**OMIS 34: Science, Information Technology, Business and Society**

**Course Syllabus**

# GENERAL INFORMATION

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| **Class** | |  |  | | --- | --- | | Location | Rm 202 Lucas Hall | | Days & Times | ISBA 2423: Saturday | 9:00 AM – 12:00 PM | | Class Dates | Apr 5, 2025 – Jun 7, 2025 | |
| **Instructor** | Steven Cabrera |
| **Office** | Lucas Hall 216AA |
| **Email** | scabrera@scu.edu |
| **Office Hours** | Saturday 12:00 pm – 1:00 pm (Lucas Hall 216AA or Via Zoom), or by appointment  Zoom link used for office hours: <https://scu.zoom.us/j/2288566391?pwd=S0JN6EW1TDJ6rYZO6oQjrTYUX1hsBz.1>  *Note: If the scheduled office hours do not align with your availability, you can arrange a Zoom appointment via email at a mutually convenient time.Or, feel free to stop by my office to check my availability.* |
| **Recommended Materials** | (**Effective Cybersecurity: A Guide to Using Best Practices and Standards, 1st edition, Required Textbook**) Paige Baltzan, 2024, [**ND LL BUSN DRVN TECH W/ CNCT**](https://scu.bncollege.com/course-material-listing-page?bypassCustomerAdoptions=true), 10th Edition, McGraw-Hill Education, ISBN 9781266914041. |
| **Reference** | Lecture slides, class recordings, videos for case studies, data used for labs, assignments, updates, etc. will be posted on our **Camino site** using Connectat 12:00 AM on the Friday prior to class date. |

# COURSE Description

The course is designed to explore the foundational concepts of cybersecurity, including governance, risk management, physical, system, and network security

The **foundational module is organized** into the following sections:

1. **Cybersecurity Fundamentals**: This section introduces the core concepts of cybersecurity, the CIA traid, and cybersecurity frameworks and regulations.
2. **Risk Management**: This advanced section is divided into three orientations:

* **Human Risk**: Focused on human based risk, attack vectors such as Phishing, Tailgaiting, and

1. **Cybersecurity Awareness & Foundations**

* **Physical Security:** Discussing & analyzing risk to physical environments, data centers, and secure facilities with an emphasis on impact to cybersecurity
* **Hardware Security**: Assessing the
* **Operating System Security**: Windows & Linux hardening & assessment
* **Software Security**: Looking at secure coding, encryption, and digital signatures as well as vulnerabilities and software-based attack vectors and mitigation strategies.
* **Network Security:** Focusing on the Session, network, and datalink layer security as well as potential vulnerabilities, attack vectors, and mitigations

1. **Vendor Security Awareness**

* **Cloud Security**
* **Third-Party Security:** Vendor & Supply Chain security

1. **Incident Management & Continuity of Operations**

* **Incident Management & recovery**
* **Business Continuity & return to operations**

1. **Emerging Technologies**

* **Artificial Intelligence**
* **Quantum Technologies**

# Communication

* Course materials will be posted on the course website at least one week in advance
* You are **recommended to use the Camino “Inbox” Button to send emails to the instructor**
* When emailing directly to the instructor, please begin the subject line with “**ISBA 2423 – Your Name – Email Subject**”
* The Recording of classes will be provided if the majority of students agree to make a recording.
* Sharing the content of this course with other platforms (e.g., Course Hero) is strictly prohibited.

# Class Expectations

* Preview lecture content before each lecture. All the slides will be posted one week in advance.
* Prepare well for all the group discussions and video case studies before the class; Participate in these activities.
* Engage in all in-class exercises.
* Complete assignments and exams independently, without inappropriate assistance.
* Utilize GenAI (e.g., ChatGPT) and study assistance platforms like Chegg, Course Hero, and Quizlet to enhance your learning, rather than diminish it.

# TENTATIVE CLASS SCHEDULE

This is a draft schedule and is subject to change at the instructor’s discretion.

