

IT History: Past, Present, and Future

Lecturer	Dr. Youna Jung
Institution	Virginia Military Institute
Email	jungy@vmi.edu

Course Description:

This course allows cadets to explore the science, engineering and origins of information technology and its effects on societies over millennia. Driven by documentary videos, web-based multimedia, readings, and small group/full class discussions, cadets will be exposed to developments and societal impacts of information technology from early Middle Eastern Civilizations' oral traditions and writing forms to the invention of the 15th century printing press to 19th century railroads, telegraph and telephone to 21st century 3D television, blogs, social networks, and to emerging technologies including cloud computing, IoT, robotics, and virtual reality.

This course requires in-class group discussions focusing on not only the technological mechanisms but also on the impact of the technology on society. Through the discussions, cadets will learn how the technology increases understanding of the role of information technology in cultures, societies, and communities at the time of its development and in ensuing centuries, decades, or years.

In this summer abroad course, we especially focus on technologies in South Korea. South Korea is one of the world's most innovative nations. It is second only to Germany in Bloomberg's 2020 Innovation Index, having reigned at the top of the 60-country list for the previous 5 years. It is a remarkable achievement if we consider that, for the first half of the twentieth century, South Korea was an agrarian-based Japanese colony, then a battle ground. In this course, cadets will be exposed to early innovations in Korea and discuss advances on information technologies including semiconductor chips, 5G, and smart city.

Learning Outcomes: As a result of successfully completing this course, cadets will:

- To give life to your knowledge of information technology
- To provide an overview of information technology and how it fits into individual and societal issues of politics, economics, government regulations, and individual and mass communication,
- To improve oral and written communications skills in a technical setting.
- To learn how to use e-Portfolios to collect and organize your work over the semester.

Civilizations & Culture course Objectives: In achieving the course objectives above the following CC objectives will be met:

- Identify cultures of the world and the components and practices that distinguish them from others particularly as it pertains to the development of information technology.
- Appreciate a culture's distinctiveness through development of information technology within it.
- Understand societies of the past as models for how human beings organize themselves for solving life's problems that have been tackled by developing information technology infrastructure and communication tools.

Materials/Text:

No Textbook

Requirements:

Prerequisite: **None**

Schedule:

Note: The schedule may be adjusted appropriately as the class progresses.
Each class is three hours long.

Week	Topics	Assignments
July 14	Introduction to the course & [PAST] Ancient Thinking Process and Information: Metaphysics and structure of language	
July 15	[PAST] Ancient communication: Oral traditions, Smoke signals and Drums	Essay 1 (Outline)
July 16	[PAST] Ancient information storage technologies: Reading, Writing, and Arithmetic	Essay 1 (Draft)
July 20	[PAST] Libraries and the Printing Press: The Middle Ages	Essay 1 (Review)
July 21	[PAST] Trains, Telegraph, Steamships and the Pony Express	
July 22	[PAST] Telephone, Radio, and Television	Essay 1 (Final)
July 23	[PRESENT] Computer (Computational Machine), DBMS, and Search Engine	Essay 2 (Outline)
July 27	[PRESENT] Midterm 1 & Network and Internet	Midterm 1
July 28	[PRESENT] Security, Privacy, Hacking	Essay 2 (Draft)
July 23	[FUTURE] Social networking and Right to be forgotten	Essay 2 (Review)
July 30	[FUTURE] Cloud computing and Crowdsourcing	Essay 2 (Final)
August 3	[FUTURE] Artificial Intelligence	Reflective (Draft)
August 4	[FUTURE] Robotics and IoT	Reflective (Review)
August 5	[FUTURE] Virtual Reality & Midterm 2	Midterm 2
August 6	Reflective Essay (Final)	

Assignments:

In-class discussion, writing assignments, midterm tests, and reflective essay.

Evaluation:

Grading Scale: A+ = 95–100, A = 90–94.99, B+ = 85– 89.99, B = 80–84.99, C+ = 75– 79.99, C = 70–74.99,
D+ = 65– 69.99, D = 60–64.99, F = under 60

Grade Distribution:

- | | |
|--|-----|
| • In-class Participation | 20% |
| • Writing Assignments (1st and 2nd, Outline → Draft → Peer Review → Final) | 30% |
| • Midterm Test (1st and 2nd) | 20% |
| • Reflective Essay (Draft and Final) | 30% |

Total	100%
-------	------