**[CIS-2720 Structured Query Language I](http://www.thatlink.com/Classes/cis2720sp14/Default.aspx)**

**Spring 2014**

**Course Syllabus**

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| --- | --- |
| Instructor | Kevin Fass |
| Email | [kevin.fass@gmail.com](mailto:kevin.fass@gmail.com) |
| Phone | 630-313-4555 |
| Course Number | CIS-2720 |
| Section | 001 |
| Course Title | Structured Query Language I |
| School | College of DuPage |
| Term | Spring 2014 |
| Number of Hours | 3 credit hours / 3 contact hours |
| Withdraw Deadline | April 17, 2014 |
| Meeting Times | Tuesday 6:30PM to 9:20PM January 21 to May 13, 2014  (mixture lecture and lab) |
| Meeting Location | Seaton Computing Ctr, Room 110 |
| Course Webpage | <http://www.thatlink.com/Classes/cis2720sp14/Default.aspx> <http://bb.cod.edu/> |
| Office Hours | Wednesday 4-7pm, BIC 1512 Thursday 4-6pm, BIC 1512 |
| Required Texts | SQL Fundamentals by John Patrick, 3rd edition ISBN: 978-0-13-712602-6  Book Cover |
| Also Required | USB Thumb Drive – at least 1 gigabyte Access to a computer with Oracle 10g XE installed *(I will explain how to download Oracle XE directly from Oracle for free)* |

**Course Description (from the COD course catalog)**

Introduction to Structured Query Language (SQL) programming. Includes concepts of relational databases and SQL programming commands. Uses SQL statements to create and maintain database objects. One or more Database Management Systems (DBMS) are used. No prior SQL programming knowledge is required. Prerequisites: Computer Information Systems 1230 and 2710 or equivalents, or consent of instructor (3 lecture hours)

**Prerequisites**

The prerequisite for this course is CIS-1230 (“Microcomputer Database Application”) and CIS-2710 (“Database Management”), or instructor’s consent. You are expected to have already worked with a relational database using a graphical interface. You do not have to have experience writing SQL statements by hand (that’s what this class is for). Experience with any major relation database is acceptable, including MS Access, MS SQL Server, Oracle, DB2, MySQL, etc. If you don’t have this experience or have any questions please see me privately.

Your are also expected to have programming experience in at least one computer programming language, equivalent to a 2000 level credit course at COD This was a prerequisite for CIS-2710.

The prerequisites for this class are defined by the college in the course catalog. For many higher level CIS classes more than half the students did not take the required courses at COD. Instead they have taken a similar class at another institution or have corresponding work experience. I generally grant prerequisites waivers to students via email before the start of the semester. Often it's difficult to confirm for sure whether a student's background is appropriate for this class. If you have been given one of these waivers (be me or someone else at the college) it is still your responsibility to make sure you have the right background for this class. We will discuss the prerequisites the first night of class. If you feel you do not have the appropriate background for this class you must withdraw quickly to receive a refund. Please contact me if you have questions or concerns.

**Course Objectives (from Active Course File)**

Upon successful completion of the course the student should be able to do the following:

1. Use SQL command statements to create tables
2. Use aggregate calculations
3. Demonstrate use of join table functions
4. Perform text, date, and null value manipulation
5. Convert data types
6. Create queries with UNION and UNION ALL
7. Create subqueries and nested subqueries
8. Use SQL to add, edit, and delete records
9. Create and alter the field structure of tables
10. Implement specific database application security
11. Use Data Definition Language (DDL) in scripts

**Topical Outline / General Semester Overview:**

1. Relational database concept
2. Aggregate calculation, subqueries, and nested subqueries
3. Basic foundational commands of SQL and functions
4. Inner join, equi-join, and self join tables
5. Concatenation, text, date, and null manipulation and data type conversion
6. DDL commands
7. Database security
8. Use of insert, delete, and update commands
9. Syntax comparison for commonly used relational database

**Grading**

There will be no formal exams. As a “hands-on” practical course the projects take the place of traditional exams. Some lab exercise may require answering some questions (open book). You will be graded on the various assignments, as described below.

