ECS COMP3200: finding quality information for your final year projects

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This session will help you

• Start thinking about how to approach your research
• Choose the right resources
• Get the best results
• Identify good quality information
• Understand why you must reference, using software if necessary
There’s lots of information out there ..

Which information is best for your project?
Google

blogs

videos

wikis

news items

websites

magazine articles

Subject databases

reports

books

academic journal articles

conference papers

Specialist search engines

eprints

patents

standards

magazine articles

websites

wikis

news items

blogs

videos

reports

books

academic journal articles

conference papers

eprints

patents

standards
Look for good quality, academic sources

• Evaluate the information you find. Consider
  – Who wrote it
  – When was it written?
  – Who published it?
  – Is it free from bias?
The Library Webpages: a great resource!

LibGuides@Southampton

- via Library tab on SUSSED
- library.soton.ac.uk
Subject Guides: finding the right resources …

Go to the ELECTRONIC & COMPUTER SCIENCE Library LibGuide

• http://library.soton.ac.uk/ecs
Use the ECS LibGuide to find:

- Links to key online resources for information in
  - Library Search
  - Journal articles
  - Websites
  - Databases
  - Books and topics

- Search the resources available here at
  http://library.soton.ac.uk/ecs
Engineering: Skills for Success

Assignment Planner

Just got an assignment? Not sure how to start? This Assignment Planner is a step-by-step guide to help you plan, organise and find the resources you need to complete your assignment. You can save your work and return to the planner at any time. Please provide feedback or let us know if you have any questions.

Citing and Referencing

Your department will recommend which citing and referencing style you should use.

Use the Citing and Referencing guide to find out how to reference resources and which referencing style you should be using. There is also guidance on the different types of reference management software available to help you choose the right tool for you.

http://library.soton.ac.uk/fee/ - Skills for Success tab

Academic Skills Hub

The Academic Skills Hub is located on Level 2 in the Hartley Library, room 2045. The drop-in service provides face-to-face support to help you develop any area of study skills where you feel you need help.

Drop in Monday to Friday, 10:00 to 12:00 and 14:00 to 16:00, for guidance and advice about:

- Academic skills
- Critical thinking
- Academic integrity
- Information management
- Presentation skills
- Exam techniques
- Research skills
SCHOLARLY Databases

Key engineering databases incl:
- Engineering Village (Compendex)
- INSPEC
- Web of Science Core Collection
- SCOPUS

• Specialist databases include:
  - British Standards Online
  - Espacenet - Patents
  - ePrints Soton
  - plus many more

- Compendex
  A large and interdisciplinary engineering information database with coverage from 1969.

- INSPEC
  A leading database in the fields of physics, electronics and electrical engineering, computers and control, and information technology. It contains abstracts of articles from over 3000 journals, as well as conference proceedings, books, technical reports and dissertations. Coverage: 1966 to date.

- Web of Science Core Collection
  Provides references, and in many cases abstracts, for peer-reviewed scholarly journal articles in the sciences, social sciences, arts and humanities. Includes the Science Citation Index Expanded (1970-present), Social Sciences Citation Index (1970-present) and Arts & Humanities Citation Index (1975-present). Also provides citation data and references to books and conference papers. Click on the Full Text Finder links to check for full-text.

- ACM Digital Library
  Full text access to the Association of Computing Machinery journals and conferences - this includes all current content and in many cases a full backfile (to the 1950s in some cases).

- IEEE Xplore
  Full text access to all IET and IEEE journals and conferences since 1988 and all current IEEE standards.

- Lecture Notes in Computer Science (LNCS)
  Reports new developments in computer science and information technology research and teaching. Full text available from 1975 - present day. LNCS also includes the sub-series LNAI (in Artificial Intelligence) and LNBNI (in Bio-informatics).

- Scopus
  Scopus is the largest abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings. Delivering a comprehensive overview of the world's research output in the fields of science, technology, medicine, social sciences, and arts and humanities, Scopus features smart tools to track, analyze and visualize research.

- ePrints Soton
  ePrints Soton is the University's institutional Research Repository.
Why databases?

- link to quality, up to date information from peer reviewed publications such as journal articles, conference papers & reports
- are usually well indexed enabling you to search in detail
- contain abstracts summarising the articles retrieved
- often link directly to the full text if it is available electronically
- Includes journals we don’t buy
- Reference citation not full text (often linking features)
SEARCHING Databases: Getting the best results

Can be done in many ways…

• Topic or subject searches
  – keywords or phrases
  – controlled indexing (thesaurus) terms
• Author & title searches
• Citation searching
• plus more
Library Online Training

Go to

– library.soton.ac.uk/online-skills
– Select ‘Search Strategies’
SEARCH TIPS 1: The basics

Start simple – with a few keywords

– Then look at the results – do you need?:
  • more relevance – be more specific
  • more results - broaden your search
  • more manageable numbers – restrict by date or publication
– N.B. aim for about 50-150 results
Quiz

• Go to Kahoot.it and enter the Game PIN
• ECS-Finalyrs: Search Strategy: finding quality resources for your project (1-4)
PLAN your Search Strategy

Identify the main concepts

Development of optical telecommunications with microstructured fibres

– e.g. optical fibres, telecommunications, microstructure
SEARCH TIPS 2: refining your search

- Use Boolean operators to combine search terms
  - AND, OR, NOT

- Use truncation, stemming and wild cards
  - e.g. electron *
  - Symbols vary

- Use exact phrases
  - e.g. graphical user interface

- Enclose exact phrases in quotation marks in some cases
  - Enclose in quotes
  - “black body radiation”
**Boolean searching**

Use

- AND
- OR

... to combine **key** and **alternative** terms to get the best results
Boolean Searching

• **Stand up** if you are wearing anything with the colour **blue** ... 

