|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Faculty Information** | **Name** | Mina Park | | | | | |
| **E-mail** | bamiya@hanyang.ac.kr | | | | | |
| **Home University** | Hanyang University | | | | | |
| **Department** | Center for Creative Convergence Education | | | | | |
| **Homepage** |  | | | | | |
| **Course Information** | **Class No.** |  | **Course Code** | VEN2022 | | **Credits** | 3 |
| **Course Name** | Revolutions in Science and Technology | | | | | |
| **Lecture Schedule** | Online | | | | | |
| **Course Description** | This course explores the great revolutions in the history of science and technology in the 19th and 20th centuries: Darwin's theory of evolution, Einstein's theory of relativity, the atomic bomb, and the discovery of DNA. The course examines the cultural and social impacts, as well as the scientific and technological significance, of these events. Social aspects of science and technology will be discussed, along with gender-related questions.  The course covers a single scientific and technological revolution over the span of 2-3 lessons. In the first lesson of each revolution, the focus is on the "origin" of the scientific and technological revolution, entering into the intellectual background and evolution of revolution. The second lesson of each revolution concentrates on the reception of the scientific and technological revolution, examining how the scientific community and intellectual society embraced this revolution. In the third lesson, the focus shifts to the socio-cultural impacts brought about by this revolution.  In the 14th lesson, social issues are addressed, particularly gender problems and credit sharing in scientific research and prerequisite for future revolutions in science and technology. | | | | | |
| **Course Objective** | 1. You can learn the development of historical events such as the Darwinian Revolution, the Einstein Revolution, the Atomic Bomb Revolution, and the DNA Revolution. 2. You can understand the intellectual and social conditions under which scientific and technological revolutions occur. 3. You can understand various ways in which scientific and technological revolutions are accepted under different social conditions. | | | | | |
| **Prerequisite** |  | | | | | |
| **Materials/Textbooks** | Peter Bowler, *Evolution: The History of an Idea* (Univ. of California Press, 2009)  Peter Bowler and Iwan Morus, *Making Modern Science* (Univ. of Chicago Press; Second edition, 2020) | | | | | |
| **Evaluation** | **Attendance** | 20 % | **Quiz** | | % | | |
| **Assignment** | % | **Mid-term Exam** | | 40 % | | |
| **Presentation** | % | **Final Exam** | | 40 % | | |
| **Group Project** | % | **Participation** | | % | | |
| **Etc.** | **Evaluation Item** | | | **Ratio** | | |
|  | | | % | | |
|  | | | % | | |
| **Course Contents** | Lesson 1 | Course Preview | | | | | | |
| Lesson 2 | Darwinian Revolution – The Origins of the Origin | | | | | | |
| Lesson 3 | Darwinian Revolution - Darwin’s Theory of Evolution in the Making | | | | | | |
| Lesson 4 | Darwinian Revolution – Reception of Darwinism | | | | | | |
| Lesson 5 | Einstein Revolution – The Origin of Relativity | | | | | | |
| Lesson 6 | Einstein Revolution – Reception of Relativity | | | | | | |
| Lesson 7 | Einstein Revolution – The Assassin of Relativity | | | | | | |
| Lesson 8 | Midterm exam | | | | | | |
| Lesson 9 | Atomic Bomb Revolution –The Manhattan Project and the Nazi Bomb Project | | | | | | |
| Lesson 10 | Atomic Bomb Revolution - Who could control the atomic bomb? | | | | | | |
| Lesson 11 | Atomic Bomb Revolution – Big Science and Big Politics | | | | | | |
| Lesson 12 | DNA Revolution – The Origin of Double Helix | | | | | | |
| Lesson 13 | DNA Revolution – Bio-engineering and Its Social Impact | | | | | | |
| Lesson 14 | Social Issues in Revolutions + Outlook on the Future Revolutions | | | | | | |
| Lesson 15 | Final exam | | | | | | |