

BIT 275 Database Design (Section 1 - 1660)

Course Description

Students learn the basics of the planning and design of relational databases and the use of the Structured Query Language (SQL). Students gain hands-on experience by creating and testing a complete data model based on a set of client objectives. Topics of study include information design, relational database concepts, data modeling (DML) and data definition (DDL) language syntax, database design process, conceptual vs. physical data modeling, database implementation planning, and project scoping. Prerequisite: Co-enrollment with or completion of BIT 158 with grades of 2.0 or higher, or instructor permission.

Class Meeting

CC2-180 – Tuesdays/Thursdays 8:45 am-10:50 am

Instructor

Craig Duckett

Office Hours

CC2-180 or CC3-321 – Tuesdays/Thursdays 11:00 am-12:30 pm

Contact Info

cduckett@cascadia.edu ← Preferred Method of communication
425-352-8022

Required Text

Database Design for Mere Mortals (2nd or 3rd Edition)

Author: Michael J. Hernandex

Copyright: 2013

ISBN-13: 978-0321884497

The Language of SQL (1st or 2nd Edition)

Author: Larry Rockoff

Copyright: 2010

ISBN-13: 978-1435457515

Course Website

Cascadia: <http://faculty.cascadia.edu/cduckett/bit275>

Mirror: <http://www.programajama.com/courses/bit275>

Learning Outcomes

I. Learn Actively - Learning is a personal, interactive process that results in greater expertise and a more comprehensive understanding of the world.

- Engage in meaningful design practice, meeting deadlines / ensuring / quality deliverables
- Create effective data models to engage in learning, both individually and with others
- Demonstrate responsibility for learning within group activities
- Develop an effective, usable database design using a typical data design methodology
- Use industry-standard development tools to create a prototype design for testing
- Perform integrity testing at appropriate stages of the development process

II. Think Critically, Creatively and Reflectively - Reason and imagination are fundamental to problem solving and critical examination of ideas.

- Evaluate existing data designs to assess and describe effective) design elements
- Solve complex query problems using Structured Query Language
- Compare / contrast database management systems for gathering, storing / using data
- Make design trade-off decisions that balance project objectives and data model integrity
- Reflect on time-on-task requirements for different project phases
- Recognize and solve data modeling problems using creativity, analysis and intuition

III. Communicate with Clarity and Originality – The ability to exchange ideas and information is essential to personal growth, productive work, and societal vitality.

- Communicate the project plan in effective, precise and understandable ways
- Organize individual and group presentations to articulate the data design and objectives for a range of audiences
- Incorporate feedback effectively into design drafts and modifications
- Support future development with the creation of an organized, concise documentation of the data design

IV. Interact in Diverse and Complex Environments - Successful negotiation through our increasingly complex, interdependent and global society requires knowledge and awareness of self and others, as well as enhanced interaction skills.

- Demonstrate effective group process and communication about a database design
- Interact within groups to review and assess proposed database designs
- Demonstrate respect for individual ways of arriving at answers, expressing results and processes
- Use online development and version control tools to coordinate collaborations

Assessment and Grading

Grading/Assessments:

Assignments:	03 @ 150 points each (450)
Database Presentation:	01 @ 50 points each
In-Class Exercises:	15 @ 20 points each (300)
Mid-Term Exam:	01 @ 100 points
Final Exam:	01 @ 100 points

Total Points: 1000

NOTE: The class will use an absolute grading scheme: If you get 100% of the points possible, you'll get a 4.0. If everyone gets 100% of the points possible, everyone will get a 4.0.

Late Policy: Any work that is not submitted to the instructor for grading will be assigned a grade of "0".

The general policy for work that is submitted electronically is that work is not late until the instructor goes to grade the work and finds it to be missing.

In practical terms this means that if the instructor hasn't graded something yet you can (typically) still upload the work and have it be graded as if the work had been handed in on-time (i.e., penalty-free). The instructor will wait until the work is due to grade it (of course), but makes no guarantees about waiting any longer than that.

