General Regulations for Higher Degrees in the Faculty of Engineering and Regulations for Doctoral Training Centres in the Faculty

The content of our courses is reviewed annually to make sure it is up-to-date and relevant. Individual modules are occasionally updated or withdrawn. This is in response to discoveries through our world-leading research; funding changes; professional accreditation requirements; student or employer feedback; outcomes of reviews; and variations in staff or student numbers. In the event of any change the University will consult and inform students in good time and will take reasonable steps to minimise disruption.

GENERAL REGULATIONS FOR HIGHER DEGREES IN THE FACULTY OF ENGINEERING AND REGULATIONS FOR DOCTORAL TRAINING CENTRES IN THE FACULTY

1. The programmes of study within the Faculty shall, subject to any provision in the Regulations for particular programmes of study, extend over:

   (a) one year for both a Master’s Degree and a Postgraduate Diploma for a full-time student, who will complete all components of the programme within the minimum period of study; or

   (b) not less than three consecutive years for a part-time student for a Master’s Degree, who will complete all components of the programme within the three year period; or

   (c) not less than two consecutive years for a part-time student for a Postgraduate Diploma, who will complete all components of the programme within the two year period.

REGULATIONS FOR DOCTORAL TRAINING CENTRES IN THE FACULTY OF ENGINEERING

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COMR191 SPEECH AND LANGUAGE TECHNOLOGIES (PhD with Integrated PGDip) (Full-Time) (CDT)

For students whose initial registration is in 2019/20.

1. In Year One a student will take

   - COM61003 F7 Introduction to Responsible SLT Leadership 15 credits
   - COM61004 F7 Introduction to Collaborative Research Practice for SLT 15 credits

   A student will take 45 credits from the following

   - COM6012 F7 Scalable Machine Learning 15 credits
   - COM6115 F7 Text Processing 15 credits
   - COM6502 F7 Speech Processing 15 credits
   - COM6509 F7 Machine Learning and Adaptive Intelligence 15 credits
   - COM6511 F7 Speech Technology 15 credits
   - COM6513 F7 Natural Language Processing 15 credits

   One or more optional modules may be substituted for alternative modules at the discretion of the CDT Director.

2. In Year Two a student will take

   - COM61005 F7 SLT Research and Leadership Practice 1: Scientific Foundation 15 credits

3. In Year Three a student will take

   - COM61006 F7 SLT Research and Leadership Practice 2: Core Research 15 credits

4. In Year Four a student will take

   - COM61007 F7 SLT Research and Leadership Practice 3: Dissemination and Impact 15 credits
5. In Years One to Four a student will also pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations, with the following exceptions:
   a) Confirmation Review, a first attempt of which would normally take place between months 15-18 from a student’s initial date of registration with the CDT. The final decision regarding whether a student may be permitted to pass the Confirmation Review must be taken within 24 months of the student’s initial registration for full-time students; and
   b) minimum period of registration, which in this case will be 3 years.

6. In order to proceed to Year Two a student must:
   a) pass sixty credits in respect of units listed at 1 above; and
   b) adhere to all standard Sheffield PGR progression rules, as per the Regulations for Higher Degrees by Research.

7. In order to proceed to Year Three a student must:
   a) pass COM6962: SLT Research and Leadership Practice 1: Scientific Foundation; and
   b) pass Confirmation Review and adhere to all other standard Sheffield PGR progression rules, as per the Regulations for Higher Degrees by Research.

8. In order to proceed to Year Four a student must:
   a) pass COM6963 SLT Research and Leadership Practice 2: Core Research;
   b) adhere to all standard Sheffield PGR progression rules, as per the Regulations for Higher Degrees by Research.

9. A student who has been awarded sixty credits in respect of units listed at 1 to 4 above and is ineligible for a research award, will be eligible for the award of PGCert in Speech and Language Technologies Leadership (COMT92).

10. A student who has been awarded one hundred and twenty credits in respect of units listed at 1(a) and 5 above and is ineligible for a research award, will be awarded the Postgraduate Diploma in Professional Skills (DTET10).

