FACULTY-LED
STUDY ABROAD

CS 475-2 Topics: Cybersecurity and Ethics

Instructor: Dr. Jan Pearce
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Instructor's office hours: on-site and by appointment

Syllabus subject to change

1. Course Description:

How can we balance the benefits of technology with the risks to privacy and security? What ethical considerations should be considered when creating new cyber technologies? How can we stay ahead of cybersecurity threats and ensure safety online?

Cybersecurity and the ethics of computing have swiftly become expected core components of education in industry, government, and business. With a focus on international and cross-border issues, we explore ethical and security issues faced by and brought about by computing professionals, including privacy, intellectual property, reliability, liability, and business disruption. The Association for Computing Machinery (ACM), the world's largest scientific and educational computing society, recently updated the ACM Code of Ethics, and the ACM's most recent curricular guidelines for undergraduate degree programs in computer science specifically state that computer science graduates should "recognize the social, legal, ethical, and cultural issues inherent in the discipline of computing" including the important ethical issues to consider in computer security, such as "ethical issues associated with fixing or not fixing vulnerabilities and disclosing or not disclosing vulnerabilities." We will also discuss the ethical and security impacts of widespread use of disruptive technologies such as cryptocurrencies and generative AI like ChatGPT.

2. Overall KIIS Program Student Learning Outcomes:

KIIS Study Abroad Mission Statement:
KIIS provides high-quality education abroad programs for students from all diverse backgrounds that promote deep international learning, are integrated into the curriculum, and encourage critical and creative thinking. Our goal is to help students understand the wider world and develop personal and professional skills for lifelong enrichment. We strive to go beyond generalizations and cultural stereotypes to help foster a nuanced appreciation of the world in which we live.

Students participating on KIIS study abroad programs aim to:
1) Understand contemporary issues of their host country/countries (i.e. KIIS program location).
2) Develop skills to interact comfortably in a global setting.
3) Understand other cultures.

Prior to your KIIS study abroad program, and again at the conclusion of your program, KIIS will ask each student to a) answer a few multiple-choice questions, and b) write a short reflective essay (two paragraphs in length) related to the elements detailed above. There is no right or wrong answer, and your responses will not affect your grade in any way. The purpose of the exercise is to help KIIS measure the effectiveness of its study abroad programs.

3. Course Objectives and Specific Learning Outcomes:

Upon successful completion of this course, students will be able to:	How students will practice each outcome:	How student achievement of each outcome will be assessed:
1. Explain and discuss social engineering and personal security, VPNs and virtual machines, Internet security and protocols, ciphers and common attacks and vulnerabilities, phone and wifi security, public policies, and ethics, as well as SQL injections and data security.	Readings/Class discussions	Worksheets and short essays
2. Identify potential vectors for bad actors in the areas of cybersecurity and the ethical implications of decisions to attempt to block these vectors.	Readings/Visits/Class discussions	Worksheets and short essays

3.	Synthesize the information you learned to formulate a final presentation and final report on cybersecurity and ethics in government and business.	Readings/Class discussions	Short essays/Independent research, final report & final presentation

4. Major Topics covered in the Course:
Malware and other attacks, social engineering and personal security, VPNs and virtual machines, Internet security and protocols, ciphers and common attacks and vulnerabilities, phone and wifi security, policies and ethics, and SQL injections and data security.

5. Fulfillment of General Education Requirement:
This course is expected to meet the Active Learning Requirement (ALE) at Berea College in the old General Education Program; in the Applied Disciplines Way of Knowing in the new General Education Program; and count in any one of the following in the Computer and Information Science Major (student choice of which): 1) the entry-level Exploratory Category, or 2) the upper-level Systems category or 3) the upper-level Additional Category.

6. Required Readings and Materials:

- **Required Primary Text**: Computer Systems Security: Planning for Success. **https://runestone.academy/ns/books/published/KIIS-security-2026/comp-sys-sec.html**. Add this course using **KIIS-security-2026.**
- **Labs: https://tryhackme.com/**. The instructor will give you a code for one month of full access.
- **Other online Materials:** Many shorter readings linked from the course website and demos using Github Codespaces. You can access all course-related materials, including this syllabus, online.
- **Accounts**: Gmail, Github, and WhatsApp accounts will be used in the course. If you do not already have these, please create them--they are all free.
- **Hardware**: A laptop computer with a physical keyboard is strongly recommended. A tablet or phone will be unlikely to suffice.

7. Graded Assignments: Grades for the course will be calculated based on your work on the following items:

- **Participation** (20%) – You are expected to attend every class and to participate in out-of-class activities as directed by the instructor and the program director. KIIS requires that any unexcused absence result in a grade reduction. Multiple unexcused absences may result in expulsion from the program. You will be graded here not just on your attendance, but your attitude and active engagement with our guest speakers and tours (during excursions) and the class discussions and readings.
- **Course Activities/Homework** (40%) – For each class period and each excursion/speaker, you will complete a course activity or a short essay. I will assign a specific activity or essay topic for each session, but often these activities will ask you to relate the course readings to Taiwan. Typically, you will submit these by 8 AM each day.

- **Independent Research/Final Presentation** (40%) Using **TryHackMe** as one of your tools, you will propose a cybersecurity exploit as a topic, then research and develop a detailed explanation in layman's terms of a specific cybersecurity exploit and the ethical context of this exploit, research at least one real-world example of this exploit, complete a five-page structured report, and present this research to the class during our last two class meetings. You will be expected to reference only reputable articles, videos, and blog posts as your source materials.

All course assignments must be completed to receive a passing grade. There will be no extra credit offered. Your course will use the following scale:

A = 90-100%   B = 80-89%   C = 70-79%   D = 60-69%   F ≤ 59%

This course will be graded on this basis, without regard to other scales (i.e., plus-and-minus) which may apply at your college or university. Note KIIS/WKU does not award +/- grades, only full letter grades.)

