

Global Technology Revolution

Huang, James. Liang Cheng
[d95010 \(at \) im.ntu.edu.tw](mailto:d95010@im.ntu.edu.tw)

Copyright@2007

2007/10/4 Updated

Course Description:

How will artificial intelligence change how law is conducted? What is the impact of issues such as globalization on the future of international law? What of terrorism and world law? Can we keep up with changes in world economy and technology? Is a science court needed to address issues such as the rights of robots?

In GTR, we will discuss Technology revolution globally, Global revolution technically, or Global technology's revolution. Why GTR? Technology changes the world rapidly, Global changes and impacts by tech are more than last two decades You need to catch the trend and find your advantages in the job market.

Topics/Frameworks:

- Biotechnology
 - Genomics
 - Genetic Profiling and DNA analysis
 - Cloning
 - Genetically Modified Organisms
 - Therapies and Drug Development
 - Biomedical Engineering
 - Organic Tissues and Organs
 - Artificial Materials, Organs, and Bionics
 - Biomimetics and Applied Biology
 - Surgical and Diagnostic Biotechnology
- Energy/Transport systems
- Material
- Information Technology
- The Impact of GTR

Assignment:

There will be THREE assignment in this quarter.

Assignment I: a Movie/Book report

Assignment II: a Term Project by team

Assignment III: Term Project report of each one of you

Assignment I: a Movie/Book report

Each of you have to Watch/read at least 3 Movies or Books I list at the syllabus and writing a report to

compare the spirits/themes which the director of movie or the author of book intent to tell you.

The report could write in Chinese or English, the later would be better. This report required at least 3 pages A4 without any pics or over 5000 words in Chinese/English. No COVER PAGE please!

Due on Oct. 17th, 2007

Movie/Book List:

Back to the future 1/2/3	Time Machine	The Matrix 1/2/3
Minority Report	Star War (only 4/5/6)	Terminator 1/2/3
iRobot	The enemy of the state	Hollow man
Artificial Intelligence	Jurassic Park I/II	Fantastic Voyage
The 6th Day	Sphere	Digital Fortress by Dan Brown
Deception Point by Dan Brown	Prey by Michael Crichton	State of Fear by Michael Crichton

The list of movie could be the origin novel of the movie or the adaption movie from the literary

Assignment II: a Term Project by team

Each team need at least 5 members. Pick up one of the topics I mention in this syllabus, extended my course description and discussing. Writing a term paper. This term paper should be due on Nov. 06, 2007

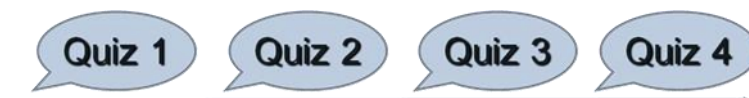
I'll choose the best 6 - 8 teams to make a 20 mins team presentation at the end of this season. Present in Chinese/English, later would be a plus. Team presentation will be a plus in your grades

Assignment III: Term Project report of each one of you

Each of you should write a report of the cooperation / collaboration in your team processing of the term project. It Should Contain What you learn in this project and the collaboration with your member. The report should contain at least 1200 words in Chinese/English.

Quiz

There may be several quiz in a random day or class. The Quiz Test paper will appear only 10 mins after class starting. The Quiz would be very easy. Quiz will grade as your class participation/attendance



Class Hours (usually 2)

Grading System

Assignment I	20%
Assignment II	20%
Assignment III	10%
Class Participation	25%
Quiz / Examination	25%

Note: The assignment grading system you would get is A/B/C/D/F, which means:

A = 90 +

B = 80 ~ 89

C = 70 ~ 79

D = 60 ~ 69

F = 59 - (Failed)

Class Rule

There are several rules you should follow in my class. If you break each of the rules, I reserved my right to keep you out of my class.

No Cell Phone, Please!

No Food, Drink or Cooler, Please!

No Chatting, Please!

If you have any words, please raise your hand then tell everyone after my admitted.

Reference

There is no actual textbook of this class. However, there will be two important reference documents and may announce some reference website in our class.

Two main references are free to download on the web. Thus, I'll give the files to your rep. and you may ask him/her for the files if you want to print it.

The Global Technology Revolution

Bio/Nano/Material Trends and Their Synergies with Information Technology by 2015

http://www.rand.org/pubs/monograph_reports/MR1307/index.html

Download at:

http://www.rand.org/pubs/monograph_reports/2005/MR1307.pdf

The Global Technology Revolution 2020, In-Depth Analyses

Bio/Nano/Materials/Information Trend, Drivers, Barriers, and social implication

<http://192.5.14.110/pubs/monographs/MG475/>

Download at:

http://192.5.14.110/pubs/monographs/2006/RAND_MG475.pdf