DTER03 E-FUTURES (PhD) (Full-Time)
DTET10 PROFESSIONAL SKILLS (PGDip) (Part-Time)

1. In Year One a student will take
   (a) FCE6000 F7 Carbon Challenge 5
       FCE6001 F7 Summer School 5
       FCE6003 F7 Introduction to Energy and Professional Skills 60
       FCE610 F7 Personal Effectiveness Skills 10
   (b) FCE6004 F7 Mini Project 1 30
       FCE6005 F7 Mini Project 2 30
       FCE6006 F7 Mini Project 3 30

2. In order to proceed to Year Two a student must pass not less than one hundred and sixty credits in respect of units listed at 1(a) and (b) above.

3. A student who has been awarded one hundred and twenty credits in respect of units listed at 1(a) (above) and does not proceed to Year Two will be eligible for the award of Postgraduate Diploma in E-futures (DTET01).

4. In Years Two to Four a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations.

5. In Years Two to Four a candidate shall take
   FCE6007 F7 Skills for Industry 15
   FCE6009 F7 Skills in Action 10
   FCE607 F7 Career Skills 5
   FCE609 F7 Public Engagement Project 10

6. A student will successfully complete the Doctoral Training Centre’s upgrading procedures before progressing to the third year of study.

7. A student who has been awarded one hundred and twenty credits in respect of 1(a) and 5 above will be awarded the Postgraduate Diploma in Professional Skills (DTET10).
MATR50 ADVANCED METALLIC SYSTEMS (Full-Time) (PhD) (DTC)
MATR56 ADVANCED METALLIC SYSTEMS (Full-Time) (EngD) (DTC)

(Joint programme with The University of Manchester)

For students whose registration was in the academic year 2014-15, 2015-16, 2016-17 or 2017-18.

1. In Year One a PhD candidate shall take units listed in 1(a) and (b) below. In Year One an EngD candidate shall take units listed in 1(a) and either (b) or (c) below.

   (a) MAT6292 F7 Structure, Properties and Modelling of Metallic Materials 15
       MAT6511 F7 Phase Transformations in Materials Processing 15
       MATS64571 F7 High Performance Alloys 15
       MATS64601 F7 Materials Performance – Life Cycle Design 15
       MAT6294 F7 Transformative Technologies 10
   
   (b) MAT6278 F7 Advanced Metals Manufacturing 20
       MAT6299 F7 Mini Research Project and Experimental Skills 30
   
   (c) MAT6289 F7 Extended Mini Research Project and Experimental Skills 50

*MATS codes denote University of Manchester units

2. In order to proceed to Year Two a PhD candidate must pass one hundred and twenty credits in respect of units listed at 1(a) and (b) above. An EngD candidate must pass one hundred and twenty credits in respect of units listed at 1(a) and either (b) or (c) above.

3. A candidate who has been awarded one hundred and twenty credits as described at 2 above and does not proceed to Year Two: (i) shall be eligible for the award of Postgraduate Diploma in Advanced Metallic Systems (MATT104) or (ii) may become instead a candidate for the award of MSc Advanced Metallic Systems (MATT121) and in addition to 1(a) above shall take EITHER 4(a) or 4(b) below:

   a) MAT6278 F7 Advanced Metals Manufacturing 20
      MAT6499 F7 Research Project 90
   
   b) MAT6599 F7 Research Project 110

4. A candidate who has been awarded sixty credits in respect of 1(a) above and does not proceed to Year 2 shall be eligible for the award of Postgraduate Certificate in Advanced Metallic Systems (MATT123).

5. In Years Two to Four a candidate shall pursue a programme of research in accordance with the General Regulations for Higher Degrees and shall present a thesis in accordance with those Regulations.

6. In Years One to Four a candidate shall take

   a) the Postgraduate Diploma in Personal and Professional Skills (DTMT10).
   
   b) Units selected from the Advanced Metallic Systems CDT Handbook to the value of a minimum of fifteen credits or an equivalent activity to be approved by the Course Director.

MATR50 ADVANCED METALLIC SYSTEMS (Full-Time) (PhD) (DTC)
MATR56 ADVANCED METALLIC SYSTEMS (Full-Time) (EngD) (DTC)

(Joint programme with The University of Manchester)

For students whose registration was in the academic year 2018-19.

1. In Year One all PhD or EngD candidates shall take the units listed in 1(a).

   In Year One all PhD or EngD candidates with a non-Materials discipline Degree shall take the units listed in 1(b).

   In Year One a PhD or an EngD candidate with a Materials Degree shall take the units listed in 1(c) below.