In other words: for work that the instructor has not yet graded you can take your chances that the instructor will be back-logged enough for you to get the work done and submitted but if the instructor grades it before you can finish (or submit) the work then you will get the zero for not having it in on time.

Exams: The exams will be derived from the Weekly Quiz Questions and lab projects. Mid-term will consist of multiple-choice questions from first half of the quarter. Final Exam will consist of multiple-choice questions from second half of the quarter, as well as a network design section learned in the labs.

Class Time: Class time will be used not just for lecture time, but also for various in-class activities that you will be expected to participate in (labs, Packet Tracer, routers and switches). Thus, you should consider attendance to be mandatory; roll call will be done at the start of each class. If you show up on time for all classes, stay for the entire class, and actively participate in the in-class exercises, you should receive the 300 points allotted to this category.

Missing Days and Make Ups: If you notify the instructor at least one week prior to an exam or quiz, it may be possible to take the exam or quiz at a different time than the scheduled date – this different time will be on the same day if possible, or typically on a day prior to

the exam otherwise. No make-ups will be given for exams, presentations, or other such graded events, that were missed without prior notification to the instructor. In any case, the notification of absence must be given at least 2 days before the exam/quiz/event.

Cheating: Unless stated otherwise, all work should represent your own original, independent thinking. Unless stated otherwise, all out-of-class assignments are not meant to be group projects. While in the classroom working on exercises, you are encouraged to either seek help or to offer help from those around you.

It is okay to talk with classmates to clarify conceptual understanding necessary to complete assignments. However, copying another person's work in whole or in part, either manually or electronically, it not acceptable; nor is copying and slightly modifying another person's work acceptable. In the event copying should occur: all participants in the plagiarism (both the person plagiarizing, and the person whose work was taken) will receive:

1. a 20% penalty on the first offense
2. a grade of zero for the second offense, and
3. for a third (and final) offense, all parties will be given the option of either withdrawing (if the drop deadline hasn't been passed) or taking a "0.0" for the term. (Second and third offences include offences from prior terms)

Group Work: Group projects are learning exercises like individual projects: every individual in the group is expected to understand all the material as if each person had done the entire assignment individually. Therefore, it is fair game to ask any person in a group to explain any aspect of the assignment that the group has done.

Grading Scale

Grade points will be assigned as using the following scale:

%	GPA	%	GPA	%	GPA	%	GPA
96-100	4.0 / A	89	3.4 / B+	79	2.4 / C+	69-68	1.4 / D+
95	3.9 / A	88	3.3 / B+	78	2.3 / C+	67	1.3 / D+
94	3.8 / A-	87	3.2 / B+	77	2.2 / C+	66	1.2 / D+
93	3.7 / A-	86	3.1 / B	76	2.1 / C	65	1.1 / D
92	3.6 / A-	85	3.0 / B	75	2.0 / C	64-60	1.0 / D
91-90	3.5 / A-	84	2.9 / B	74	1.9 / C	59-0	0.0 / F
		83	2.8 / B-	73	1.8 / C-		
		82	2.7 / B-	72	1.7 / C-		
		81	2.6 / B-	71	1.6 / C-		
		80	2.5 / B-	70	1.5 / C-		

Electronic Submission

I would like you to electronically submit all assignments. You should type all assignments & homework answers into the computer, make sure it runs correctly, and submit the files for any given assignment. More details will be given in class how to do this. [Today's technology](#)

is inherently unstable. Knowing this, you should include time in your schedule to compensate for possible technological snafus. For assignments having a hard deadline, no leeway will be given for failing to hand in work because of tech problems, including power outages.

Attendance

You are responsible for what goes on in class whether present or not. You are responsible for making up any work, assignments, quizzes, etc., for missed classes. Attendance is very important, since the course is structured to require active involvement and participation on the part of the student. Missing a class means missing material that is difficult to make up. If you must miss a class, you will have to arrange to get the class notes and any other information from another person. I suggest that once you get to know some people in the class, you exchange email addresses or phone numbers with one or two, so if you do miss a class you can obtain assignments, quiz information, etc., for the following class.