**Grading Categories:**

|  |  |  |
| --- | --- | --- |
| **Category** | **Points** | **Percent** |
| Assignments | 650 | 100.0% |
| Total: | 650 | 100.0% |

**Grading Scale:**

|  |  |  |
| --- | --- | --- |
| **Grade** | **Percentage** | **Points** |
| A | >= 90% | 585 |
| B | >= 80% | 520 |
| C | >= 70% | 455 |
| D | >= 60% | 390 |
| F | < 60% | - |

My goal is to return your assignments to you one calendar week after they are due.

**Due Dates / Late Policy**

All assignments are due two hours before class on the due date. Late assignments will be accepted up to one week after the due date/time (exactly one week, i.e. 168 hours). Late assignments will receive a 50% penalty. *If you turn in an assignment late you must send me an email so I know to grade it.* Late assignments due to a medical emergency will be accepted if medical documents are provided. Only on time assignments are eligible for revision.

**Homework**

There will be a total of 15 homework assignments. Each home work assignment will cover a single chapter in the text book. There will be no homework for chapters 1. The homework assignment for each chapter is worth 10 points.

**Lab Exercises**

There will be a total of 14 lab exercises during the semester. Each home work assignment will cover a single chapter in the text book. There will be no lab exercise for chapter 1. Each lab is worth 30 points, except chapters 10 and 14 which are worth 60 points each. Lab exercises generally focus on newly covered material. However, the course material is inherently cumulative. Labs will assume knowledge of previous material. It is important to stay current on the readings and lab assignments.

**Assignment List**

|  |  |  |
| --- | --- | --- |
| **Assignment** | **Points** | **Due Date** |
| [Homework + Lab #2](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter02.aspx)\* | 40 | February 4th, 4:30 pm |
| [Homework + Lab #3](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter03.aspx)\* | 40 | February 11th, 4:30 pm |
| [Homework + Lab #4](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter04.aspx)\* | 40 | February 18th, 4:30 pm |
| [Homework + Lab #5](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter05.aspx)\* | 40 | T.B.D. |
| [Homework + Lab #6](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter06.aspx)\* | 40 | T.B.D. |
| [Homework + Lab #7](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter07.aspx)\* | 40 | T.B.D. |
| [Homework + Lab #8](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter08.aspx)\* | 40 | T.B.D. |
| [Homework + Lab #9](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter09.aspx)\* | 40 | T.B.D. |
| [Homework + Lab #10](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter10.aspx)\* | 70 | T.B.D. |
| [Homework + Lab #11](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter11.aspx)\* | 40 | T.B.D. |
| [Homework + Lab #12](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter12.aspx)\* | 40 | T.B.D. |
| [Homework + Lab #13](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter13.aspx)\* | 40 | T.B.D. |
| [Homework + Lab #14](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter14.aspx)\* | 70 | T.B.D. |
| [Homework + Lab #15](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter15.aspx)\* | 40 | T.B.D. |
| [Homework #16](http://www.thatlink.com/Classes/cis2720sp14/Assignments/Chapter16.aspx)\* | 30 | T.B.D. |

**Database Login Accounts**

On the first night of class each student will be assigned their own login into the database server. The login name will be in the form “studXX”, where XX is a number from 01 to 20. The lab exercises will ask you to login as “studXX”. You should replace this with your assigned account name.

**Software**

For security reasons the computer lab is completely isolated from the rest of the COD network. You will not be able to access other COD computer resources from the computer lab. Additionally, you will not be able to use our server from outside the classroom (i.e. not from home, or from another computer on the COD premises).

You will need access to Oracle 10 XE (express edition) outside of the classroom to complete your assignments. Oracle not available in any of the computer labs at COD, nor will the class room be available to you outside of normal class hours.

You can download Oracle XE directly from Oracle free of charge. It will run on most Windows XP and 7 computers (it will not run on Vista). We will discuss how to download and install Oracle the first night of class.

You can use another version of Oracle 10g or 11g is you already have access to it (e.g. on a server at work). However you will also need access to the “HR” demo tables that are provided by Oracle. These are installed by default with Oracle XE, but not the other versions. You may need you DBA to install these for you.