   In Year One a PhD or an EngD candidate with a Materials Degree shall take one of the units listed in 1(d) below.

   Alternative courses to the same credit value may be substituted at the discretion of the CDT Director.

   (a) MAT6294 F7 Transformative Technologies 15
       MAT6279 F7 Innovative Manufacturing 10
       MAT6299 F7 Mini Research Project and Experimental Skills 30
   
   (b) MAT6292 F7 Structure, Properties and Modelling of Metallic Materials 15
       MAT6511 F7 Phase Transformations in Materials Processing 15
       MATS64402 F7 Advanced Metals Processing 15
       MATS64502 F7 Superalloys and High Performance Materials 15
       MAT333 F7 Metals 10
   
   (c) AER4447 F7 Industrial Training Programme 20
       MEC6014 F7 Introduction to MATLAB 5
       MAT6292a F7 Modelling, Heat Transformation and Data Analysis 15
       MATS64662 F7 Research Software Engineering Practice 15
   
   (d) MATS43102 F7 Advanced Metals Processing 15
       MATS43202 F7 Superalloys and High Performance Materials 15

*MATS codes denote University of Manchester units

2. In order to proceed to Year Two a student will satisfy the requirements of the CDT Academic Progression Committee.

3. A student will successfully complete the Doctoral Training Centre’s upgrading procedures before being upgraded to PhD or EngD status.

4. A candidate who has been awarded one hundred and twenty credits as described at 1 above and does not proceed to Year Two: (i) shall be eligible for the award of Postgraduate Diploma in Advanced Metallic Systems (MATT104) or (ii) may become instead a candidate for the award of MSc Advanced Metallic Systems (MATT121) and in addition to 1(a) above shall take:

   a) MAT6499a F7 Research Project 60
   
   b) A candidate who has been awarded sixty credits in respect of 1(a) and does not proceed to Year Two shall be eligible for the award of Postgraduate Certificate in Advanced Metallic Systems (MATT123).

5. In Years Two to Four a candidate shall pursue a programme of research in accordance with the General Regulations for Higher Degrees and shall present a thesis in accordance with those Regulations.

6. In Years One to Four a candidate shall take the Postgraduate Diploma in Personal and Professional Skills (DTMT10).
MATR143 GENERATING RENEWABLE ECONOMIC ENERGY FROM NUCLEAR (GREEN) (PhD with Integrated PGDip in Professional Skills) (Full-Time) (CDT)

(Joint programme with the University of Manchester.)

For students whose initial registration is in 2019/20.

1. In Year One a student will take
   (a) MAT6801 F7 Introduction to the Chemistry and Physics of the Nuclear Fuel Cycle 15
   MAT6802 F7 Materials Science in the Nuclear Fuel Cycle 15
   MAT6804 F7 Environmental Radiochemistry and the Science of Radioactive Waste Disposal 15
   (b) MAT6803 F7 Site Visits, Winter School and Skills Training 15
   MAT61006 F7 Research Skills 1: Foundation Independent Research and Professional Skills 45
   MAT61007 F7 Research Skills 2: Core Independent Research and Professional Skills 45
   FCE6100 F7 Professional Behaviour and Ethical Conduct 0

2. In order to proceed to Year Two a student must pass not less than one hundred and thirty-five credits in respect of units listed at 1 above.

3. A student who does not proceed to Year Two of the PhD may instead be permitted to become a student for the award of MSc Nuclear Science and Engineering (MATT152). In addition they will take:
   MAT6800 F7 Extended Research Project 30

4. A student who does not proceed to Year Two but has been awarded one hundred and twenty credits in respect of units listed at 1 above, including forty-five credits from 1a, will be eligible for the award of PGDip Nuclear Science and Engineering (MATT153). A student who has been awarded one hundred and twenty credits in respect of units listed at 1 above but with fewer than forty-five credits from 1a will be eligible for the award of PGDip Professional Skills (MATT154).

5. In Years Two to Four a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations, with the following exceptions:
   a) Confirmation Review, a first attempt of which would normally take place between months 21-24 from a student’s initial date of registration with the CDT. The final decision regarding whether a student may be permitted to pass the Confirmation Review must be taken within 30 months of the student’s initial registration for full-time students; and
   b) minimum period of registration, which in this case will be 3 years.

