CIT178
Relational Databases

FIGURE 1 SQL SERVER LOGO

Syllabus – Spring 2022

INSTRUCTOR:	**Lisa Balbach**
OFFICE:	Zoom and JB119 (Beckett Building)
Campus Office Hours **Livestream Office Hours:**	**By appointment** **Sunday 7:00-10:00pm** **Monday& Wednesday 5:15-6:15pm**
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Course Description

This course introduces students to core database concepts including data, data types, and relationships. Students will interpret and create relational data structures and use SQL language to perform basic create, read, update, and delete operations. Students will perform, administrative, backup and security functions. Students will recognize the value of optimized data and produce normalized designs. **Course content is mapped to the Certiport Information Technology Specialist- Database Fundamentals learning objectives** and students enrolled in this course will take the certification exam. Group 2 course.

Additional Required Skills

This course assumes that the student possesses the essential skills required to use a computer with the Windows operating system. The student will interact with the Windows desktop to access software and data and perform file and folder maintenance. The student must be proficient in the use of the web, e-mail, and searching. The student must have the skills required to use Moodle. To brush up on these skills, please visit Online Learning Orientation module in Moodle (https://elearn.nmc.edu/course/view.php?id=48676).

Materials Needed

1. Required Textbook: There is 1 book required for this course:

Murach's SQL Server 2019 for Developers by Bryan Syverson and Joel Murach (2020) ISBN: 9781943872572

2. Hardware and Software Requirements
This course uses various software applications that are available free or through the NMC CIT Department's Microsoft Imagine subscription. At the minimum, you will want to obtain and setup the following:

- Microsoft SQL Server 2019 Developer, Express or Enterprise edition [1]
- Microsoft SQL Server Management Studio
- Microsoft Office – Word, Excel, and PowerPoint

Installation instructions are included in the lesson 1 course materials and in Appendix A of the textbook.

3. Internet Access: Reliable Internet access is essential for success in this course.

General Education Outcomes

The following NMC general education outcomes will be met by this course.

Critical Thinking: *Students will skillfully conceptualize, apply, analyze, synthesize, and evaluate information gathered from observation, experience, reflection, reasoning, or communication.*

[1] The Developer and Express versions along with the management studio can be downloaded from: https://www.microsoft.com/en-ca/sql-server/sql-server-downloads free of charge. Office software can be downloaded from the link in the course resource section of our Moodle course (you will need to create a Microsoft account using your NMC email to be eligible for the software).

Significant Learning Outcomes

The following learning outcomes will be met by this course.

TABLE 1 LEARNING OUTCOMES

Outcome	Assessment Method
Knowledge	
#1 Distinguish DML, DDL, and DCL operations.	**Assignments, Term Projects, Exams**
Application	
#2 Create a normalized database with multiple tables, relationships, views, procedures, user-defined functions and triggers.	**Assignments, Term Projects, Term Project Showcase**
Integration	
#3 Design relational databases: construct tables, relationships, fields, and keys.	**Term Projects, Term Project Showcase Presentations, Exams**
Human Dimension	
#4 Give and receive feedback in an appropriate manner.	**Discussion exercises, Assignments**
Caring – Civic Learning	
#5 Explain the legal and ethical issues of data sharing.	**Discussion, Papers, Assignments**
Learning How to Learn	
#6 Engage in self-directed learning.	**Term Projects, Term Project Showcase Presentations**

Grading and Assignment Information

Grading Scale: At the end of the semester, the following scale will be used to determine your final grade:

Grade	Percentage	Points Required
4.0	95-100%	950-1000
3.5	90-94%	900-949
3.0	85-89%	850-899
2.5	80-84%	800-849
2.0	75-79%	750-799
1.5	70-74%	700-749
1.0	65-69%	650-699
0.0	0-64%	0-649

I = incomplete, W = withdrawn (with or without grade (see posted date), FA = failed to attend, AU = audit or drop without record (see posted date)

Grades are assigned based on the total points you have accumulated throughout the semester. Points are accumulated by completing textbook assignments, lab assignments, final project lab assignments, quizzes, papers and discussion forums.

Grade proportions and points are as follows:

Graded Activity	Learning Outcomes	Total Points
Textbook Assignments (24%)	#1, #2, #3, #4	240
Lab Assignments (10.5%)	#1, #2, #3, #4	105
Final Project (19%)	#1, #2, #3, #4, #6	190
Final Project Showcase (13.5%)	#4, #6	135
Unit Tests (15%)	#1	150
Discussion Forums, short research papers and ePortfolio (8%)	#4, #5, #6	80
Final Exam (10%) Certification Exam	#1, #6	100
TOTAL		**1000**[2]

2 Projected total. If the course total changes at the instructor's discretion, the updated total will be used to calculate your final percentage in the class.

