Programme Specification

MEng Electronic Engineering

1. Programme title	MEng Electronic Engineering
2. Awarding institution	Middlesex University
3. Teaching institution	Middlesex University
4. Details of accreditation by professional/statutory/regulatory body	
5. Final qualification	Masters of Engineering
6. Year of validation **Year of amendment**	
7. Language of study	English
8. Mode of study	FT/ TKSW

9. Criteria for admission to the programme

Admission to the MEng (Hons) Electronic Engineering programme will require 280 UCAS tariff points normally including a minimum of 200 points from at least two science or numerate based subjects.

In addition Middlesex University general entry requirements apply as outlined in the university's regulation B2. Applicants whose first language is not English are required to achieve 6.0 in IELTS overall (with a minimum of
5.5 in each component) or an equivalent qualification recognised by Middlesex University. The equivalence of qualifications from outside UK will be determined according to NARIC guidelines.

We welcome applicants with a wide variety of educational experience including: A/AS levels, AVCE, BTEC National Diploma, Access Certificates, Scottish Highers, Irish Leaving Certificates (Higher Level), International Baccalaureate and a large number of equivalent home and overseas qualifications. Application from mature applicants with suitable life skills and experiences are also welcomed

10. Aims of the programme

This programme aims to produce professional and competent Electronic Engineers capable of playing an active role in formulating, meeting the challenges and opportunities arising in contemporary industrial and commercial practice.

Students will develop core electronics design capabilities, which are developed

and enhanced progressively through the course.

This programme explores the principles underlying the design and implementation of up-to-date analogue and digital systems needed in a variety of problem domains and provides the opportunity of realising such systems.

11. Programme outcomes

A. Knowledge and understanding	Teaching/learning methods
On completion of this programme the successful student will have : Comprehensive knowledge and understanding of Scientific principles and related engineering disciplines to enable the modelling and analyse complex engineering systems, processes and products and collect and analyse data and draw conclusions for the innovative solution of unfamiliar or novel engineering design problems using future developments and technologies Extensive knowledge and understanding of concepts, principles and theories of the design process and an appreciation of their limitations Knowledge and understanding of the application of a systems approach to solving complex engineering problems within the context of Electronic Engineering. Comprehensive knowledge and understanding of analytical techniques and engineering science relevant to Design Engineering within the context of Electronic Engineering. Detailed understanding of the issues involved in systems engineering and the range of approaches used in industry to manage the resulting complexity. Extensive knowledge and understanding of developing new technologies and applications relevant to Electronic Engineering. Extensive knowledge and understanding of current commercial, management and business practices and their limitations relating to engineering and to new product Knowledge and understanding of professional and ethical	*Students gain knowledge and understanding takes place through a combination of lectures, seminars, exercise classes, design build and test projects, forensic deconstruction, CAE and IT workshops, laboratory classes, industrial visits, group and individual project work, experimenting, constructing, analysing,* assessing and discussing and self-study. **Assessment methods** *Students' knowledge and understanding is assessed by technical reports, coursework assignments, essays, presentations, and practical in-class tests*

responsibilities of engineers. Comprehensive knowledge and understanding of the role and limitations of common ICT tools and ability to specify requirements for computer-based engineering design tools to solve unfamiliar problems. Extensive knowledge and understanding of a wide range of engineering materials and Components.	
B. Cognitive (thinking) skills On completion of this programme the successful student will be able to: Critically analyse and solve engineering problems using appropriate techniques and through critical thinking. Model and critically analyse relevant engineering systems. Fully engage with the design process. Select, justify and apply appropriate computer based methods for solving design engineering problems. Fully evaluate external influences on the design process. Design creative and innovative systems, components or processe	**Teaching/learning methods** Students learn cognitive skills through design projects, problem solving activities and through report writing. **Assessment methods** *Students' cognitive skills are assessed by the products and systems design, with particular reference to their engagement with the design process and by coursework comprised of reports and essays.*
C. Practical skills On completion of the programme the successful student will be able to: 8. Plan, manage and undertake a design project, team or individual, including establishing user needs and technical specification, concept generation and evaluation, embodiment and detail design work, verification and review. 9. Critically evaluate technical risk with an awareness of the limitations of possible solutions. Use relevant laboratory and test	**Teaching/learning methods** Students learn practical skills through design projects, specific skills inputs and set exercises. **Assessment methods** Students' practical skills are assessed by individual and group projects, lab reports, coursework assignments and practical tests.

equipment. 11. Create CAD models and make physical models and prototypes. 12. Interface different technologies to develop integrated systems. 13. Apply engineering design techniques, taking into account of a selection of commercial and industrial constraints. 14. Effectively apply understanding of *concepts from a range of fields including those outside engineering to engineering design projects.* .	
D. Graduate skills On completion of this programme the successful student will be able to:	**Teaching/learning methods** **Assessment methods** .

12. Programme structure (levels, modules, credits and progression requirements)
12. 1 Overall structure of the programme

12.2 Levels and modules		
Level 4 (1)		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS

Students must take all of the following:		
Level 5 (2)		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
Students must take all of the following:		.
Level 6 (3)		
COMPULSORY	OPTIONAL	PROGRESSION REQUIREMENTS
Students must take all of the following:		

12.3 Non-compensatable modules (note statement in 12.2 regarding FHEQ levels)	
Module level	**Module code**

13. Curriculum map
See attached.

14. Information about assessment regulations

15. Placement opportunities, requirements and support (if applicable)

16. Future careers (if applicable)

17. Particular support for learning (if applicable)

18. JACS code (or other relevant coding system)	
19. Relevant QAA subject benchmark group(s)	

20. Reference points

21. Other information

Appendix 2: Curriculum Map