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## COURSE INFORMATION

**Course Number and Title:** ISBA2402: Database Management Systems- Fundamentals of SQL

**Instructor:** Xiaochen Zhu

**TA:** Khushali Jiten Rathod <krathod@scu.edu>

**Office:** Lucas Hall 321U

**Email:** XZhu4@scu.edu (please specify your course number/name in subject for each communication)

**Office hours:** TTh 4:50PM – 5:30PM or by appointment

## Course Description

Information systems often utilize a database for storage and management of system information. Vast amounts of valuable business data are stored in these databases. To develop information systems that utilize databases, or to access this information for analysis in business decision making, developing and programming database queries is required. This course presents querying of databases using the Structured Query Language (SQL). The topics include: query syntax such as clauses, operators, and aggregate functions, joins and subqueries; SQL data analytics with various functions and full-text search; and advanced SQL topics including DBMS-based programming, manipulation with multiple tables, etc.

## Course Objectives

- Identify and define the characteristics of relational databases and modern database management systems.
- Write SQL commands to retrieve data from relational databases to answer business questions.
- Manipulate strings, dates, and numerical data from different sources for analysis.
- Answer business questions and extract business insights using data analytics with SQL.

## COURSE DETAILS

### Text and Resource List

#### OPTIONAL BOOKS

The following resources are optional but recommended to help you better understand the material and prepare for the assignments and quizzes:

1. Sveta Smirnova, Alkin Tezuysal (2022). *MySQL cookbook: Solutions for database developers and administrators* (4th ed.). O'Reilly Media. ISBN: 9781492093169.
2. Ramakrishnan, R., & Gehrke, J. (2002). *Database management systems* (3rd ed.). McGraw Hill.

#### REFERENCES

[\*MySQL 8.0 Reference Manual\*](#)

## Technology

We use MySQL and MySQL workbench to illustrate the core concepts of the class and to practice the use of DBMS. It is highly recommended to bring your laptop for every lecture.

## Weekly Topics (Tentative)

Week	Topic	Reading ( 1 and 2 represent the sequence in the optional textbook list)
1	Intro to Relational Databases and SQL	1. Ch 1 2. Ch 1, 3
2	Intro to SQL Queries	1. Ch 5, 9, 10, 15 2. Ch 5
3	Complex SQL Queries and Data Analytics	1. Ch 16, 17
4	Data Types	1. Ch 7, 8
5	Advanced Topics	1. Ch 11 2. Ch 16, 17

## GRADING

Achievement in this course will be assessed through completion of the following activities:

Type	Grade %
Participation	5%
Assignment (*4)	55%
Final Exam	40%

## Grading Scale

Grades scales are set by individual faculty members. The following scale will be used for this course:

Letter	Grade Range
A	94%+
A-	90-94%
B+	87-90%
B	84-87%

B-	80-84%
C or below	80%-

## COURSE POLICIES

### Late Assignment Policy

It is very important that work be turned in on time or students will find it very difficult to catch up. All work in the course (e.g., projects, papers, exams, quizzes, etc.) will be due by 11:59 p.m. PT on the date noted on the class calendar.

A 10% deduction per day applies to late assignment submissions. Submissions more than three days after the due date will be refused unless prior permission is obtained.

### Faculty Communication and Feedback

At the beginning of each course, make sure that you understand the instructor's preferred mode of communication and any specific communication protocol. In general, online faculty will respond to student inquiries within one business day and will grade assignments within one week. However, one of the best ways to be effective as a graduate student is to understand each individual instructor's expectations and operate within those boundaries. If students have concerns about communication or feedback, they should always go to the professor first. Students should explain their concern as clearly as possible without judgment or emotion. Effective communication is an important graduate-level skill, and every interaction in their master's program is an opportunity to develop this skill.

### My responsibility

I will support you in your learning in this class and beyond to the best of my abilities. If I am not able to help you myself, I will identify someone who can. I will evaluate your contribution solely based on the standards set by this syllabus. Changes to the syllabus will be highlighted, discussed during class sessions, and will be published on Camino.

### Your responsibility

By enrolling in this class, you agree to the requirements stated in this syllabus. You will operate with integrity in your dealings with me and your fellow students. You will engage the learning materials with appropriate attention and dedication and maintain their engagement when challenged by difficult learning activities. You will contribute to the learning of others, and you will perform to standards set by this syllabus.

Mutual respect is the foundation of this course. No one will be criticized for being wrong. Appropriate conduct includes honesty, self-respect, respect for others, and compliance with university policies and standards. Computers in the classroom should be used only for completing course-related work and for taking notes; cell phones must be turned off or muted.

