

The University of Manchester Library Content Development Policy Mechanical Aerospace and Civil Engineering

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Introduction

This document presents the Content Development Policy for the School of Mechanical Aerospace and Civil Engineering. It includes a description of the Library's existing collections and an outline of current collecting areas.

Set within the context provided by an overall Content Development Policy and a related Collection Management Policy, its purpose is to ensure that the selection of resources - books, journals, and other kinds of material – whether print, electronic or other format, reflect the teaching and research priorities of the School and provide best value in both financial and academic terms.

Collection evaluation

The Library has substantial collections in all fields of mechanical, aerospace and civil engineering and includes books and journals, in print and digital formats. The principal collection of printed books, including all reading list items, is kept in the Joule Library.

- Mechanical Engineering is shelved at 621 onwards.
- Aerospace Engineering at 629.13 onwards.
- Manufacturing Engineering is at 621.9 onwards
- Civil Engineering is shelved at 624 onwards and also at 690-699
- Books on computing can be found at 001-006 on the Upper Level of the Joule Library.
- Books on mathematics can be found at 510-517 on the Main Level of the Joule library

Appendix 1 provides an overview of the MACE bookstock by classmark, date of publication, and location.

Appendix 2 lists the books purchased from the MACE bookfund during the 2009-10 financial year, excluding items purchased as part of other subscriptions.

Appendix 3 lists current journal subscriptions in the area of MACE.

Because of the difficulties in deciding on what constitutes a MACE journal, it is not necessarily a complete list. However all journal holdings and subscriptions are listed in the Library catalogue, and all subscriptions to electronic journals are listed in its E-Journals A-Z listing.

Appendix 4 lists other relevant subscriptions to bibliographic databases and book collections in the area.

Bookfund and resource allocations

Bookfunds are allocated in June/July each year for the following financial year (August – July). This bookfund is to provide for all non-subscription library materials including printed

textbooks and research monographs, electronic books, and any other one-off purchase requirements.

Journals and other subscription items are purchased from a separate fund which at present accounts for over 85% of the cost of all purchases.

Collection areas

To support the School's scholarly and research activities the Library will acquire material published in the areas listed below.

Research Groups

- Aerospace
- Energy, Environment and Climate Change
- Structures, Dynamics and Extreme Loading
- Manufacturing and Management
- Nuclear

Research Themes

- Advanced Flow Diagnostics & Instrumentation
- Bioengineering
- Built Environment
- Coastal Processes
- Computational Fluid Dynamics
- Construction Science
- Dynamics and Aeroelasticity
- Energy and Multiphysics
- Experimental Aerodynamics
- Geo-Engineering
- Impact and Explosion
- Management of Projects
- Marine Energy
- Nuclear Graphite
- Reliability, Availability, Maintenance & Safety
- Smoothed Particle Hydrodynamics (SPH)
- Structures and Fire
- Turbulence Mechanics

Document Supply Service and Inter-Library Loans

Although the Library will try to accommodate all requests for purchase, books which lie outside the areas listed above or are out of print can be obtained on loan from another library through the [Document Supply Service](#). Such books are usually borrowable for up to 6 weeks at a time. Journal articles and other material not available from within the Library's collections can also be obtained through this service.

Teaching and Learning

The Library will support all taught course modules.

Multiple copies and / or electronic copies of texts will be purchased or subscribed to as appropriate. Subject to copyright restrictions the Library will digitise materials, for instance book chapters, or journal articles not otherwise available electronically, if required for taught course modules.

Reading lists and estimated student numbers should be sent to the Faculty Team Librarian by July 31 and November 30 each year so any new material can be purchased and processed in time for the forthcoming semester.

The library's software package *Link2Lists* affords the opportunity of creating multi-media **resource lists**. Hyperlinks to audio files, video clips, podcasts and the like can all be included in a resource list alongside traditional bibliographic references to print material, e-books and journal articles, which can link directly through to entries in the Library catalogue. Library staff can provide training and support to academic staff interested in using Link2Lists software (rather than a traditional word processing package), and embedding resource lists into Blackboard modules.