**Prerequisites**

The prerequisites for this class are defined by the college in the course catalog. For many higher level CIS classes more than half the students did not take the required courses at COD. Instead they have taken a similar class at another institution or have corresponding work experience.

I generally grant prerequisites waivers to students via email before the start of the semester. Often it's difficult to confirm for sure whether a student's background is appropriate for this class. If you have been given one of these waivers (be me or someone else at the college) it is still your responsibility to make sure you have the right background for this class. We will discuss the prerequisites the first night of class. If you feel you do not have the appropriate background for this class you must withdraw quickly to receive a refund.

Please contact me if you have questions or concerns.

**Chapters Not Covered**

The following is a tentative list of chapters from the textbook(s) **will not** be covered in this class. I may add or remove chapters from this list during the semester.

* Chapter #19 - The Multiuser Environment (pp. 721-738)

**Methods of Instruction**

This is an introductory class to an enterprise grade development tool. It is a hands-on class and the goal is to set the foundations for use in a professional work environment (i.e. “the real world”).

The majority of our class time will consist of lecture. However, since this is a hands on class and we are in the computer lab, you are encouraged to enter the examples as I go through them. Many of the examples will be posted on the web site for you to use as reference.

Most classes we will have enough time at the end of class for an open lab period. During that time you can work on your assignments. I will also be available to answer any questions you may have.

**Extra Credit**

I may or may not offer extra credit opportunities in this class. Extra credit is just that, extra. I generally do not cover how to do extra credit assignments in class, not do I offer addtional help or hints. You may need to do additional research (e.g. on the internet) to complete the extra credit assignment.

**General Answers**

Unless otherwise stated on an assignment or exam, you must provide a general answer to all problems. By this I mean that the solution must solve the problem for all given input, not just the sample input required.

For example, if I ask you to show all customers in the database who live in Illinois you cannot write code that only shows customers for the zip code 60540 because there is only one Illinois customer in the database. In this case your code must continue to work even someone later adds another Illinois customer in another zip code.

In the corporate environment everyone takes short cuts when writing code that will only be used once. In class you should write your code as if it was going to be released and used by others in the future.

We will discuss this in class. Please contact me if you have any questions about this.

**Warning About Grading**

My classes are designed to be hands on to prepare you for a corporate environment. Because of this tests and exams make up a smaller percentage of your grade than in a typical college class. I believe that you will learn more in a programming class by doing assignments than by cramming for and exam.

The first couple of assignments are usually very straight forward. My goal is to make sure you are comfortable in the environment as quickly as possible. After that the assignments get more difficult.

I don't give out assignments with large amounts of busy work. I prefer to give a couple of problems that make you think. This is especially true for the second half of the semester. The down side of only having a couple of problems is that even minor mistakes can cost a significant amount of points.

Even the best students in my class bomb at least one assignment. I've designed the class so that you can make a number of mistakes and still get an A. However if you repeatedly make mistakes you will get a lower grade.

**Announcements**

Class announcements will be made on the class [homepage](http://www.thatlink.com/Classes/cis2720sp14/). Check this page frequently.

**Email**

When sending me email be sure to use my Gmail account (see above) and not my official COD email account. When asking a question about lab or project, please be sure to include the lab or project number and step number in your question.

I will reply to your emails using the address in your “from” line. Do not send me email from accounts that you do not check regularly. **Do not send me email from accounts that other people have access to (e.g. shared accounts).**

Additionally you should also check your official “@dupage.edu” account on a daily basis. If I need to contact you I may use this address, or I may send email to the whole class email using the Blackboard system (which uses your @dupage.edu address). Additionally the college sends announcements of class cancellation (e.g. due to weather conditions) to you @dupage.edu account. You should begin checking this email account as of the first day of class.

If you do not want to check your @dupage.edu account daily you can set it up to forward all email to your regular email account. Information about using your COD email account and setting up forwarding (including tutorial videos) can be found at the following links:

* <http://www.cod.edu/it/labs/pages/email.html>
* <http://www.cod.edu/it/labs/pages/emailguide.html>

You will need your MyAccess user ID and password. This email system is new as of the summer 2010. If you setup a forwarding account on the system prior to summer 2010 you will have to set it up again. For assistance with your COD email please contact the Student Help Desk at 630-942-2999 or via email at [studenthelp@dupage.edu](mailto:studenthelp@dupage.edu) (Note that the Student Help Desk will only answer questions regarding use of the student e-mail system and will not be able to assist students with any other issues related to personal computer or assignments).