General Assignment/Project/Exam Overview

Textbook Assignments:

Textbook assignments complement textbook chapters and lecture material. They are designed to provide directed practice for skills covered in the textbook chapters. These exercises are designed to teach you skills needed to be successful in this course. Textbook assignments are worth 5 to 25 points depending upon their level of difficulty. Assignments are due on the date indicated in the course schedule. **Late work will not be accepted without prior approval by your instructor.**

Lab Assignments:

Lab assignments are designed for you to apply what you learned in the textbook exercises. They are worth 15 to 25 points each and are due on the date indicated in the syllabus course schedule. **Late work will not be accepted without prior approval by your instructor.**

Final Project Lab Assignments:

Final project lab assignments are designed for you to apply what you have learned while completing portions of your final project throughout the semester. Some of the lengthier assignments will involve more time than a typical lab assignment and will be worth more points. There are several weeks that include only a final project lab and a textbook assignment. Final project lab assignments are worth between 20 and 50 points depending upon the amount of work involved in the assignment. The first few assignments which involve creating the database and adding rows to tables will take longer to complete and are worth more points. As we progress through the course, final project assignments will become shorter. By the end of the semester, your final project should be complete, and you shouldn't have to spend any additional time on it, if you submit your work on the due dates indicated in the course schedule. **Late work will not be accepted without prior approval by your instructor.**

Final Project Showcase:

The purpose is to show everyone your fantastic project! We will have a showcase after you have created your database, tables and have populated them with data. We will also have a showcase at the end of the semester when your project is completed. You will have two opportunities to share your final project with your classmates.

Final projects will be shared using PowerPoint slideshows that you will convert into MP4 videos and upload to a discussion forum. (PowerPoint has a built-in feature for converting to MP4).

GitHub, ePortfolio, Discussion Forums and Short Research Papers:

The CIT department has adopted a policy that requires 5-10% of the grade be devoted to networking and social media. We will be fulling that requirement by:

1) Creating an ePortfolio in LinkedIn
2) Creating a GitHub repository for our final project and uploading it. After uploading, we will link the final project repo to LinkedIn.
3) Discussion Forums for research and sharing our projects
4) Short Research Papers done through professional development websites

Unit Tests:

Tests cover textbook, lecture and assignment material. Quizzes consist of a variety of question types that you will find on the certification exam. Unit tests typically cover 3-4 chapters and are worth 25-40 points. Quizzes are in Moodle and must be completed by the due date which is in the course schedule.

Certification Exam:

This class prepares you for the Certiport Information Technology Database exam, which is your final exam in this course. Passing the certification exam is worth 100 points. Students who do not pass, will be allowed to retake the exam. Students who retake and pass the exam will be awarded 100 points. Students who do not pass the certification exam, will still receive points for the final, but their score will be prorated.

PLEASE NOTE the certification exam must be taken in the professional testing center which is in the Parsons-Stulen building on the Aero Park Campus. If you do NOT live in Traverse City and you need to use a different testing center, please let me know ASAP so we can get a testing voucher for you (the cost of the voucher is covered by your course fees).

Late work will not be accepted unless prior arrangements have been made with the instructor!

Course Communication

For online students, the best way to contact me is via email. Please use the following email address: lbabach@nmc.edu . If you would like to speak with me using the phone, you can email me and let me know when you are available, then I can return your call (I will not be in the office very much this semester because our courses are online and livestream). You can also leave a message and I will return your call.

All students are required to use their NMC email account for all communication in this class and college business. I will be using your NMC email address to communicate with you throughout the semester.

I will try my best to answer your emails to me within a 24-hour period during Monday through Friday. I will also check email over the weekend. I will try to read the emails at least once or twice a day and respond at that time. If I am gone or ill, I will post that fact in the announcements so that you will know why I have not responded to your email.

The Student Questions/Answers discussion forum at the top of the course is for you to ask each other questions. You may be able to resolve the problem without waiting for a response from me 😊 .

