

# Social Engineering

## CSSS-5280

SU 2021 Section FL 3 Credits 05/31/2021 to 07/30/2021 Modified 05/21/2021

### Meeting Times

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Social Engineering: (CSSS-5280) Summer semester course will be offered via Zoom session every Tuesday, beginning 05/31/2021 to 07/30/2021 from 6:00 PM till 10:00 PM.

Note: Class dates are: June 1st, 8th, 15th, 22nd, 29th, July 6th, 13th, 20th, and 27th respectively.

Room Location: Virtually via Zoom session. Zoom session links for every week will be available on the Zoom link of your Canvas page (Click on Courses and scroll to the bottom to find the Zoom menu).

### Online via Zoom

Online Via Zoom

### Contact Information

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Please feel free to reach me out either via Canvas Inbox and/or call me (through the number which is listed on canvas). I am willing to assist you in accomplishing your goals/needs.

### Description

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This course examines social engineering - the science of influencing a target to perform a desired task or divulge information. The course provides the student with current information defining the many methods of deception hackers use in order to gather information with the intent of executing identity theft, fraud, or gaining computer system access; discusses activities toward preventing social engineering threats ranging from elicitation, pretexting, influence, and manipulation. The techniques of social engineering are presented, discussed, and explained by using real-world examples, and the science behind them to unravel the mystery in social engineering.

To complement the social engineering threat, the course analyzes the ethical and social implications of being a social engineer. And, to achieve an understanding of the professional social engineer the course teaches the student how to think and act like one. It is this 'putting ourselves into the shoes' concept that enables a comprehensive understanding of the social engineer's plans, concepts, and techniques in action, just to mention a few.

### Outcomes

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- Summarize and demonstrate an understanding of the vocabulary of cybersecurity terms and phraseology

- Acquire and differentiate a broad understanding of the methods used to influence humans through the use of social engineering activities.
- Develop an understanding of the positive uses of social engineering. Demonstrate and differentiate a basic working knowledge and awareness of current and growing threats to people, organizations, and society through the use of social engineering and manipulation
- Explain the basic knowledge of potential threats and how criminals and nation-states use different social engineering methods
- Describe the roles, responsibilities, and duties of computer scientists, IT managers, CIOs, CEOs, and other decision makers who may influence the use of IT systems
- Differentiate the scope of the evolving environment of cybersecurity; International law, national law enforcement, and organizational security measures and counter measures as applied to social engineering
- Classify future trends In social engineering addressing evolving Issues and liabilities facing public and private enterprises
- Produce graduate level research papers and practice oral presentation methods
- Demonstrate an understanding and proper application of APA as It is applied to professional writing
- Demonstrate skills in the use of common graduate program technologies -PowerPoint, Internet Research (Wikipedia is not considered a valid source), Library Resources, e-Reserves, Concourse, Connections and TurnItIn

## Required Textbook

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### Social Engineering: The Art of Human Hacking

Author: Hadnagy  
 Publisher: Wiley  
 Edition: 1st  
 ISBN: 978-0470639535

## Materials

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#### **OPTIONAL TEXTBOOK:**

The Art of Deception  
 Author: Mitnick and Simon  
 Publisher: Wiley  
 Edition: 1 edition  
 ISBN: 10: 0-471-23712-4

## Deliverables

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We'll have four major deliverable as shown below:

- Active participation on a weekly threaded discussion forums/classroom on a given topic
- Midterm exam
- Group project
- Final exam

## Evaluation

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Throughout the course, you will be expected to participate in class discussions. Discussions are designed to provoke original thought. Some are designed to allow you and other students to reply to real situations you have experienced. The key is to discuss each question. Short answers are not acceptable. Points will be awarded commensurate with student participation. The Discussion Grade is based both upon quantitative (number of submissions) and qualitative (quality of the submission) for the overall grade.

The weekly time frame for the class discussions (all discussions listed are mandatory) begins each **Wednesday morning at 10AM Eastern Time and ends one week later on Wednesday morning at 10AM (EST)**. I will close each week's discussion out at 10AM on Wednesday mornings for the previous week. At a minimum (equivalent of a "C" grade) students are expected to submit at least one input for each discussion. However, I strongly urge you to dialogue with your peers as they submit discussion points, articles, or ask

questions. Grading for class participation is based both on quantity and quality. It is a dual-assessment methodology.

Besides, midterm exam, one group project, and a final exam will be part of the overall evaluation criteria.

