1. Introduction

1.1. Aims of the Course

The aims of the course are:

- To review the general knowledge of the role of description, classification and indexing in information management, and particular knowledge of how the principles may be applied to information retrieval (IR) systems;
- To provide an ability to apply the theories and principles of information organisation by designing and creating a text-based database using IR systems packages;
- To give an appreciation of the effects of file structure on IR capability;
- To compare and contrast the capabilities of commercial document or IR systems with those of Database Management Systems (DBMS);
- To provide experience in online searching on a range of Web and non-Web based bibliographic and full text databases using general and advanced IR principles.

1.2. Learning Outcomes

On completion students should have acquired a good understanding of:

- Textual information retrieval principles: boolean operators, proximity operators, limit operators, truncation, inverted indexes, keyword versus phrase indexing, controlled vocabulary and thesaurus use versus uncontrolled keyword searching, retrieval command languages, set logic and construction for retrieval purposes.
- Databases of textual records: databases as collections of textual records, categorisation of database types, contrast and comparison with other types of databases, eg relational, electronic record keeping principles.
- Construction and implementation of search strategies: search sequence diagrams, query expansion, broadening and narrowing search results, strategies to avoid information overload.
- Advanced retrieval features: relevance feedback, introduction to weighting and probabilistic retrieval.
- Information retrieval systems for specific information environments: libraries, records management systems, etc.
- Basic design and creation of text-based databases using information retrieval systems: data structures, documentary and management metadata elements and their properties, data entry or conversion requirements, data output techniques.

1.3. Teaching and Learning Strategies

The vehicles for students to achieve the learning outcomes listed above are a mix of lectures, tutorials, problem-based class and laboratory exercises lectures and tutorials.

Lectures are on Mondays from 7-9pm in Quad G025. Attendance is required and you will need to ‘sign-in’ each week.

Tutorials are on Mondays, 6-7pm from Weeks 2 to 14 in Quad Lab 7. Although attendance at the tutorial time is not compulsory (that is, you do not have to ‘sign-in’), it is highly recommended. Assignments (e.g. weekly computer exercises and the Database report) can be done outside of the regular tutorial time slot; however, questions dealing with the exercises and the major assignment will be answered during the tutorials; therefore, students are expected to attend the tutorials to obtain help directly relating to the class assignments.
Computer Laboratories

Students will attending computer laboratories. Various exercises are set up for students to work through the tutorial-hour and later, in their own time. Two of these weekly exercises will be handed in (for assessment) via email attachments; due dates (generally) will be on the Fridays after the Monday tutorials. Students are required to bring their own formatted diskettes, (or USB removable memory ‘sticks’) for saved files or downloaded information.

2. Student Assessment

<table>
<thead>
<tr>
<th>Task</th>
<th>Date Due</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Database design, construction, evaluation and comparison of an information retrieval (IR) system for a specific information environment with that of a relational database management system (DBMS).</td>
<td>Week 10: Tuesday, 10th of May, 5pm</td>
<td>45%</td>
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<tr>
<td>Information Retrieval Lab (selected) exercises: two, each worth 5%.</td>
<td>Submitted on Fridays after the tutorials</td>
<td>10%</td>
</tr>
<tr>
<td>Class participation in discussions</td>
<td>Continuously</td>
<td>5%</td>
</tr>
<tr>
<td>Open book examination</td>
<td>Exam period</td>
<td>40%</td>
</tr>
</tbody>
</table>

2.1. Criteria to Pass this Course

To receive a pass grade in this course, you must meet the following criteria:

- 80% attendance at lectures is required and an attendance sheet must be signed at every lecture. This is a general University policy.
- Two Lab exercises will be selected for assessment.
- Late submission of assignments will incur a penalty of 10 percent of the maximum assessment mark per day. An extension (without penalty) on the time of submission will only be granted under exceptional circumstances by the Lecturer-in-charge. In all cases documented evidence must be provided.
- The database design, construction, evaluation (and comparison) assignment must be submitted as a printed report including a title page and stapled in the top left-hand corner or placed in a binder. The title page should include the subject name, student name, student number, assignment details and the following statement confirming originality of the work.

"I certify that this assignment is my own work in which my sources are acknowledged and which I submit for the first time."

- Students must obtain a Pass (that is 50% or better) in the two major components (worth 45% and 40%) of the course in order to pass the course.

2.2. Major Assignment

The major assignment involves the design, construction, evaluation of an information retrieval (IR) system for a specific information environment using the DB/TextWorks package. A comparison with a relational database management system (DBMS) will also be required.

More detailed information for the database assignment will be given to students by Week 4.

2.3. Examination

There will be a formal 2-hr examination during the examination period.
3. Student Responsibilities

3.1. Class Attendance

The standard university rule applies to class attendance. Namely, you are required to attend at least 80% of classes. If in the event of illness or misadventure, you must provide your lecturer with documentary evidence.

