

# COURSE SYLLABUS



COURSE TITLE: ICS212 Database Systems Management  
CLASS SECTION: X03A, X03B  
TERM: Fall 2022  
COURSE CREDITS: 3  
DELIVERY METHOD(S): Face-to-face

Camosun College campuses are located on the traditional territories of the Ləkʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here. Learn more about Camosun's [Territorial Acknowledgement](#).

For COVID-19 information please visit <https://legacy.camosun.ca/covid19/index.html>.

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*Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.*

## INSTRUCTOR DETAILS

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NAME: Brandon Devnich  
EMAIL: devnichb@camosun.bc.ca  
OFFICE: TEC 170  
HOURS: By appointment in person or via Collaborate

*As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.*

## CALENDAR DESCRIPTION

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Students will expand their knowledge in website building by adding dynamic and interactive components. Through applied activities, students will be introduced to how client-side scripts interact with server-side programs and back-end concepts and tools for end-to-end (e.g., full-stack) web development.

PREREQUISITE(S): C in COMP 139, or ICS 124, or COMP 146  
and  
C in COMP 144, or ICS 120  
and  
C in ENGR 155, or ICS 125  
CO-REQUISITE(S): -  
EXCLUSION(S): -

## COURSE LEARNING OUTCOMES / OBJECTIVES

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Learn how to design and manage database systems. You will be introduced to advanced database system concepts including the issues of design, setup and data manipulation.

The course lectures will provide the students with foundational database administrative theory. The weekly three-hour lab will provide the student with opportunities to put these concepts into practice within a real-world environment based on the Oracle XE and MongoDB. Lab assignments will include programming assignments, database management, troubleshooting and architecture activities. A midterm and final exam will be scheduled as will bi-weekly quizzes.

## REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

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- Materials on the D2L course page: presentation slides for lectures, lab assignment instructions for labs, etc. see <https://online.camosun.ca/d2l/home/236045>
- Required Textbooks:
  - Beginning Oracle Database 12c Administration: From Novice to Professional, 2nd ed.
    - Edition by Ignatius Fernandez.
    - ISBN: 978-1484201947
  - The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling, 3rd Edition
    - by Ralph Kimball and Margy Ross.
    - ISBN: 978-1118530801.
  - The Data Warehouse Lifecycle Toolkit, Second Edition
    - by Ralph Kimball and Margy Ross.
    - ISBN: 978-0470149775.
- Recommended Hardware
  - This course assigns labs on a weekly basis that will enable students to gain practical experience using the Oracle DBMS and the MongoDB NoSQL database. As a result, it is recommended that students have access to computers capable of running these systems. The recommended computer is a Windows 10 desktop or laptop with 8GB of RAM and 12GB of free disk space. As an alternative, students may also access lab computers remotely that have these systems preinstalled.

## COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

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The course will meet once a week over a 14-week semester. Each week will consist of a two-hour lecture and one three-hour lab. Additional time over and above the allotted lab time may be required to complete lab assignments.

Lectures will be delivered in-person at regular times. Recordings of lectures may be made available. Supplemental material including study aids will be made available on a weekly basis within D2L.

Labs will be assigned and completed each week with the exception of the week of the midterm (week 7) and those weeks that include holiday that falls on lab day (weeks 4 & 10).

The instructor will be available during the regularly scheduled lab time either in person. Priority assistance is given to those students who physically attend the lab block, however you are permitted to work on the labs from home and email the instructor with questions.

Please see lecture and lab schedule at <http://my.camosun.ca> for detailed information about class hours and locations. Please consult the calendar tool in D2L frequently for any updates.

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

Week	Start	Topics	Labs
1	Sept 5	Course Outline Introduction to DBMS, SQL, PL/SQL, and Triggers	Lab 1 – Introduction to Oracle
2	Sept 12	Oracle Architecture Planning Physical Design	Quiz 1 Lab 2 – Trigger, Functions, Procedure
3	Sept 19	Physical Design User Management Data Loading	Lab 3 – Planning and Data Import/Export
4	Sept 26	Taking Control Monitoring Fixing Problems	Quiz 2 No Lab
5	Oct 3	Backups Recovery Big Picture & SOPS	Lab 4 – User Management
6	Oct 10	Introduction to Data Warehouse Lifecycle Dimensional Modeling	Quiz 3 Lab 5 – ImpExpDP, DBA and Data Dictionary
7	Oct 17	Midterm Exam	No Lab
8	Oct 24	Dimensional Modeling Creating Dimensional Model Case Study	Lab 6 – RMAN, SOP & Explain
9	Oct 31	Extract, Transform, and Load Overview Transformation PL/SQL	Lab 7 – Star Schema
10	Nov 7	SQL Functions Oracle Summaries Data Mining	Quiz 4 No Lab
11	Nov 14	NoSQL Intro MongoDB Introduction Mongo DB Basic Commands	Lab 8 – Extract, Transform & Load (Part 1)
12	Nov 21	MongoDB Basic Commands MongoDB Arrays MongoDB Indexes Projection	Quiz 4 Lab 9 – Extract, Transform & Load (Part 2)
13	Nov 28	MongoDB Aggregation MongoDB Schema Design Guidelines MongoDB Security MongoDB Utilities	Lab 10 – MongoDB Install + Database Creation
14	Dec 5	Review	

Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced noticed is required. Deadlines can be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

## EVALUATION OF LEARNING

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DESCRIPTION	WEIGHTING
<b>Lab Assignments</b> Must achieve a 55% minimum on 8 of the 10 labs.	30%
<b>Quizzes</b> 5 quizzes, roughly every other week, online – two chances per quiz.	10%
<b>Midterm Exam</b> Closed book	10%
<b>Final Exam</b> Theoretical worth 50%, Practical worth 20%, and Essays worth 30%	50%
If you have a concern about a grade that you have received for an evaluation, please see instructor as soon as possible. Refer to the <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf">Grade Review and Appeals</a> policy for more information. <a href="http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf">http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf</a>	<b>TOTAL</b> 100%

## COURSE GUIDELINES & EXPECTATIONS

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Late assignments and/or labs will not be accepted, except by the instructor's prior written permission or in the presence of a dire and documented short-term medical or family emergency. Student must complete **all** labs.

Students must achieve

- a minimum 55% on the final exam, and
- a minimum 55% on 8 of 10 labs

to pass the course.

Must achieve a C (60%) in the course to use as a pre-requisite.

## SCHOOL OR DEPARTMENTAL INFORMATION

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Supplemental department policies:

Grade review: You have 7 days after marks are posted to review with your instructor.

Academic Integrity Violations:

- 1st violation: minus the weight of the deliverable and a note on your departmental file.
- 2nd violation: F in the course

- 3rd violation: Student Conduct Policy E-2.5 is applied

Missed Examinations/Quizzes: If a student misses a quiz, project or an exam, a mark of zero will be assigned unless there are extenuating circumstances. You must provide a note from a medical practitioner (Doctor, Nurse, Psychologist, Counsellor, etc.) In such cases, the proportion of grade assigned to the missed quiz or exam will be added to the proportion assigned to the final exam.

Electronic Devices: The school’s policy regarding electronic devices is that any student who has a cell phone or other unauthorized electronic device (ie. ipad, laptop, playbook, etc.) on their person or around their desk during a closed-book exam will be guilty of cheating and will receive a grade of “F” for the course.

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## STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

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## SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit <http://camosun.ca/students/>.

Support Service	Website
Academic Advising	<a href="http://camosun.ca/advising">http://camosun.ca/advising</a>
Accessible Learning	<a href="http://camosun.ca/accessible-learning">http://camosun.ca/accessible-learning</a>
Counselling	<a href="http://camosun.ca/counselling">http://camosun.ca/counselling</a>
Career Services	<a href="http://camosun.ca/coop">http://camosun.ca/coop</a>
Financial Aid and Awards	<a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>
Help Centres (Math/English/Science)	<a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>
Indigenous Student Support	<a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>
International Student Support	<a href="http://camosun.ca/international/">http://camosun.ca/international/</a>
Learning Skills	<a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>
Library	<a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a>
Office of Student Support	<a href="http://camosun.ca/oss">http://camosun.ca/oss</a>
Ombudsperson	<a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>
Registration	<a href="http://camosun.ca/registration">http://camosun.ca/registration</a>

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Support Service	Website
Technology Support	<a href="http://camosun.ca/its">http://camosun.ca/its</a>
Writing Centre	<a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</a>

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If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

## COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

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### Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](#) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started:

<http://camosun.ca/services/accessible-learning/>

### Academic Integrity

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf> for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

### Academic Progress

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf> for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

### Course Withdrawals Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <http://camosun.ca/learn/fees/#deadlines>.

### Grading Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf> for further details about grading.

### Grade Review and Appeals

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

### Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the “Attendance” section under “Registration Policies and Procedures”

(<http://camosun.ca/learn/calendar/current/procedures.html>) and the Grading Policy at <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>.

### Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf> to learn more about the process involved in a medical/compassionate withdrawal.

### Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun’s Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student’s right to choose what is right for them. For more information see Camosun’s Sexualized Violence and Misconduct Policy: <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf> and [camosun.ca/sexual-violence](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto:oss@camosun.ca) or by phone: 250-370-3046 or 250-3703841

### Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College’s Student Misconduct Policy at <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf> to understand the College’s expectations of academic integrity and student behavioural conduct.

**Changes to this Syllabus:** Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.