National University of Singapore
H3 Programmes – Synopses: Semester 2, Academic Year 2016/2017

GEH1022 GEOPOLITICS: GEOGRAPHIES OF WAR & PEACE

Geopolitics: Geographies of War & Peace introduces key ideas and contemporary themes of geopolitics. Geopolitics draws upon a lot of "popular" geopolitics materials in the form of video, film, blogs, images and other multi-media to illustrate key issues. Students will learn about the geography of conflict, war and peace-making in the twentieth century. Students will be led to understand the current and future trends and debates, including issues such as the New (and old) World Order, terrorism, peacekeeping and conflicts in and over 'cyberspace' and natural resources. The course introduces students to a wide-range of sources and encourages critical use of media, academic material and internet resources. The objective of the course is to develop a deeper and life-long understanding of the geography of international affairs.

Mode : University-taught course
Pre-requisite : H2 Geography or History
Assessment : Students undertake the following components:

- Continuous Assessment (one group project, one individual project)
- Final Examinations

PC1144 INTRODUCTION TO MODERN PHYSICS

This module introduces the ideas of modern physics to students, with an emphasis on conceptual understanding. Topics covered are a) Einstein's theory of special relativity, including time dilation, length contraction, and his famous equation E=mc2, b) Quantum physics, where the observed phenomena of black body radiation, the photoelectric effect and Compton scattering, leading to the quantization of angular momentum and energy, atomic transitions and atomic spectra, c) Introduction to quantum mechanics, introducing the Heisenberg uncertainty principle, wave-mechanics and wave particle duality, and the use of wavefunctions in predicting the behaviour of particles trapped in potential wells, d) Nuclear physics, introducing radioactivity and decay processes, nuclear interaction and binding energy, fission and fusion, and e) Sub-atomic elementary particles and their classification. The module is targeted at science students who are interested in learning about the more recent developments in physics, and is an essential for physics majors.

Mode : University-taught course
Pre-requisite : H2 Physics
Assessment : Students sit for the following:

- Practical Test
- Mid-Term Test
- Final Examination
