IoT). It is expected that IoT will increasingly permeate into the everyday lives of ordinary citizens and its growth will depend heavily on the advancement in the telecommunications sector. This MSc programme will provide state-of-the-art knowledge in the different areas of Telecommunications and IoT and is targeted at students with a background in Electrical Engineering, Telecommunications Engineering and other related areas. The programme will be delivered through the virtual classroom mode, making it more accessible to working professionals and international students.

The objectives of the online MSc Telecommunications with Internet of Things are:

- To provide comprehensive knowledge of the different areas of Telecommunications and IoT.
- To provide state-of-the-art information and relevant use-cases.
- To prepare students to adapt to the challenges of the fast evolving field of Telecommunications.
- To equip students with the basic skills and knowledge required to become innovators and entrepreneurs.

2. Learning Outcomes

After completion of this programme, graduates should be able to:

- Evaluate problem solving strategies and develop solutions for Telecommunications systems
- Integrate and apply knowledge acquired from various sources to propose design concepts.
- Demonstrate competence to engage in independent learning through well-developed learning skills.
- Demonstrate critical awareness of the need to act professionally and ethically and to exercise judgment and take responsibility within own limits of competence.

3. Teaching and Learning Methods

Modules shall be taught over 10 weeks and shall include 3 hours of contact per week, involve 6 hours of self-study per week and 9 hours of other learning activities per week for each semester. The 30 hours of contact shall include class hours and tutorials.

Details of the teaching and learning methods:

- Teaching and learning environment, which allows participants to view and discuss presentations or videos and engage with learning resources.
- Case studies
- Self-evaluation exercises
- Guest lectures
- Experiential Learning

4. Entry Requirements

- **General**

A 2nd class honours degree or a GPA not less than 2.5 out of 4 or equivalent from a recognised higher education institution, OR alternative qualifications acceptable to the University of Mauritius. International students will be required to pass IELTS exams with an overall score of 6.5 with a minimum score of 5.5 in each component, OR have an equivalent English language proficiency qualification by recognised exam boards acceptable to the University of Mauritius.

- **Programme (Specific)**

At least a Second Class Honours Degree in Electrical Engineering, Telecommunications Engineering, Computer Science and other related areas, or an equivalent qualification acceptable to Senate;

Preference will be given to candidates with relevant work experience.

- **Special Cases**

The following may be deemed to have satisfied the General and Programme requirements for admission:

- (i) Applicants who do not satisfy any of the above requirements but who submit satisfactory evidence of having passed examinations which are deemed by the Senate to be equivalent to any of those listed;
- (ii) Applicants who do not satisfy any of the above requirements but who in the opinion of the Senate submit satisfactory evidence of the capacity and attainments requisite to enable them to pursue the programme proposed;
- (iii) Applicants who hold a full practising professional qualification obtained by examination.

5. Programme Duration

	Normal	Maximum
Master's Degree:	4 Semesters	8 Semesters
Postgraduate Diploma:	4 Semesters	8 Semesters

6. Minimum LCCS Credits Required:

Minimum No. of credits per year: 12

Maximum No. of credits per year: 48

For Degree Award

Master's Degree: 72 LCCS credits (including dissertation)

Postgraduate Diploma: 48 LCCS credits (without dissertation)

For each Academic Year

Year 1: 36 LCCS credits

Year 2: 36 LCCS credits

7. Assessment and Deadlines

Students are required to register for modules, which they intend to follow in a given semester on date(s) specified by the Faculty.

Each module will carry 100 marks and will be assessed through continuous assessments carrying 100% of the total marks. Continuous assessment will comprise assignment(s) and online tests.

An online viva-voce will be carried out for the Dissertation/Project.

For a student to pass a module, at least 50% of the total marks would be required without minimum threshold within the individual continuous assessments.

If CPA < 40 at the end of 2 consecutive semesters, the registration of the student will be terminated.

All modules carry equal weighting.

The MSc project carries 18 LCCS credits.

Students are required to submit at the end of Semester I a Plan of Study for their whole Programme of Studies, indicating the list of elective modules and in which semester each of them will be taken.

The University reserves the right not to offer a given elective module if the critical number of students is not attained and/or for reasons of resource constraints.

The Faculty reserves the right to change the order in which the modules are offered.
The programme is offered through virtual classroom mode.

Submission deadlines for Dissertation: As per UoM Regulations.

8. List of Modules

Code	Module Name	L*/T* hrs	Self-study hrs	Other learning hrs	LCCS Credits
ELEC 5105	Principles of Internet of Things I	30	60	90	6
ELEC 5106	Emerging Networking Technologies	30	60	90	6
ELEC 5205	Applied Statistics and Data Analytics	30	60	90	6
ELEC 5107	Communication Technologies	30	60	90	6
ELEC 5207	Principles of Internet of Things II	30	60	90	6
ELEC 5206	IoT Security	30	60	90	6
ELEC 6105	Advanced Multimedia Communications	30	60	90	6
ELEC 6000	Project	15	525	0	18
<u>ELECTIVES</u>					
ELEC 6205	Engineering Design and Methods	30	60	90	6
ENGG 6101	Principles of Project Management	30	60	90	6
ELEC 6208	Engineering Innovation and Entrepreneurship	30	60	90	6

NOTE:

- Learning hours are the total number of hours each student is expected to spend on the module.
- For each module excluding the project, the total number of contact hours for the lecture and tutorial sessions will be 30 hours. The number of self-study hours will be 60 hours. The remaining 90 hours will be devoted to other learning activities.
- For the project, there shall be about 15 contact hours and the remaining 525 hours will be self-study hours.

4. Students have to complete ALL core taught modules, the project module and ANY two (2) electives.
5. The University may not offer any of the elective modules if a critical mass of students is not attained and may shift modules from semester 1 to semester 2 or vice versa, depending on availability of resources.

9. **Programme Plan**

YEAR 1 Semester 1 CORE			
Code	Module Name	L*/T* hrs (per week)	LCCS Credits
ELEC 5105	Principles of Internet of Things I	2+1	6
ELEC 5106	Emerging Networking Technologies	2+1	6
ELEC 5107	Communication Technologies	2+1	6
Sub-Total			18
Semester 2 CORE			
Code	Module Name	L*/T* hrs (per week)	LCCS Credits
ELEC 5205	Applied Statistics and Data Analytics	2+1	6
ELEC 5206	IoT Security	2+1	6
ELEC 5207	Principles of Internet of Things II	2+1	6
Sub-Total			18
Total for Year 1			36
YEAR 2 Semester 1 CORE			
Code	Module Name	L*/T* hrs (per week)	LCCS Credits
ELEC 6000	Project	2+1	18
ELEC 6105	Advanced Multimedia Communications	2+1	6
Sub Total			24
YEAR 2 Semester 2 CHOOSE ANY TWO ELECTIVES of six (6) LCCS credits from			
Code	Module Name	L*/T* hrs (per week)	LCCS Credits
ELEC 6205	Engineering Design and Methods	2+1	6
ENGG 6101	Principles of Project Management	2+1	6
ELEC 6208	Engineering Innovation and Entrepreneurship	2+1	6
Sub-Total			12
Total for Year 2			36
Grand Total			72