

# Information Sources Guide: Engineering (General)

*This is a basic guide to finding information for Engineering Students.*

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## HOW SHOULD I SEARCH FOR RESOURCES?

The search strategy is the way you search. It pays to spend time thinking about how you will search to ensure you are considering:

- **WHAT** you are looking for and **WHERE** you might find it

### **Step 1: What is it that you need to know?**

**Hint:** Try writing your topic as a sentence – which are the **key** concepts in that sentence? Use dictionaries and encyclopaedias to find other relevant words.

### **Keywords**

These words are your **keywords** or the terms you will use to search the databases.

### **Step 2: Where will you look?**

- Library catalogue
- Journal databases
- Standards & patents
- Internet
- Others?

**Hint:** use this handout for details of what each resource contains and select the most appropriate resource.

### **Step 3: How will you search?**

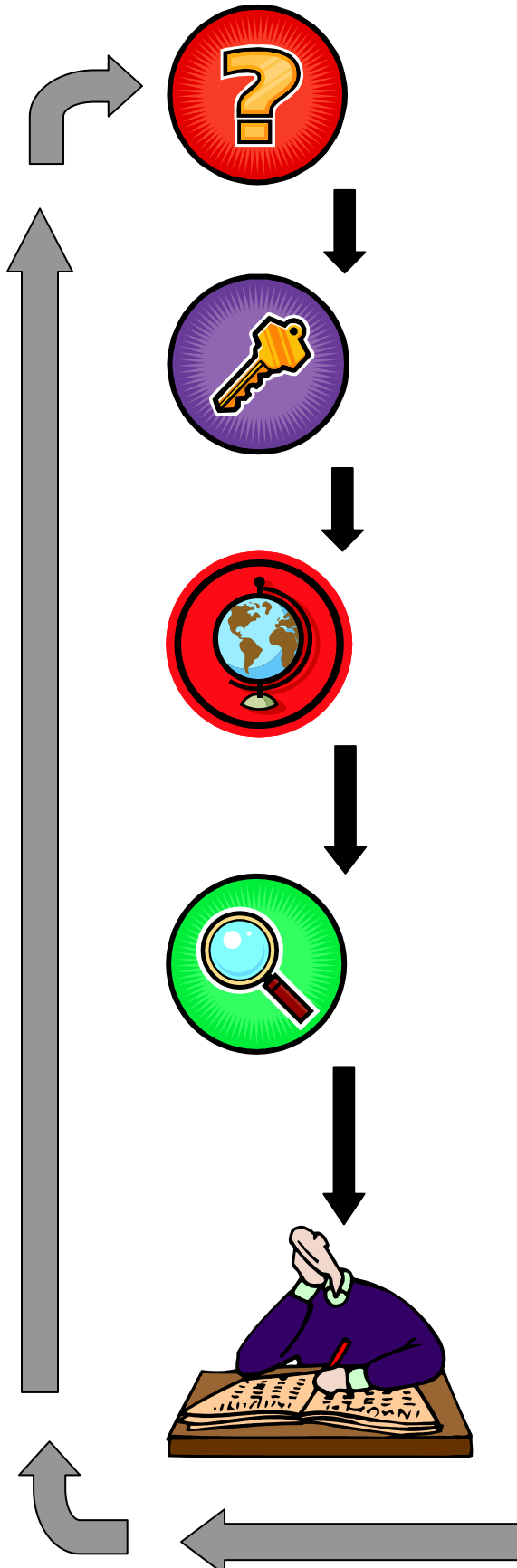
Start with a simple search in one database...are the results any good? Are they:

- **Relevant?** Try other terms
- **Too many?** Refine your search by adding another term with **AND** to reduce the results
- **Too few?** Are there other terms you could try? Try joining them with **OR**.