6. In order to proceed to Year Three a student must:
   a) attend and engage with CDT-specific training
   b) Undertake a first attempt of Confirmation Review and adhere to all other standard Sheffield PGR progression rules, as per the Regulations for Higher Degrees by Research.

7. In order to proceed to Year Four a student must:
   a) attend and engage with CDT-specific training;
   b) Pass Confirmation Review and adhere to all other standard Sheffield PGR progression rules, as per the Regulations for Higher Degrees by Research.

8. A student who is not eligible for the award of PhD, and who has been awarded one hundred and twenty credits in respect of units listed at 1 above may submit for the award of MPhil with Integrated PGDip in Professional Skills (MATR144).

MATR145 ADVANCED METALLIC SYSTEMS (PhD with Integrated PGDip in Personal and Professional Skills) (Full-Time) (CDT)

MATR146 ADVANCED METALLIC SYSTEMS (EngD with Integrated PGDip in Personal and Professional Skills) (Full-Time) (CDT)

(Joint programme with the University of Manchester, University College Dublin and Dublin City University.)

For students whose initial registration is in 2019/20.

MATS codes denote University of Manchester units
COMP codes denote University College Dublin units
MM codes denote Dublin City University units

1a. In Year One a student will take
   COMP47670 F7 Data Science in Python 5
   MAT61001 F7 Advanced Modelling Techniques Part 1 5
   MAT61002 F7 Structure and Mechanical Properties 10
   MAT61005 F7 Phase Transformation and Solidification 10

1b. MAT6299 F7 Mini Research Project 30
   MAT6294 F7 Transformative Technologies 10
   MAT61004 F7 The Modern Research Environment 10
   AER4447 F7 Industrial Training Programme 20

1c. 30 credits from the following
   MATS64402 F7 Advanced Metals Processing 15
   MATS64502 F7 High Performance Materials 15
MAT64662 F7 Research Software Engineering 15
MM601 F7 CFD with Open Foam 15
MM600 F7 LabVIEW Data Acquisition, Analysis and Control 15
MM555 F7 Manufacturing Process 15
MM602 F7 Additive Manufacturing 30

2. In Years Two to Four a student will take

FCE608 F7 Doctoral Writing Skills 10
MAT6297 F7 Public Engagement Project 10
FCE6011 F7 SME Consultancy Project 10
MAT6291 F7 Standards, Codes and Specifications 5
MAT6398 F7 Science and Engineering in the Media 5
FCE6009 F7 Skills in Action 10

Alternative courses to the same credit value may be substituted at the discretion of the CDT Director.

3. In order to proceed to Year Two all students must pass no less than one hundred and fifteen credits in respect of units 1 above, and to include MAT6299.

4. A student who has been awarded sixty credits in respect of units listed at 1 above and does not proceed to Year Two will be eligible for the award of PGCert in Advanced Metallic Systems (MATT150).

5. A student who has been awarded at least one hundred and twenty credits but less than one hundred and eighty credits in respect of units listed at 1 above and is ineligible for a research award, will be eligible for the award of PGDip in Advanced Metallic Systems (MATT149).

6. In Years Two to Four a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations, with the following exceptions:

a) Confirmation Review, a first attempt of which would normally take place between months 18-21 from a student’s initial date of registration with the CDT. The final decision regarding whether a student may be permitted to pass the Confirmation Review must be taken within 27 months of the student’s initial registration for full-time students; and

b) minimum period of registration, which in this case will be 3 years for Full Time students.

7. In order to proceed to Year Three a student must:

a) pass not less than twenty credits in respect of units listed at 2 above.

b) undertake a first attempt of Confirmation Review and adhere to all other standard Sheffield PGR progression rules, as per the Regulations for Higher Degrees by Research.

8. In order to proceed to Year Four a student must:

a) attend and engage with CDT-specific training;

b) pass Confirmation Review and adhere to all standard Sheffield PGR progression rules, as per the Regulations for Higher Degrees by Research.

9. A student who has been awarded one hundred and eighty credits in respect of units listed at 1 above, who exits the programme early and is ineligible to submit for a research award, will be eligible for the award of MSc in Advanced Metallic Systems (MATT148).

10. A Sheffield PhD student must be awarded one hundred and twenty credits in respect of units listed in 1b and 2 above to be eligible for the final award of PhD in Additive Manufacturing Process (MAT6150). A student who is awarded less than one hundred and twenty credits will be eligible for the final award of EngD Advanced Metallic Systems (MATT149).