## Breakdown

### Evaluation breakdown/Grading elements

- Class Participation/Discussion board: 10%
- Mid-Term: 30%
- Final Exam: 25%
- Project (Presentation/Documentation): 35%
- Total = 100%

#### \*SCHEDULE

##### **Lecture Week 1**

Introduction to Social Engineering and Course structure  
Expectations/Deliverables  
Overview of methods of Social Engineering

##### **Lecture Week 2**

Social Engineering Methods of Social Engineering; Information Gathering and Elicitation  
Implication of SE towards supply-chain cyber risk(s)

##### **Lecture Week 3**

Social Engineering  
Methods of Social Engineering -- Part Two;  
Pretexting and Mind Tricks  
Social Engineering Experiments  
Influence and the Power of Persuasion

##### **Lecture Week 4**

Social Engineering Tools of the Social Engineer  
Case Studies of Social Engineers

##### **Lecture Week 5**

Social Engineering Mid-Term Examination  
Social Engineering Experiment Planning

##### **Lecture Week 6**

Social Engineering Case Studies of Social Engineers  
Cyber Ethics, Law, and Society

##### **Lecture Week 7**

Social Engineering Prevention and Mitigation of Attacks

##### **Lecture Week 8**

Social Engineering Experiment Presentations and Reports

## Schedule

When	Topic	Notes
Lecture Week 1 Read chapter one	Introduction to Social Engineering	Introduction to Social Engineering Course Social Media The World of the professional Social Engineer (SE) The SE Pyramid Cialdini's 6 Tendencies Types of SE Digital Vulnerabilities
Lecture Week 2 Review the PP slides and supporting materials	Online Social Engineering Attacks & Techniques	The primary Social Engineering Techniques
Lecture Week 3 Read chapters two through four	OSINT, Profiling, and DISC	Open Source Intelligence (OSINT) Profiling people through communications Pretexting and faking who we are Rapport, tribe mentality, and making the target like you Marston's DISC Communications Descriptor to human examples and discerning their specific communications type.
Lecture and Case Study Week 4 Read chapter five	Rapport, Propaganda, Triad of Disruption	The SE's use to Build Rapport with Targets 10 Principles of Building Rapport and why it is important to SE Propaganda, its effectiveness, and how it is used Triad of Disruption The Russian SE campaign against the United States of America's 2016 Presidential Election
Lecture and Case Study Week 5 Read chapter six	Influence and Manipulation	Influencing a target through persuasion The 8 Principles of Influence compared to the art of manipulation Case Study -- ISIS
Lecture Week 6 Read chapters seven through nine	Framing, Elicitation and Nonverbal Techniques	Framing and elicitation Understanding nonverbal communications techniques of an SE Impersonator penetration testing
Lecture Week 7 Read chapters 10-11	MAPP and the Challenge of Soft Skills in SE	The MAPP concept Soft Skills challenges for 'Techies'
Lecture Week 8 Review the Code of Ethics PP slides and material	Code of Ethics and Project #2	The SE Code of Ethics The challenges of planning a complex social engineering intervention
Lecture Week 9	The Mind of the Social Engineer	Bring together all of the concepts, techniques, soft skills, and other factors to fully understand the 'mind' of a professional SE.

## \* Course Policies

## Academic Policies

Academic policies provide students with important rights and responsibilities. Students are expected to familiarize themselves with all academic policies that apply to them. Academic policies for undergraduate students can be found in the Undergraduate Studies Catalog; graduate students should review the Graduate Studies Catalog.

### Undergraduate Studies Catalog

The Undergraduate Studies Catalog contains academic policies that apply to all undergraduate students. The *academic policies and information* section of the catalog contains important information related to **attendance, conduct, academic honesty, grades, and more**. If you are an undergraduate student, please review the catalog each academic year. The current Undergraduate Studies Catalog is at:

<http://www.webster.edu/catalog/current/undergraduate-catalog/> (<http://www.webster.edu/catalog/current/undergraduate-catalog/>)

### Graduate Studies Catalog

The Graduate Studies Catalog contains academic policies that apply to all graduate students. The *academic policies* section of the catalog contains important information related to **conduct, academic honesty, grades, and more**. If you are a graduate student, please review the catalog each academic year. The current Graduate Studies Catalog is at:

<http://www.webster.edu/catalog/current/graduate-catalog/> (<http://www.webster.edu/catalog/current/graduate-catalog/>)

## Grading

The Grades section of the academic catalog outlines the various grading systems courses may use, including the information about the final grade reported for this class.

### *Undergraduate*

<http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html#grading>  
(<http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html#grading>)

### *Graduate*

<http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html#grades>  
(<http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html#grades>)

### Incomplete

There are important policies that govern grades of Incomplete (I), including the circumstances under which Incomplete grades are granted, deadlines for completion, and consequences should the remaining course work not be completed. It is the responsibility of a student who requests an Incomplete to ensure that he/she understands and follows the policies.