## Attendance policy

Please let me know via email during the first two weeks of the course if you have any conflicts between a course element (class meeting, assignment) and another vital commitment (another course, work, university-related extracurricular activities, religious commitments). At my discretion, I will provide you with alternative means to complete the course element.

I am aware that many of you have multiple commitments. You should attend at least 80 percent of all scheduled class meetings. If you miss more than 20 percent of scheduled classes, you will receive a reduction by one letter grade.

## PROGRAM INFORMATION

### Mission of the Leavey School of Business

The Leavey School of Business is a community dedicated to innovative learning and scholarship that transforms people, ideas, and organizations to create prosperity here and around the world. We blend theory and practice, find inspiration in Silicon Valley's entrepreneurial spirit, and are committed to a collaborative learning environment that develops leaders of competence, conscience, and compassion.

### Credit Policy

Academic work at Santa Clara University is measured by credit unit. A unit of credit represents that amount of time and effort both within and outside of formal settings that a student devotes to a particular class. At the graduate level, course credit is determined by the college or school and is consistent with practices in the disciplines.

### Academic Integrity

The Academic Integrity pledge is an expression of the University's commitment to fostering an understanding of—and commitment to—a culture of integrity at Santa Clara University. The Academic Integrity pledge, which applies to all students, states:

"I am committed to being a person of integrity. I pledge, as a member of the Santa Clara University community, to abide by and uphold the standards of academic integrity contained in the Student Conduct Code."

Students are expected to uphold the principles of this pledge for all work in this class. For more resources about ensuring academic integrity in your work, including the appropriate use of course sharing sites such as Chegg, see this site created by the SCU Library at [SCU Library's Plagiarism](#) site or visit [SCU's Academic Integrity](#) website.

We ask that you affirm this pledge and apply these principles to your work in this class. Where you use information from a reading, from the web, lecture, or any other source, you must cite as appropriate. Unless it is a paper I have written or something that is my personal intellectual property, please do not cite me. Use the citation I have provided. Do not cite Wikipedia as a source, rather use Google scholar, the library databases, or Wikipedia to find the foundational citation. Consult the library's website to learn more about managing references. The library's website also offers information about the ethical and legal [implications of using course sharing websites](#). Specifically, "SCU faculty and staff retain copyright over their teaching materials. Students who upload a faculty or staff member's teaching materials to course-sharing websites are violating copyright"

(Santa Clara University Library, 2022). Why is this important? It's about ethics, intellectual property, and avoiding career limiting outcomes.

The [Student Conduct Code](#) is in effect for all assignments, assessments, in-class exercises and papers. It is the student's responsibility to comply with the Student Code of Conduct (such as to do his/her own work and to cite sources of information, whether paraphrased or quoted). There is zero tolerance of any breach of the Student Conduct Code. The professor maintains responsibility for assigning grades for all assignments and the course grade even if an incident is submitted to the judicial process.

A student who is guilty of a dishonest act in an examination, paper, or other work for a course, or who assists others in such an act will be subject to sanctions, up to and including dismissal from the University, as a result of the judicial process described in the bulletin. Further details, and the protocol followed in case of an allegation of dishonesty can be found on the [Leavey School of Business Policies](#) page.

Breaches of the honor code include but are not limited to:

- Plagiarizing, misrepresenting as one's own work any work done by another. This includes, but is not limited to, all text and exhibits that you find in an article, book, web page (including a firm's web page), previous capstone projects or other research resources.
- Cheating on quizzes, participation exercises and papers; this includes sharing information on participation exercises between sections
- Submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned
- Misrepresentation when explaining missed or late assignments
- Allowing another student to use your academic work

## Citation Expectations

All research work submitted should be properly cited using APA standards. For more information and tools to assist, refer to the information available through the University Library at SCU. There are many resources available through the [Santa Clara University Library](#).

## Group Work

As you advance in your careers, it becomes increasingly important to develop the skill of influencing others and working collaboratively. Similarly, in most workplaces, you will need to collaborate or negotiate with others in order to accomplish their goals.

Teamwork in many courses offers an opportunity for you to learn virtual team leadership and team theory. It is important that you treat your team members with the same respect that you would treat coworkers. Team members will become part of your professional network, so if you work effectively with them, they may become a lifetime resource. Remember that everyone's style of communication is different, and that it is important to listen carefully and adjust your style when necessary to communicate effectively. You should be proactive when you feel there might be a problem in the group. The situation will not improve if you do not address it.

# STUDENT SUPPORT

## Office of Accessible Education

If you have a documented disability for which accommodations may be required in this class, please contact the [Office of Accessible Education](#) (408-554-4109) as soon as possible to discuss your needs and register for accommodations with the University. If you have already arranged accommodations through OAE, please be sure to request your accommodations through your myOAE portal and discuss them with your instructor during my office hours within the first two weeks of class.

