\*Delete the content on this page after finalizing the course outline information.\*

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Accessibility

Use Word’s built-in [Accessibility Checker](https://support.microsoft.com/en-us/office/improve-accessibility-with-the-accessibility-checker-a16f6de0-2f39-4a2b-8bd8-5ad801426c7f#PickTab=Windows) and review [CLPE’s Accessible Word Documents](https://rrcca.sharepoint.com/sites/SF-teaching-essentials/SitePages/Accessible%20Word%20Documents.aspx), to assist in determining if your course outline is accessible. Note: this will not guarantee accessibility to all, and your course outline may require further reformatting or alternate formats to support all students.

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Document Title

Intro Paragraph

Body Copy

Heading 1

## Heading 2

Subhead 1

Subhead 2

1. List 1

• List 2 – Sub List

Table Heading

Link text

Asterisk, caption or foote

Red River College Polytechnic campuses are located on the lands of Anishinaabe, Ininiwak, Anishininew, Dakota, and Dené, and the National Homeland of the Red River Métis.

Course Outline

Course Information

**Course Code and Title:** DBMS-2006 Database Management Systems 2

**Course Section:** All Sections

**Department/Program:** Applied Computer Education/Business Information Technology

**Total Hours:** 80

**Credit Hours:** 5

## Course Description:

This course is an extension to the Introduction to Database Management Systems 1 course. The course covers importing/exporting data, automating maintenance tasks, creating basic reports, performing advanced object creation, securing data, migrating on-premise databases to the cloud, and deploying a database locally using containerization. Students will write T-SQL (Transact-SQL) statements and configure development and production environments and/or MS SQL Server tools. Students will also design, test, and debug stored procedures, functions, and triggers while demonstrating effective use of exception handling.

## Recognition of Prior Learning (RPL):

RPL is a process in which students have the opportunity to obtain credit for College-level knowledge and skills gained outside the classroom and/or through other educational programs. It is a process that documents and compares a student’s prior learning gained from education, work and life experience to the learning outcomes in College courses/programs. For more information about RPL at RRC Polytech, refer to the RPL website at [rrc.ca/RPLservices](http://www.rrc.ca/RPLservices) or [A14 - RPL Policy](https://www.rrc.ca/legal/policies/recognition-of-prior-learning/).

For general information and assistance with RPL, contact RRC Polytech’s RPL Advisor at 204.632.3094 or [rpladvisor@rrc.ca](mailto:rpladvisor@rrc.ca).

## Accessibility Statement:

RRC Polytech is committed to providing persons with documented disabilities fair and equal access to educational programs, services and facilities. If you are a student with a disability\* and require reasonable accommodations, you must connect with Student Accessibility Services (SAS) who will assist in developing and implementing your accommodation plan. Refer to the [Student Accessibility Services webpage](https://www.rrc.ca/accessibility/) for information about SAS locations and how to [book an appointment](https://hub.rrc.ca/Forms/Start/AccessibilityRequest?_ga=2.209090074.987068331.1650400536-653561319.1650400536). Students with disabilities are also encouraged to have a private discussion with their instructor(s) to facilitate greater understanding of their learning needs.

\*RRC Polytech’s definition of “disability” is consistent with the Manitoba Human Rights Code. In the educational setting, “disability” refers to a permanent or temporary medical, physical, sensory, mental health (e.g., anxiety, depression), learning, or neurological (e.g., ADHD, Autism Spectrum Disorder) condition that interferes with a student’s ability to fully participate in their studies and/or other associated activities.

## Academic Integrity:

Academic Integrity means acting with the values of honesty, trust, respect, responsibility, fairness and courage in learning, teaching and research to ensure that the credentials granted by RRC Polytech accurately represent demonstrated knowledge, skills and abilities. All members of the RRC Polytech community are expected to demonstrate these values through RRC Polytech learning activities, relationships and commitments. Clear expectations will be communicated to students to promote positive academic practices in compliance with RRC Polytech’s [Academic Integrity policy](https://www.rrc.ca/legal/policies/academic-integrity/). Contact [academicintegrity@rrc.ca](mailto:academicintegrity@rrc.ca) for additional information.

## Academic Requisites:

DBMS-1002 Database Management Systems

## Course Delivery Methods:

This course will be delivered through a combination of in person lectures/demonstrations and online.

The following communication tools will be used in this course:

Email (Learn)

Course News Feed (LEARN)

Scheduled and unscheduled chats

Teleconference Calls and Lectures (Microsoft Teams)

Course format:

This course follows a step-by-step approach to present content to students. Students will be completing challenges and projects to reinforce concepts learned through lectures.

## Effective Date:

January 2, 2024

Instructor Information

**Instructor’s name:** Various

**Email:** [Email here]

**Office phone:** [Office phone here]

**Office location:** [Office location]

**Office hours:** [Office hours]

[Delete this text and add information for TA if required]

Student Readiness

## Technology and Equipment Readiness:

Computer – meeting minimum program hardware and software requirements, internet, web camera, microphone, and headset.

## Student Commitments and Contact Times:

5 hours scheduled weekday attendance per week. Some classes are in person and some are online.

Students are expected to commit time outside of regularly scheduled classes to work on their challenges and projects.

Students in this course are expected to regularly check their academic email account or ensure it is forwarded to another checked account.

Instructors will notify students at the beginning of the term of any course specific communication methods.

## Course Resources:

All course resources will be supplied in the LEARN Course Management System.

References:

[SQL Authority with Pinal Dave - SQL Server Performance Tuning Expert](https://blog.sqlauthority.com/)

Student Learning

## Learning Outcomes and Elements of Performance:

By the end of this course of study, you should be able to...

