1. **Programme Title(s):**

    MSc/PGDip*/PGCert* in Advanced Electrical and Electronic Engineering

    * Exit awards only

    [HECOS Code](#)

HECOS CODE	%
100163	100

2. **Awarding body or institution:**

    University of Leicester

3. **a) Mode of study**

    Full time or part-time

    b) Type of study

    Campus-based

4. **Registration periods:**

    The normal period of registration is 1 year full-time, and 2 years for part-time students.
    The maximum period of registration is 2 years full-time, and 4 years for part-time students.

5. **Typical entry requirements:**

    Candidates should have at least a good second-class honours degree in a relevant subject from a British University or its equivalent; or a qualification recognised by the University as equivalent. Candidates whose first language is not English will be required to provide evidence of appropriate language skills.

6. **Accreditation of Prior Learning:**

    No accreditation of Prior Learning is normally considered.

7. **Programme aims:**

    The course provides a coherent selection of electrical and electronic engineering subjects to advanced level. Module combinations include communications and signal processing through control engineering to electrical machines and drives. The course is ideal for the engineer who wishes to follow a career in the design and implementation of electrical and electronic circuits within the wider engineering environment**.**

8. **Reference points used to inform the programme specification:**

    - QAA Benchmarking Statement
    - Framework for Higher Education Qualifications (FHEQ)

- UK Quality Code for Higher Education
- Engineering Accreditation Board (EAB) Masters Degree other than Integrated Masters, and EngD Learning Outcomes (AHEP 3rd Edition)
- UK-SPEC (UK Standard for Professional Engineering Competence)
- Engineering Council Compensation and Condonement requirements November 2018.
- [University Learning Strategy](#)
- [University Assessment Strategy](#)
- University of Leicester Periodic Developmental Review Report
- External Examiners' reports (annual)
- United Nations Education for Sustainable Development Goals
- Student Destinations Data

9. Programme Outcomes:

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
(a) Subject and Professional skills		
Knowledge		
Core knowledge of Electrical and Electronic Engineering, and closely related subjects such as Communications, Signal Processing and Control	Lectures, Specified reading, Laboratory classes, Design exercises, Tutorials	Module examinations, Laboratory, design exercise and literature review reports, oral presentations, tutorial performance
Concepts		
A variety of concepts in Electrical and Electronic Engineering and related subjects will be presented at an advanced level	Lectures, Practical classes, Tutorials	Module examinations, Laboratory, design exercise and literature review reports, oral presentations, tutorial
Techniques		
Practical demonstration of experimental methods, Competent use of a variety of engineering design tools.	Laboratory classes, Individual Project and module design exercise supervision, Practical demonstrations, Lectures	Laboratory and design exercise reports, module design exercise assessment, Individual Project progress and report, Module examinations
Critical analysis		
Critical appraisal of results. Critical review of literature	Laboratory, design exercise and project supervision	Laboratory, module design exercise and literature review reports, Project progress and report
Presentation		
Presentation of scientific results, Participation in scientific discussion	Tutorials, Module seminars, Laboratory classes, module design exercise supervision, Project supervision	Module presentations, Laboratory, module design exercise and Individual project report
Appraisal of evidence		

Experimental methods, Project design	Lectures, Laboratory classes, Project supervision	Written examinations, laboratory and design exercise reports, Project reports
(b) Transferable skills		
Research skills		
Literature review, Experimental design, Laboratory skills, Data analysis	Tutorials, lectures, Laboratory classes, module design exercise work, Project supervision meetings	Module design exercise reports and oral presentations, Course work, Individual project report
Communication skills		
Report writing, Scientific Communication	Project supervision meetings, laboratory and design exercise classes, Tutorials	Laboratory, design exercise and literature review reports, Individual project report
Data presentation		
IT, Analytical and graphical methods, CAD drawings, Statistics	Project supervision meetings, course work (laboratories, module design exercises)	Seminars, Course work reports, Project reports, Module examinations

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
Working relationships		
Project management, Organization skills, Time management, Working in groups	Project supervision meetings, Group working in modules (laboratories and design exercises)	Module design exercise assessment, Seminar performance
Managing learning		
Study skills, Information management, Developing specialization and interests, Project management	Tutorials and seminars, Library and IT skills sessions, project supervision meetings	Course work, module design exercise assessment, project assessment

10. **Special features:**
    The course is accredited by IET and InstMC subject to 5 yearly re-accreditation.

11. **Indications of programme quality:**
    The programme is subject to all normal departmental, college and institutional academic quality assurance processes.

12. **Scheme of Assessment**

    As defined in Senate Regulation 6: Regulations governing taught postgraduate programmes of study.

    The following additional award requirements for this programme have been approved:

    - This programme follows the Scheme of Assessment for Master degree programmes with a structure of 120 credits of taught modules and a project of 60 credits, with the variation (required by the Engineering Council for accreditation purposes) that a maximum of 15 credits may be failed at grade D (40-49%) and no credits failed at grade F (0-39%). Students who fail to meet this criterion will be considered for an interim award based on the taught component of the programme.

13. **Progression points**

    As defined in Senate Regulation 6: Regulations governing taught postgraduate programmes of study.

    In cases where a student has failed to meet a requirement to progress he or she will be required to withdraw from the course and a recommendation will be made to the Board of Examiners for an intermediate award where appropriate.

14. **Rules relating to re-sits or re-submissions:**

    As defined in Senate Regulation 6: Regulations governing taught postgraduate programmes of study.

    http://www2.le.ac.uk/offices/sas2/regulations/general-regulations-for-taught-programmes

15. **Additional information** [e.g. timetable for admissions]
    //

16. **External Examiners**

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports can be found [here](#).

Appendix 1: Programme structure (programme regulations)

	Credits	Dates
Semester 1		
Compulsory Modules:		
Induction	0	Week 1 / Semester 1
EG7010 Engineering Design Case Study	15	Semester 1
Select three modules from:		
EG7013 Modelling and Classification of Data	15	Semester 1
EG7015 Robust Control	15	Semester 1
EG7021 Radio Systems	15	Semester 1
EG7014 High Reliability Embedded Systems	15	Semester 1
EG7034 Advanced Electrical Machines	15	Semester 1
EG7412 Engineering and Spacecraft Systems	15	Semester 1
Semester 2		
Select four modules from:		
EG7016 Design of Discrete Systems	15	Semester 2
EG7017 Real-Time Signal Processing	15	Semester 2
EG7018 Embedded Systems for Condition Monitoring and Control	15	Semester 2
EG7022 Digital Communications	15	Semester 2
EG7023 Radio Communications	15	Semester 2
EG7035 Advanced Electronically Controlled Drives	15	Semester 2
EG7040 Nonlinear Control	15	Semester 2
EG7020 Individual Project	60	Semester 2 / Summer

Appendix 2: Module Specifications

See module specification database http://www.le.ac.uk/sas/courses/documentation