**本科全英语课程采用如下英文版教学大纲**

**Syllabus Sample of Fudan University**

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| **Department:** School of Life Sciences **Date:** 2024.09 | | | | | | | | | | | | | | |
| **Course Code** | | BIOL130067.01 | | | | | | | | | | | | |
| **Course Title** | | Bioethics | | | | | | | | | | | | |
| **Credit** | | 2 | | **Experiment**  **(including Computer) Credit** | | | | 0 | | **Practice Credit** | | 0 | **Aesthetic Education**  **Credit** | 0 |
| **Credit Hours Per Week** | | 2 | | **Education on The Hard-Working Spirit Credit Hours** | | | | 0 | | [**Language of Instruction**](http://www.baidu.com/link?url=47JJa4qk0LrDpLNqaOc5vq3QapQmx50Zq2Si4vRilP0LBh4dhC7LdZ11ucoXf4IUT8hpalC4TDsTvQgZFq5vOkmJp5rQO-DihNiIVE0Ui-SRoTDGpQwonRCT8aiX7pDO) | | English | **Honors**  **Course** | □Yes  RNo |
| **Course Type** | | □Core General Education Course □Specific General Education Course  RBasic Course in General Discipline  □Others | | | | | | | | | 2+X Major ：  □Professional Core Course  □Professional Advanced Course | | | |
| Non 2+X Major ：  □Professional Compulsory Course  RProfessional Elective Course | | | |
| **Course Objectives** | | （Including value, knowledge and ability objectives）  This course is intended to discuss issues related to bioethics in research of life sciences for students of Biology who are interested in science and consider taking biological sciences as his/her career goal. Also, this course takes students in other disciplines who are interested. This course focuses on the methodology and ethics that a scientific researcher needs to know and comply to, in order to make the best use of limited course time. This course aims to help student become a scientist full of creativity, scientific moral standard, and true love in scientific research, and at the same time, knows how to protect his/her own intellectual property while contributing to the development of science. | | | | | | | | | | | | |
| **Course Description** | | This course includes the major topics in bioethics, including: the determination of choosing science as lifelong career; the social foundation of scientific research; how to start a scientific career and choose a good advisor/mentor; methodology and data management in scientific research; ethics in scientific research; how to deal with conflict of interest; publication of research results; how to evaluate the contribution of each individual in a collaboration project; authorship；error and negligence in scientific research; misconduct in scientific research; subtle differences among error, negligence, and misconduct; and how to apply ethics code and regulation. | | | | | | | | | | | | |
| **Course Requirements:**  Attendance and active participation in discussion. | | | | | | | | | | | | | | |
| **Teaching Methods:**  Lectures, case studies and discussions. | | | | | | | | | | | | | | |
| **Course Director's Academic Background:**  Yan Zheng, M.D., Ph.D., graduated from University of Texas School of Public Health at Houston in 2013 and then worked as postdoctoral fellow in Harvard T.H. Chan School of Public Health till 2017. Dr. Zheng joined the School of Life Sciences at Fudan as an associate professor in July 2017. Dr. Yan Zheng’s primary research fields are: molecular epidemiology of cardiometabolic diseases; gene-environment interactions and nutritional metabolomics in type 2 diabetes and cardiovascular disease.  Over the past five years, Dr. Zheng has served as the principal investigator for 10 research projects. She has published 55 articles as a significant author in journals such as JAMA, Nature Reviews Endocrinology, BMJ, Diabetes Care, and Natl Sci Rev so that she has been selected for the "Global Top 2% Scientist List (2023) " and recognized as a highly cited scholar in China for multiple years.  Since 2019, Dr. Zheng has been a lecturer in BIOETHICS at the School of Life Sciences. She has received positive feedback for her teaching and was honored with the First Prize of the Fuxing Scholarship in Teaching in 2022. | | | | | | | | | | | | | | |
| **Instructor's Academic Background:**  Sun Lin, Professor and Vice Dean of the School of Life Sciences at Fudan University. She received her bachelor's degree from Fudan University in 1992, master's degree in 1995, and PhD from Yale University in 2001. Prof. Sun conducted functional genomics and developmental biology research as a postdoctoral fellow and later as an associate researcher at Yale University from 2001 to 2004. She has been a professor and associate professor at the Institute of Developmental Biology, School of Life Sciences, Fudan University since 2004. Prof. Sun is mainly dedicated to studying the functional genomics and molecular mechanisms of mouse development using developmental biology and other biological sub-disciplines. Her current researches focus on: 1) mechanisms of organismal quality control (stem cells and development, aging, and disease); 2) intestinal microbiota and development; 3) mechanisms of skeletal muscle development-related diseases in mice. Prof. Sun has been awarded the titles of New Century Excellent Talents and Pujiang Talents. She introduced and taught BIOETHICS at the School of Life Sciences in 2005, which was one of the earliest courses of this research area in domestic universities.  