

Resources for Mechanical Engineering

Contact details for further help are at the end of this guide.

The resources in this guide will help you learn more about your subject. The best place to start your search is **Discover**, which provides you with easy access to thousands of books, eBooks, journal articles and much more. You can access Discover and other key resources via the Library website, LJMU student homepage and MyLJMU portal.

Remember, your modules also have reading lists in Canvas with links to recommended books, eBooks, journal articles and other subject resources.

Books and eBooks

There is an extensive collection of books and eBooks on all aspects of Mechanical Engineering. You can browse what is available in your subject area or look for specific titles by searching **Discover**.

- Go to **Discover**, if prompted, **Sign in** with your **LJMU username@ljmu.ac.uk** and **password**
- Type a book title or keywords and select the search icon
- From the results screen, you can filter your results by selecting **Books**
- Select a book title to see more details and availability
- eBooks will have links to view online
- Print books will show number of copies and location

Print books have a class number and are organised numerically by that number on the shelves. Common class numbers are shown below:

Automatic Control Engineering	629.8
Computer Aided Design	620.004202
Computing	004-006
Electrical & Electronic Engineering	621.3
Engineering	620
Engineering Materials	620.11
Engineering Mechanics & Materials	620.1

Flexible Manufacturing Systems	670.427
Fluid Mechanics	532 & 620.106
Heat	536
Heat Engineering	621.4
Machine Engineering	621.8
Management	658
Manufacturing	670
Marine Engineering	623.87
Materials Management	658.7
Mathematics	510
Mechanics	531
Metal Manufactures	671
Metallurgy	669
Organisational Management	658.402
Physics	530
Plastics	668.4
Production Engineering	670.42
Renewable Energy	333.794
Systems	003
Thermodynamics	536.7 & 621.4021
Tribology	621.89

Journals

Journals are published on a regular basis and contain up-to-date information. Journals contain articles focussing on specific topics written by subject specialists.

To find individual journal titles on your subject area:

- Go to **Discover**, if prompted, **Sign in** with your **LJMU username@ljmu.ac.uk** and **password**
- Select the **Journals** option
- Type a journal title you wish to access and select the search icon
- Select a journal title to see more details and availability
- eJournals will have links to view online
- Print journals will show number of issues and location

Databases

You can search for journal articles using **Discover** or via individual databases. There are different types of databases. For example:

- **Full-text databases** provide access to full-text information such as journal articles, book chapters, reports, standards and statistics
- **Abstracting and Indexing Databases** are searchable indexes, you can view the abstract or summary for each resource. If full-text is available follow the link, if not you can request an Inter-library loan.

To access a database:

- Go to **Discover**, if prompted, **Sign in** with your **LJMU username@ljmu.ac.uk** and **password**
- Select the **Databases** option
- Select **Mechanical Engineering** to see suggested databases or type the name of the database in the search box and select the **search icon**
- Select the database title to see more details and note any log-in requirements
- Select the database link

Academic Full-text Databases

The databases below are listed in alphabetical order:

Access Engineering

A reference source of eBooks, videos, interactive spreadsheets and tutorials for all Engineering disciplines including Mechanical, Electrical, Civil and Product Design Engineering, Computer Science and Built Environment.

ASTM Compass

Provides access to the ASTM (American Society for Testing and Materials) standards and related journals, manuals, technical, research and market reports.

Business Source Ultimate

Business Source Ultimate offers an unprecedented wealth of peer-reviewed, full-text journals and other resources that provide historical information and current trends in business.

IEEE Xplore

A powerful research tool that provides access to key scientific and technical publications from IEEE (Institute of Electrical and Electronics Engineers) and its partners such as: IEEE journals, IEEE conference proceedings, IEEE standards and the IEEE-Wiley eBooks Library and IET conference proceedings.

IET Open Access Journals

Provides access via the IET (The Institution of Engineering and Technology) Hub to the collection of IET open access journals from 2013 to date.

IMechE Journal Collection and Archive

Provides access to key IMechE (Institution of Mechanical Engineers) journal titles covering all aspects of mechanical engineering including the Proceedings of the IMechE titles and access to the IMechE archive.

IOP Science

Provides access to key Institute of Physics journal titles.

Proquest Central

Provides access to databases across all major subject areas and includes thousands of full-text scholarly journals, trade and professional titles, newspapers, magazines, dissertations, working papers, case studies, and market reports.

