



Name: Sammya Majumdar  
Award: Master of Science (Engineering)  
Field of study: Energy and Power Systems  
Classification: Pass With Distinction  
Award Date: 6th December 2021

The University of Liverpool is a member of the Russell Group, which represents the 24 leading UK universities committed to maintaining the very best research, an outstanding teaching and learning experience and unrivalled links with business and the public sector.

This Higher Education Achievement Report incorporates the model developed by the European Commission, Council of Europe and UNESCO/CEPES for the Diploma Supplement.

The purpose of the Supplement is to provide sufficient recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context and status of the studies that were pursued and successfully completed by the individual named on the original qualifications to which this Supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition. Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

The University of Liverpool only produces HEARs in a digital format. Only HEARs accessed via <https://verify.liverpool.ac.uk> can be considered valid and verified.

## INFORMATION IDENTIFYING THE HOLDER OF THE QUALIFICATION

1.1	Family name(s):	Majumdar
1.2	Given name(s):	Sammya
1.3	Date of birth (day/month/year):	14th May 1997
1.4	Student identification number or code:	201532513
	HESA reference number: *	2011265325139

\*HUSID (HESA Unique Student Identifier) is the unique national identifying number for students registered at a UK university. It is defined by HESA, the UK's Higher Education Statistics Agency.

## INFORMATION IDENTIFYING THE QUALIFICATION

2.1	Name of qualification and (if applicable) title conferred:	Master of Science (Engineering)  The power to award degrees is regulated by law in the UK.
2.2	Main field(s) of study for the qualification:	Energy and Power Systems
2.3	Name and status of awarding institution(s):	This degree is awarded by the University of Liverpool, a university established by Royal Charter and a recognised body for the award of degrees.

- 2.4 Name and status of institution(s) (if different from 2.3) administering studies:** As above
- 2.5 Language(s) of instruction/examination:** All teaching and assessment that leads to a University of Liverpool award is in English, except for programmes of study involving language studies, where some teaching and assessment is in the relevant language(s).

## INFORMATION ON THE LEVEL OF THE QUALIFICATION

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- 3.1 Level of qualification:** Postgraduate programme assigned to level 7 in the Framework for Higher Education Qualifications (see Section 8 for further details on the UK Higher Education System), and Bologna FQ-EHEA 2nd cycle degree compatible
- 3.2 Official length of programme:** One year
- 3.3 Access requirement(s):** Detailed information regarding admission to the programme is available in the University's Online Prospectus at <https://www.liverpool.ac.uk/study/postgraduate/courses/taught/>

## INFORMATION ON THE CONTENTS AND RESULTS GAINED

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### 4.1 Mode of study:

2020-2021 - Full time

### 4.2 Programme requirements:

It is now widely accepted that we are facing climate change and energy challenges which have become one of the top priorities of governments around the world. The demand for graduates at postgraduate level in energy and power systems has increased dramatically over the past few years. The programme has been developed for graduates with electrical/electronic or related background to meet the increasing demand from the energy and power industry, and tackle the global warming and climate change problems.

1. To provide students with an in-depth knowledge of the electrical power generation, distribution, and systems;
2. The operating principles, monitoring, optimisation and control of modern energy and power systems are discussed in details;
3. The environmental challenges, renewable energy generation, and research and management skills are also addressed in this one-year programme;
4. Finally, students will be introduced to the principles underlying robust trading systems, an important element of fair and

transparent electricity markets.

A programme of study leading to a Master's degree award shall normally require successful completion of 180 credits (90 ECTS) either at FHEQ level 7, or a combination of FHEQ level 7 and up to 30 credits of modules at FHEQ level 6.

#### 4.3 Programme details, and the individual grades/marks/credits obtained:

**Programme Start Date: 28th September 2020**

**Programme End Date: 31st October 2021**

##### 2020-2021 - The University of Liverpool (UK) - Year 1

Module Code	Title	Credits	ECTS	Semester	FHEQ Level	Grade	Result
ELEC 331	Drives	7.5	3.75	1	6	54	P
ELEC 391	Plasma System Engineering	7.5	3.75	1	6	82	P
ELEC 402	Power Systems: Analysis and Dynamics	15	7.5	1	7	77	P
ELEC 431	Engineering Programming	15	7.5	1	7	66	P
ELEC 382	Electromagnetic Compatibility	7.5	3.75	2	6	82	P
ELEC 407	High Voltage Engineering	15	7.5	2	7	77	P
ELEC 433	Advanced Power Electronics	7.5	3.75	2	7	74	P
ELEC 435	Renewable Energy and Smart Grid	15	7.5	2	7	81	P
ELEC 421	Measurement, Monitoring and Sensors	15	7.5	3	7	54	P
ELEC 483	Research Skills and Project Management	15	7.5	3	7	81	P
ELEC 460	MSc Project	60	30	S	7	80	P
<b>Credits Obtained</b>		<b>180</b>					

