

Course Syllabus

1. *Course number and name*

COSC 4315 Information and Knowledge Management

2. *Credits and contact hours*

3 Credit Hours

3. *Instructor's or course coordinator's name*

Instructor: Leonard Brown

4. *Textbook, title, author, and year*

None

5. *Specific course information*

a. *A brief description of the content of the course (catalog description)*

An introduction to information retrieval and knowledge management focusing on the search, indexing, retrieval, and management of unstructured data.

b. *Prerequisites or co-requisites*

COSC 1337

c. *Indicate whether a required, elective, or selected elective course in the program*

Required course for Computer Science

6. *Specific goals of the course*

a. *Specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.*

1. Discuss information management as a unifying theme regarding a range of topics within computer science including database systems and artificial intelligence.
2. Compare and contrast data, information, and knowledge.
3. Apply the basic principles of information retrieval in the design and implementation of different applications.
4. Compare and contrast the strengths and weaknesses of various application areas in data management, such as information retrieval and data management.

5. Describe the different business and other imperatives (including legal and ethical) that influence the development of information systems including the requirements of remote access.
6. Select and apply intelligent searching techniques to collections of data across different computing environments.
7. Evaluate knowledge representation and reasoning techniques.
8. Discuss fundamental issues in intelligent systems & their use in data management.

- b. *Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course*

Course address Student Outcome(s): [a, b, c, g:5, h, i, j:3, k]

7. *Brief list of topics to be covered*

- Information models and systems
- Information Retrieval
- Database systems
- Unstructured data modeling
- Search and constraint satisfaction of unstructured data
- Knowledge representation and reasoning
- Fundamental issues in intelligent systems
- Multimedia and Web Information Retrieval

COSC 4315 Information and Knowledge Management – Spring 2026

General Information

Instructor	Leonard Brown
Office Location	Soules 315.01
Office Hours	T/Th 2pm – 5pm, W 1pm-5pm (or by appointment)
Phone	(903) 566-7403
Email	lbrown@uttyler.edu
Class Time/Location	Online

Exams: There will be two midterm exams and one final exam given for this class. All exams will be held in the class lecture room. The midterm exams will be during the regular class time. The *tentative* dates of the exams are:

Exam I	March 6, 2026
Exam II	April 17, 2026
Final Exam	April 27, 2026

You will be notified in advance of any change in the above dates.

Grading: There are several components to the course grade totaling 1000 points. The point distribution is as follows:

Exam I	150 points
Exam II	150 points
Homework Assignments/Quizzes	400 points
Final Examination	300 points

Course grades will be assigned based on the following scale.

900-1000	A
800-899	B
700-799	C
600-699	D
599 and below	F

Late Policies: All homework assignments are due at 11:59 p.m. on the date specified in the assignment. Assignments submitted after the due date (even if it is by one minute) are considered late. There is a 10% penalty for assignments submitted late. Assignments will not be accepted after 48 hours.

Plagiarism: Unless otherwise specified, all work submitted for a grade must be completed by yourself. You are not to submit another person's work and claim it as

your own. Plagiarism will result in disciplinary actions. To spare yourself accusations of plagiarism-

1. Do not show another student a copy of your work before it has been graded. The penalties for permitting your work to be copied are the same as the penalties for copying someone else's work.
2. Do not leave printouts of your work where other students may pick them up.

Additional Policies:

<https://www.uttyler.edu/policies.php>

Academic Calendar:

<https://www.uttyler.edu/academics/academic-calendar-25-26/>

Final Exam Schedule:

<https://www.uttyler.edu/academics/academic-calendar-25-26/final-exam-schedule.php>