COMP 4601A (Winter 2026)
Intelligent Web-based Information Systems

Instructor: Ava McKenney

Email: avamckenney@cunet.carleton.ca

Office Location: HP 5171

Best Ways to be in Touch: In class, Discord, or during office hours

Teaching Assistants: A list of teaching assistants, their contact information, and office hours information will be posted on the course Brightspace page.

Class Location: Please check Carleton Central for the room location.

Lecture/Lab Times: Wednesdays 11:35am-1:25pm

Course Website: https://brightspace.carleton.ca/

Course Calendar Description

Introduction to the creation, delivery and analysis of multimedia content in systems with mobile devices. Topics include analysis of webs of documents, social network analysis, recommender systems and problems of trust, reputation and influence in mobile e-commerce systems.

Prerequisite(s): (COMP 2404 or SYSC 3010 or SYSC 3110) and (COMP 2406 or COMP 2601 or SYSC 4504).

Learning Material(s) and Other Course/Lab-Related Resources

Students are not required to purchase textbooks or other learning materials for this course. All readings and resources will be from freely available online resources. You will need a computer to complete the course work but the operating system and programming language you use is up to you. We will be using the SCS OpenStack resources to deploy lab and assignment implementations.

Topics Covered

Week	Topics
Week #1, January 5th-10th	Course Introduction, Review of pre-requisite material from COMP 2406 (web apps, HTTP, client-server architecture, etc.)
Week #2, January 11th-17th	Representational State Transfer (REST)
Week #3, January 18th-24th	Web Crawling
Week #4, January 25th-31st	Web Scraping
Week #5, February 1st-7th	Indexing and Search
Week #6, February 8th-14th	PageRank
Week #7, February 15th-21st	Winter Break (no classes, etc.)
Week #8, February 22nd-28th	User-based Recommender Systems, **Assignment #1 Due (Distributed Search Engine)**
Week #9, March 1st-7th	Item-based Recommender Systems
Week #10, March 8th-14th	Evaluating Recommender Systems
Week #11, March 15th-21st	Sparsity and the Cold Start Problem
Week #12, March 22nd-28th	Attacks on Recommender Systems
Week #13, March 29th-April 4th	Trust-Aware Recommender Systems **Assignment #2 Due (Recommender System Analysis)**

Assessment Scheme

Grade Breakdown

COMPONENT	GRADE VALUE	DATE
Labs	10 x 2% each	Assigned weekly (approximately)
Assignment #1	20%	Due Friday, February 27th, 11:59pm
Assignment #2	20%	Due Friday, April 3rd, 11:59pm
Final Exam	40%	In-Person, scheduled by Exam Services

Please note that the exam in this course may use a remote proctoring service provided by Scheduling and Examination Services (CoMaS). You can find more information at https://carleton.ca/ses/e-proctoring/.

The final exam will be in-person, closed book, and must be completed individually. The labs and the assignments for the course can be completed individually or as a team of two students. To submit as a team of two, you must inform the professor that you will be working as a team. See the course Brightspace for details.

Late and Missed Work Policies

Late Work

A 48-hour grace period will be allowed for each lab and assignment. You may submit your lab/assignment solutions any time within this 48-hour window without penalty. Beyond this grace period, no further extensions will be possible for any reason. Technical problems do not exempt you from this requirement, so if you wait until the last minute and then have issues with your computer or internet connection, you will still receive a mark of zero.

Missed Work

No accommodations will be made for missed work.

Chat GPT/Generative AI Usage

It is recommended that students complete the labs and assignments without the use of generative AI or similar tools. However, use of these tools is permitted for the labs and assignments, if desired. You will be expected to understand and explain the algorithms and implementations we cover throughout the course on the exam. No such tools will be allowed for the exam.

Academic Integrity

Students are expected to uphold the values of academic integrity, which include fairness, honesty, trust, and responsibility. Examples of actions that compromise these values include but are not limited to plagiarism, accessing unauthorized sites for assignments or tests, unauthorized collaboration on assignments or exams, and using artificial intelligence tools such as ChatGPT when your assessment instructions say it is not permitted.

If you are unsure of the expectations regarding academic Integrity (how to use and cite references, if unauthorized collaboration with lab- or classmates is permitted (and, if so, to what degree), then you must ask your instructor. Sharing assignment or quiz specifications or posting them online (to sites like Chegg, CourseHero, OneClass, etc.) is ALWAYS considered academic misconduct. You are NEVER permitted to post, share, or upload course materials without explicit permission from your instructor. Academic integrity offences are reported to the office of the Dean of Science. Information, process and penalties for such offences can be found on the ODS webpage: https://science.carleton.ca/students/academic-integrity/.

Misconduct in scholarly activity will not be tolerated and will result in consequences as outlined in Carleton University's Academic Integrity Policy. A list of standard sanctions in the Faculty of Science can be found here.

Additional details about this process can be found on the Faculty of Science Academic Integrity website.

Students are expected to familiarize themselves with and abide by Carleton University's Academic Integrity Policy.

School of Computer Science Laptop Requirement

Every student that has been enrolled in a 1000-level (i.e., first year) course offered is required to have a laptop. This includes COMP1001, COMP1005, and COMP1006. For more information, please visit https://carleton.ca/scs/scs-laptop-requirement/ and then review the requirements at https://carleton.ca/scs/scs-laptop-requirement/laptop-specs/.

Undergraduate Academic Advisors

The Undergraduate Advisors for the School of Computer Science are available in Room 5302HP; or by email at scs.ug.advisor@cunet.carleton.ca. The undergraduate advisors can assist with information about prerequisites and preclusions, course substitutions/equivalencies, understanding your academic audit and the remaining requirements for graduation. The undergraduate advisors will also refer students to appropriate resources such as the Science Student Success Centre, Learning Support Services and Writing Tutorial Services.

SCS Computer Laboratory

Students taking a COMP course can access the SCS computer labs. The lab schedule and location can be found at: https://carleton.ca/scs/tech-support/computer-laboratories/. All SCS computer lab and technical support information can be found at: https://carleton.ca/scs/tech-support/. Technical support staff may be contacted in-person or virtually, see this page for details: https://carleton.ca/scs/tech-support/contact-it-support/.

Mental Health and Wellness

The Carleton Wellness Website is a useful resource for any students who may be struggling.

Academic Accommodations and Regulations

Academic Accommodation

Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes are outlined on the Academic Accommodations website (https://students.carleton.ca/course-outline/).

Student Rights & Responsibilities

Students are expected to act responsibly and engage respectfully with other students and members of the Carleton and the broader community. See the 7 Rights and Responsibilities Policy for details regarding the expectations of non-academic behaviour of students. Those who participate with another student in the commission of an infraction of this Policy will also be held liable for their actions.

Student Concerns

If you have any concerns regarding this course, your first point of contact is me. Please email me or visit during my student hours, and I will do my best to address your concerns. If I cannot resolve the issue, the next point of contact is the School of Computer Science at studentconcerns@scs.carleton.ca. If the concern remains unresolved, the final point of

contact is the Office of the Dean of Science at ODScience@carleton.ca. Please follow this order of contact. **Note:** You can also bring your concerns to Ombuds services.