\* - Indicates a mark obtained at a second or subsequent sitting

E - Indicates Extenuating Circumstances

#### 4.4 Module grading scheme and, if available, grade distribution guidance:

Grade (100 point scale)

50 to 100	Pass
40 to 49	Narrow Fail (but compensation may be allowed in accordance with University's rules)
Less than 40	Fail

#### 4.5 Overall classification of the qualification (in original language):

Pass With Distinction

Information about the degree classification methodology used at the University of Liverpool is available at <https://www.liverpool.ac.uk/aqsd/academic-codes-of-practice/code-of-practice-on-assessment/>

## INFORMATION ON THE FUNCTION OF THE QUALIFICATION

- 5.1 Access to further study:** Attainment of an postgraduate degree may entitle access to postgraduate study (Bologna FQ-EHEA 3rd cycle/level 8 qualifications or equivalent) and/or professional career opportunities.
- 5.2 Professional status (if applicable):**

## ADDITIONAL INFORMATION

- 6.1** This section provides details of extra-curricular student awards and activities that represent achievement, and have been verified by the University of Liverpool. Details of prizes gained whilst at the University are also listed here. Please note that the number of extra-curricular activities which the University and the Liverpool Guild of Students are currently able to verify is limited. Students may therefore have undertaken additional activities which have contributed significantly to their personal and professional development. They will be encouraged to record these in other documentation.

#### **Additional Awards (Accredited Performance in Non-Academic Contexts):**

**Term:** 2020-21

**Award:** Sir Robin Saxby Prize

**Description:** One prize to the student on the MSc(Eng) programmes who has most distinguished him/herself in examinations and project work and one prize to a student on any year of the BSc Computer and Multimedia Systems programme who has most distinguished him/herself in subjects associated with microcomputers or their programming.

**6.2 Further information sources:**

Further information concerning the University of Liverpool may be obtained from the University's website ([www.liverpool.ac.uk](http://www.liverpool.ac.uk)). A description of the UK higher education system may be obtained from the UCAS website (<https://www.ucas.com/ucas/undergraduate/getting-started/what-higher-education>).

## CERTIFICATION OF THE HEAR

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**7.1 Date:**

4th December 2021

**7.2 Award Date:**

6th December 2021

**7.3 Signature:****7.4 Capacity:**

Director of Student Experience &amp; Enhancement

**7.5 Official Seal:**

## INFORMATION ON THE NATIONAL HIGHER EDUCATION SYSTEM

### Description of Higher Education in England, Wales and Northern Ireland

In England, Wales and Northern Ireland<sup>2</sup>, higher education institutions are independent, self-governing bodies active in teaching, research and scholarship. They are established by Royal Charter or legislation and most are part-funded by government.

Higher education (HE) is provided by many different types of institution. In addition to universities and university colleges, whose charters and statutes are made through the Privy Council which advises the Queen on the granting of Royal Charters and incorporation of universities, there are a number of publicly-designated and autonomous institutions within the higher education sector. Publicly funded higher education provision is available in some colleges of further education by the authority of another duly empowered institution. Teaching to prepare students for the award of higher education qualifications can be conducted in any higher education institution and in some further education colleges.

#### Degree awarding powers and the title “university”

All universities and many higher education colleges have the legal power to develop their own courses and award their own degrees, as well as determine the conditions on which they are awarded. Some HE colleges and specialist institutions without these powers offer programmes, with varying extents of devolved authority, leading to the degrees of an institution which does have them. All universities in existence before 2005 have the power to award degrees on the basis of completion of taught courses and the power to award research degrees. From 2005, institutions in England and Wales that award only taught degrees (“first” and “second cycle”) and which meet certain numerical criteria, may also be permitted to use the title “university”. Higher education institutions that award only taught degrees but which do not meet the numerical criteria may apply to use the title “university college”, although not all choose to do so. All of these institutions are subject to the same regulatory quality assurance and funding requirements as universities; and all institutions decide for themselves which students to admit and which staff to appoint. Degrees and other higher education qualifications are legally owned by the awarding institution, not by the state. The names of institutions with their own degree awarding powers (“Recognised Bodies”) are available for download at:

<http://www.bis.gov.uk/policies/higher-education/recognised-uk-degrees/recognised-bodies>.