11. A Sheffield EngD student must be awarded one hundred and twenty credits in respect of units listed in 1b and 2 above to be eligible for the final award of EngD with Integrated PGDip in Personal and Professional Skills (MATR146). A student who is awarded less than one hundred and twenty credits will be eligible for the final award of EngD Advanced Metallic Systems (MATT149).

12. A student who is not eligible for the award of PhD or EngD, and who has been awarded one hundred and twenty credits in respect of units listed at 1b and 2 above may submit for the award of MPhil with Integrated PGDip in Advanced Metallic Systems (MATT150).

DTNT03 NUCLEAR FISSION (PhD)
(Full-Time)

(Joint programme with the University of Manchester)

1. In Year One a student will take

MAT6801 F7 Introduction to the Chemistry and Physics of the Nuclear Fuel Cycle 15
MAT6802 F7 Materials Science in the Nuclear Fuel Cycle 15
MAT6803 F7 Site Visits, Winter School and Skills Training 15
MAT6804 F7 Environmental Radiochemistry and the Science of Radioactive Waste Disposal 15
MAT6805 F7 DTC Project Rotation 1 45
MAT6806 F7 DTC Project Rotation 2 45

In order to proceed to Year Two a student must pass not less than one hundred and thirty-five credits in respect of units listed at 1 above.

2. A student who has been awarded not less than one hundred and thirty-five credits in respect of units listed at 1 above and does not proceed to Year Two may become instead a student for the award of MSc(Res) Nuclear Fission (DTNT02) and in addition will take

MAT6800 F7 Extended Research Project 30

In order to proceed to Year Two a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations.

3. A student who has been awarded not less than one hundred and thirty-five credits in respect of units listed at 1 above and does not proceed to Year Two may become instead a student for the award of MSc(Res) Nuclear Fission (DTNT02) and in addition will take

MAT6800 F7 Extended Research Project 30

4. A student who has been awarded one hundred and twenty credits in respect of units listed at 1 above and does not proceed to Year Two will be eligible for the award of Postgraduate Diploma in Nuclear Fission (DTNT01).

5. In Years Two to Four a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations.

6. A student will not be permitted to complete either a Postgraduate Diploma in Professional Management and Leadership Skills or forty-five credits of the Doctoral Development Programme.
For students whose registration was in the academic year 2014-15

1. In Year One a student will take
   - CPE604 F7 An Introduction to Energy and the Environment 15
   - CPE610 F7 Energy Storage CDT Mini-Project 15
   - CPE612 F7 Applied Energy Storage 30
   - CPE650 F7 Research project (Sheffield) 60
   - FEEG6019 F7 Energy Storage Applications 30
   - PSY6081 F7 The Social Science of Energy Storage 15
   - SESG6041 F7 Introduction to Energy Technologies, Environment and Sustainability 15

2. Delivered during the second, third and fourth year
   - CPE613 F7 Skills in Action 15
   - CPE614 F7 Public Engagement 5
   - CPE615 F7 Researcher Development 30
   - FCE6007 F7 Skills for Industry 15
   - FCE610 F7 Personal Effectiveness Skills 10
   - MEC6314 F7 Innovation Management 10
   - MEC6414 F7 Technology Strategy and Business Planning 10
   - MEC6428 F7 Professional Responsibility of Engineers 10
   - PSY6081 F7 Social Science of Energy Storage 15

3. In order to proceed to Year Two a student must pass not less than one hundred and fifty credits in respect of units listed at 1 above.

4. A student who has been awarded one hundred and eighty credits in respect of units listed at 1 above will be eligible for the MSc in Energy Storage and its Applications (CPET35).

5. A student who has been awarded one hundred and twenty credits in respect of units listed at 1 above will be eligible for the Postgraduate Diploma in Energy Storage and its applications (CPET36).

6. In the event of failure in CPE650 Research project (Sheffield) at the first attempt any resubmission is subject to the approval of the Board of Examiners.

7. A student who has been awarded one hundred and twenty credits in respect of units listed at 1 above will be eligible for the MSc in Energy Storage and its Applications (CPET35).

