FACULTY OF ENGINEERING

DEPARTMENT OF DESIGN, MANUFACTURING AND ENGINEERING MANAGEMENT

DESIGN ENGINEERING

Master of Science in Design Engineering
Postgraduate Diploma in Design Engineering
Postgraduate Certificate in Design Engineering

Master of Science in Design Engineering with Sustainability
Postgraduate Diploma in Design Engineering with Sustainability
Postgraduate Certificate in Design Engineering with Sustainability

Master of Science in Design Engineering with Advanced Product Development
Postgraduate Diploma in Design Engineering with Advanced Product Development
Postgraduate Certificate in Design Engineering with Advanced Product Development

These regulations are to be read in conjunction with General Academic Regulations - Postgraduate Taught Degree Programme Level.

Admission

1. Notwithstanding the General Academic Regulations - Postgraduate Taught Degree Programme Level, successful applicants shall possess:

    i. a first or second class Honours degree in an Engineering, Design, Product Development, Science or Technology subject; or
    ii. a qualification deemed by the Programme Leader acting on behalf of the Senate to be equivalent to i. above.

2. In all cases, applicants whose first language is not English, shall be required to demonstrate an appropriate level of English.

Duration of Study

3. See General Academic Regulations - Postgraduate Taught Degree Programme Level.

Mode of Study

4. The programmes are available by full-time or part-time study.

Curriculum

5. All students shall undertake an approved curriculum as follows:

    i. Postgraduate Certificate no fewer than 60 credits from the list of taught modules
    ii. Postgraduate Diploma no fewer than 120 credits from the list of taught modules
    iii. degree of MSc no fewer than 180 credits

6. Students will have the option to study:

    i. Design Engineering; or
    ii. Design Engineering with Sustainability; or
    iii. Design Engineering with Advanced Product Development

7. Students are required to take all compulsory modules relevant to their chosen specialisation.

Compulsory Modules (All Specialisations – Full-time and Part-time Students)

Module Code	Module Title	Level	Credits
DM503	Global Design	5	10
DM923	Product Modelling & Visualisation	5	10
DM931	Industry Group Project	5	40
DM943	Sustainable Product Design and Manufacturing	5	10
DMXXX	Digital Manufacturing and Smart Products	5	10
EFXXX	Design Methods and Management	5	10
Students for the degree of MSc only:			
DM932	Postgraduate Individual Project	5	60

Together with modules appropriate to the chosen specialisation:

Design Engineering (Full-time Students)

30 credits from:

Module Code	Module Title	Level	Credits
DMXXX	Management of Technology and Innovation	5	10
DM945	Systems Thinking and Modelling	5	10
DM954	Intelligent Sensing and Reasoning through Machine Learning	5	10
DM984	Human Centred Design	5	10
DM985	Remanufacturing	5	10
DM994	Systems Engineering Concepts	5	10
EF931	Project Management	5	10
with a maximum of 20 credits from the following:			
DM933	Engineering Risk Management	5	10
DM948	Advanced Materials & Production Technology	5	10
DM986	Mechatronic Systems Design Techniques	5	10

Design Engineering (Part-time Students)

30 credits from:

Module Code	Module Title	Level	Credits
DMXXX	Management of Technology and Innovation	5	10
OR			
DMXXX	Management of Technology and Innovation (online)	5	10
DM945	Systems Thinking and Modelling	5	10
OR			
DM808	Introduction to Systems Thinking, Modelling and Optimisation (online)	5	10
DM954	Intelligent Sensing and Reasoning through Machine Learning	5	10
DM984	Human Centred Design	5	10
DM985	Remanufacturing	5	10
DM994	Systems Engineering Concepts	5	10
EF931	Project Management	5	10
OR			
DM811	Project Management (online)	5	10
with a maximum of 20 credits from the following:			
DM933	Engineering Risk Management	5	10
OR			
DM805	Engineering Risk Management (online)	5	10
DM948	Advanced Materials & Production Technology	5	10
DM986	Mechatronic Systems Design Techniques	5	10

Design Engineering with Sustainability (Full-time Students)

30 credits from:

Module Code	Module Title	Level	Credits
AB975	Sustainability	5	10
DM945	Systems Thinking and Modelling	5	10
DM985	Remanufacturing	5	10

Design Engineering with Sustainability (Part-time Students)

30 credits from:

Module Code	Module Title	Level	Credits
AB975	Sustainability	5	10
DM945	Systems Thinking and Modelling	5	10
OR			
DM808	Introduction to Systems Thinking, Modelling and Optimisation (online)	5	10
DM985	Remanufacturing	5	10

Design Engineering with Advanced Product Development (Full-time Students)

30 credits from:

Module Code	Module Title	Level	Credits
DM986	Mechatronic Systems Design Techniques	5	10
DM933	Engineering Risk Management	5	10
DM948	Advanced Materials & Production Technology	5	10

Design Engineering with Advanced Product Development (Part-time Students)

30 credits from:

Module Code	Module Title	Level	Credits
DM986	Mechatronic Systems Design Techniques	5	10
DM933	Engineering Risk Management	5	10
OR			
DM805	Engineering Risk Management (online)	5	10
DM948	Advanced Materials & Production Technology	5	10

Full-time students: permitted to select up to 20 credits of online-delivery modules (applicable to Optional modules ONLY, Compulsory modules must be undertaken on campus.)

Part-time students: permitted to select up to 30 credits of online-delivery modules (applicable to Compulsory and/or Optional modules.)

Examination, Progress and Final Assessment

8. See General Academic Regulations - Postgraduate Taught Degree Programme Level.

9. The final award will be based on performance in the examinations, coursework, and the Individual Project where undertaken.

Award

10. **Degree of MSc:** In order to qualify for the award of the degree of MSc in Design Engineering, or Design Engineering with Sustainability, or Design Engineering with Advanced Product Development, a candidate must have performed to the satisfaction of the Board of Examiners and must have accumulated no fewer than 180 credits, of which 60 must have been awarded in respect of the project DM932, in addition to all the compulsory modules and the relevant specialisation modules.

11. **Postgraduate Diploma:** In order to qualify for the award of the Postgraduate Diploma in Design Engineering or Design Engineering with Sustainability or Design Engineering with Advanced Product Development a candidate must have accumulated no fewer than 120 credits, including all the compulsory modules and all the specialist modules from the chosen specialisation.

12. **Postgraduate Certificate in Design Engineering:** In order to qualify for the award of the Postgraduate Certificate in Design Engineering a candidate must have accumulated no fewer than 60 credits from the taught modules of the programme.

13. **Postgraduate Certificate in Design Engineering with Sustainability or Design Engineering with Advanced Product Development:** In order to qualify for the award of the Postgraduate Certificate in Design Engineering with Sustainability or Design Engineering with Advanced Product Development a candidate must have accumulated no fewer than 60 credits, with at least 10 credits from the chosen specialisation.