3.2. Assignment Submission

It is your responsibility to adhere to the procedures for submission of assignments otherwise a penalty may apply:

- Late submission of assignments will incur a penalty of 10% of the marks available.
- The major assignment must be submitted by the due date specified and must include a course Cover Page, a title page, contents list, pagination, and stapled in the top left-hand corner. The Cover Page must include the Course name, your full name, student ID, assignment details and your signature below the following statement:

  "I certify that this assignment is my own work in which my sources are acknowledged and which I submit for the first time".

- Students are reminded of the penalties for plagiarism (see below under Misconduct); action will be taken in all cases where plagiarism is suspected.
- An extension of time to complete assignments will only be granted under exceptional circumstances by the Lecturer-in-Charge. In all cases, documented evidence of extenuating circumstances must be provided.

3.3. Style, Citations or Referencing

The preferred citation format for this course is the APA Manual of Style. Information about the APA writing style, and how to cite what you have read and included in your own work (i.e., books, journal articles, or web-pages) can be found at any of the following Web links:

http://www.apastyle.org/elecsourse.html
http://www.lib.usm.edu/%7Einstruct/guides/apa.html
http://www.libs.uga.edu/ref/apastyle.html

The following links on the UNSW Library website will also be useful to you throughout the course:

http://www.library.unsw.edu.au/links/Reference_Tools
http://www.library.unsw.edu.au/links/Research_and_Study_Skills

3.4. Academic Misconduct and Plagiarism

You are reminded that the University regards academic misconduct as a very serious matter. Because of the circumstances in individual cases the period of exclusion can range from one session to permanent exclusion from the University. The following are some of the actions, which have resulted in students being found guilty of academic misconduct:

1. Taking unauthorised materials into an examination;
2. Submitting work for assessment knowing it to be the work of another person;
3. Improperly obtaining prior an examination paper and using it in the examination.

The University regards plagiarism as a form of academic misconduct, and has very strict rules regarding plagiarism. For full information regarding policies, penalties and information to help you avoid plagiarism see: http://www.lc.unsw.edu.au/plagiarism/index.html
Plagiarism is the presentation of the thoughts or work of another as one’s own.* Examples include:

- direct duplication of the thoughts or work of another, including by copying work, or knowingly permitting it to be copied. This includes copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person’s assignment without appropriate acknowledgement;
- paraphrasing another person’s work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and,
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

Submitting an assessment item that has already been submitted for academic credit elsewhere may also be considered plagiarism. The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does not amount to plagiarism.

Students are reminded of their Rights and Responsibilities in respect of plagiarism, as set out in the University Undergraduate and Postgraduate Handbooks, and are encouraged to seek advice from academic staff whenever necessary to ensure they avoid plagiarism in all its forms.

The Learning Centre website is the central University online resource for staff and student information on plagiarism and academic honesty. It can be located at:

www.lc.unsw.edu.au/plagiarism

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle
† Adapted with kind permission from the University of Melbourne.

### 3.5. Responsibility to Keep Informed

It is your responsibility to keep informed about the course. There is a course website (WebCT), for announcements, course materials and for sharing experience using the discussions feature. Occasionally, correspondence of an individual nature is required and e-mail may be sent to your official UNSW e-mail account.

You should also be familiar with the specific policies of the school found on the school website. This is particularly important for students seeking post examination consultations with staff or applications for special consideration.
3.6. **Expected Workload**

Students are expected to invest at least ten hours per week studying this course. This time should be made up of reading, research, working on exercises and problems, performing computer tasks and attending classes. In periods where you need to complete assignments or prepare for examinations the workload may be greater.

Over commitment has been a cause of failure for many students. You should take the required workload into account when planning how to balance study with employment and other activities.

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4. **Student Support**

4.1. **Education Development Unit**

Additional learning support, tailored to the needs of FCE students, is available from the Education Development Unit (EDU) in the Faculty. The EDU offers a range of services for FCE students including:

- Academic skills workshops run throughout the session;
- Printed and on-line study skills resources e.g. referencing guide, report writing and exam preparation;
- A drop-in resource centre containing books and audio visual material that can be borrowed;
- A limited consultation service for students with individual or small group learning needs.

More information about the EDU services including on-line resources, workshop details and consultation request forms are available from the EDU website. EDU services are free and confidential and are available to students of the Faculty of Commerce and Economics. EDU contacts and location are:

EDU Web: [http://education.fce.unsw.edu.au](http://education.fce.unsw.edu.au)

EDU Location: Room 2039, Level 2 Quadrangle Building

4.2. **Other UNSW support**

In addition to the EDU services, the UNSW Learning Centre provides academic skills support services for students. The Learning Centre is located on Level 2 of the Library and can be contacted by Phone: 9385 3890 or through their website: [http://www.lc.unsw.edu.au/](http://www.lc.unsw.edu.au/). Students experiencing problems of an academic or personal nature are encouraged to contact the Counselling Service at UNSW. This service is free and confidential and run by professional counsellors. The Counselling Service is located on Level 2, Quadrangle East Wing, and can be contact on 9385 5418.