### Grade Appeals

Instructors are responsible for assigning grades, and student should discuss grade issues with the instructor. Policies and procedures for appealing grades are available in the appropriate catalog.

## Academic Honesty Policy

Webster University is committed to academic excellence. As part of our Statement of Ethics, we strive to preserve academic honor and integrity by repudiating all forms of academic and intellectual dishonesty, including cheating, plagiarism and all other forms of academic dishonesty. Academic dishonesty is unacceptable and is subject to a disciplinary response. Students are encouraged to talk to instructors about any questions they may have regarding how to properly credit others' work, including paraphrasing, quoting, and citation formatting. The university reserves the right to utilize electronic databases, such as Turnitin.com, to assist faculty and students with their academic work.

The University's Academic Honesty Policy is published in academic catalogs:

### *Undergraduate*

<http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html>  
(<http://www.webster.edu/catalog/current/undergraduate-catalog/academic-policies.html>)

### *Graduate*

<http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html>  
(<http://www.webster.edu/catalog/current/graduate-catalog/academic-policies.html>)

As a part of the University commitment to academic excellence, the Academic Resource Center provides student resources to become better acquainted with academic honesty and the tools to prevent plagiarism in its many forms:

[http://www.webster.edu/arc/plagiarism\\_prevention/](http://www.webster.edu/arc/plagiarism_prevention/) ([http://www.webster.edu/arc/plagiarism\\_prevention/](http://www.webster.edu/arc/plagiarism_prevention/))

## Statement of Ethics

Webster University strives to be a center of academic excellence. The University makes every effort to ensure the following:

- The opportunity for students to learn and inquire freely
- The protection of intellectual freedom and the rights of professors to teach
- The advancement of knowledge through scholarly pursuits and relevant dialogue

To review Webster University's statement of ethics, see the Undergraduate Studies Catalog and the Graduate and Studies Catalog:

### *Undergraduate*

<http://www.webster.edu/catalog/current/undergraduate-catalog/overview.html#ethics>  
(<http://www.webster.edu/catalog/current/undergraduate-catalog/overview.html#ethics>)

### *Graduate*

<http://www.webster.edu/catalog/current/graduate-catalog/ethics.html> (<http://www.webster.edu/catalog/current/graduate-catalog/ethics.html>)

## Contact Hours for this Course

It is essential that all classes meet for the full instructional time as scheduled. A class cannot be shortened in length. If a class session is cancelled for any reason, the content must be covered at another time.

## Important Academic Resources

### Academic Accommodations

Webster University makes every effort to accommodate individuals with academic/learning, health, physical and psychological disabilities. To obtain accommodations, students must identify themselves and provide documentation from a qualified professional or agency to the appropriate campus designee or the Academic ADA Coordinator at the main campus. The Academic ADA Coordinator may be reached at 314-246-7700 or [disability@webster.edu](mailto:disability@webster.edu) (<mailto:disability@webster.edu>).

If you have already identified as a student with a documented disability and are entitled to classroom or testing accommodations, please inform the instructor of the accommodations you will require for this class at the beginning of the course.

### Academic Resource Center

Additional support and resources may be accessed through the Academic Resource Center (ARC). Support and resources include academic counseling, accommodations, assistive technology, peer tutoring, plagiarism prevention, testing center services, and writing coaching. Visit [www.webster.edu/arc](http://www.webster.edu/arc) (<http://www.webster.edu/arc>) or Loretto Hall 40 on the main campus for more information.

### Student Success Portal

Webster University's Student Success Portal, powered by Starfish, is a communications tool to connect students with faculty members and campus support services. It allows faculty and staff members to communicate with you regarding academic achievements as well as areas where support may be helpful. You may use the portal to contact faculty and staff members for

assistance and to arrange meetings. Activity in the portal will be communicated to your Webster University email account. The Student Success Portal is available via your course home page in WorldClassRoom or via Connections. Learn more about the Student Success Portal at <http://www.webster.edu/success/students.html> (<http://www.webster.edu/success/students.html>).

### University Library

Webster University Library is dedicated to supporting the research needs and intellectual pursuits of students throughout the University's worldwide network. Resources include print and electronic books, journal articles, online databases, DVDs and streaming video, CDs and streaming music, datasets, and other specialized information. Services include providing materials at no cost and research help for basic questions to in-depth exploration of resources. The gateway to all of these resources and services is <http://library.webster.edu> (<http://library.webster.edu/>). For support navigating the library's resources, see <http://libanswers.webster.edu/> (<http://libanswers.webster.edu/>) for the many ways to contact library staff.