Reading list texts can be 7-day loan, 28 days for UG or put into the [High Demand Collection](#) from where they can be borrowed for shorter periods.

Digitisation

Subject to copyright restrictions the Library will digitise material according to its [Digitisation Policy](#). Priorities include reading list items – book chapters or journal papers – and items from Special Collections.

Manchester e-Scholar

The University's institutional repository, [Manchester eScholar](#), manages and disseminates the intellectual outputs of the university. Since the beginning of 2010 all accepted PhD theses have been added to the repository.

Stock editing

Most stock is kept on the Library's open shelves. As space is at a premium, especially in the Main Library, periodic weeding is used to remove less-well used material to store from where it can be retrieved usually within one working day. [[Store requests](#)]

Unused duplicates are disposed of from time to time.

Weeding and withdrawal criteria are described in the [Collection Management Policy](#).

Donations

Offers of donations are welcome, but they can normally only be considered for acceptance if they are within the collection areas detailed above.

Other factors taken into account in deciding upon acceptance are listed in the [Collection Management Policy](#).

Recommendations

The Library welcomes recommendations for the purchase of books from staff and students of the School. Purchases are normally made if:

- Recommendations fall within the scope of the policy as described above;
- Funds are available;
- The item is not already in stock.

Usually:

- Only a single copy of a printed book is purchased;
- Books must normally be written in English.
- They must be of an appropriate academic standard.

For reading list texts, multiple copies and electronic versions will be considered as appropriate.

Recommendations can be made directly to the Faculty Team Librarian.

Journal recommendations are considered twice a year in March and November. Because of the forward financial commitment involved journal subscriptions usually have to be balanced by savings elsewhere in the subscription budget. Recommendations should be made through the School Library Representative.

Contacts

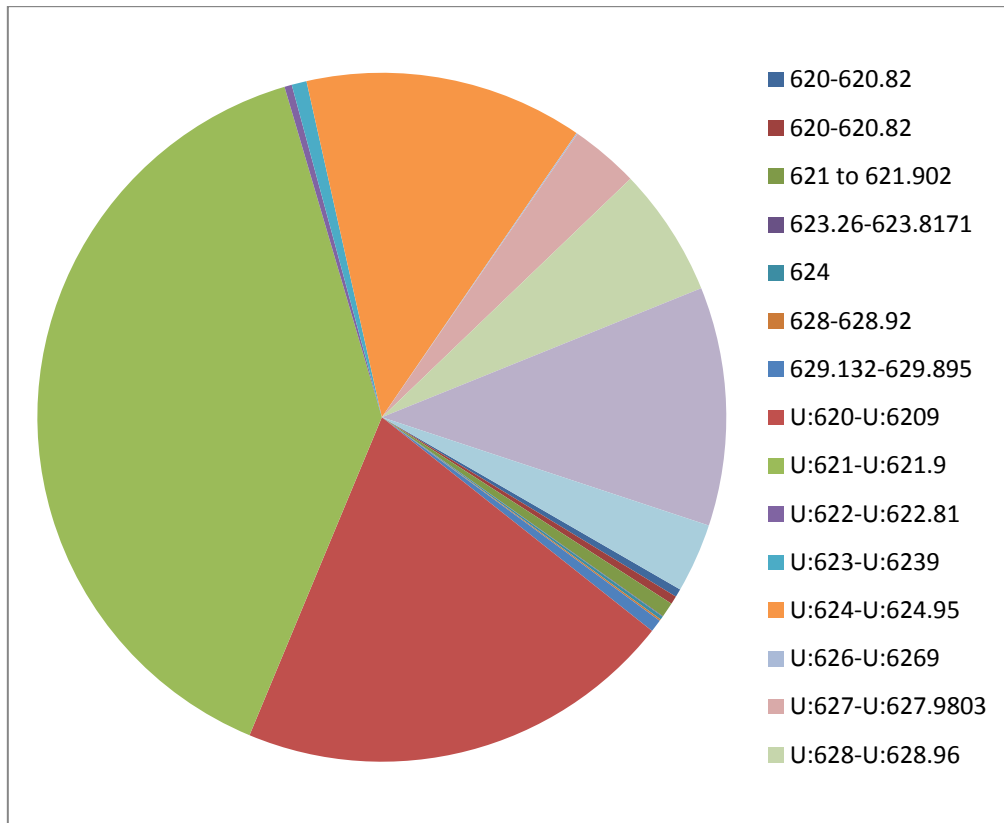
Faculty Team Librarian, Mechanical, Aerospace and Civil Engineering: Dave Hirst, 0161-306 4932