8. A student who has been awarded sixty credits in respect of units listed at 1 above will be eligible for the Postgraduate Diploma in Energy Storage and its applications (CPET36).

9. In Years Two to Four a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations.

For students whose registration is in the academic year 2018-19

1. In Year One a student will take
   - CPE604 F7 Global Energy Systems 15
   - CPE610 F7 Energy Storage CDT Mini-Project 15
   - CPE612 F7 Fundamentals of Energy Storage 30
   - CPE650 F7 Energy Storage CDT Summer Research project (Sheffield) 60
   - FEEG6019 F7 Energy Storage Applications 30
   - PSY6018 F7 The Social Science of Energy Storage 15
   - SESG6041 F7 Introduction to Energy Technologies, Environment and Sustainability 15

   *SESG and FEEG codes denote University of Southampton units.

2. In Years Two to Four a student can take
   (a) CPE613 F7 Skills in Action 15
   - FCE610 F7 Personal Effectiveness Skills 10
   - FEEG6018 F7 Personal & Professional Skills 15
   - MEC6314 F7 Innovation Management 10
   - MEC6414 F7 Technology Strategy and Business Planning 10
   - MEC6428 F7 Professional Responsibility of Engineers 10

For students whose registration was in the academic year 2015-16, 2016-17 or 2017-18

1. In Year One a student will take
   - CPE604 F7 Global Energy Systems 15
   - CPE610 F7 Energy Storage CDT Mini-Project 15
   - CPE612 F7 Applied Energy Storage 30
   - CPE650 F7 Research project (Sheffield) 60
   - FEEG6018 F7 Professional and Research Skills 15
   - FEEG6019 F7 Energy Storage Applications 30
   - SESG6041 F7 Introduction to Energy Technologies, Environment and Sustainability 15

2. Delivered during the second, third and fourth year
   - CPE613 F7 Skills in Action 15
   - CPE614 F7 Public Engagement 5
   - CPE615 F7 Researcher Development 30
   - FCE6007 F7 Skills for Industry 15
   - FCE610 F7 Personal Effectiveness Skills 10
   - MEC6314 F7 Innovation Management 10
   - MEC6414 F7 Technology Strategy and Business Planning 10
   - MEC6428 F7 Professional Responsibility of Engineers 10
   - PSY6081 F7 Social Science of Energy Storage 15

3. In order to proceed to Year Two a student must pass not less than one hundred and fifty credits in respect of units listed at 1 above.

4. A student who has been awarded one hundred and eighty credits in respect of units listed at 1 above will be eligible for the MSc in Energy Storage and its Applications (CPET35).

5. A student who has been awarded one hundred and twenty credits in respect of units listed at 1 above will be eligible for the Postgraduate Diploma in Energy Storage and its applications (CPET36).

6. In the event of failure in CPE650 Research project (Sheffield) at the first attempt any resubmission is subject to the approval of the Board of Examiners.

7. A student who has been awarded one hundred and twenty credits in respect of units listed at 1 above will be eligible for the MSc in Energy Storage and its Applications (CPET35).

8. A student who has been awarded sixty credits in respect of units listed at 1 above will be eligible for the Postgraduate Diploma in Energy Storage and its applications (CPET36).

9. In Years Two to Four a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations.
A student can take either
CPE614  Public Engagement  5
or
CPE634  Public Engagement  15
(c) A student can take either
CPE635  CDT Researcher Development  15
or
CPE615  CDT Researcher Development  30
3. In order to proceed to Year Two a student must pass not less than one hundred and fifty credits in respect of units listed at 1 above.
4. A student who has been awarded one hundred and eighty credits in respect of units listed at 1 above will be eligible for the Postgraduate Diploma in Energy Storage and its applications (CPET35).
5. A student who has been awarded one hundred and twenty credits in respect of units listed at 1 above will be eligible for the Postgraduate Diploma in Personal and Professional Skills (CPER08).

FCE607  Career Skills  5
(b) A student can take either
CPE614  Public Engagement  5
or
CPE634  Public Engagement  15
7. In Years Two to Four a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees by Research, and will present a thesis in accordance with those Regulations.

