课程大纲
COURSE SYLLABUS

1.	**课程名称(中英文)** **Course Title(Chinese and English)**	细胞及分子神经生物学 Cellular and Molecular Neurobiology
2.	**课程类别 Course Type**	专业课 Major
3.	**授课院系** **Originating Department**	生物系 Biology
4.	**可选课学生所属院系** **Open to Which Majors**	生物系及相关院系 Biology and Related Majors
5.	**课程学时 Credit Hours**	48
6.	**课程学分 Credit Value**	3
7.	**授课语言** **Teaching Language**	英语 English
8.	**授课教师 Instructor(s)**	姬生健 JI Shengjian
9.	**先修课程、其它学习要求** **Pre-requisites or Other Academic Requirements**	普通生物学 General Biology；生物化学 Biochemistry； 细胞生物学 Cellular Biology； 分子生物学 Molecular Biology；发育生物学 Developmental Biology

10. 教学目标 Course Objectives

细胞及分子神经生物学是为一年级研究生开设的高级生物学课程。本课程的总体目标是帮助学生在细胞和分子水平上了解控制神经系统结构、组织、发育、功能和疾病的基本原理。

Cellular and Molecular Neurobiology is an advanced biology course designed for first-year graduate students. The overall goal of this course is to help students understand the fundamental principles governing the structure, organization, development, function and diseases of nervous system.

11. 教学方法及授课创新点 Teaching Methods and Innovations

学生们除了可以从授课老师学到经典的、教科书上的神经科学知识，还有机会通过阅读、简报和讨论最新的顶级学术期刊上的论文来接触最前沿的研究进展。通过这个课程，学生们可以理解和掌握现代神经生物学的基本知识、研究方法和思维方法。这个课程还可以提高学生在神经科学领域的报告和交流

能力。

In addition to lectures given by the instructor, the students have the opportunity to contact the frontier research by reading, presenting and discussing the most recent scientific papers in top journals. In this course, the students can learn the basic principles, methods and ideas for modern neuroscience. They can also improve the skills for scientific presentation and communication in neuroscience.

12. 教学内容及学时分配 Course Contents and Course Schedule

Unit 1, Structure and organization of nervous system;

Unit 2, Nervous system development and diseases;

Unit 3, Neural signaling;

Unit 4, Sensory and motor systems;

Unit 5, Neuroscience journal club. 1~2 students will be assigned with a most recent or classic scientific article in neuroscience. They will read and present this paper to the class.

Unit 1~4: 40 credit hours

Unit 5: 8 credit hours

13. 课程考核 Course Assessment

出勤 Attendance	5
课堂表现 Class Performance	10
小测验 Quiz	15
课程项目 Projects	20
期末考试 Final Exam	50

14. 教材及其它参考资料 Textbook and Supplementary Readings

Neuroscience, 5th ed., Dale Purves et al., Sinauer Associates