(For help combining search terms see the table below)

### **Step 4: READ your results**

**Do they answer the question you started out with?**  
If **NOT**, or if there is anything else you need to know.... Go back to **Step 1**



## Some basic bits of search language

<b>Truncation</b>	Used to find variant spelling or plurals, most databases use an asterisk (except the Library catalogue and MetaLib which use a question mark ?). e.g. <b>engin*</b> will find <b>engine, engines, engineer, engineers, engineering</b>
<b>Wildcards</b>	For example a question mark: <b>?</b> : can be used to replace just one term within a search e.g.: <b>wom?n</b> will find <b>women</b> and <b>woman</b> .
<b>Be aware of Americanized spelling</b>	Some databases use American spelling, e.g.: color for colour, organize for organise etc. Most databases have a <b>wildcard</b> to get around this problem. i.e. colo?r or organi?e.
<b>Boolean logic</b>	You can combine your terms with Boolean operators to get better results, e.g. AND, OR and NOT. <ul style="list-style-type: none"> <li>• <b>AND</b>: narrows a search, both terms must appear in the results. Many databases (including web search engines) automatically “AND” your search terms together, unless you state otherwise.</li> <li>• <b>OR</b>: broadens a search, results are included if either word appears.</li> <li>• <b>NOT</b>: excludes terms from the results. Use this sparingly, as you may lose relevant results.</li> </ul>
<b>Brackets</b>	Just as with mathematics you can use brackets in many databases to force the order of a search, ie: <b>(tv OR television) AND digital transmission</b>
<b>Phrases</b>	Searching for a phrase sometimes requires you insert it in “ <b>quotation marks</b> ”.

## WHAT DOES A REFERENCE MEAN?

When you search resources, often you will be given a reference rather than the fulltext. This contains the information you need to be able to find the item in a Library.

Make a note of the Author, Title, and if it is a journal you will also need the Journal Title (sometimes called Source title), volume and page numbers for any of your results you want to find. If in doubt note all the information you are given.

Next, search by the **title, journal title** or source on the Library catalogue. If we do not have the item in stock, you need to submit an Inter-Library Loan.

When you refer to somebody else’s work within your own you should insert a citation, and include full reference details in the bibliography at the end of your work. A reference in the Harvard Referencing format (recommended by most of EDT) is:

### Journals

Surname, I. N. (Year) Title of paper. *Journal title*, Volume(Part), pp.first page-last page.

eg: Smith, J. (2007) Soil compaction in building foundations. *Geotechnique*, 86(3) 152-157

### Books

Surname, I.N. (Year) *Title of book*. City: Publisher.

Smith, I. (2005) *Soil Mechanics* London: Wiley.

For more information on referencing see the Harvard Referencing handout available from your Subject librarian.

## HOW DO I KNOW WHICH RESOURCE TO USE?

As a general rule:

- Books – standard background information on a topic.
- Journals and Conference proceedings– current research, more likely to find very specific topics covered.
- Websites – these should be used with caution, much harder to verify quality with Internet sources.

## HOW DO I EVALUATE THE QUALITY OF A RESOURCE?

Key things to consider include:

- **Who wrote it?** – Is it written by someone well known for writing in this field? Is it published by a reputable publisher? Is it well referenced? Can you follow up sources?
- **Where was it published?** – Is it a book or journal (generally more reliable) or an internet site (anyone can write and publish on the internet). If it is an internet site, is it one you've been recommended? Is it for a reputable organisation?
- **When was it published?** – If it was published some time ago is it still relevant?
- **Why was it published?** – Is it written by someone impartial, or are they writing from a particular viewpoint?

## FINDING RESOURCES IN THE LIBRARY

### *How do I find out what books and journals are in the Library?*

The Library catalogue lists all the books and journals in the Library.

For **books**, the Library catalogue will tell you:

- In which Library a book can be found.
- Where it can be found (the class number).
- Whether it is on loan.
- And, for how long you can borrow it.
- If it is available as an ebook (with a link to the fulltext)

For **journals** the Library catalogue will tell you:

- In which Library a journal is held.
- How many years of a journal the Library holds.
- Whether the journal is available electronically (with a link to the journal).

The Library catalogue can be accessed through the dedicated terminals in the Library or online at: <http://www.brad.ac.uk/Library>.

### **How do I know where on the shelves to look for a book?**

The first thing to do when you find a book on the catalogue is to check which Library it is in (Look under the Copy/Holding Information and Library for each copy), then make a note of the class number, i.e.: L51:62 CRO or U609.2 BRA, this tells you where the book is on the shelf.