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| --- | --- | --- | --- |
| **Week** | **Date** | **Topic** | **Assignment** |
| Week 1 | **4/5/25** | • Introductions • Course Introduction • Instructor Self-introduction  • Student Self-introduction  • In-class Survey • Cybersecurity Fundamentals  • Cybersecurity Frameworks | Reading Assignment: Chapter 1  Discussion Board Post 1 |
| Week 2 | **4/12/25** | • Cybersecurity Governance  • Risk Management & Assessment | Reading Assignment: Chapter 2 & 3  Discussion Board Post 2 |
| Week 3 | **4/19/25** | • Security Management  • People Management  • Human Risk  • External Threat  • Insider Threat | Reading Assignment: Chapter 4 & 5  Discussion Board Post 3  Security Policy Assignment |
| Week 4 | **4/26/25** | • Physical Security Concepts   * Physical Security Threats * Physical Security Mitigations   • Local Environment Management | Reading Assignment: Chapter 7 & 16  Discussion Board Post 4 |
| Week 5 | **5/3/25** | • System Access  • System Management | Reading Assignment: Chapter 10 & 11 Discussion Board Post 5 |
| Week 6 | **5/10/25** | • Systems Security   * System Threats * System Defense * System Hardening | Discussion Board Post 6  Kali Lab Activity |
| Week 7 | **5/17/25** | • Networks & Communications   * Communications Threats * Communications Defense | Reading Assignment: Chapter 12  Discussion Board Post 7  Wireshark Activity |
| Week 8 | **5/24/25** | • Supply Chain & Cloud Security  • Technical Security Management | Reading Assignment: Chapter 13 & 14 Discussion Board Post 9 |
| Week 9 | **5/31/25** | Memorial Day | Reading Assignment: Chapter 15 & 17 Discussion Board Post 10 |
| Week 10 | **6/7/25** | • Incident Management  • Business Continuity  • Course Review & Future Study | Incident Response Plan  Student Surveys |

*Note. The first 5 weeks focus on the business and data module, and the last 5 weeks focus on the technology & AI-oriented module.*

# Evaluations (% of grade)

TBD, Scale & scoring are still in development.

# Grading

* Following the business school’s guidelines, grades are earned based on your performance relative to the class
  + **Approximate grade distribution: ~40% A’s, ~40% B’s, ~20% C’s, and below**
  + **The grading for this course will be primarily based on curving, rather than absolute scores**. My grading will be transparent and fair. If you have any questions or concerns about your grade, please do not hesitate to get in touch with me.
* Late assignments will be refused without receiving permission at least one business day before the due date
  + Each student has the choice to extend at most two assignments with 3 additional days without any point deduction.
  + Then, A 10% deduction per day late applies to late submissions since the third late submitted assignment.
    - If you want to offset the point deduction due to late submissions, you can read one chapter from the Additional Reading books and submit a one-page reflection about the reading.
* Assignments and exams completed with inappropriate assistance will receive no credit
  + Students are allowed to withdraw their submitted assignment in the next twenty-four hours and they will take a zero on the assignment they have already submitted.

# My Personal Ethics Code About Teaching

**My Teaching Commitments**

1. Foster a deep respect for students in my mentoring and teaching roles, empathizing with their perspectives. *Regardless of your academic performance or attendance in this course, I will continue to regard you as a person of worth, demonstrating care and respect.*
2. Ensure thorough preparation for all classes, regardless of class size or difficulty level.
3. Practice impartiality and fairness in my treatment of all students.
4. Conduct fair and equitable grading.
5. Provide timely, thoughtful feedback on student assignments, presentations, and exams.
6. Responsively address student inquiries related to the course material.
7. Facilitate independent learning, emphasizing the cultivation of students' self-driven knowledge acquisition rather than mere knowledge transmission.
8. Uphold a teaching environment free from offensive behavior and discrimination.
9. Report any instances of misconduct following my obligations.

