Department of Electronic and Computer Engineering

Library Collection development & management policy

Mícheál Ó hAodha, Faculty Librarian, Science and Engineering

September, 2014

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1.0 Introduction

The purpose of this policy is to service the research and teaching requirements of faculty within the Electronic and Computer Engineering at the University of Limerick. Consideration must be given to the extensive teaching portfolio conducted by faculty consisting of supervising research PhD Students, taught postgraduates and extensive undergraduate programmes, many of which are interdisciplinary.

1.1 Application

This policy will inform Department and Library decision-making in recommending items for purchase or de-selection. The identification and implementation of key procedures and mechanisms will enable constructive review of existing resources as well as the selection of new resources targeted at areas of strategic growth in Departmental teaching, learning and research.

1.2 Collection Development & Management at university level

The university’s Collection Development & Management policy should be referred to for information on non-department specific information, including for example policies regarding donations, withdrawals, preservation and digitisation.

1.3 Collection Development & Management at faculty level

The Faculty of Science and Engineering is academic home to almost 3,500 students and over 250 enthusiastic faculty and staff. The Faculty offers a wide range of Computing, Design, Engineering, Mathematics and Science programmes, and is committed to developing a collection to support those programmes. The Faculty of Science and Engineering comprises 10 departments: Architecture; Chemical and Environmental Science; Civil Engineering and Materials Science; Computer Science and Information Systems; Design and Manufacturing Technology; Electronic and Computer Engineering; Life Sciences; Mathematics and Statistics; Mechanical, Aeronautical and Biomedical Engineering; and Physics and Energy. The Faculty of S&E offers taught and research programmes at certificate, graduate diploma, bachelor’s degree and master’s degree level, and over 500 researchers are currently pursuing a Ph.D. qualification. Academic programmes are continually reviewed to ensure they meet the requirements of employers as well as national and international bodies. Graduates from the Faculty of S&E are well qualified to make major contributions both to the future of the Irish knowledge-based economy and the global market place. The Faculty of S&E has three world-class research institutes in the areas of materials and surface science, software engineering, and microfluidics and heat transfer, together with a number of highly successful research centres, all of which are underpinned by close links with industry.

2.0 Profile of Electronic and Computer Engineering

The Department of Electronic and Computer Engineering is one of the ten constituent departments that make up the Faculty of Science and Engineering. The Department currently has they have 21 fulltime faculty, 1.5 administration staff and 8 technicians.

As electronics and computing now plays a vital role in every aspect of society, a degree in the
strategically important Information Communication Technology area provides a strong foundation for a wide variety of careers. This variety of career opportunities is guaranteed by the extensive growth and application of electronics, computing and telecommunications in industry, commerce and science. In terms of research-active faculty, postdoctoral researchers and registered research students the Department of Electronic and Computer Engineering, University of Limerick is one of the largest in the country. The undergraduate and postgraduate courses on offer in this department are widely-acknowledged in terms of their research quality and importance with respect to the placing of graduates in successful and rewarding careers within the ICT sector.

The Department of Electronic and Computer Engineering and its academic staff have created extensive linkages with Irish and multi-national companies, international academic institutions and research funding agencies. These linkages have helped to create a stimulating learning environment for our undergraduate and postgraduate students. One of the major strengths of its research activities is that they are diverse and multidisciplinary covering many aspects of Engineering and Science and therefore extend well beyond the traditional boundaries of Electronic and Computer Engineering. Examples of these areas include Microelectronics, Marine Robotics, Optical Communications, Embedded Systems and Distributed Computing, Optical Fibre Sensors, Biomedical Electronics, Semiconductor Technology, Wireless Access, Assisted Living, Sustainable/Environmental Design, Robust Control etc.

2.1 Department Programmes

Undergraduate Programmes

The Department of Electronic and Computer Engineering hosts the following undergraduate degrees:

Undergraduate Courses :

LM118 BE in Electronic and Computer Engineering
Bachelor of Engineering (B.E.) Electronic and Computer Engineering: This programme provides great flexibility for students where at the end of their second year, they can choose their specialist area of study for years three and four of the programme. Students can choose one of the following technology areas for study: Computer Engineering; Electronic Engineering; Robotics Engineering, and Electrical Energy Engineering. Alternatively students can choose a General option, where they can select modules from the other defined degree options.

