附件2

**武汉大学全英文授课课程信息表**

**Wuhan University Course Outline**

**School/Department:**

|  |  |
| --- | --- |
| **Course Name (Chinese)\*** | 高级生化研究技术I—蛋白质研究 |
| **Course Name (English)\*** | Advanced Techniques of Biochemistry for Protein Study |
| **Course Code\*** | 20301008 |
| **Availability\*** | **■**Semester 1 □Semester 2 |
| **Course Hours\*** | 36 |
| **Credits\*** | 2 |
| **Course Description\*** | Protein biochemistry is an essential part of modern biological research. Tremendous advances in heterologous expression of recombinant proteins have greatly increased our ability to produce proteins of interest. This course will Introduce the research status of Protein structure and function, explain in detail that protein [properties](javascript:void(0);) [and](javascript:void(0);) [research](javascript:void(0);) [strategies](javascript:void(0);) in protein (including enzyme) recombination, expression and [purification](javascript:void(0);)s, design and research strategies in protein engineering. |
| **Course Objectives/Content\*** | This course focuses on the theory and methodology of protein study, including protein p[roperties](javascript:void(0);) [and](javascript:void(0);) [research](javascript:void(0);) [strategies](javascript:void(0);) in protein purification; expression and production of recombinant protein; the rational design, calculation method and directed evolution strategies of protein engineering; the establishment of the method and application of enzyme analysis.  Contents:  Chapter 1. Introduction  Chapter 2. Protein [Properties](javascript:void(0);) [and](javascript:void(0);) [Research](javascript:void(0);) [Strategies](javascript:void(0);) in Protein [Purification](javascript:void(0);)s  Chapter 3. Expression and Production of Recombinant Proteins  Chapter 4. The Rational Design and Calculation Method of Protein Engineering  Chapter 5. Directed Evolution Strategies in Protein Engineering  Chapter 6. Enzyme Analysis |
| **Teaching Methods** | Theory teaching (24 hrs), discussion teaching (6 hrs), combined with design and practice teaching (6~8 hrs) |
| **Assessment\*** | Reports and practice test |
| **Textbook(s)** | Teaching material of Advanced Techniques of Biochemistry for Protein Study |
| **Reading** | 1. Richard R. Burgess and Murray P. Deutscher. Guide to Protein Purification (Second Edition) 2. Clive Dennison. A Guide to Protein Isolation. Kluwer Academic Publishers. eBook (ISBN: 030646868-9) |
| **Prerequisites** | Grasp the basic knowledge and techniques of Biochemistry and Cell Biology |
| **Lecturer(s)** | YU Hong, ZHANG Baifang, FAN Chengpeng; DU Fen; WANG Min |

注：\*为必填。