• This could be our first search term eg Optical fibres
Boolean Searching

... continue standing if you are wearing anything red

• i.e. wearing BOTH blue AND red
• we are narrowing down our search

• This could be our search
• optical fibres AND telecommunications
Boolean Searching

• ... continue standing if you are also wearing anything green

We have used AND to group different concepts together
e.g. optical fibres AND telecommunications AND microstructur*

making it a much more specific search

• All sit down again to ‘clear’ our search history
SEARCH TIPS 3: alternative keywords and concepts

- Use Boolean ‘OR’ to
- search for a GROUP of concepts
  - sweets OR candy
  - AND (sours OR jellies)
Keep **PLANNING** your Search Strategy

- Now think about alternative phrases and keywords i.e. words that have the same or similar meaning
  
  - Optical fibres > fibre optics > fiber optics
  - Telecommunication/s
  - Microstructured > microstructur*

  - E.g. (Optical fibres OR fibre optics OR fiber optics) AND telecommunications AND microstructur*
Search in Compendex 2016
SEARCHING: refining your search

• Re-run your new search with the revised concepts and keywords

• Or narrow your search using the Refine options on the search screen
Advanced searching techniques

- Author search
- Controlled vocabulary (thesaurus searching)
- Citation searching - ‘history’ and ‘future’ of a given research study
- Search history

- Saving searches
- Alerts
Searching by author

- Useful for key authors in a field
- Follow database instructions for input format eg Hanzo L* (very important)
- For common names, limit by address or topic (Hint: ‘search’ for University of Southampton – change to address in index)
Advanced online training
library.soton.ac.uk/online-skills-advanced

Advanced online training: Improve your searching skills
Throughout this course we will show you how to use more advanced library resources and improve your searching skills to support your studies and research.

Advanced searching strategies - getting the best out of databases
Improve your database searching skills by using more advanced options such as thesaurus searching, citation searching, setting up alerts and saving searches.

Subject headings/ Thesaurus searching  Citation Searching  Keeping up to date

Subject Headings: Searching uses a ‘controlled vocabulary’ also known as MeSH Headings (Medical Subject Headings) or Thesaurus Searching, these headings are applied consistently which means that once you have identified the correct thesaurus term you do not need to consider synonyms, different word endings or alternative spellings. Follow our Subject/Thesaurus searching tutorial
Citation Searching - WoS Core Collection & Scopus

Earlier articles    More recent articles

Key paper

Articles referenced in key paper   Articles referencing key paper
Online Resources

Technical information
http://library.soton.ac.uk/techinfo

- Patents
- Standards
  - British Standards Online (BS / some ISO, IEC, etc.)
  - IEEEXplore
- Engineering Sciences Data Unit (ESDU) Engineering methods/data
- NASA
Websites: other online resources

Resources

- Learned societies Full text resources (IEEE, ACM Digital Library, BCS)
- Publishers e-journals and e-books (Springer (LNCS), Knovel, Safari)
- E-print repositories – ePrints soton, Oister

Things to consider

- coverage
- quality of search interface
- availability of full text
- ‘authority’ of the resource
Managing the material AND your time!

• Use search histories to keep a record of the searches done:
  – i.e. the databases searched and which keywords and concepts used/combined
• MARK, EXPORT, RECORD
  – Many databases have a ‘marked record’ facility or similar
  – Add useful articles to a marked/selected records area to …
    • print out or e-mail to yourself a list of these articles
    • export to bibliographic software like EndNote, Bibtex or Mendeley
• Reference consistently and with the system recommended by your Department
• Download relevant material (ensuring you comply with copyright)
**ROUTES to full text material**

- Full text sources such as IEEEXplore, ACM and LNCS
- Via Full Text Finder to check if we have an electronic subscription
- Print material in the Library – check the journal title in Library Search
- Inter Library Loan (ILL) - http://library.soton.ac.uk/ill
RECORD your searches

Why?

• To clarify with supervisor you are ‘on the right track’
• Acting with Academic Integrity
  – acknowledging the work of others
  – enable others to trace your line of research
• Avoid Plagiarism
  “Evidence of plagiarism will result in a mark of 0%”

• Do you know which referencing style you should be using?
More help can be found at …

Library Online Training http://library.soton.ac.uk/online-skills
Recap Quiz

• ECS-Finalyrs: Search Strategy: finding quality resources for your project (5-9)
Get Help…

- Email us: @ libenqs@soton.ac.uk
- Go to your subject pages: library.soton.ac.uk/fee
- Ask at library help desks
- Ask a Librarian: live chat

Chat with us

The library chat service is staffed 10am - 5pm Monday to Friday

You will be asked to log in using your university password. If you don’t have one, you can send your question to libenqs@soton.ac.uk
Setting you on the road to success.
Academic Skills Hub

Information and guidance on:
- Academic integrity
- Exam preparation
- Presentation skills
- Academic writing
- Critical thinking
- Referencing

Drop in at the Hartley Library
No appointments necessary!
Open Mon-Fri
1000-1200 & 1400-1600

Go to: library.soton.ac.uk/sash
YOUR QUESTIONS