**My Teaching Aspirations (strive diligently to achieve)**

1. Endeavor to create courses that are both informative and engaging.
2. Employ innovative teaching methods and materials to inspire creative thinking among students.
3. Motivate students to find enjoyment in the learning process, fostering a sense of accomplishment.
4. Apply professional & industry experience to create course material and lessons that are directly relevant to student and professional employment readiness.

# USE OF GENERATIVE AI

The policies for using generative AI, such as ChatGPT, in this class aim to support your intellectual growth and uphold academic integrity. While using AI can significantly increase the speed of your work, you still need to be able to understand all the learning topics yourself. If AI can do the work without you, you will not have employable skills.

* Use AI like a collaborator or tutor: ask for feedback or ways to improve, but all of the text needs to be yours.
* You may use generative AI to aid in studying, summarizing, and reviewing course materials, preparing for video case studies/group discussions, and preparing for the exams provided you find it beneficial for enhancing your learning. Be aware that AI-generated information may not always be accurate. You are the person who should verify whatever is generated by GenAI.
* Directly copying output from GenAI to assignments is strictly forbidden to ensure your learning opportunities are not hurt by the AI. Specifically, CenAI should not substitute your thinking for the video case studies/group discussions. Thoughtlessly handing decision-making over to AI could erode your judgment. If you are concerned about whether the way you use ChatGPT is proper for this course, you are more than welcome to discuss your concerns with me.
* Generative AI to assist with group discussions and case studies could be used to summarize the main ideas of the video and generate inspiration related to the video content/discussion questions. Then, you should reflect on AI output using the [given template](https://human.libretexts.org/Bookshelves/Composition/Advanced_Composition/How_Arguments_Work_-_A_Guide_to_Writing_and_Analyzing_Texts_in_College_(Mills)/16%3A_Artificial_Intelligence_and_College_Writing_(Under_Construction)/16.01%3A_Template_Phrases_for_Reflecting_on_AI_Feedback) to come up with your own thinking. All the text needs to be yours. You are the person who is responsible for your own thoughts.
* You are encouraged to read the [Guidelines for the Ethical Use of Generative AI on Campus](https://www.scu.edu/ethics/focus-areas/campus-ethics/guidelines-for-the-ethical-use-of-generative-ai-ie-chatgpt-on-campus/), developed by a group of SCU students, to gain a better comprehension of the benefits and risks associated with the use of generative AI in an academic setting. Some important guidelines are as follows:
  + ***NEVER****directly copy any words used by ChatGPT or any generative AI.*
  + *Always be wary of the blatant biases that generative AIs may harbor.*
  + *Do not rely on ChatGPT for accurate information; utilize a variety of reliable sources when researching important topics.*
  + *Treat ChatGPT as an additional learning tool, not a vehicle to avoid honestly completing academic work.*
  + *Whenever using ChatGPT be sure to double-check all information against other sources to ensure accuracy.*
  + *Be specific and concise when interacting with ChatGPT as its responses will only be as strong as the prompts.*
  + *Before using ChatGPT, remember your own capabilities and the value gained through problem-solving.*

# 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.*

Academic integrity is part of your intellectual, ethical, and professional development. I expect you to uphold the principles of this pledge for all work in this class. **The use of GenAI such as ChatGPT and course-sharing sites for all assignments (including open-book ones) and exams is NOT allowed in this course.** The penalty for cheating is a failing grade for the course, and the University may take further disciplinary action.

Students are required to follow these academic integrity policies for all class-related work:

* Each student must complete quizzes and exams independently.
* Sharing any course materials, such as class slides, in-class exercises, and exams, outside of one's class section is strictly prohibited. Distributing materials to anyone from a different section, course, or university, or through websites, social media, and online forums is a breach of both academic integrity and copyright law. Violations will be subject to penalties under university and federal law.

If you have questions about what is appropriate on any assignment, please let me know before you hand in work. For more resources about ensuring academic integrity in your work, see this LibGuide on Academic Integrity.