david.hirst@manchester.ac.uk

Appendices

Appendix 1 - MACE stock, Main Library and Joule library (U)

MACE stock by classification



MACE classification codes

620 Engineering & Applied operations

621 Applied physics

622 Mining & related operations

623 Military & nautical engineering

624 Civil engineering

625 Engineering of railroads, roads

626 Not assigned or no longer used

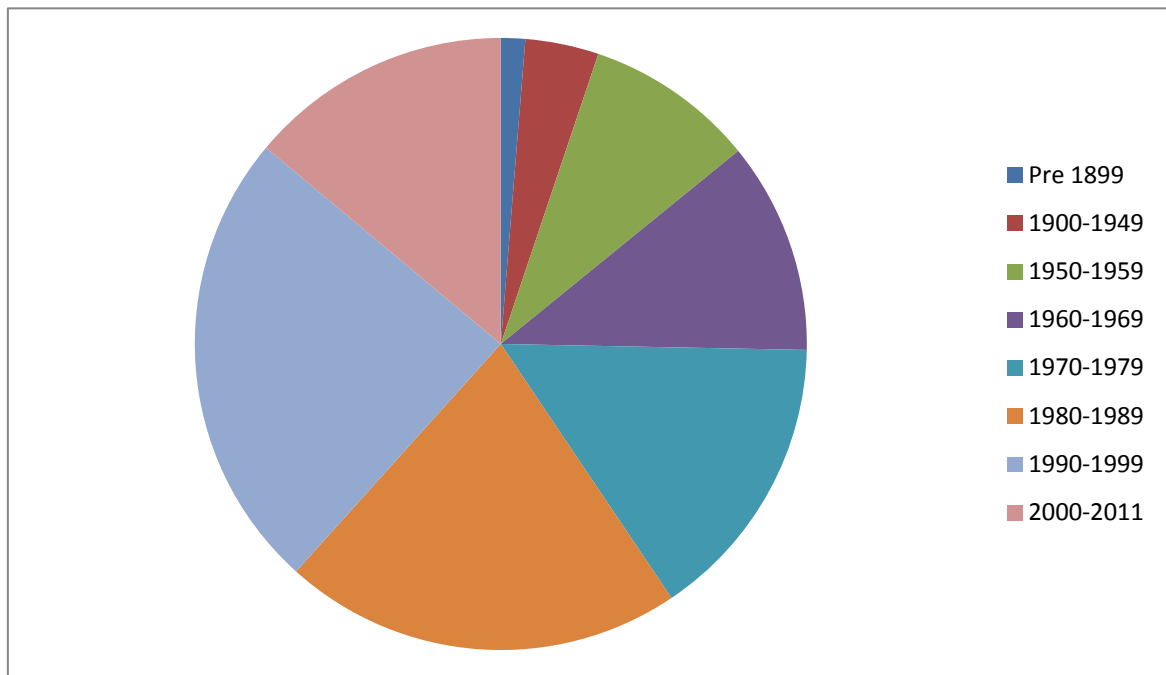
627 Hydraulic engineering

628 Sanitary & municipal engineering

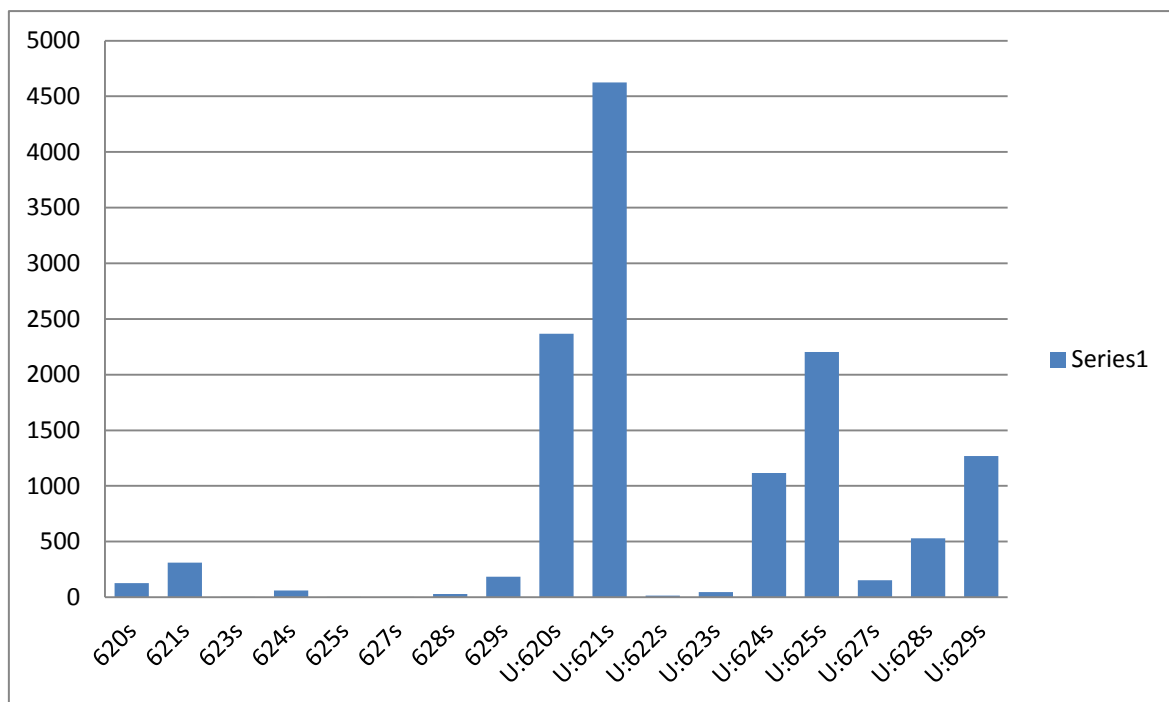
629 Other branches of engineering

(Where U is in the classification e.g. U:629 the book is held at the Joule Library)

