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English for Technical and Computer Science

Screenshot: Jamie Zawinski

Benjamin Haymond M.A

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Syllabus: a 15-Week Plan

Date:	In Class
17.09.24 19.09.24	Introduction to course content // course objectives // skills //
24.09.24 26.09.24	Topic Computing History Reading and Analysis 101: The shapes of a Text Summarizing 101: The differences between the written and the spoken.
01.10.24 03.10.24	Topic Computing History Reading and Analysis 102: Finding the Core Message // Testing the core message
08.10.24 10.10.24	Topic: Computing History Reading and Analysis 103: Details and Extrapolation Writing 102: Writing Style Basics
15.10.24 17.10.24	Topic: Hacking and Cyberattacks Reading and Analysis 104: Discovering the unspoken
22.10.24 24.10.24	Topic: Hacking and Cyberattacks Writing 103: Clarity and precision
29.10.24 31.10.24	**Assignment 1**
05.11.24 07.11.24	Topic: Hacking and Cyberattacks Listening / Reading / Analysis 105: Salience
12.11.24 14.11.24	Topic: Blockchain and NFT's Active Listening 102: More Techniques in Note Taking
19.11.24 21.11.24	**Assignment 2**
26.11.24 28.12.24	Topic: BlockChain and NFT's Managing Oral Exams: The Defense
03.12.24 05.12.24	Topic: Computer Gaming. Managing Oral Exams: Q/A's and oral Summaries.
10.12.24 12.12.24	Review
17.12.24 19.12.24	Review

ENGTCS Exam Brief

Fall semester 2024

Required skills

1. Summarizing
2. Reading and text analysis
3. Listening skills
4. Critical thinking with the ability to extrapolate information from a text or video.

Topics covered:

1. Phishing, Privacy, Identity, Theft
2. Cyberattacks, Data Breaches, Viruses
3. Blockchain, Encryption and NFTs
4. Computer Games

Performance will be based on:

1. Two written summaries counting for 50% of the grade,
2. And an oral exam counting for 50% of the grade.

GOOD LUCK!

Ben Haymond
September 2024

Course Description

One of the most important skills involves taking information and accurately relating it to somebody else either through writing or speaking. This requires an understanding of both the written and spoken word. It involves filtering and processing information. Finally, it may involve simplifying the message or adapting the message so that the intended audience can understand an idea with minimal effort.

In this course, the skills necessary to achieve the above actions will be developed in the context of four topics: Phishing and Data Privacy, cyberattacks, blockchain and encryption, and tracing apps and biometrics.

Course Goals

By the end of 14 weeks, you should be able to:

- Create a well-written summary.
- Discuss the main points of a text or video.
- Discuss how ideas are related through different texts and videos.
- Engage both readers and listeners through various tools such as dialogue and storytelling.
- Adapt a message to a specific audience.

Section Goals

By the end of each section, you should be able to

- explain the ideas and extrapolate ideas based on limited input
- explain the contents of these videos and articles to a 3rd party,
- identify the general structure of how information is conveyed in each of these texts and videos,
- and use topical-related vocabulary.

Methods

The methods used for this course will correspond with the process used by getAbstract in their summary writing process. Students will:

- write summaries.
- write teasers.
- review information for usefulness and validity.
- choose quotes that represent or showcase an idea in the texts and videos.

5.

Computing History

A Brief History of the Letter 'X,' From Algebra to X-Mas to Elon Musk

https://www.smithsonianmag.com/history/a-brief-history-of-the-letter-x-from-algebra-to-x-mas-to-elon-musk-180982647/

History Of Computers: Timeline, I/O Devices and Networking

https://www.g2.com/articles/history-of-computers

The Promethean Antikythera Computer of Greek Civilizatio

https://www.counterpunch.org/2023/04/25/the-promethean-antikythera-computer-of-greek-civilization/

Predicting Eclipses: The Three-Body Problem

https://www.youtube.com/watch?v=Gjbee3Bx_xs

The 'father of information theory', Claude Shannon brought us our digital world

https://aeon.co/videos/the-father-of-information-theory-claude-shannon-brought-us-our-digital-world