LM083 BSc in Mobile Communications and Security
The Bachelor of Science degree in Mobile Communications and Security teaches students the skills to become world class IT specialists. The programme offered is practical, challenging and rewarding with a significant national and international appeal. The ICT sector in Ireland is seen as a key driver for the future development of Ireland’s smart economy. Most forecasts suggest a sustained, strong growth for ICT that will provide significant future jobs and career opportunities in this country and also worldwide.

LM080 BSc in Electronics
The bachelor’s degree in Electronics is designed to meet the demand for graduates that will power Ireland’s and Europe’s future economy through the use of smart electronics. This degree programme is designed to provide its graduates with a well balanced and practical skill set to
ensure that they are given the opportunity to develop into world leaders in the Smart Electronics arena. This programme places you at the forefront of technology with significant and diverse employment opportunities in: ICT, smart housing, health, transport, well-being and entertainment sectors.

The Department of Electronic and Computer Engineering hosts the following postgraduate courses:

**LM346 MEng in Computer and Communications Systems**

**LM525 MEng in Computer and Communications Systems - Part Time**
The Master of Engineering in Computer and Communications Systems is designed to equip students with a detailed knowledge of software engineering and its application in the field of communications systems.

**LM347 MEng in VLSI Systems**

**LM526 MEng in VLSI Systems - Part Time**
The MEng in VLSI Systems provides a comprehensive grounding in the theory of micro-electronic systems, as well as exposure to state of the art design techniques and toolsets. There is an emphasis on the testing of VLSI systems, both digital and analogue.

**LM 634 MEng in Information and Network Security**
The bachelor’s degree in Electronics is designed to meet the demand for graduates that will power Ireland’s and Europe’s future economy through the use of smart electronics. This degree programme is designed to provide its graduates with a well-balanced and practical skill set to ensure that they are given the opportunity to develop into world leaders in the Smart Electronics arena. This programme places you at the forefront of technology with significant and diverse employment opportunities in: ICT, smart housing, health, transport, well-being and entertainment sectors.

**LM331 Graduate Diploma/Master of Engineering in Computer Engineering**
The Graduate Diploma/Master of Engineering in Computer Engineering programme combines software and hardware developments of computer, electronic and communication systems into a condensed course of study that will give you a much sought after background for today’s demanding job market. The programme is designed to provide a broadly based training in computer engineering for graduates who wish to augment their analytical skills with skills and knowledge of computer systems, computer programming, software engineering data communications and digital electronics.

**LM711 Higher Diploma in Mobile and Secure Cloud Computing**
The aim of the Higher Diploma in Mobile and Secure Cloud Computing programme is to provide graduates with the knowledge and practical skills to meet current and emerging industrial needs in both generic and targeted ICT areas such as Computer Programming, Cloud Computing, Web Technology, IT Networks, Data Security and Mobile Applications.
2.2 Research Specialisms

The department has a wide variety of research expertise. These include:

**Research Centres**

Biomedical Electronics Research Centre  
Mobile and Marine Robotics Research Centre  
Circuit and Systems Research Centre  
Optical Fibre Sensors Research Centre  
Data Communications Security Research Centre  
Telecommunications Research Centre  
Education Media Research Centre  
Wireless Access Research Centre  
Microelectronics and Semiconductor Research Centre

**Research Groups**

Control Engineering Research Group  
Optical Communications Research Group  
Design for Testability Research Group  
Signal Processing and Coding for Digital Data Storage Research Group  
Ambient Wireless and Assisted Living Group

For further information on these research groups and current and previous projects, they have undertaken research in, please visit the groups’ websites on the following webpage: http://www.ece.ul.ie/index.php/research.html

3.0 Scope

The scope of the collection of resources will reflect the Department’s teaching and research activities and resource management is facilitated by the relationship between the Department and the Faculty Librarian.

3.1 Subject Coverage

All material purchased or otherwise taken into stock should contribute to enriching the scholarly collections identified by the Department as its core areas of teaching and research.
3.2 Classification & Collection Levels

The American Library Association (ALA) collection levels model will be applied in assessing all book requests. Texts considered outside the remit of the Department’s teaching and research areas shall not be purchased.