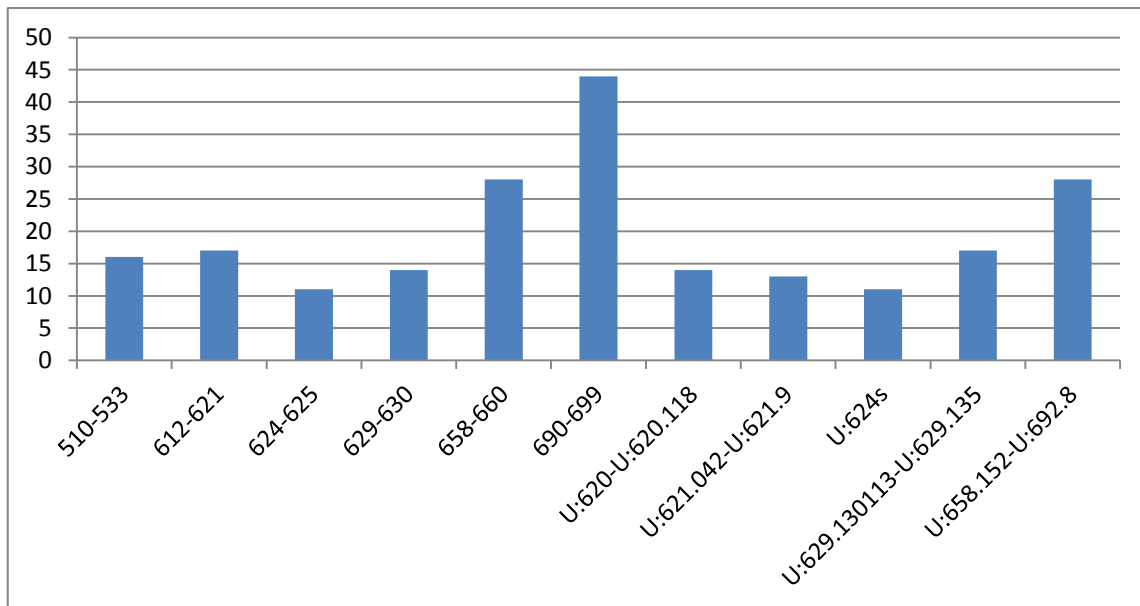
MACE book stock by year



MACE Detailed Breakdown 2000-2011 by Classification



Appendix 2 - MACE Book Purchases 2009-11



Author	Title	Edition	Copies
AISI	Cold-Formed Steel Design Manual Set	2008	1
Ambartsumyan	Theory of Anisotropic Plates: Strength, Stability and Vibrations	1991	1
Anderson	Introduction to Flight	2008	4
Anderson	Aircraft Performance and Design	1999	1
Anderson	Fundamentals of Aerodynamics	2010	5
Anderson	Hypersonic and High Temperature Gas Dynamics	2006	1
Ashworth	Contractual procedures in the construction industry		1
ayra	Design of structural elements : concrete, steelwork, masonry and timber designs to British standards and Eurocodes		1
Baker	Plastic Design of Frames:		2
Baker	Plastic Design of Frames 2 Applications: Applications		1
Bank	Composites for construction : structural design with FRP	2006	1
Banks	Risk and Financial Catastrophe		1
Barbero	Introduction to composite materials design	1998	2

Author	Title	Edition	Copies
Bell, A	Eurocode for masonry EN 1996-1-1 and EN 1996-2 guidance and worked examples	2009	5
Belotserkovskii	Constructive Modeling of Structural Turbulence and Hydrodynamic Instabilities	2009	1
Bertin	Aerodynamics for engineers		1
Bessant	Learning to Pass ECDL 4.0 for Office XP		4
Blight	Geotechnical Engineering for Mine Waste Storage Facilities	2009	1
Bo	Compressibility of Ultra-Soft Soil	2008	1
Bolton	Control systems		1
Bolton	Control systems	2002	1
Booth	Earthquake Design Practice for Buildings	2009	1
Boussabaine	Whole life-cycle costing : risk and risk responses	2007	1
Bozorgnia	Earthquake Engineering: From Engineering Seismology to Performance-Based Engineering		1
Bryan	Construction Technology: Analysis and Choice	2010	5
Çengel	Fundamentals of Thermal-fluid Sciences	2007	1
Chanson	The hydraulics of open channel flow		1
Checkland	Information, Systems & Information Systems		1
Chudley	Building Construction Handbook	2010	1
Coates	Structural Analysis	1987	2
Cohen	Gas Turbine Theory	2001	2
cook	Flight Dynamics Principles: A Linear Systems Approach to Aircraft Stability and Control	2007	1
Cook	Finite Element Modeling for Stress Analysis		2
Coulson	Winning new business : the critical success factors	2003	
Cragoe	How to Read Buildings: A Crash Course in Architecture	2008	1
Curtis	Orbital mechanics for engineering students		1