In terms of the European Higher Education Area they are “short cycle” qualifications within the first cycle. The FHEQ is one component of the Credit and Qualifications Framework for Wales (CQFW). The Qualifications and Curriculum Authority (QCA), the Department for Children, Education, Lifelong Learning and Skills, Wales (DCELLS) and the Council for Curriculum Examination and Assessment, Northern Ireland (CCEA) have established the Qualifications and Credit Framework (to replace, in time, the National Qualifications Framework (NQF)). These authorities regulate a number of professional, statutory and other awarding bodies which control VET and general qualifications at all levels. The QCF is also incorporated into the CQFW. There is a close association between the levels of the FHEQ and the NQF (as shown overleaf), and other frameworks of the UK and Ireland (see “Qualifications can cross Boundaries”

<http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/qualifications-can-cross-boundaries.aspx>

#### Quality Assurance

Academic standards are established and maintained by higher education institutions themselves using an extensive and sophisticated range of shared quality assurance approaches and structures. Standards and quality in institutions are underpinned by the universal use of external examiners, a standard set of indicators and other reports, by the activities of the QAA, and in professional areas by relevant professional, statutory and regulatory bodies. This ensures that institutions meet national expectations described in the FHEQ: subject benchmark statements, the Code of Practice and programme specifications. QAA conducts peer-review based audits and reviews of higher education institutions with the opportunity for subject-based review as the need arises. The accuracy and adequacy of quality-related information published by the higher education institutions is also reviewed. QAA also reviews publicly funded higher education provision in further education colleges.

#### Credit Systems

Most higher education institutions in England and Northern Ireland belong to one of several credit consortia and some operate local credit accumulation and transfer systems for students moving between programmes and/or institutions. A framework of national guidelines, the Higher Education Credit Framework for England, was launched in 2008. Credit is also an integral part of the CQFW and the QCF. It may be possible for credit awarded in one framework to be recognised by education providers whose qualifications sit within a different framework. HE credit systems in use in England, Wales and

Higher education institutions, further education colleges and other organisations able to offer courses leading to a degree of a Recognised Body are listed by the English, Welsh and Northern Irish authorities, and are known as “Listed Bodies”. View the list at:

<http://www.bis.gov.uk/policies/higher-education/recognised-uk-degrees/listed-bodies>.

### Qualifications

The types of qualifications awarded by higher education institutions at sub-degree and undergraduate (first cycle) and postgraduate level (second and third cycles) are described in the Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ). This also includes qualification descriptors that were developed with the HE sector by the Quality Assurance Agency for Higher Education (QAA - established in 1997 as an independent UK-wide body to monitor the standard of higher education provision – [www.qaa.ac.uk](http://www.qaa.ac.uk)). The FHEQ was self-certified as compatible with the Framework for Qualifications of the European Higher Education Area, the qualifications framework adopted as part of the Bologna Process, in February 2009. Foundation degrees, designed to create intermediate awards strongly oriented towards specific employment opportunities, were introduced in 2001.

Northern Ireland are compatible with the European Credit Transfer System (ECTS) for accumulation and transfers within the European Higher Education Area, and are used to recognise learning gained by students in institutions elsewhere in Europe.

### Admission

The most common qualification for entry to higher education is the General Certificate of Education at “Advanced” (A) level. Other appropriate NQF level 3 qualifications and the kite-marked Access to HE Diploma may also provide entry to HE. Level 3 qualifications in the CQFW, including the Welsh Baccalaureate, also provide entry, as do Scottish Highers, Advanced Highers or qualifications at the same levels of the Scottish Credit and Qualifications Framework. Part-time and mature students may enter HE with these qualifications or alternatives with evidenced equivalent prior formal and/or experiential learning. Institutions will admit students whom they believe to have the potential to complete their programmes successfully.

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<sup>2</sup> The UK has a system of devolved government, including for higher education, to Scotland, to Wales and to Northern Ireland. This description is approved by the High Level Policy Forum which includes representatives of the Department for Business, Innovation and Skills, the Scottish Government, the Welsh Assembly Government, the Higher Education Funding Councils for England, Scotland and Wales, the Quality Assurance Agency (QAA), Universities UK (UUK), GuildHE and the National Recognition Information Centre for the UK (UK NARIC).

## Diagram of higher education qualification levels in England, Wales and Northern Ireland