Web of war

https://aeon.co/essays/how-nuclear-fears-helped-inspire-creation-of-the-internet

The True Story of "Hidden Figures," the Forgotten Women Who Helped Win the Space Race

https://www.smithsonianmag.com/history/forgotten-black-women-mathematicians-who-helped-win-wars-and-send-astronauts-space-180960393/

UNIVAC: the troubled life of America's first computer

https://arstechnica.com/tech-policy/2011/09/univac-the-troubled-life-of-americas-first-computer/

***Adventures of a Mathematician* brings an unsung scientist back into the light**

https://arstechnica.com/gaming/2021/10/adventures-of-a-mathematician-brings-an-unsung-scientist-back-into-the-light/

How Doug Engelbart Pulled off the Mother of All Demos

https://www.wired.com/story/how-doug-engelbart-pulled-off-the-mother-of-all-demos/

Computer Science and Society: Hacking, Scamming and Cyberattacks

How phishing attacks trick our brains

https://www.technologyreview.com/s/614095/how-phishing-attacks-trick-our-brains/

Anyone can fall for online scams — even you.

https://www.vox.com/even-better/23157229/online-scam-venmo-zelle-cashapp-crypto

Online Privacy: How Did We Get Here?

https://www.pbs.org/video/off-book-online-privacy/

The Data Dilemma

https://www.pbs.org/video/data-dilemma-sfwq53/

The Extortion Economy

https://www.technologyreview.com/supertopic/extortion-economy/

The Morris Worm Was the World's First Cyberattack

https://mashable.com/article/kernel-panic-morris-worm

The Cyber Crimes You Never Hear About

https://www.smithsonianmag.com/videos/category/arts-culture/the-cyber-crimes-you-never-hear-about/

How a major oil pipeline got held for ransom

https://www.vox.com/recode/22428774/ransomeware-pipeline-colonial-darkside-gas-prices

Why banning victims of ransomware from paying ransom might not be the answer.

https://www.youtube.com/watch?v=4ig0KYzYHEA

Blockchain, Encryption, and NFTs

An Elegy For Cash: The Technology We Might Never Replace

https://www.technologyreview.com/2020/01/03/131029/an-elegy-for-cash-the-technology-we-might-never-replace/

3 things you need to know about securing a blockchain

https://www.weforum.org/agenda/2019/04/what-leaders-need-to-understand-about-securing-a-blockchain/

The Long and Winding History of Encryption

https://www.theatlantic.com/technology/archive/2016/01/the-long-and-winding-history-of-encryption/423726/

How Two Men Unlocked Modern Encryption

https://www.theatlantic.com/technology/archive/2014/09/how-two-men-unlocked-modern-encryption/380520/

NFTs explained

https://www.theverge.com/22310188/nft-explainer-what-is-blockchain-crypto-art-faq

NFTs – SNL

https://www.youtube.com/watch?v=mrNOYudaMAc

NFTs and the monetization of hope

https://www.vox.com/the-goods/23186695/nft-nyc-bored-apes-doodles-web3-crypto-crash

6.

Computer Science and Society: Gaming

The Surprisingly Long History of ‘Choose-Your-Own-Adventure’ Stories

https://www.smithsonianmag.com/innovation/surprisingly-long-history-of-choose-your-own-adventure-stories-180980014/

We Need a New Term for Video Games

https://www.nytimes.com/2021/07/23/technology/new-video-games.html

Level up: How video games evolved to solve significant scientific problems

https://www.theatlantic.com/magazine/archive/2021/10/sid-meier-civilization-vi-humankind-gaming/619820/

Confessions of a Sid Meier’s Civilization Addict

https://arstechnica.com/gaming/2017/07/level-up-how-video-games-evolved-to-solve-significant-scientific-problems/

Evolution of Video Games Documentary

https://www.youtube.com/watch?v=A-aO3hpCfvQ

The Rise of Videogame Economies

https://www.pbs.org/video/off-book-video-games/