For more information about how books are arranged on the shelf either refer to the *Finding books in the Library* handout (available from the Floor 0 enquiry desk), or look at the guiding materials on the shelf ends... if in doubt, please ask!


Once you have found the books you want, you can issue them using the self-issue terminals. We send you an email just before your books are due back, you can renew your books either in person in the Library or online using the Library catalogue

### **Finding journal articles**

The Library catalogue does not index journal *articles*, just journal titles. To find an article use one of the **electronic databases**. For engineers key resources are:

- **Web of Knowledge (SM)** – general periodicals database (from Institute of Scientific Information) which covers science, social science and engineering and allows cross searching with the ISI Proceedings. Coverage 1970-present. Or...
- **Ei Compendex®** – a general engineering database covering over 5,000 engineering journals and conferences. Coverage 1884-present.
- **ProQuest®** – Covers engineering, manufacturing and management etc, but with US bias. Many articles in full text.

### **How do I get hold of the articles I find in the databases?**

- If there is a link called SFX or an SFX button (  ) next to the details of an article, click on it, it will automatically do a search of the Library catalogue for the item.
- If not, try a **Journal title** search on the Library catalogue for the title of the Journal article. Check the holdings for print journals – or follow the link to electronic resources.
- If the journal is not in the Library you can order it through the **Inter-Library Loans** service.

## **HOW DO I FIND HIGH QUALITY INFORMATION ON THE INTERNET?**

The internet is a wonderful source of information. But there are no guarantees about the *quality* or *accuracy* of the information available.

There is a great general tutorial on finding and evaluating information at <http://www.vts.intute.ac.uk/detective/> and a suite of subject specific tutorials at: <http://www.vts.intute.ac.uk>.

## **WHERE DO I FIND INFORMATION ON GOVERNMENT PUBLICATIONS**

The Government doesn't just publish laws. Many Government departments publish reports and papers on engineering topics. Increasingly the Government publish direct to the web. But for

older publications or those you cannot find online UK Official publications are kept in the J B Priestley Library on Floor 2 in the BGP section. Not all items in this collection are listed on the Library catalogue. They are shelved alphabetically by the name of the Department that published them.

If you are a Civil Engineer many Official Publications are indexed in the **Construction Information Service**.

The best way to find resources published by a Government Department is to search **UKOP online** which indexes UK Official Publications from 1980-present. For more information on finding Government Publications go to: <http://www.brad.ac.uk/Library/elecinfo/refoff.php>.

## WHAT ABOUT STANDARDS AND PATENTS?

### **Standards**

Standards contain technical information or precise criteria to be used as rules, guidelines, definitions to ensure materials, products, processes and services are fit for their purpose. British Standards are available in full text online from **British Standards Online®**. More help on international standards is at: <http://www.brad.ac.uk/library/elecinfo/webstan.php>.

### **Patents**

Patents are a way of ensuring you have an exclusive right to commercially exploit an invention for a specified period of time. More info on patents can be found on the Library patents page at: <http://www.brad.ac.uk/Library/elecinfo/patents.php>. The main search tool is called **Esp@cenet** and is available at: <http://gb.espacenet.com> some applications are available in full text. Others you will need to order through Inter-Library Loans.

## WHAT ABOUT THESES & RESEARCH?

The University Library holds work done for higher degrees (MSc, PhD etc.) at the University. Theses from other universities can be obtained by Inter Library Loan. More information on searching for theses can be found at: <http://www.brad.ac.uk/Library/elecinfo/theses.php>.

## WHAT IF I NEED MORE HELP?

If you have a question about the Library, problems accessing resources or would like to be shown how to use a particular resource; the Library staff are here to help you.

There is a general enquiry point on Floor 0. More subject specific enquiries can be directed to the subject desks on Floors 1 and 2. You are also more than welcome to contact your subject Librarian direct:

- Email – [k.carver@bradford.ac.uk](mailto:k.carver@bradford.ac.uk).

If you want to look at other help documentation we have produced it can be found here: <http://www.brad.ac.uk/Library/documents/index.php>

**Please keep this information for reference.**