MECR80 INDUSTRIAL DOCTORATE IN MACHINING SCIENCE (Full Time) (EngD)
ACSR80 INDUSTRIAL DOCTORATE IN MACHINING SCIENCE (Full Time) (EngD)
MATR80 INDUSTRIAL DOCTORATE IN MACHINING SCIENCE (Full Time) (EngD)
CPER97 INDUSTRIAL DOCTORATE IN MACHINING SCIENCE (Full Time) (EngD)
MECR97 MACHINING SCIENCE (Full Time) (PhD)
MECR91 MACHINING SCIENCE (Full Time) (PhD)

MECR09 MACHINING SCIENCE (Full Time) (PhD)

MECR07 INTEGRATED TRIBOLOGY (PhD) (Full-Time)

(Joint programme with the University of Leeds)
1. In Year One a student registered at The University of Sheffield will take
(a) MEC6907  F7  Tribology Masterclass  0
   MEC6908  F7  Professional Skills  30
   MEC6905  F7  Mini Project - Group  30
   MEC6906  F7  Mini Project – Individual  30
(b) plus twenty credits from (i)
   (i) MAT3430  F6  Materials for Biological Devices  10
   MEC6403  F7  Reciprocating Engines  10
   MEC6429  F7  Mechanical Engineering of Railways  10
   MEC6440  F7  Advanced Finite Element Modelling  10
   plus ten credits from (ii)
   (ii) MAT373  F6  Surface degradation and protection  10
   MAT6336  F7  Surfaces and Coatings  10
2. At (b) above, students may substitute other units with permission of the Programme Manager.
3. A student who has been awarded one hundred and twenty credits in respect of units listed at 1(a) and (b) above and who does not complete the requirements of the Degree of PhD will be eligible for the Postgraduate Diploma in Integrated Tribology (MEC).
4. Before proceeding to Year Two a student will complete MEC6908 Professional Skills.
5. In order to proceed to Year Two a student will satisfy the requirements of the CDT Academic Progression Committee.
6. A student will successfully complete the Doctoral Training Centre’s upgrading procedures before being upgraded to PhD status.
MECT07 DIPLOMA IN MACHINING SCIENCE (PG Dip) (Part-Time)

1. In Year One a student will take
   (a) FCE610 F7 Personal Effectiveness 10
     MEC6908 F7 IDC Personal and Professional Skills 20
     MGT6256 F7 Managing Complex Projects and Risk Management 20
   (b) units to the value of twenty credits from the following
     ACS329 F6 Robotics 10
     MAT6333 F7 Aerospace Metals 10
     MAT6444 F7 Advanced Materials Manufacturing 10
     MEC6405 F7 Experimental Stress Analysis 10
     MEC6411 F7 Tribology of Machine Elements 10
     MEC6415 F7 Condition Monitoring 10
     MEC6440 F7 Advanced Finite Element Modelling 10
     MEC6444 F7 Additive Manufacturing – Principles and Applications 1
     MEC6445 F7 Additive Manufacturing – Principles and Applications 2
     MEC6452 F7 Advanced Topics in Machining 10
   (c) MEC6901 F7 IDC Machining Science Mini-Project 1
     MEC6902 F7 IDC Machining Science Mini-Project 2
     MEC6903 F7 IDC Machining Science Mini-Project 3
     Other units may be substituted for those listed in 1(b) at the discretion of the Academic Director of the IDC.

2. In order to proceed to Year Two a student must pass one hundred and sixty credits in respect of units listed at 1(a), (b), and (c) above.

3. A student who has been awarded seventy credits in respect of units listed at 1(a), (b), and (c) above and does not proceed to Year Two, may instead become a student for the award of Postgraduate Diploma in Machining Science (MEC707 PG Dip) and in addition to 1(a), (b) and (c) above will take
   MEC6904 F7 IDC Machining Science Research Project 50

4. In Years Two to Four a student will pursue a programme of research in accordance with the General Regulations for Higher Degrees and will present a thesis in accordance with those Regulations.

5. In Years Two to Four a student will undertake further academic and professional skills related modules and activities appropriate to their studies, and also present at the AMRC Technical Fellows or IDC Student Conference.

6. A student will successfully complete the Industrial Doctorate Centre’s confirmation procedures before progressing to the third year of study.

MECR93 RESILIENT DECARBONISED FUEL ENERGY SYSTEMS (Full Time or Part Time) (EngD) (CDT)

MECR92 RESILIENT DECARBONISED FUEL ENERGY SYSTEMS (Full Time or Part Time) (PhD) (CDT)