## Drops and Withdrawals

Drop and withdrawal policies dictate processes for students who wish to unenroll from a course. Students must take proactive steps to unenroll; informing the instructor is not sufficient, nor is failing to attend. In the early days of the term or semester, students may DROP a course with no notation on their student record. After the DROP deadline, students may WITHDRAW from a course; in the case of a WITHDRAW, a grade of W appears on the student record. After the WITHDRAW deadline, students may not unenroll from a course. Policies and a calendar of deadlines for DROP and WITHDRAW are at:

### *Undergraduate*

<http://www.webster.edu/catalog/current/undergraduate-catalog/enrollment.html>  
(<http://www.webster.edu/catalog/current/undergraduate-catalog/enrollment.html>)

### *Graduate*

<http://www.webster.edu/catalog/current/graduate-catalog/enrollment.html>  
(<http://www.webster.edu/catalog/current/graduate-catalog/enrollment.html>)

Academic Calendar - <http://www.webster.edu/academics/academic-calendar/>  
(<http://www.webster.edu/academics/academic-calendar/>)

Current tuition rates, policies, and procedures, including details of pro-rated tuition refunds, are available in the "Tuition, Fees, and Refunds" section of Webster's Academic Catalogs:

### *Undergraduate*

<http://www.webster.edu/catalog/current/undergraduate-catalog/tuition.html>  
(<http://www.webster.edu/catalog/current/undergraduate-catalog/tuition.html>)

### *Graduate*

<http://www.webster.edu/catalog/current/graduate-catalog/tuition.html> (<http://www.webster.edu/catalog/current/graduate-catalog/tuition.html>)

## Student Handbook and Other Important Policies

Student handbook and other non-academic policies may apply to you and may impact your experience in this class. Such policies include the student code of conduct, privacy, technology and communications, and more. Please review the handbook each year and be aware of policies that apply to you. The handbook is available at:

<http://www.webster.edu/student-handbook/> (<http://www.webster.edu/student-handbook/>)

### Sexual Assault, Harassment, and Other Sexual Offenses

Webster University makes every effort to educate the community to prevent sexual assault, harassment, and other sexual offenses from occurring, and is committed to providing support to those affected when this behavior does occur. To access information and resources or to review the Policy on Sexual Assault, Harassment, and Other Sexual Offenses, visit:

<http://www.webster.edu/sexual-misconduct/> (<http://www.webster.edu/sexual-misconduct/>)

## Research on Human Subjects

The Webster University Institutional Review Committee (IRB) is responsible for the review of all research on human subjects. The IRB process applies to all Webster University faculty, staff, and students and must be completed prior to any contact with human subjects. For more information on the IRB, visit:

<http://www.webster.edu/irb/index.html> (<http://www.webster.edu/irb/index.html>)

## Course Evaluations

At the end of this course, you will have the opportunity to provide feedback about your experience. Your input is extremely valuable to the university, your instructor, and the department that offers this course. Please provide your honest and thoughtful evaluation, as it helps the university to provide the best experience possible for all of its students.

## Important Technology Information

### Connections Accounts

Webster University provides all students, faculty, and staff with a University email account through Connections. Students are expected to activate their Connections account and regularly check incoming University email. Students may choose to have their University email forwarded to an alternate email address. Connections account holders can call the Help Desk (314-246-5995 or toll free at 1-866-435-7270) for assistance with this setup. Instructions are also provided on the Information Technology website at:

<http://www.webster.edu/technology/service-desk/> (<http://www.webster.edu/technology/service-desk/>)

### WorldClassRoom

WorldClassRoom is Webster's Learning Content Management System (LMS). Your instructor may use WorldClassRoom to deliver important information, to hold class activities, to communicate grades and feedback, and more. WorldClassRoom is available using your Connections ID at:

<https://worldclassroom.webster.edu/> (<https://worldclassroom.webster.edu/>)

### Webster Alerts

Webster Alerts is the University's preferred emergency mass notification service, available free to current students, faculty and staff at all US campuses. By registering a valid cell phone number and email address, you will receive urgent campus text, voice mail and email communications. Valuable information concerning a range of incidents affecting you - from weather-related campus closures, class delays and cancellations, to more serious or life-threatening events - are immediately and simultaneously delivered through multiple communication channels. To register for Webster Alerts, visit:

<http://www.webster.edu/technology/services/webster-alerts/> (<http://www.webster.edu/technology/services/webster-alerts/>)

## Campus Information

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