Online Communication Netiquette Policy:

Dialogue through Discussion Boards provides opportunities to communicate with each other and the instructor. Communication is expected to be positive and constructive with the intent of helping others gain further insight and clarity on assignments and concepts. Think critically as you respond to others and consider the following:

- Have others expressed the same sentiment you are thinking?
- Can you offer suggestions or provide examples illustrating points you are making?
- Use a subject line reflective of the material you are providing.
- Written responses should be concise in paragraph form with longer passages broken into additional paragraphs for ease in reading.
- Be respectful and professional. Disrespectful or sarcastic responses will be removed.
- Use emotional symbols (:-), :-(, :-o, etc. to indicate the tone of voice. Use emotional symbols to convey feelings.
- Use standard writing practices including correct spelling, complete sentences with punctuation, and capitalization.

Additional Instructional Support

1) Supplemental Materials: Lecture notes, textbook assignment videos and lab instructions are posted to Moodle. Additional free video tutorials, programs, and documents are available on the web and will be linked into Moodle as needed.

2) Feedback on assignments/scores: The instructor will correct assignments within a week of receiving them. Scores will be posted to the assignment dropbox (comments will also be placed in the dropbox).

3) Posting Scores: Scores will be updated when assignments, labs, discussions etc. are corrected. Quiz scores should display immediately; however, short answer questions will need to be corrected manually by the instructor and won't display until after the instructor enters a score. If you have any questions about your assignment scores, please email your instructor and ask.

4) Time Requirements: This course is NOT a self-paced course. College courses are designed to require 2 to 3 hours of study per hour of class time. This means that a 4-unit course, in addition to 4 hours of class time, requires at least 8 hours of study outside of class. If you cannot find 8 hours of time per week to study for this course, then you should postpone until a future semester when you have adequate time to study. If you are taking more than one course, multiply your total units by 2 hours and consider whether you will have time to do that much work at a minimum in addition to class time. There is no point in setting yourself up for failure.

Strategies for Success

- Do all required reading before attempting the assignments (that includes textbook chapters and lecture notes). The assignments are designed to apply material covered in the textbook and lecture, so it is important that you read through everything first!
- Practice, on the computer, the skills taught in the text or other assigned materials.
- Use time management skills to establish your weekly commitment to this course.
- Ask for help when you need it. Your instructor is available to help you learn. Your instructor's goal is to assist you in having a pleasant and successful learning experience.
- Take advantage of tutoring available through the college and the CIT department.
- Communicate with your instructor if you don't understand something or if your work may be late. Communication in an online class is essential for success. Your instructor is available during office hours via phone (you can also stop by in-person if you are on-campus). Your instructor is also willing to set up appointments to meet on-campus or online using Zoom conferencing software.

Classroom and Department Policies

Student Preparation, Attendance, and Participation Policy:
Active participation and completion of homework is expected and will ensure the best results from this class.

Online students who do not submit work for 3 weeks may be administratively withdrawn from class.

Students in a traditional or Livestream course are expected to attend class. Students who do not attend class for 3 weeks may be administratively withdrawn from class.

Software/Network Policy: Students using NMC's network or downloading office software cannot share login information with others. Please realize, NMC resources are for your use

only. Any misuse of the network or college resources may result in a denial of services. If you have any questions about the use of the network, please ask!

Computer Lab: If you would like to work on the course using NMC's computer labs, there are several labs that include software needed for this course:

1) West Hall Innovation Center. Please consult the https://www.nmc.edu/departments/help-desk/computer-labs.html for hours.

2) Student Success Center computer lab in the Osterlin Library. The "business pod" computers have the correct software for this course. They are loaded with the same software as the Beckett Building computer labs – please consult the https://www.nmc.edu/library/index.html for hours.

Department Policy for Academic Code of Conduct: The policy for academic dishonesty is as follows: The penalty for the first offense of cheating will be zero (0.0) on the assignment. Future offenses will result in failure of the course. The same will be true for the quizzes. Please think before you cheat—it is really hurting you the most. Note: NMC requires instructors report any cheating incidents to the Vice President of Student Services. Each offense will be recorded, and multiple offenses could result in expulsion.

Laptop Checkout at the Osterlin Library: NMC students, faculty, and staff may be able to check out laptops for home use from the Mark & Helen Osterlin Library, subject to availability. Please contact https://www.nmc.edu/library/contact-us.html for availability and checkout information.

CIT Majors: CIT majors must have a 3.0 GPA in CIT courses as a prerequisite to taking the work experience internship. This internship class is necessary for a CIT degree. Please see the internship instructor if you are near the end of your program.

Syllabus Changes: The instructor reserves the right to make changes to the syllabus and will inform the class of any changes.