To ensure fairness and consistency, individual faculty members are required to receive verification from the Office of Accessible Education before providing accommodations. OAE will work with students and faculty to arrange proctored exams for students whose accommodations include double time for exams and/or assistive technology. Students with approved accommodations of time-and-a-half should talk with me as soon as possible. The Office of Accessible Education must be contacted in advance (at least two weeks notice recommended) to schedule proctored examinations or to arrange other accommodations.

In light of shifting health advisories related to COVID-19, exams may be administered online. Students with approved testing accommodations should contact their instructor (at least two weeks notice recommended) prior to an exam date to notify their instructor of their intent to use their testing accommodations on the upcoming exam to ensure their accommodations are effectively implemented.

## Accommodations for Pregnant and Parenting Students

Santa Clara University does not discriminate against any student on the basis of pregnancy or related medical conditions. Absences due to medical conditions relating to pregnancy and childbirth will be excused for as long as deemed medically necessary by a student's doctor, and students will be given the opportunity to make up missed work. Students needing accommodations can often arrange accommodations by working directly with their instructors, supervisors, or departments. Students needing accommodations can also seek assistance with accommodations from the Office of Accessible Education (OAE) or from the Office of Equal Opportunity and Title IX Office. The [SCU Title IX and Pregnancy site](#) provides information for students and faculty regarding pregnancy rights.

## Discrimination, Harassment and Sexual Misconduct (Title IX)

Santa Clara University is committed to providing all students with a safe learning environment free of all forms of discrimination, sexual harassment, and sexual violence.

Please know that as a faculty member, California law SB 493 requires me to report any information brought to my attention about incidents of sexual harassment or misconduct to the SCU [Equal Opportunity and Title IX Office](#) (408) 551-3043. This includes, but is not limited to, disclosures in writing assignments, class discussions, and one-on-one conversations.

Should you need support, SCU has dedicated staff trained to assist you in navigating campus resources, accessing health and counseling services, providing academic and housing accommodations, helping with legal protective orders, and filing a formal complaint with the University or with law enforcement. Please see the [Student Resources](#) page for more information about reporting options and resources.

If you or someone you know has experienced sexual harassment or sexual violence and wishes to speak to a **confidential** resource who is not required to report, please contact one of the following SCU resources for support:

- Bree Van Ness, [Assistant Director for Student Survivor Advocacy and Campus Support](#), SCU Wellness Center, 852 Market St, (408) 551-3307, [bvanness@scu.edu](mailto:bvanness@scu.edu)
- [SCU Wellness Center](#)
- [CAPS](#)
- Any individual (clergy, counselors) acting in a professional capacity for which confidentiality is mandated by law

Your instructor is happy to help connect you with any of these resources.

## Camino Voluntary Product Accessibility Template (VPAT)

VPAT can be used to evaluate the learning management system's conformance to recommended accessibility standards. Users can review how various Camino features align to Web Content Accessibility Guidelines (WCAG 2.0) and Section 508 of the Rehabilitation Act by visiting the [Canvas Accessibility](#) webpage.

## Safety Measures

In order to meet our learning objectives, we will adhere to the highest standards for safety and mutual respect. I expect everyone to adhere to current university mask mandates at all times; to make their best attempt to make themselves heard when asking questions or contributing to discussions; and refrain from eating or drinking in class. It is expected that everyone will follow university guidelines about health and public safety measures outlined on the [Prepared SCU website](#).

## Copyright Statement

Materials in this course are protected by United States copyright laws. I am the copyright holder of the materials I create, including notes, handouts, slides, and videos. You may make copies of course materials for your own use and you may share the materials with other students enrolled in this course. You may not publicly distribute the course materials without my written permission.

## Technology Support

SCU can provide you with technology assistance, and you can also reach out to our providers directly for questions. For Camino (SCU's branded instance of Canvas) support, contact [caminosupport@scu.edu](mailto:caminosupport@scu.edu) or call 408-551-3572. You can also use the help button within the Camino platform (on the left hand navigation) for 24/7 support via chat or phone with our vendor.

For Zoom assistance, contact Media Services at [mediaservices@scu.edu](mailto:mediaservices@scu.edu) or 408-554-4520. You can also get support from the [Zoom Help Center](#) website.

For SCU network and computing support, contact the SCU Technology Help Desk at [techdesk@scu.edu](mailto:techdesk@scu.edu) or 408-554-5700. They can provide support for MySCU Portal, Duo, eCampus, hardware and software issues, and more.