Author	Title	Edition	Copies
Davim	Sustainable Manufacturing	2010	1
Deb	Multi-objective Optimization Using Evolutionary Algorithms	2008	1
Dekker	Micro Electro Mechanical System Design	2005	1
Denny	Super Structures: The Science of Bridges, Buildings, Dams, and Other Feats of Engineering	2010	1
Dibnah	Fred Dibnah's Ups And Downs Of Chimneys [DVD]	2004	1
Dongarra	High Performance Heterogeneous Computing	2009	1
Duffie	Solar Engineering of Thermal Processes	2006	2
durbin	Statistical Theory and Modeling for Turbulent Flows	2001	2
esty	Modern Project Finance: A Casebook	2006	5
esty	Project management : a managerial approach	2004	5
Ewins	Modal testing : theory, practice, and application		1
Fenichell	Plastic: The Making of a Synthetic Century		4
Ferziger	Computational Methods for Fluid Dynamics	2004	2
Fiell	Industrial Design A-Z	2006	4
Filippone	Flight performance of fixed and rotary wing aircraft	2006	1
Fortescue	Spacecraft Systems Engineering	2003	2
Gaitskell	Engineer's Dispute Resolution Handbook	2006	1
Genta	Vibration Dynamics and Control	2009	1
Goldsmith	Impact: the theory and physical behaviour of colliding solids.	2003	2
gray	Project Management: The Managerial Process		5
Hamill	Understanding Hydraulics	2001	5
Henry	'Creative Management'	2006	1
Hewitt	Introduction to nuclear power	2000	1
Heyman	The Masonry Arch		1
Hickman	Leading Organizations: Perspectives for a New Era	2010	2

Author	Title	Edition	Copies
Hickman	Leading Organizations: Perspectives for a New Era	2010	2
Hoepfner	Structural Integrity Considerations in Engineering Design: Introduction to Structural Integrity and Basic Fatigue Design: v. 1	2008	1
Holman	Heat Transfer	2009	2
Horne	Stability of Frames	1965	1
Hsieh	Computed Tomography Principles, Design, Artifacts, and Recent Advances	2009	1
Hsu	Unified Theory of Reinforced Concrete		1
Hunt	Oil Analysis handbook	2008	1
Irvine	Surveying For Construction		2
Irving	1001 Buildings You Must See Before You Die: A Remarkable Tour of the World's Most Exceptional Architectural Feats	2007	1
Jackson	Civil Engineering Materials	1997	4
Jukes	Aircraft Display Systems	2003	4
Kalpakjian	Manufacturing, Engineering and Technology SI	2009	2
kaplan	Practical Applications of Infrared thermal Sensing and imaging equipment	2007	1
Katz	Low-speed Aerodynamics	2001	2
Kerzner	Value-Driven Project Management		1
Kirk	Programming Massively Parallel Processors: A Hands-on Approach	2010	1
Kirkham	Ferry and Brandon's Cost Planning of Buildings	2007	5
Kohler	Nanotechnology: An Introduction to Nanostructuring Techniques	2007	1
Langhaar	Energy methods in applied mechanics		1
Launder	Closure Strategies for Turbulent and Transitional Flows	2004	1
Law	Combustion Physics	2006	1
Lee	Flight Simulation: Virtual Environments in Aviation		2

Author	Title	Edition	Copies
Lee	Principles of CAD/ CAM/ CAE systems	1999	1
Lefebvre	Gas Turbine Combustion: Alternative Fuels and Emissions	2010	1
Leishman	Principles of Helicopter Aerodynamics	2006	2
Levine	Project Portfolio Management: A Practical Guide to Selecting Projects,	2005	1
Liu	Smoothed Particle Hydrodynamics: A Meshfree Particle Method	2003	1
Lorenz	Information Technology and Sustainability: Essays on the Relationship between Information Technology and Sustainable	2008	1
Lynch	Computer numerical control for machining	1992	1
Magrab	An engineer's guide to MATLAB : with applications from mechanical, aerospace, electrical, and civil engineering	2005	2
Marshall	Understanding Housing Defects	2009	3
Masters	Renewable and Efficient Electric Power Systems	2005	1
Mathieu	An Introduction to Turbulent Flow	2000	1
Maxwell	Qualitative research design : an interactive approach	1996	4
Mays	Durability of concrete structures : investigation, repair, protection	1992	1
McGeough	Principles of Electrochemical Machining	1974	1
Megson	Aircraft structures for engineering students	2009	1
Meredith	project management	2009	2
Meredith	Project management : a managerial approach		2
Meriam	Engineering mechanics: statics	2009	4
Meriam	Engineering Mechanics: Dynamics	2010	4
Merna	Financing infrastructure projects /		2
Merna	Financing Infrastructure Projects		1
Mitchell	Introduction to Machinery Analysis and Monitoring	1993	1
Moir	Aircraft systems : mechanical, electrical, and avionics		1