You should setting your email forwarding up by the end of the second class. You must also enter your @dupage.edu address on the [Your Information](http://www.thatlink.com/Classes/Main/AccountInfo.aspx?Section=cis2720sp14) page on the class website (we will discuss this in class). Part of your participation grade will be determined by this.

**Rave Alerts**

Another way to get emergency notifications from the college is via the [Rave Alert](https://www.getrave.com/login/cod/) system. You can signup to get important notifications such as a weather related class cancelations. Messages are delivered in a variety of formats, including SMS. This service is optional, you do not have to sign up for this.

**Policy for Withdrawal, Satisfactory/Fail, and Incomplete**

If you decide not to complete the course, you must contact the registration office to formally withdraw. Failure to do so will result in a grade of `F' for the course. **After the midterm** I must submit a form before you can withdraw from the class. Please contact me if you wish to do so. All requests to withdraw from the class must be sent to me **at least 14 days** before the final class session. For COD's polices on withdrawal and incompletes visit:

* <http://www.cod.edu/catalog/AcademicPolPro_11-13.pdf>

Students wishing to take the class Satisfactory/Fail (S/F) must apply to the instructor, in writing or email, at least five full weeks before the last class session. See the COD catalog and web site for other restrictions. Note that most schools will not accept a "satisfactory" grade for transfer credit. Students must receive 70% of total points to receive a grade of satisfactory.

There will be no incomplete (I) grades given. For COD's polices on incomplete grades visit:

**Medical Withdrawals**

If you wish to explore the possibility of withdrawing from the course for medical reasons you must contact the Registration Office before the end of the semester. Verification from a physician or medical institution is typically required.

* <http://www.cod.edu/catalog/AcademicPolPro_11-13.pdf>

**Reading**

Most weeks I will be presenting topics from a new chapter in the text book. Please read these chapters before coming to class. See the [class list](http://www.thatlink.com/Classes/Main/Classes.aspx?Section=cis2720sp14) online for what chapters will be covered during each class each week.

**Important Assignment, Examination, and Project Deadlines**

Due dates for assignments can be found by clicking on [assignments](http://www.thatlink.com/Classes/Main/Assignments.aspx?Section=cis2720sp14). on the class homepage. This page lists all the assignments and exams for the class and the due date. This page will be updated regularly, so you should check it frequently.

All work must be submitted by the end of the last day of class. No work will be accepted after this point.

**Schedule**

The class schedule is available on the class home page by clicking on [schedule](http://www.thatlink.com/Classes/Main/Schedule.aspx?Section=cis2720sp14). This page links to a page for each class. Each class pages describes what we will be covering that night, any assignments that will be assigned, and links to any files or web pages we will be using. These pages will be updated weekly, so you should check them frequently.

**Appropriate Material**

Your assignments are not only a reflection of yourself, but also on me and the College of DuPage. All content should follow the following rules:

* Do not publish any material that could be considered obscene, racist, hurtful, etc. Keep everything rated “PG-13”.
* Do not publish any copyrighted material without the permission of the author.
* Give appropriate credit to sources, as appropriate.
* Do not publish personal information, including last names, social security numbers, phone numbers, email address, etc.
* Follows all COD rules and the student code of conduct (<http://www.cod.edu/catalog/StudentServices_11-13.pdf> and <http://www.cod.edu/resources/studentaffairs/conduct.pdf>).

Failure to follow these rules may result in disciplinary action including, but not limited to, failure in the class.

**Backing up your data**

The computer lab is an inherently dynamic environment. Other classes use this lab, and hardware failures do occur (it’s happened in my previous classes). Please save all of your data to a USB thumb drive. This includes your scripts, code, documents, data, etc. Be sure you have all of you all of your data on your thumb drive before leaving for the evening, and make sure to take it home with you.

