By Eric Topol 2019

Slides and articles provided directly by the Professor on the LMS

Selected parts of:
- A. Campbell (2017), Bioethics, Routledge
- I. van de Poel, L. Royakkers (2011), Ethics, technology, and engineering: An introduction, Wiley-Blackwell

Scientific papers made available by the Professor.

General issues related to medical professionalism can be found on:
- Pellegrino E., (2002), "Professionalism, Profession and the Virtues of the Good Physician", The Mount Sinai Journal of Medicine Vol. 69 No.6
- Cruess R.L., S. R. Cruess, "The cognitive base of Professionalism" in Cruess R.L., Cruess S. R., Steinert, Y. Teaching medical Professionalism, Cambridge, 2009 – Chapter 1,2,3
- Cruess R.L., Cruess S.R., Boudreau J.D, Snell L., Steinert Y, (2014), "Reframing Medical Education to Support Professional Identity Formation"
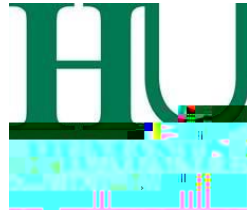
In addition to the group presentation in class on 8 May, the examination will consist of a written essay (max. 1500 words) in wh
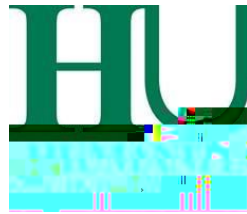
- Confront which aspects of being a medical doctor had changed, had fortunately or unfortunately been lost through time and which had remained the same over the centuries.
- Illustrate the evolution process of Medicine over the centuries and how this has impacted the present concept of medicine.
- Describe how technology and engineering have contributed to medical advances.
- Discuss how discoveries have moved from empirical observations to methodological research.
- Discuss the thinking process that led to a breakthrough in healthcare in history and how this could be applied in present and future challenges.
- Discuss how ethical approach and doctor-patients relationship had changed through time. Starting from this analysis improve our understanding the actual scenario and lay the foundations for the improvement of our own ethical and interaction models.

The module of Bioethics deals with the application of ethical theories to problems created, aggravated, or transformed by biomedical and health technologies. It aims to give students a chance to reflect on the ethical, social, and cultural impact of these technologies and the associated practices. The course focuses on theories and issues at the intersection of medical and biological ethics and ethics of technology and engineering.

The module includes lectures by the instructor and students' discussions; class participation is expected, and students should apply what they learn through reading and lectures by looking at current events through an ethical lens.

- Acquire a broad perspective on the ethical impacts and implications of problems in health care and biomedical sciences.
- Be acquainted with normative ethics through the critical analysis of paradigmatic case studies.
- Learn how to recognize and analyse ethical aspects inherent in health and biomedical sciences.
- Be able to use critical skills in clarifying and ethically analysing case-studies and to apply ethical theories to problems created, aggravated, or transformed by digital technologies in health care and biomedical sciences.
- Analyse the ethical issues of a technology.
- Present in an effective way the results of their independent research, being able to justify their choices.
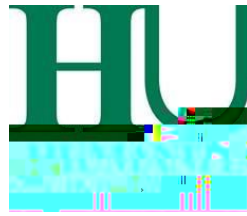
- Present in an effective way the results of their independent research, being able to justify their choices.
- Be better prepared for their future professional life in an ethically and socially responsible way.
- Be able to analyse problems through an ethical lens.
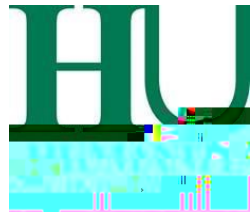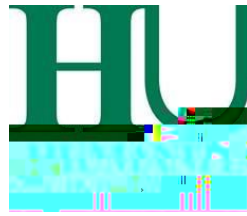
The aim of the lesson is to introduce students to the cognitive base of medical professionalism and stimulate a personal reflection on their values and beliefs related to those of medicine.

- Be aware of the professional core values of medical profession.
- Be able to define and discuss the concept of medical professionalism.
- Be able to apply medical professionalism to some case
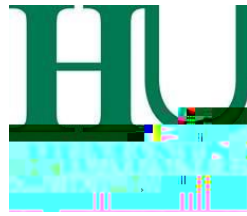
professionals (nurses, physiotherapists...). This 'delicate' processes of interpretation, interaction and interdependence with other people and other points of view, start from the ability to manage challenging situations and adapt our own behaviour to different contexts.

- Define the Biomedical, the Bio-Psycho-Social Model and the Patient Centred Model of Medicine
- Explain why the need for a new model of medicine was perceived at the end of the 1970s (according to Engel's perspective)
- Define the concepts of Disease, Illness and Sickness
- Explain the aims and the roles of both the patient and the Doctor in a disease centred and patient centred medical interview.

The lesson will discuss *informational* and *constitutional privacy*; the issue of "privacy as an individual good" and "privacy as a social good". Students will reflect on some privacy issues in biomedical research, patient care and public health and relevant governance approaches.

The lesson will deal with social and distributive justice in public health ethics, discussing fair access, the paradox of health care and global inequality in the digital era.

- Present the use of social media in the medical environment and in relation to doctor's job.
- Acquire awareness on cognitive bias in data interpretation from social media.
- Encourage a personal reflection on a mindful use of social media in relation to medical professionalism.

- Discuss the basic principles of A.I.
- Discuss some applications of A.I. in medical practice.

These lessons will focus on how medical knowledge has evolved not only in its content but also in its diffusion. The lesson will give an overview on the organization, the function and the