Qi Yun, Associate Professor at the School of Life Sciences, Fudan University. He obtained his bachelor's degree from Tsinghua University in 2003 and his PhD from Tsinghua University in 2009. He worked as a postdoctoral researcher and served as a Special Volunteer at the National Institutes of Health and National Heart, Lung, and Blood Institute in the United States from 2010 to 2016. Dr. Qi joined the School of Life Sciences at Fudan University in 2016. His researches mainly focus on the genetic regulation of Drosophila development and maintenance of adult homeostasis, as well as mitochondrial quality control. Dr. Qi has been involved in BIOETHICS at the School of Life Sciences since 2021 and has demonstrated excellent teaching performance.  He Huang, Assistant Professor at the Institute of Metabolism and Integrative Biology, Fudan University. He received his Bachelor degree in Wuhan University at 2012, and pursued his Ph.D in the University of Akron, 2017. Being researching on methodologies of metabolomics and lipidomics through the whole period of doctoral time, he joined a mass spec core facility in Isreal Deaconess Medical Center (BIDMC) as a research associate, as well as a postdoc in Harvard Medical School. Two years after postdoctoral training, he came back to China, and joined the IMIB, Fudan University in 2019. Recently, he is in charge of a metabolomics and lipidomics platform building and management, as well as doing the research on new metabolomics/lipidomics methodologies using in multiple diseases; his research interests are extensively on metabolomics/lipidomics data analyses and metabolic pathway analysis in an efficient manner. | | | | | | | | | | | | | | |
| **Members of Teaching Team** | | | | | | | | | | | | | | |
| **Name** | | **Gender** | | | | **Professional Title** | | | **Department** | | | **Responsibility** | | |
| Lin Sun | | F | | | | Professor | | | School of Life Sciences | | | Participate in teaching | | |
| Yun Qi | | M | | | | Associate professor | | | School of Life Sciences | | | Participate in teaching | | |
| He Huang | | M | | | | Assistant professor | | | Institute of Metabolism and Integrative Biology | | | Participate in teaching | | |
| Jin Li | | M | | | | Assistant professor | | | School of Life Sciences | | | Participate in teaching | | |
| **Course Schedule** (Please supply the details about each lesson)**:**   1. Course Introduction, Beginning of a Research Career 2. Mentor, Lab Citizenship, and Collaboration 3. Mentor, Lab Citizenship, and Collaboration (Continued) 4. Values in Science, Literature Browsing, and Project Choice 5. Journal Club, Lab Meeting, and Seminar 6. Experiments and Notebook 7. Safety and Research subjects 8. Data Management 9. Data Management (Continued) 10. Conflicts of interest 11. Conflicts of interest (Continued) 12. Publication, presentation and openness 13. Credit Allocation and Authorship Practices 14. Error, Negligence and Misconduct in science 15. Responding to violations of ethical standards | | | | | | | | | | | | | | |
| **The design of class discussion or exercise, practice, experience and so on:**   1. Using interactive teaching methods and various case study materials. 2. Encouraging students to participate in discussion. | | | | | | | | | | | | | | |
| **If you need a TA, please indicate the assignment of assistant:**   1. Preparing teaching materials in advance for instructors; 2. Recording students’ class attendance and performance; 3. Q & A. | | | | | | | | | | | | | | |
| **Grading & Evaluation** (Provide a final grade that reflects the formative evaluation process)**:**  Presence and discussion 15%; middle term 15%; final exam 70%. Final exam is an open-book exam. It usually takes the form of case studies. | | | | | | | | | | | | | | |
| **Usage of Textbook：**□Yes(complete textbook information form below) RNo  **Textbook Information** (No more than two textbooks) **:** | | | | | | | | | | | | | | |
| **Title** | **Author** | | **ISBN** | | **Publishing Time** | | **Publisher** | | | **Type Ⅰ** | | | **Type Ⅱ** | |
|  |  | |  | |  | |  | | | □Self-compiled Textbook (Published)  □Non-mainland Textbook  □Other Textbook (Published) | | | □National Planning Textbook  □Provincial and Ministerial Planning Textbook  □School Level Planning Textbook  □Others | |
|  |  | |  | |  | |  | | | □Self-compiled Textbook (Published)  □Non-mainland Textbook  □Other Textbook (Published) | | | □National Planning Textbook  □Provincial and Ministerial Planning Textbook  □School Level Planning Textbook  □Others | |
| **Teaching References** (Including author, title, publisher, publishing time,ISBN)**:**   1. Class material containing:    1. **On Being a Scientist:** A Guide to Responsible Conduct in Research: Third Edition. *Commitee on Science, Engineering, and Public Policy.* 2009. National Academy Press.    2. Course Material composed from various case study materials from various sources including Yale, Columbia. （various times, upto now） 2. **Cantor’s Dilemma**. *C. Djerassi.* 1991. Penguin Books. 3. **At the Bench.** A Laboratory Navigator. *Kathy Barker.* 2005*.* Cold Spring Harbor Laboratory Press.   **Time, Love, Memory** A Great Biologist and His Quest for the Origins of Behavior. *Jonathan Weiner.* 1999. Alfred A. Knopf, Inc. | | | | | | | | | | | | | | |

Table column size can be adjusted according to the content.