Data stored on your PC in the computer lab is not saved. Every time the PCs in the computer lab are booted they start with fresh image of the “C:” drive. If you computer crashed during class you will lose all the data save on the “C:” drive. Be sure to save your data to your thumb drive.

Data inside the database itself will be saved from week to week. However, you should still backup your scripts and data to your thumb drive. Server errors can and do occur, and you will be responsible to keeping your own copy of your data on your thumb drive.

Additionally you should always retain a copy of any files uploaded to the server. Files on the server may be lost due to user error, hardware failures, etc. If files on the server are lost you will be responsible to resubmit your files, even if the failure was not your fault.

**Assignments**

Each assignment generally focuses on material covered recently in class. You are expect to do the assignment using the techniques learned recently in class. In general do not use material we have not covered in class. If you are not sure if you can use a particular technique on a particular assignment please ask me in class or my email.

You must use the information I give you in a problem. Do not take a shortcut by manually looking up information. For example if ask you to write a query to look up John Smith's salary you must use "John" and "Smith" in your query. You cannot manually lookup John Smith's employee number and then use that in your query.

Be sure to check the assignment on the website before beginning work. Sometimes I make corrections to the assignment, or add additional hints or notes. When I make non-trivial changes to the assignment page I mark the inserted text as well as the deleted text.

**Academic Integrity / Plagiarism**

Students found guilty of plagiarism or cheating (either providing to or receiving from others) in any form will be dealt with severely. Unauthorized access of any computer system belonging to COD or myself will also be considered a violation of academic integrity.

Students found guilty of violating academic integrity in any form will be dealt with severely. The penalty will be at my sole discretion. The minimum penalty for each incident will be a zero on for the test or assignment in question **and** a full letter grade deduction on your final grade. The penalty can be a high as receiving an F for the course. I may also file a report with Student Affairs office, which could result in other disciplinary action, including expulsion from COD. Do not share your work with anyone. Make sure you use reasonable and customary procedures for protect others from accessing your work.

Many of you are taking this class for career training and the corporate world is more lax about plagiarism (and in many cases encourages it). Remember that this is first an foremost a college class so the academic rules apply. If you think you might be sharing to much information with another student then you probably are.

Additionally students are expected to follow all COD guidelines, including those in the academic honesty policies and student code of conduct. For more details on the academic honesty polices and code of conduct at COD see:

* <http://www.cod.edu/dept/boardpolicy/5050pr.doc>
* [http://www.cod.edu/catalog/StudentServices\_11-13.pdf](http://www.cod.edu/resources/studentaffairs/conduct.pdf)
* <http://www.cod.edu/catalog/StudentServices_11-13.pdf>

**Attendance and Absence Policy**

Attendance is required and is the contributes to the participation portion of your grade. If you are not able to attend class you do not need to inform the instructor, although a short email to let me know is always nice. You will be responsible for the missed material (find someone to take notes for you).

If you are absent on a night when an assignment is due you must submit your work to me before class. If you are absent on a night when an exam or quiz is given you must make prior arrangements See the the Make-up Policy section below for details.

**Participation**

Part of your grade is based on your class participation, which is determined entirely subjectively. When determining your participation grade I will consider the following (but not limited to):

* Attendance
* Participation in class discussions
* Following class rules

**Tardiness**

If you arrive late to class please try not to disturb the class. If the door is locked knock gently.

**Make-up Policy**

Some assignments may be turned in late with a substantial penalty. See the section above for the late policy for each type of assignment.

If you will be absent the night of an exam or presentation you must make alternative arrangements with me at least one week before. No exceptions to this policy.

All work must be turned in by the end of the last night of class. No work will be accepted after that point. I do not give out incomplete grades.

**Class Policies / Student Conduct**

* You may only turn in one solution for each problem.
* I do not allow you to resubmit your work.
* I will be available for help outside of class by appointment only.
* Please turn your cell phones and pagers off or to vibrate. If you need to take a call, please step out into the hallway.
* Food/drink is not allowed in the lab.
* No photography or audio/video recording without my express permission.
* In addition to the rules outlined in this syllabus and presented in class, it is the student's responsibility to understand and abide by all COD academic policies as stated in the current catalog.

Bottom of Form