Course Schedule

See <http://faculty.cascadia.edu/cduckett/bit275> for current **Schedule** and **Reading Assignments**

NOTE: The number of projects and the points possible for exams, projects and activities are subject to change depending on the circumstances of the class. I reserve the right to modify any and all aspects of the course, any time, without prior notice, including this syllabus.

Campus Closures

In the event of a campus closure, please log into [CANVAS](#) for announcements and instructions. [Click here for CANVAS instructions, including technical support information.](#)

I may also send out an email to the class, so please make sure that you have the cascadia.edu domain in your Safe Senders list.

Find information about and sign up for alerts and notifications at [Emergency Notifications Cascadia FlashAlert](#). The site includes instructions for subscribing to alerts.

In the event of inclement weather affecting morning classes, there will be notification on the local media by 5:30 a.m. You may also call the main campus number: 425-352-8000 to hear a message that will be updated with the latest Cascadia closure information. Should the weather deteriorate during the day, you may check online, listen to the main campus message, check email or the media to hear news about closures or class schedule changes.

Emergency Procedures

Emergency procedures are posted in each classroom. To reach campus security personnel, dial 425-352-5222. City of Bothell fire and police may be reached by dialing either 9-9-1-1 or 9-1-1 from any campus phone. Campus emergency phones are located on campus walkways and parking lots.

Pluralism and Diversity

Cascadia believes in pluralism, an intentional culture where everyone's history contributes to the collective success of our community. Cascadia is committed to creating a supportive environment for a diverse student, faculty, and staff population. Individual differences are celebrated in a pluralistic community of learners. Cascadia does not discriminate on the basis of race, color, religion, gender and/or sex, sexual orientation, national origin, citizenship status, age, marital or veteran status, or the presence of any sensory, mental or physical disability, or genetic information, and is prohibited from discrimination in such a manner by college policy and state and federal law. The following office has been designated to handle inquiries regarding non-discrimination policies and can direct inquiries to the appropriate office for ADA-related requests: Director of Human Resources, Office CC2-280, 425-352-8880.

Title IX

Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in education programs or activities that receive Federal financial assistance. In compliance with Title IX, Cascadia is committed to providing an educational environment free from sexual harassment, including acts of sexual violence or sexual assault. The College is equally committed to ensuring that those who raise complaints or participate in the investigation and resolution of complaints are free from retaliation. To raise a complaint or voice a concern with Cascadia's compliance with Title IX, contact Martin Logan, Executive Director of Human Resources, at mlogan@cascadia.edu or 425-352-8262.

Academic Honesty

The College regards acts of academic dishonesty, including such activities as plagiarism, cheating and/or/violations of integrity in information technology, as very serious offenses. In the event that cheating, plagiarism or other forms of academic dishonesty are discovered, each incident will be handled as deemed appropriate. Care will be taken that students' rights are not violated and that disciplinary procedures are instituted only in cases where documentation or other evidence of the offense(s) exists. A description of all such incidents shall be forwarded to the Student Conduct Officer, where a file of such occurrences is maintained. The Student Conduct Officer may institute action against a student according to the college's disciplinary policies and procedures. [Click here to see the policies and procedures in the Student Handbook.](#)

Student Rights and Responsibilities

Cascadia is a student-centered college, operated to provide knowledge and skills for the achievement of learners' academic, professional and personal goals. Inherent in the college's

mission are certain rights and freedoms needed for learning and personal development. Admission to Cascadia provides these rights to students, and also assumes that students accept the responsibility to conduct themselves in ways that do not interfere with the purposes of the college in providing education for all of its learners. For the complete policy, see [the Student Code of Conduct in the Student Handbook](#).

Course Website

Nearly every course at Cascadia has one or more dedicated websites. The most common course website is the college Learning Management System, [CANVAS](#); nearly all mathematics courses use [WAMAP](#). My [BIT115 classes](#) use a proprietary online grading application called [Student Tracker](#). Access to course websites is through Internet browsers, and students will use personal user IDs and passwords to log in.