8. Generative AI Policy:

Generative AI is permitted/encouraged in some ways, with proper attribution, but prohibited in other ways.
Students are allowed, encouraged, and even required to use Generative AI in some ways but are prohibited from using it in other ways. Keep in mind that any content produced by generative AI can "hallucinate" (produce false information), so students are responsible for ensuring the accuracy of any AI-generated content. Examples of citing AI are available at: https://libguides.wku.edu/stylewrite/ai.

Students are permitted and encouraged to use generative AI in the following ways:
- Brainstorming: You may use generative AI to stimulate creativity, generate ideas, or brainstorm topics for computer code, papers, presentations, and discussions. The generated content must serve as a steppingstone, not a final product.
- Citation Assistance: AI tools can be used to manage, format, and organize citations and references, promoting adherence to academic writing standards and specific style guides required for individual assignments.
- Grammar and Style Checking: AI-powered writing enhancement tools may be used to help with spelling, grammar, syntax, and stylistic errors.
- Concept Understanding: Generative AI can be used to explain or simulate concepts taught in class, aiding in a deeper understanding.
- Research Assistance: AI can be used to conduct initial research, compile data, and summarize articles, books, or papers. It should not replace traditional research methods but rather enhance them.

You may not use generative AI in coursework in the following ways:
- Plagiarism: Using AI-generated content as your original work without attribution. This includes computer code, essays, images, reports and papers, presentations, and exam answers.

- Data Manipulation: Using AI tools to alter data or create misleading information.
- Misrepresentation of Skills: Using generative AI to complete tasks that are meant to assess your knowledge and skills.
- Confidentiality Breach: Using AI tools that might violate KIIS/university policies or laws related to data privacy and confidentiality.

Metacognitive Reflection. In addition to a proper citation, the student should include the following statement with any assignment where generative AI is used for assistance.

"I used generative AI [INSERT NAME OF PLATFORM] for assistance in the following ways on this assignment: [INSERT WAYS USED, such as brainstorming, citation assistance, grammar and style checking, concept understanding, and research assistance, etc.]."

8. Attendance Policy:

KIIS program participants are expected to be punctual to and in attendance at all classes, presentations, meetings and required excursions, and to remain with the program for the full academic period. Unexcused absences from classes and/or mandatory meetings will result in a lowering of the student's final grade, as will excessive tardiness. Multiple unexcused absences could result in expulsion from the program. Any absence from an academic class session must be excused for medical reasons.

9. Disability Accommodation:

KIIS will make every reasonable effort to provide accommodations for program participants with special needs or disabilities, but we cannot guarantee that we will be able to do so. Be aware that many foreign countries do not have comprehensive legislation comparable to the Americans with Disabilities Act (ADA). As a result, businesses and other establishments operating in foreign countries may not be able to provide accommodations.

If you have a disability accommodation need, we recommend you contact your KIIS Campus Representative, https://www.kiis.org/about-kiis/contact-us/campus-representatives/ early in your program selection process so that s/he has time to discuss any specific needs, including which KIIS programs may be best suited. You also are welcome to contact KIIS Assistant Director, Maria Canning, maria.canning@wku.edu, to discuss your disability accommodation needs (e.g. housing, transportation, excursions, class schedule, etc.).

Immediately after acceptance, notify KIIS Admissions and Enrollment Specialist, Haley McTaggart, haley.mctaggart@wku.edu, if you have a special need or disability that might require any form of accommodation abroad. Failure to notify KIIS may prevent you from participating on your KIIS program.

If you require any accommodations abroad, you must provide KIIS Admissions and Enrollment Specialist, Haley McTaggart, an accommodation letter from your home campus' disability accommodation office that lists the accommodations you are eligible to receive. Please do not request accommodations directly from your KIIS Program Director or other KIIS Faculty; the KIIS Office will notify your KIIS Program Director and/or Faculty after we have received your above accommodation letter.

In some cases, you may need to make arrangements for a caregiver to join you on your KIIS program, should your physician, campus disability accommodation office, or KIIS make such a recommendation or require it.

10. Title IX / Discrimination & Harassment:
Recent attention to gender discrimination and sexual harassment at colleges and universities reminds us of the importance of adhering to standards of ethical and professional behavior. KIIS Study Abroad is committed to supporting and encouraging safe and equitable educational environments for our students, faculty, and program directors. Students, faculty, and program directors are required to be civil and treat each other with dignity and respect. As such, harassment and/or discrimination of any kind will not be permitted or tolerated.

Sexual misconduct (sexual harassment, sexual assault, and sexual/dating/domestic violence) and sex discrimination are violations of KIIS policies. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to a) KIIS Assistant Director, Maria Canning (+1-859-200-1000) or KIIS Executive Director, John Dizgun (+1-270-227-2288), b) WKU's Title IX Coordinator, Ena Demir (270-745-6867 / ena.demir@wku.edu) or WKU's Title IX Investigator, Michael Crowe (270-745-5429 / michael.crowe@wku.edu). Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a KIIS program director and/or faculty member, KIIS program directors and faculty are considered "Responsible Employees" of Western Kentucky University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator.

If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center, https://www.wku.edu/heretohelp/ at 270-745-3159.

For more information on KIIS Title IX, see https://www.kiis.org/students/health-safety/title-ix-clery/; additional Title IX resources can be found here https://www.wku.edu/titleix/titleixbrochure2020.pdf.

Everyone should be able to participate on a KIIS program, attend a KIIS event, or work in a KIIS environment (e.g. KIIS office) without fear of sexual harassment or discrimination of any kind. Be respectful of each other.