<table>
<thead>
<tr>
<th>ALA Collection Levels</th>
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<tbody>
<tr>
<td><strong>Collection Level</strong></td>
</tr>
<tr>
<td>Out of Scope</td>
</tr>
<tr>
<td>Minimal Level</td>
</tr>
<tr>
<td>Basic Information Level</td>
</tr>
<tr>
<td>Study or Instructional Support Level</td>
</tr>
<tr>
<td>Research Level</td>
</tr>
<tr>
<td>Comprehensive Level</td>
</tr>
</tbody>
</table>

The Glucksman Library uses the Dewey Decimal system to classify material in all formats. The primary and secondary classification numbers* for ECE are:

<table>
<thead>
<tr>
<th>Dewey Decimal Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>004</td>
<td>Data Processing, computer science</td>
</tr>
<tr>
<td>005</td>
<td>Computer programming, programs, data</td>
</tr>
<tr>
<td>006</td>
<td>Special computer methods</td>
</tr>
<tr>
<td>384</td>
<td>Communications; Telecommunications</td>
</tr>
<tr>
<td>537</td>
<td>Electricity and electronics</td>
</tr>
<tr>
<td>621.3</td>
<td>Electric, electronic, magnetic, communications, computer engineering; lighting</td>
</tr>
<tr>
<td>651.8</td>
<td>Data processing Computer applications</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dewey Decimal Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Philosophy and psychology</td>
</tr>
<tr>
<td>510</td>
<td>Mathematics</td>
</tr>
<tr>
<td>530</td>
<td>Physics</td>
</tr>
<tr>
<td>570</td>
<td>Life Sciences</td>
</tr>
<tr>
<td>600</td>
<td>General Technology</td>
</tr>
<tr>
<td>790</td>
<td>Recreation, Sports &amp; performing arts</td>
</tr>
</tbody>
</table>

* Electronic and Computer Engineering systems are widely applied and may require resources from other disciplines covered by a non-exhaustive set of secondary classification numbers.
Below are listed subjects with Dewey classification and recommended collection level:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Dewey Decimal Classification</th>
<th>Recommended collection level (ALA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>System identification</td>
<td>003.1</td>
<td>4</td>
</tr>
<tr>
<td>Forecasting and forecasts</td>
<td>003.2</td>
<td>4</td>
</tr>
<tr>
<td>Computer modeling and simulation</td>
<td>003.3</td>
<td>4</td>
</tr>
<tr>
<td>Theory of communication and control</td>
<td>003.5</td>
<td>4</td>
</tr>
<tr>
<td>Kinds of systems</td>
<td>003.7</td>
<td>4</td>
</tr>
<tr>
<td>Systems distinguished in relation to time</td>
<td>003.8</td>
<td>4</td>
</tr>
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</table>
4.0 Budget

The distribution of the annual book budget is agreed by the LIRD committee based on the needs identified by the Faculty Librarians in collaboration with their academic representatives.

4.1 Distribution within the faculty

The Dean of the Faculty of Science and Engineering working in consultation with the two Faculty librarians allocates funds across the 10 Departments, and the four research themes.

4.2 Distribution within the department

The fund designation for the Electronic and Computer Engineering is currently as follows:

- A Departmental fund: to purchase items on reading and resource lists for modules across the Faculty of Science and Engineering.
- Faculty can avail of a range of Research theme funds depending upon which category their research belongs.

Purchases may include electronic resources not requiring yearly subscriptions

5.0 Selection of Resources

The Electronic and Computer Engineering collections are composed of a range of subjects which reflect the teaching and research interests of the Department. These resources are evaluated regularly in terms of scholarly merit and relevance to their individual subject field.

5.1 Module and Programme support

The Library will continue to actively review its resources to ensure that modules and programmes at undergraduate and postgraduate level are adequately supported and that the impact on library resources can be correctly assessed.

5.1.1 Reading list items

Reading lists will be given to the faculty librarian prior to the start of each semester, using the agreed procedures for collection of module reading lists. Where possible, items on reading lists will be purchased and placed in the most appropriate collection area (Normal loan, Week loan, or Short Loan Collection), depending on class size and numbers of copies. For items that are difficult to source or considered to be too expensive for lending, the Reference Collection (i.e. Library use only) will be used. Items will be moved between collections, as required, to facilitate maximum use of resources by users.

5.1.2 Research material

Faculty can submit order requests for material which comes under their departmental research requirements and also as relating to any of the Research themes that they engage with.
5.2 Partnership between department and library

The Faculty Librarian liaises with faculty members when making collection development decisions in line with the collection development policy. Together they determine priorities, and decide which material should be acquired, which methods for delivery are most suitable, the number of copies to be purchased.

