Final year project

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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
ALL stand up

• Who ONLY uses Wikipedia, books and Google to find information?

• Who also uses just Google Scholar?

• What else do you use?
Who uses Google?
Search unmanned vehicles

What do you see?
Who uses Google Scholar?

• Type ‘unmanned vehicles’ into search box - demo
What makes a good source?

• A Facebook Page?
• Someone’s Blog?
• A company website?
• A Newspaper Article?
• A scholarly journal paper?
• A magazine?
• A trade journal?
• A talk presented at a conference?
• A wikipedia page?
• An open source pre-print journal paper?
Answer questions on Vevox

- Vevox.app
- Meeting ID 149-912-152
- What makes a good academic source for your assignments/projects?
- Let's see what you think?
What makes a good source? If multiple-words, use a hyphen
Why? What makes one source better than another?

We need sources to be

1. **Authoritive** i.e. reliable and true. Consider
   - Who wrote it
   - When was it written?
   - Who published it?
   - Is it free from bias?

2. **Findable**

Your tutor or reader must be able to follow your reference to find the article or book online or in the library.

It must not have changed since you referenced it!
What are the next steps?

• Use quality academic sources

• Search them well
A great resource!

LibGuides@Southampton
• library.soton.ac.uk

Your Subject Guide
• library.soton.ac.uk/ecs
Key Subject Resources

These are the key databases we recommend that you use, a more complete list is available from our ECS Finding Useful Articles & Databases page. All electronic resources can be accessed off-campus through the Southampton Virtual Environment (SVE).

Full text databases

- ACM Digital Library
  Full text access to the Association of Computing Machinery's 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 active and archival (but not draft) 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 LNCS (in Artificial Intelligence) and LNEI (in Bioinformatics).

Other Databases for more focused and detailed searching:
SCHOLARLY Databases

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

Specialist databases include:
- Lecture Notes in Computer Science
- Electronics & Communications Abstracts
- Computer & Information Systems Abstracts
- ESDU Data

plus many more
Why databases?

Because they

• 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: Get the best results

- Topic or subject searches
  - keywords or phrases
  - controlled indexing (thesaurus) terms
- Author & title searches
- Citation searching
and more
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
SEARCH terms or keywords

Thinking of ‘good’ terms to put in a search engine is a skill!

Think about..

• Keywords
• Synonyms
• Alternative spellings
• Phrases
• Common abbreviations
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”
SEARCH TIPS: using AND and/or OR

• Converse OR Vans

AND

• High top OR Low top

• Disney OR Halloween

Search statement: (converse OR vans) and (High top OR Low top)
SEARCH TIPS 2: keywords and concepts

• Enhancing power allocation efficiency of NOMA aided-MIMO downlink VLC networks

• Identify the main concepts
  – e.g. NOMA, MIMO, VLC, Power allocation

• List alternative phrases and keywords
  – NOMA > non-orthogonal multiple access
  – MIMO > Multiple-Input Multiple-Output
  – VLC > visible light communications
  – Energy efficiency > energy-efficient
  – Power allocation > GRPA OR NGDPA
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
• Search history
• Saving searches
Searching by author

• Useful for key authors in a field
• Follow database instructions for input format eg Al-Hashimi B * (very important)
• For common names, limit by address or topic (Hint: ‘search’ for University of Southampton – change to address in index)
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

• ESDU Data: provides essential design and analysis methods and guides, data and software tools to help solve complex engineering problems

• NASA
Websites: other online resources

<table>
<thead>
<tr>
<th>Resources</th>
<th>Things to consider</th>
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</thead>
<tbody>
<tr>
<td>• Learned societies Full text resources (IEEE, ACM Digital Library, BCS)</td>
<td>• coverage</td>
</tr>
<tr>
<td>• Publishers e-journals and e-books (Springer (LNCS), MIT)</td>
<td>• quality of search interface</td>
</tr>
<tr>
<td>• E-print repositories – ePrints soton, Oister</td>
<td>• availability of full text</td>
</tr>
<tr>
<td></td>
<td>• ‘authority’ of the resource</td>
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</table>
More help can be found at …

Library Online Training [http://library.soton.ac.uk/online-skills](http://library.soton.ac.uk/online-skills)

1. Listen to this online activity
2. Identify **your topic** key words & concepts
3. Think about **your** search strategy
4. Use the ‘help’ tutorials to search the databases

[http://library.soton.ac.uk/tutorials](http://library.soton.ac.uk/tutorials)
FINDING THE FULLTEXT

- Links within the database
- Check University holdings
- Off-campus links
- Check Unpaywall
- Check Google Scholar
- Always use Inter Library Loans rather than pay for access!