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5. **Course Staff**

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<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Room</th>
<th>E-Mail</th>
<th>Telephone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturer In Charge</td>
<td>Dr Fletcher Cole</td>
<td>Quadrangle Building, Rm 2110</td>
<td><a href="mailto:f.cole@unsw.edu.au">f.cole@unsw.edu.au</a></td>
<td>(02) 9385 7124</td>
</tr>
<tr>
<td>Tutor</td>
<td>Jo Orsatti</td>
<td></td>
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</tbody>
</table>

5.1. **Consultation**

Tuesdays 4.30-5.30pm. Other times by appointment.
Some enquiries can be handled by e-mail. However, when sending an e-mail identify yourself fully (name & student ID), preferably using your UNSW address. For your own security, do not use Hotmail, Yahoo, Google and other similar services. Any official notifications will be sent to your UNSW e-mailbox, so check this regularly, or ensure that messages are forwarded from there to your preferred e-mail address.

**Email contacts and usage**

It is school policy to only respond to e-mail messages that are clearly identifiable as having originated from legitimate accounts. Legitimate e-mail accounts are:

- A UNSW student account
- An identifiable employer-provided account
- An identifiable ISP account (Bigpond, Ozemail, etc)

All students and staff are expected to use email responsibly and respectfully.

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### 6. Resources

#### 6.1. Texts

There is no one single text for this course. Lists of recommended reading materials will be handed out in class. The following are particularly useful:


#### 6.2. IT Resource Handbook

UNSW Faculty of Commerce & Economics, *Student IT Resource Handbook*. Available from the SISTM or FCE Technical Support Group office.

#### 6.3. Prizes and Scholarships

There are significant prizes and scholarships associated with courses in the Information Management specialization. See separate handout.
### 7. Course Schedule

Subject to change, according to class requirements. Changes will be notified in class.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Tutorial/Lab</th>
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<tbody>
<tr>
<td>1 27 Feb</td>
<td>Introduction and overview of IR Systems</td>
<td>Lab familiarization; Reflective searching exercise</td>
</tr>
<tr>
<td>2 6 March</td>
<td>Introduction to searching techniques; Keyword and concept searching; Boolean logic; Inverted files; Dialog; Dialog command syntax</td>
<td>Review of search exercise; Intro to Dialog</td>
</tr>
<tr>
<td>3 13 March</td>
<td>Structure of IR System records; Field searching – fields; Electronic information sources; Databases (types: bibliographic, statistical, full text, newspapers, etc.)</td>
<td>Dialog search exercise; Inverted Index exercise</td>
</tr>
<tr>
<td>4 20 March</td>
<td>Controlled vocabulary: Thesauri and Descriptor field; Free text searching; Phrase versus keyword searching.</td>
<td>Dialog exercises using controlled vocabulary fields</td>
</tr>
<tr>
<td>6 3 April</td>
<td>DB/TextWorks – database design and construction; Reports and screen designs. Advanced searching techniques including proximity operators, etc.</td>
<td>DB/TextWorks searching</td>
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<tr>
<td>7 10 April</td>
<td>DB/TextWorks: Advanced (optional) features including images, semi-relational capability; Contrast between DB/TextWorks and Microsoft Access</td>
<td>DB/TextWorks DB creation; reports and screen designs</td>
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<tr>
<td>RETEACH WEEK</td>
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<tr>
<td>8 24 April</td>
<td>The Internet – Search engines and searching techniques on the Internet vis-à-vis other IR systems such as Dialog</td>
<td>Microsoft Access database</td>
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<tr>
<td>9 1 May</td>
<td>Citation indexing; Structure of a citation index.</td>
<td>Search exercise using various Internet search engines</td>
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<tr>
<td>10 8 May</td>
<td>Citation indexing continued. Statistical and ranking features in Dialog.</td>
<td>Web of Science exercise</td>
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<tr>
<td>11 15 May</td>
<td>Advanced features including Dialog Target and Rank features; Internet relevance feedback.</td>
<td>Citation searching, ranking, etc</td>
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<tr>
<td>12 22 May</td>
<td>Further advanced features of IR systems; Evaluation of IR systems: Recall and Precision</td>
<td>Target vs advanced search engine searching</td>
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<tr>
<td>13 29 May</td>
<td>Current and future research in IR</td>
<td>Further advanced IR</td>
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<tr>
<td>14 5 June</td>
<td>Course review / Evaluation Exam revision and answers to FAQ</td>
<td>Research database exercise</td>
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