To ensure the timely purchase of resources, the Faculty Librarian will need to be informed as soon as possible about the following:

- The introduction of new modules
- Any modification to existing modules
- The introduction of new programmes
- Current modules on offer in each programme for the new academic year
- The introduction of new methods of teaching
- The Faculty Librarian monitors usage of the collection and will order replacement
- or extra copies of items due to:
  - Damage
  - Loss
  - Multiple requests for an item over a short period of time
  - User needs based on information received from Information Desk, Library
  - Suggestions for books and online queries

5.3 Procedure for purchase

Items recommended for purchase should contain as much detail as possible including

- Title
- Author
- Date
- Publisher
- Edition
- ISBN

5.3.1 Language

Priority is given to publications in the Irish and English languages. Works published in other languages are acquired where they are required to support the curriculum and research.

5.3.2 Multiple copies

The Department working in consultation with the Faculty Librarian will decide on the number of multiple copies to be purchased for each module depending on the class size. Normally a maximum of 15 copies will be purchased for undergraduate classes consisting of 350 students or more, and placed in the Short loans collection.
5.3.3 Item format

5.3.3.1 Print

While there is a growing preference for electronic format, print format continues to be the preferred format for the general book collection. (See 5.4.1.1 for journals policy.)

5.3.3.2 Electronic

Electronic format is the preferred format for high demand textbooks and reference material. (See 5.4.1.1 for journals policy.)

5.3.3.3 Multimedia

When selecting multimedia material – e.g. CDs and DVDs – ease of access will be the priority. The existence of appropriate licencing and archiving requirements will be taken into account to ensure high quality and reliable service.

5.4 Procedure for acquisitions outside the allocated budget

The Library Information Resources Development committee agree the book fund allocations on an annual basis. Funds for journals and subscriptions are managed centrally.

5.4.1 Journals & Subscriptions

Subscriptions to journals and databases are regularly reviewed. Where new titles are required either a) the department/faculty agree cancellations to the same value or b) departmental funds are allocated to the subscription.

5.4.1.1 Journals format

Electronic format is the preferred format for journals.

5.4.2 National initiatives e.g. IReL

IReL – Irish Research eLibrary - funded resources are reviewed regularly and decisions are made based on a cost per use/value for money model, alongside consultations with faculties and researchers.

5.4.3 Donations

Working in collaboration with the Department the Faculty Librarian will assess any potential donations under the following criteria:

- Contribution to existing scholarly collections.
- Teaching resource.
5.4.4 Legal Deposit

Working in collaboration with the Department the Faculty Librarian will accept Legal Deposit material which meets the following criteria:

- Contribution to existing scholarly collections.
- Teaching resource.

5.4.5 Departmental or faculty funding

The Library will endeavour to support new academic initiatives wherever practicable. In the absence of any special funding allowance provided by the University, new courses, new faculty or new research centres will be supported from within the standard Departmental materials allocation.

6.0 Collections

6.1 Department or Discipline specific collections

Blank

6.2 Location of collections

Blank

6.3 Dissertations and theses

Electronic versions of doctoral and research masters theses will be accepted by the library provided the author has not placed an embargo upon them. The Department will retain any electronic versions of theses which have an embargo upon them until it expires.

7.0 Library Support for resource use

The Library is committed to supporting the promotion and use of all information resources. To this end, the Faculty Librarian will continue to work with library colleagues and academics to maximise the exploitation of key Design/Technology sources using accepted international frameworks for information skills delivery to support undergraduate teaching, academic research and postgraduate studies.

The Library will work with the Department to:

- Identify the level and detail of training required
- Identify a suitable place within the timetable to deliver training at point of need
- Identify the most suitable delivery mechanism
- Evaluate the training’s impact on assignment quality via assessment
8.0 Stock Review

Print resources will be reviewed frequently, and the Department consulted regarding the removal of journals and older editions of textbooks. These older editions no longer in use or superseded by a newer version will be transferred to the stores. One copy for each of these texts will be retained for future scholars.

9.0 Future Considerations

The Library is committed to aligning the provision of information resources to the strategic priorities of the Department. Identification of best practice will facilitate effective resource management to support the teaching and research of the Department. Issues impacting on planning include:

- Future trends in Electronic and Computer Engineering research.
- The development of inter-disciplinary and thematic research
- The provision of lifelong learning and information skills to library users whether full-time or distance learners.

10.0 Review of Policy

This policy will be reviewed and updated on an on-going basis by the faculty librarian and the Head of Department.

11.0 Contributors

Mícheál Ó hAodha, Faculty Librarian (Science and Engineering), UL

John Nelson, Head, Electronic and Computer Engineering, UL

Appendices

September, 2014