Author	Title	Edition	Copies
	subsystems integration		
Morton	The PIC microcontroller : your personal introductory course	2008	
Morton	The PIC microcontroller : your personal introductory course	2008	1
Nahavandi	Art and Science of Leadership	2008	5
Naylor	Introduction to operations management		15
Nielsen	Limit Analysis and Concrete Plasticity		2
Niku	Creative Design of Products and Systems	2009	5
Niu	Composite airframe structures : practical design information and data	1992	1
Northouse	Leadership: Theory and Practice	2009	2
Oosthuizen	Compressible Fluid Flow		1
Piluso	Structural Steel Semirigid Connections		2
Pocock	Nuclear power : its development in the United Kingdom		1
Pooley	A Mobile Century?: Changes in Everyday Mobility in Britain in the Twentieth Century	2005	1
Prometric	Construction Skills Managerial and Professional Health and Safety Test: All the Questions and Answers: 2009: Issue 1	2009	2
Qingwei	Advances in Numerical Simulation of Nonlinear Water Waves	2009	1
Qingwei Ma	Advances in Numerical Simulation of Nonlinear Water Waves	2009	1
Rabbath	Safety and Reliability in Cooperating Unmanned Aerial Systems	2010	1
Rabiee	Programmable logic controllers: Hardware and Programming	2002	5
Rao	The Finite element method in engineering	1982	1
Reshetov	Accuracy of Machine Tools		2
Robinson	Engineering, business and professional ethics	2007	1
Rogers	Highway engineering		1
Roman	Writing Excel Macros		2
Rowe	Finite-Element Plasticity and Metalforming Analysis		3

Author	Title	Edition	Copies
Rowe	Finite-Element Plasticity and Metalforming Analysis		1
Ruskeepaa	Mathematica Navigator: Mathematics, Statistics and Graphics	2009	1
Schick	Fortran 90 and engineering computation	1995	1
Segerlind	Applied finite element analysis		1
Shi	High-Performance Construction Materials: Science and Applications	2008	1
Shukla	Geosynthetics and their applications	2009	1
Slack	Operations Management	2009	4
smith	Managing risk in construction projects	2006	1
Smith	Appraisal, Risk and Uncertainty		1
Smith	Engineering Project Management	2007	3
Smith	Programming the Finite Element Method	2004	1
Sorensen	Renewable Energy, Conversion, Transmission and Storage	2007	1
Steele	Applied finite element modeling : practical problem solving for engineers	1989	1
Swailles	Scottish Iron Structures (Guide for practitioners)	2005	1
Tester	Sustainable Energy: Choosing Among Options	2005	2
Theodore J. Trauner	Construction Delays: Understanding Them Clearly, Analyzing Them Correctly	2009	1
thomann	Principles of Surface Water: Quality Modeling and Control	1987	1
Thorby	Structural Dynamics and Vibration in Practice: An Engineering Handbook	2008	1
Tompkins	Facilities Planning		1
Tsai	Introduction to Composite Materials	1980	1
Uff	Construction Law	2009	10
Utkin	Sliding Mode Control in Electro-mechanical Systems	2009	1
Varela	Handbook of Optimization Theory: Decision Analysis and Application	2010	1

Author	Title	Edition	Copies
Versteeg	An introduction to computational fluid dynamics : the finite volume method		1
Vincenti	Introduction to physical gas dynamics		2
Walkenbach	Excel VBA programming for dummies		1
Wells	Introduction to Traffic Engineering		1
White	Fluid Mechanics	2010	5
Williams	Waste treatment and disposal	1998	1
Wilmshurst	Designing embedded systems with PIC microcontrollers : principles and applications	2006	2
Winter	Biomechanics and Motor Control of Human Movement	2009	1
Yeoh	Computational Fluid Dynamics in Fire Engineering: Theory, Modelling and Practice	2009	1
zhang	Geotechnical Risk and Safety	2009	1

