IT4300/CS4307 - Introduction to Databases

Fall 2020

Syllabus

Course for students in Computer Information Systems or in Computer and Information Technologies programs. This course will instruct students in administration of database management systems, logical database design, implementation of database designs, and application development using a DBMS. Students will be required to design, manage and implement databases. Additionally, students will develop applications that use databases.

Prerequisites: CS1400 & IT1100

Course fee: $25, used to assist in maintaining CIT infrastructure.

Two sections:

You may take this class entirely online or you may attend in class. (See COVID-19 Statement)

- IT4300-01/CS4307-01 MWF 9:00-9:50 in Smith113 - Final exam Mon, Dec 7 @ 9:00
- IT4300-02/CS4307-02 TT 9:00-10:15 in Smith113 - Final Exam Tues, Dec 8 @ 9:00

Instructor: Dr Bob Nielson

Email: nielson at dixie dot edu

Phone: 435-652-7978 (note: email preferred)

Office: Burns 238

Office Hours: MWF 9:00am or by appointment

Objectives

At the end of the course, students will be able to:

- effectively design a database system
- understand normal forms
- understand the SQL language

Tools

- Virtual Server Farm
- Putty
- WinSCP
- Data Grip

COVID-19

The CDC recommends wearing cloth face coverings in public settings to slow the spread of the coronavirus and to help people who may have the virus and do not know it from transmitting it to others. Consequently, a face covering must be worn continuously while you are inside the classroom, laboratory or other instructional setting or inside a faculty member’s office. This practice will provide a safer instructional environment for you, your classmates, and the instructor and will help slow or stop the spread of coronavirus in our community. There will be no exceptions to this rule if you wish to attend class in person. If you have a medical condition or other objection to wearing a face covering, you are welcome to attend class via interactive live stream. Face coverings can be made from household items or purchased.

Resources

Texts

There is one text recommended for this course.

Computer Resources

You may use the computers in the Smith Computer Center. There will also be lab assistants in these labs. These computers require a valid CIT username and password. If you do not already have a CIT login, visit https://pref11.cs.dixie.edu/facilities/passwd.php to create one, or ask a lab assistant to help you sign up for one.

Course Website

This course has an accompanying website. You are responsible for announcements, the schedule, and other resources posted on the website. The course website is accessible at http://cit.cs.dixie.edu/it/4300/. Grading and assignments are managed at https://canvas.dixie.edu.

Assignments and Exams

Reading

The student is responsible for reading the material in the textbook. A reading schedule is provided with the class schedule on the course website. The student is expected to read the material before the class in which it is discussed. The book also includes material beyond what we will discuss in lecture, which you are encouraged to study on your own. Feel free to bring questions from the reading to lectures or to office hours.

Assignments

Assignments will be graded for accuracy of function and style of design. Programs that do not compile will receive no credit. It is important that you start early and get each of your assignments done before its due date. Many problems will take much longer to solve in a single sitting than in many shorter sessions. Give yourself time to think; sleep on difficult problems. Finish early so you can go back and refine your initial approach.

Assignments are due on the date listed in the schedule, and must be passed off to the instructor or a lab assistant for the course. This means that you must reserve time to pass it off at a suitable time before the end of the day it is due.

Quizzes

There will be 3 in-class quizzes.

Exams

This course has a comprehensive final exam. The exam will consist of questions similar to the quizzes.

Grading

Assignments and exams each contribute to your point total. The assignments count for one third of your grade, the quizzes for one third, and the final exam for the final third.

Here is the grading scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 94</td>
<td>A</td>
</tr>
<tr>
<td>&gt;= 90</td>
<td>A-</td>
</tr>
<tr>
<td>&gt;= 87</td>
<td>B+</td>
</tr>
<tr>
<td>&gt;= 84</td>
<td>B</td>
</tr>
<tr>
<td>&gt;= 80</td>
<td>B-</td>
</tr>
<tr>
<td>&gt;= 77</td>
<td>C+</td>
</tr>
<tr>
<td>&gt;= 74</td>
<td>C</td>
</tr>
<tr>
<td>&gt;= 70</td>
<td>C-</td>
</tr>
<tr>
<td>&gt;= 67</td>
<td>D+</td>
</tr>
<tr>
<td>&gt;= 64</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 64</td>
<td>F</td>
</tr>
</tbody>
</table>

Course Policies

Absences

Students are responsible for material covered and announcements made in class. School-related absences may be made up only if prior arrangements are made. The class schedule presented is approximate. The instructor reserves the right to modify the schedule according to class needs. Changes will be announced in class and posted to the website. Exams and quizzes cannot be made up unless arrangements are made prior
to the scheduled time.

**Time**

Courses should require about 45 hours of work per credit hour of class. This class will require about 135 hours of work on the part of the student to achieve a passing grade, which is approximately 9 hours per week. If you do not have the time to spend on this course, you should probably rethink your schedule.

**Late work**

Assignments are due on the date specified in the schedule. Handing them in or passing them off after the specified time is considered one day late. You may turn them in late with penalties as described below. After five days late, you receive \( \frac{1}{2} \) points.

For example: if an assignment is due at noon on Thursday:

- Before noon Friday the assignment is considered 1 day late.
- Before noon Monday the assignment is considered 2 days late.

Saturdays, Sundays, and school holidays do not count as late days. Late days do not extend beyond the last day of class.

Assignments may be submitted late, but a 10 percent penalty will be applied for each day late. After the 5 days, assignments will receive \( \frac{1}{2} \) course credit. Note that by this time, students should be working on the next assignment.

Quizzes can only be made up if arrangements are made in advance.

**Cheating and Collaboration**

Limited collaboration with other students in the course is permitted. Students may seek help learning concepts and developing programming skills from whatever sources they have available, and are encouraged to do so. Collaboration on assignments, however, must be confined to course instructors, lab assistants, and other students in the course. Students are free to discuss strategies for solving programming assignments with each other, but this must not extend to the level of programming code. Each student must code his/her own solution to each assignment. See the section on cheating.

Cheating will not be tolerated, and will result in a failing grade for the students involved as well as possible disciplinary action from the college. Cheating includes, but is not limited to, turning in homework assignments that are not the student’s own work. It is okay to seek help from others and from reference materials, but only if you learn the material. As a general rule, if you cannot delete your assignment, start over, and re-create it successfully without further help, then your homework is not considered your own work.

You are encouraged to work in groups while studying for tests, discussing class lectures, discussing algorithms for homework solutions, and helping each other identify errors in your homework solutions. If you are unsure if collaboration is appropriate, contact the instructor. Also, note exactly what you did. If your actions are determined to be inappropriate, the response will be much more favorable if you are honest and complete in your disclosure.

Where collaboration is permitted, each student must still create and type in his/her own solution. Any kind of copying and pasting is not okay. If you need help understanding concepts, get it from the instructor or fellow classmates, but never copy another’s code or written work, either electronically or visually. The line between collaborating and cheating is generally one of language: talking about solutions in English or other natural languages is usually okay, while discussions that take place in programming languages are usually not okay. It is a good idea to wait at least 30 minutes after any discussion to start your independent write-up. This will help you commit what you have learned to long-term memory as well as help to avoid crossing the line to cheating.

**College Policies**

Additional college policies, calendars, and statements are available online at

http://academics.dixie.edu/syllabus/.