# POSSIBLE CHANGES TO SYLLABUS

The instructor reserves the right to make changes to this course syllabus as deemed necessary and appropriate given the topic covered in this course is pretty dynamic. If a change is made, the instructor will let the students know of the change either in a class announcement, a Camino announcement, or an email.

# Discrimination 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:

SCU Wellness Center

CAPS

Any individual (clergy, counselors) acting in a professional capacity for which confidentiality is mandated by law

I am happy to help connect you with any of these resources.

# 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 Office of Accessible Education (OAE) or from the Office of Equal Opportunity and Title IX Office. The following link provides information for students and faculty regarding pregnancy rights. <https://www.scu.edu/title-ix/resources/pregnancy/pregnancy>.

# 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 ([oae@scu.edu](mailto:oae@scu.edu), <http://www.scu.edu/oae>) 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 me 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 me (at least two weeks notice recommended) prior to an exam date to notify me of their intent to use their testing accommodations on the upcoming exam to ensure their accommodations are effectively implemented.

# 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.

# Land Acknowledgment

Santa Clara University occupies the unceded ancestral homeland of the Ohlone and Muwekma Ohlone people.

# Respect for Diversity

It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students’ learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, religion, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. ***In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you***. When participating in significant religious holidays, the absence is without penalty and the opportunity to make up missed work or exams will be provided. A list of religious holidays can be found on the Office of Diversity and Inclusion website (<https://www.scu.edu/diversity/events/guide-to-religious-holidays/>).

# Gender Inclusive Language

This course affirms people of all gender expressions and gender identities. If you go by a name different from what is on the class roster, please let me know. Using correct gender pronouns is important to me, so I encourage you to share your pronouns with me and correct me if I make a mistake. If you have any questions or concerns, please do not hesitate to contact me. For more on personal pronouns see www.mypronouns.org

# Wellness Statement and Mental Health Resources

I know you will do the best you can in this class (and all of your classes); however, it should never be at the expense of your own mental health, physical health, and/or well-being. Jesuit education is grounded in cura personalis, concern for the whole person—mind, body, and spirit. What does this mean for you? Be kind to others, and more importantly, be kind to yourself. Attend to your sleep (quantity and quality); drink lots of water; move; get outside; and pay attention to beauty that isn’t coming to you on a screen. Eat good food; laugh; enjoy friends and family; look for opportunities to connect with others in new ways; pray, meditate, or otherwise attend to your spirit. And ask for help, even if you don’t think you need it. Lots of folks, including me, are here to support you. It’s never too late to reach out, and I am committed to helping you.

**SCU has many resources and programs to support you. These resources may be especially helpful:**

**Wellness Center**: <https://www.scu.edu/wellness/>

The Wellness Center provides resources to aid and promote student well-being across the eight dimensions of wellness, including student peer groups for healthful living, violence prevention, and recovery.

**CAPS**: <https://www.scu.edu/cowell/counseling-and-psychological-services-caps/>

Santa Clara students are provided confidential counseling sessions at no cost through Counseling and Psychological Services (CAPS). Students have access to clinically appropriate, short-term therapy; group therapy; and other resources for care. A new 24/7 support line is also available: 408-554-5220.

**SCU Culture of Care**: <https://www.scu.edu/osl/culture-of-care/>

If you are concerned for the mental or physical welfare of one of your peers, the Office of Student Life Culture of Care website provides resources for recognizing and helping someone in distress.

**Academic Concerns**

If you are concerned with your progress in this class, please contact me so that we can find solutions together. Drahmann Center can also offer support with issues regarding your academic progress more broadly.

SCU also has multiple options for free academic tutoring. Students can make appointments to discuss work in a range of courses:

* Drahmann Tutoring (Numerous courses in the College of Arts & Sciences including Natural Sciences, Modern Languages, Economics, and Computer Science)
* The HUB Writing Center (Writing and Public Speaking)
* Mathematics Learning Center (MATH 4, 6, 8, 11-14, 30-31, 35-36, 51, 53)