- Use WebCat to find out if we take the journal online or in print
- Some older volumes are only available in print
- Search for journal title not article title
- See http://library.soton.ac.uk/ill for more information
- Log in to Library Search to make a request https://librarysearch.soton.ac.uk/
Managing the material AND your time!

MARK, EXPORT, RECORD

• Use search histories to keep a record of the searches done:
  – i.e. the databases searched and which keywords and concepts used/combined
• 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)
It’s important to reference when?

• you paraphrase or summarise the work of others

• you quote another person’s work

• you discuss or analyse the work of others
Paraphrasing and summarising

- Paraphrasing – reading and understanding another person’s work and then conveying the content and meaning in your own words

- Summarising – drawing out the key points or main arguments of the original text, significantly reducing its length
### Example reference list

<table>
<thead>
<tr>
<th>Reference</th>
<th>Further guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bowman, R. and Jenkins, S. (2011) 'Financial and environmental issues and</td>
<td>see Chapters or sections of edited books.</td>
</tr>
<tr>
<td>comparisons in new and old build properties', in Harris, P. (ed.) *Studies on property</td>
<td></td>
</tr>
<tr>
<td>improvements and environmental concerns in modern Britain*. London: Pinbury, pp. 124</td>
<td></td>
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<tr>
<td>–145.</td>
<td></td>
</tr>
<tr>
<td>Department of the Environment (2011) <em>Energy and the environment in Britain today</em>.</td>
<td>see Departmental publications.</td>
</tr>
<tr>
<td>Hallwood, L. (2012) 'The good work of sustainable energy organisations continues', *The</td>
<td>see Newspaper articles.</td>
</tr>
<tr>
<td>Times*, 20 June, pp. 20–21.</td>
<td></td>
</tr>
<tr>
<td>and the nation*. Available at: <a href="http://www.amazon.co.uk/kindle-ebooks">http://www.amazon.co.uk/kindle-ebooks</a> (Downloaded: 8</td>
<td></td>
</tr>
<tr>
<td>September 2012).</td>
<td></td>
</tr>
</tbody>
</table>
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%”
Engineering: Skills for Success

**Dissertation Planner**
Planning your dissertation? Not sure where to start? The Dissertation Planner is a step-by-step guide to help you write a dissertation from starting to think about your question through to final submission. 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.

**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

[http://library.soton.ac.uk/fee/](http://library.soton.ac.uk/fee/) - Skills for Success tab
More help can be found at …

Library Online Training [http://library.soton.ac.uk/online-skills](http://library.soton.ac.uk/online-skills)
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
Get Help…

- Email: libenqs@soton.ac.uk
- Go to your subject pages: library.soton.ac.uk/fee
- Ask at library help desks
- Live chat
Are you able to…

- find the best print and electronic resources including subject databases on the library website

- implement effective techniques for searching these resources

- know how to evaluate the information found

- Identify good quality information

- know why to reference, using software if necessary identify subject resources and key Library services available on LibGuides@Southampton
Why do we use journal articles?

✓ 1. Keeps you up to date with research published in wider world
   0%

2. Good for general out of date information
   0%

3. Can be found easily using Google Scholar
   0%

4. Easy to cut and paste information
   0%
What different terms and concepts would YOU use when searching for information on 'Unmanned vehicles'? (put - between multiple words)
Which referencing styles are used in ECS?

Vote for up to 2 choices

1. Oscola
   0%

2. IEEE Xplore
   0%

3. APA
   0%

4. Harvard
   0%

(% = Percentage of Voters)
How confident are you finding good quality resources/information for your course?

1. Very confident
   0%
2. Confident
   0%
3. Not confident
   0%
COMPLETE COMP3200 Feedback

• How satisfied are you with the content in today's lecture?
• Please provide any further feedback
YOUR QUESTIONS