SAE Technical Papers

Provides access via the platform, SAE Mobilus to SAE Technical Papers from 1998 onwards, covering topics in the automotive, aerospace and commercial-vehicle industries and providing access to the latest advances in technical solutions, new technologies and innovative research.

Sage Journals

A multidisciplinary database providing access to quality, peer-reviewed journals published by Sage.

Science Direct

The world's leading source for scientific, technical, and medical research. It is a multidisciplinary database, which provides full-text access to more than 16 million references from over 2,500 high-quality journals and over 39,000 books and major reference works. Digital archive dates back to 1823.

SPIE Digital Library

Provides access to conference proceedings and key journals on a range of topics including high power lasers and their applications, sensors and biophotonics.

SpringerLink Journals

A multidisciplinary database providing access to peer-reviewed journals, books, series, protocols, reference works and proceedings published by Springer.

Taylor and Francis Online

A multidisciplinary database providing full-text access to quality, peer-reviewed journals published by Taylor & Francis, Routledge and Psychology Press.

Wiley Online Library

A multidisciplinary database providing access to over 4 million articles from 1,600 journals, online book chapters and eBooks published by Wiley.

Academic Abstracting and Indexing Databases

The databases below are listed in alphabetical order:

Compendex

Compendex covers all areas of engineering and applied science including transportation, optical technology, computers and data processing, electronics and communications, civil, mechanical, materials and automotive engineering as well as narrower subtopics within all these and other major engineering fields. The database indexes over 4,000 engineering journal titles and over 95,000 conference proceedings.

Inspec

Inspec covers the fields of electrical engineering, electronics, physics, control engineering, information technology, communications and computing. The database indexes over 5,000 technical and scientific journal titles and over 70,000 conference proceedings.

Online coverage for both Compendex and Inspec databases is from 1969 to the present and it is updated weekly. You can search both databases individually or at the same time via the Engineering Village interface.

Scopus

Multidisciplinary abstract and citation database of peer-reviewed literature: journals, books and conference proceedings, many with links to full text

Web of Science

A powerful research platform and global citation index including over 161 million records for

books, peer-reviewed scholarly journals, and conference proceedings across 254 disciplines. It includes access to the Arts and Humanities Citation Index (1975 to the present), Science Citation Index Expanded (1970 to the present), Social Sciences Citation Index Expanded (1970 to the present). It also contains citation data e.g. journal impact factors and h-index to help you identify quality research.

You can check if LJMU has access to full-text by clicking on the **Full Text** icon within the database, this will check our other collections and direct you to any available full-text.

[Technical databases](#) provide access to key technical resources.

[British Standards Online](#)

Provides access to British Standards and Eurocodes.

[ASTM Compass](#)

Provides access to the ASTM (American Society for Testing and Materials) standards.

[Statistics, social and business data databases](#) offer statistical evidence and reports including social and economic data.

[Statista](#)

Provides access to statistics, studies and reports on countries, industries and consumer markets. It has global coverage.

[MINTEL](#)

Market intelligence provides an outlook on the consumer landscape this includes data, market research, market analysis, competitive intelligence, and product intelligence: the expert analysts combine these elements to create insight of the market.

[IBIS World](#)

A collection of industry reports organised by Standard Industry Classification (SIC) codes. It covers a broad array of industry sectors. The coverage includes global reports and country specific reports covering UK, Germany, US and Mexico. The reports provide analysis of each industry including industry performance, supply chain, key players, and competitive landscape.

Passport

Provides intelligence on industries, economies, consumers, and companies. Passport is a global market analysis platform that analyses the industry in countries around the world providing cross-country comparison of market sizes, forecasts and market shares.

Fame

Provides financial reports and analysis of private and public limited companies in the UK and Republic of Ireland.

UK Data Service

The UK's largest collection of social, economic and population data resource, including UK census data and government funded surveys as well as qualitative and business data.

Websites

The content of websites is unregulated. Therefore, it is important that you check the quality and accuracy of information on the internet to ensure that it is reliable, accurate and of an academic standard. There are selected websites or search engines that you can use to help find appropriate information online, for example Google Scholar. If you find details for a relevant resource on the internet, you can check if LJMU has full-text access.

Further Help

The Academic Engagement Librarian for Mechanical Engineering is:

Pauline Smith p.smith@ljmu.ac.uk

Please contact her to arrange a one-to-one appointment.

Guide by: Pauline Smith

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