Appendix 3 - Current Journal Subscriptions

Appendix 4 - Other Subscriptions

Technology Research Database	Bibliographic coverage of basic and applied research in aeronautics, astronautics, and space sciences. The database also covers technology development and applications in complementary and supporting fields such as chemistry, geosciences, physics, communications and electronics
Compendex	Indexes and provides abstracts from over 4,500 periodicals, reports, books and conference proceedings in the fields of engineering and technology. It covers the period 1884 to date and is updated quarterly. Although produced in the USA, it also covers the principal European journals
ESDU	The ESDU database consists of over 1200 data items, many with associated computer programs, presented as PDF files. Data items are self-contained design and analysis guides covering specific engineering components or problems.
INSPEC	Produced by the Institution of Electrical Engineers, this is the major English-language abstracting and indexing service for literature in computer science, electrical engineering, electronics and physics
British Standards	The full text of all current British Standards.
ScienceDirect	Provides full-text access to over 2,400 journals, plus book series, encyclopaedias and other reference works.
Scopus	The Scopus database includes abstracts and cited references of over 14,000 titles from more than 4,000 international publishers back to 1966. The University of Manchester is a development partner for the Scopus Development Programme. The Library's internal contact for matters relating to the Scopus database is Martin Snelling, e-mail: martin.snelling@manchester.ac.uk or telephone 0161 306 4955.
Web of Science	This multidisciplinary database covers the most highly cited journals in science, engineering, the social sciences and the humanities
Zetoc	A large multidisciplinary database containing contents pages of 20,000 journals and details of 16,000 conferences per year. Also provides an email table of contents alerting service
ESDU	The ESDU database consists of over 1200 data items, many with associated computer programs, presented as PDF files. Data items are self-contained design and analysis guides covering specific engineering components or problems.
Mechanical Engineering Abstracts	This database covers literature on mechanical engineering, engineering management and production engineering, from 1981 to date

BSRIA Infonet (Building Services Research and Information Association) includes:	Abstracts (formerly IBSEDEX) - a bibliographic database of more than 70,000 abstracted publications, Statistics Bulletin - A monthly market review and forecasts for the building services industry,
BCIS	Building Costs Information Service - provides information on the cost of constructing buildings in the UK.
Construction Information Service (CIS)	Construction Information Service (CIS) is a comprehensive source of technical information for the construction industry produced jointly by the NBS and IHS. It contains the full text of a wide range of documents relevant to the construction industry in the UK including regulatory and advisory documents, reports and standards.
Specify-it: Building	Specify-it provides product and supplier information for building and civil engineering. The database contains manufacturers' catalogues and technical specifications for products relating to the construction industry. In addition to being used for finding product details it can also be used as a way of finding addresses and telephone numbers of companies involved in the construction industry
Web of Science	This multidisciplinary database covers the most highly cited journals in science, engineering, the social sciences and the humanities
Business Source Premier	Provides full text for 2,800 scholarly business journals covering management, economics, finance, accounting, and international business.

E-book providers

KNOVEL	Provides the full text of over 1,000 reference works in science and technology. Content includes data handbooks, encyclopaedias, dictionaries, monographs, conference proceedings and datasets
NetLibrary	Provides full text access to over 10,000 books plus over 340 publicly accessible e-books in a range of subject areas
Referex	This collection provides a collection of handbooks and practical guides on mechanical and materials engineering including coverage of automotive, aeronautical, marine and maintenance engineering, metallurgy, tribology, quality systems and health and safety
Springer eBook Collection	Provides access to over 6,500 books published since the 1980's. These titles are also included in the library catalogue

Elsevier Science Direct books	
Dawsonera	The service provides access to a selection of e-books which are also listed on the catalogue.
MyiLibrary	MyiLibrary uses advanced security software to protect the copyright of the eBooks available for access. This software is designed to detect and prevent any usage that is consistent with a breach in copyright such as spidering software attempting to copy a large amount of pages. As a result of this sometimes genuine accounts on MyiLibrary that have similar usage patterns are locked while the usage is examined. We advise that you either use the Table of Content or search facilities to navigate through the title to avoid locking titles.