- Students may not share their user IDs and passwords with anyone else or allow anyone else to participate in course sites on their behalf.
- Students need reliable access to the Internet. Some devices, such as smartphones, cannot access all aspects of CANVAS and most other course websites. Cascadia does not recommend that students attempt to complete a course using only a smartphone. Computers are available in many locations on campus.

Students who enroll in courses that make use of a course website are expected to check that site frequently with their own devices and campus computers. Technical support for accessing learning management systems is available at the Cascadia Bock Learning Center.

Disability Support Services

Cascadia provides services to help students with disabilities successfully adapt to college life. Students who meet specific criteria may qualify for reasonable academic accommodations. If you have or suspect you have a disability and need an accommodation please contact the DSS Office at 425-352-8128 to make an appointment, or email us at disabilities@cascadia.edu. Services and Accommodations through DSS are not retroactive. It is the student's responsibility to approach the faculty member with the accommodation letter as soon as it is issued from DSS.

Counseling Services

If you have a personal problem or stress that is affecting you and would like to talk with someone, please contact [UWB's Mental Health Counseling Center](#). Counseling at Cascadia (provided through UWB) is confidential, professional and free (six sessions). Visit the Counseling Center front desk Monday through Friday, 8:30 a.m. to 5 p.m. or call 425-352-3183 for an appointment. The number for a 24-hour Crisis Line is 206-461-3222.

Advising

Students should schedule an appointment to meet with an advisor to consult about classes and degrees, and to create a tentative education plan. They can call 425-352-8860 or come to the Kodiak Corner to make an appointment. Appointments are not made via email. At the time of the appointment, they need to indicate which degree they are pursuing. [See the Cascadia website for information about Drop-In Advising hours.](#)

Online Advising

Email advising is available at advising@cascadia.edu. Our distance advisor can answer most questions via email, but we don't schedule advising appointments via email.

Acceptable Use Policy on Information Technology

In general, the same ethical conduct that applies to the use of all college resources and facilities applies to the use of Cascadia's systems and technology. These systems may only be used for authorized purposes, using only legal versions of copyrighted software, and with consideration and respect for the conservations of resources and the rights of other users. For additional information, see [the online version of the Student Handbook](#) or go to the Cascadia Bock Learning Center for assistance with any questions.

Family Education Rights and Privacy Act (FERPA)

Cascadia College complies with the Family Education Rights and Privacy Act (FERPA) of 1974 concerning the information that becomes a part of a student's permanent educational record and governing the condition of its disclosure. Under FERPA, students are protected against improper disclosure of their records. [See the student handbook for details.](#)

Classroom Conduct and Courtesies

Following these simple guidelines will help me to offer an enjoyable teaching environment for you. You are expected to come prepared to class and on time as scheduled. Coming late and/or unprepared is disrespectful and disruptive both to me and the other students in class, and may result in point deductions. If you have any personal concerns, please feel free to talk to me at the end of class. Please remember to respect the following list for me and the students around you.

- Please remember to respect other students and your instructor by not using inappropriate language.
- Please silence your mobile devices such as cell phones.
- Do not play computer games or visit gaming websites during class times.
- No chat or messenger programs during class times.
- Do not use personal audio devices such as MP3 players or phones during class times.
- No Internet surfing, texting, or other mobile device activity that will distract students or the instructor.

Withdrawals: If you decide to drop, it is your responsibility to turn in a drop card to the *Admissions Office*. Do not assume that you will be dropped automatically.

Proactivity and Self-Starting

Rule #1: If you want to learn networking you MUST do the reading and you MUST do the exercises and you MUST take advantage of whatever resources and sources are available in order for you to 'get' it. Unlike some other subjects, learning SQL and database design does not come magically or trickle into your head by osmosis. You cannot skate. It takes work. You must dedicate time each day reading about and researching SQL and database design techniques.

Rule #2: Google it! Google it! Google it!

Rule #3: Be resourceful, energetic, proactive, flexible, a self-starter, self-reliant, self-disciplined, and show drive and initiative! Practice! Practice! Practice!

Rule #4: Don't get frustrated. Take breaks. Walk away from your homework or assignments for some time, and then come back to it fresh and rejuvenated. It works!