1. Design, develop, and implement a Relational Database adhering to Normalization best practice.
2. Demonstrate effective use of SQL Server Management Studio and Mongo Compass (or DBeaver) to query and interact with SQL Server and MongoDB.
3. Import/Export data in multiple formats into/out of MS SQL Server.
4. Demonstrate effective use of database objects, including Stored Procedures, Functions, and Triggers.
5. Install and configure different environments and/or tools of MS SQL Server including SQL Server Integration and Reporting Services.
6. Automate maintenance tasks by scheduling SQL scripts to run.
7. Compare and contrast Relational Databases to noSQL document databases.
8. Maintain database security with TSQL
9. Compare and contrast different Transaction Isolation levels: Committed/Uncommitted Reads

## Instructional Schedule, Assessments and Dates:

**NOTE:** The following dates are subject to change based on the needs of the students at the instructor’s prerogative. Students will be notified ahead of time of any changes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Module/Unit/Week  or Important Event | Topic and Learning Outcome(s) | Assessment  and Evaluation | Weight |
| Jan 2 | First Day of Classes |  |  |  |
| Jan 2 – Jan 8 | Add/Drop Period |  |  |  |
| Jan 2 | Topic 0: Dev Setup, SSMS |  | Challenge 0 – Env Setup | 2% |
| Jan 8 | Topic 1: DML Review |  | Challenge 1 - DML | 3% |
| Jan 15 | Topic 2: Table Management | Constraints, Indices, and Triggers | Challenge 2 - DDL | 3% |
| Jan 22 | Topic 3: Importing/Exporting Data | Manual Import/Export in SSMS  Batch file, sqlCMD, and sql file  Creating and deploying SSIS packages | Challenge 3 – Setup SSIS | 2% |
| Jan 29 – Feb 9 | Topic 4: Stored Procedures, Functions, Cursors, and Exception handling | Writing TSQL to create sprocs and functions | Challenge 4 – Sprocs and Functions | 3% |
| Feb 12 | **Introductory Project** Work Period |  |  |  |
| Feb 26 | Introductory Project Milestone Check-in #1 |  |  | **Project Total** 36% |
| Mar 4 | Introductory Project Milestone Check-in #2 |  |  |  |
| Mar 11 | Topic 5:  Database Administration | Automating Maintenance Tasks, Securing Databases, Transaction Isolation Levels | Challenge 5 – ACL  Challenge 6 – Maintenance Tasks | 3%  2% |
| Mar 18 | Topic 6:  Basic Reports | Creating and deploying reports to SSRS | Challenge 7 – SSRS Setup | 2% |
| Mar 25 | Topic 7: NoSQL | Querying MongoDB locally | Challenge 8 – NoSQL | 3% |
| Apr 8 | **Final Project Labs** Milestone Check-in #1 |  |  | **Project Total** 41% |
| Apr 15 | Final Project Labs Milestone Check-in #2 |  |  |  |
| Apr 4 | VW Deadline (16-week term) |  |  |  |
| Apr 26 | Last Day of Classes (for 16-week term program) |  |  |  |
| Assessment Total: | | | | 100% |

## Letter Grade Distribution:

|  |  |  |
| --- | --- | --- |
| Letter | GPA | Percentage |
| A+ | 4.5 | 90 to 100% |
| A | 4.0 | 80 to 89% |
| B+ | 3.5 | 75 to 79% |
| B | 3.0 | 70 to 74% |
| C+ | 2.5 | 65 to 69% |
| C | 2.0 | 60 to 64% |
| D | 1.0 | 50 to 59% |
| F | 0.0 | 0 - 49% |

A grade of D is required to pass this course.

Course Policies

## General Academic Policies:

It is the student's responsibility to be familiar with and adhere to the RRC Polytech Academic Policies. These Policies can be found in the RRC Polytech calendar or online under Academic Matters at [rrc.ca/legal/policies](http://www.rrc.ca/legal/policies).

## Supplementary Policies:

Late submission:

* Students will receive a 10% deduction for anything submitted within 48 hours after the deadline.
* The grade will receive zero after 48 hours.

## Date Revised:

November 2023

Mental Health and Well-being at RRC Polytech

Having good personal health and well-being will support your success in this program.

## We Encourage You To:

• Recognize that stress is an expected part of being a college student.

• Rethink how you view difficulty. Being challenged is actually a part of learning and   
reaching success.

• Reflect on your role in taking care of yourself throughout the term. Do your best to balance your schoolwork and life demands.

• Reach out to your instructor, program coordinator, or College supports at any time if something is affecting your academic performance. It’s always best to reach out early and it’s the responsible thing to do.

## College Supports Ready and Willing to Assist You:

• [Academic Success Centre](https://www.rrc.ca/academic-success/)

• [Campus Well-Being](https://www.rrc.ca/wellness/)

• [Equity, Diversity and Inclusion Supports](https://www.rrc.ca/diversity)

• [Health Services](https://www.rrc.ca/health/)

• [Indigenous Student Supports](https://www.rrc.ca/indigenous/supports/)

• [International Student Supports](https://www.rrc.ca/international/student-support/)

• [Library Services](https://library.rrc.ca/home)

• [Student Accessibility Services](https://www.rrc.ca/accessibility/)

• [Student Counselling Services](https://www.rrc.ca/counselling/)

• [United Way 211 community resource](https://mb.211.ca/)

## Authorization:

This course is authorized for use by:

Name Here Date here  
Chair, Department/Program Date

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Approved by Senior Academic Committee March 22, 2023

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This content is available in alternate formats. To request, please contact [accessibility@rrc.ca](mailto:accessibility@rrc.ca).