

## 课程详述

### COURSE SPECIFICATION

以下课程信息可能根据实际授课需要或在课程检讨之后产生变动。如对课程有任何疑问，请联系授课教师。

The course information as follows may be subject to change, either during the session because of unforeseen circumstances, or following review of the course at the end of the session. Queries about the course should be directed to the course instructor.

1.	课程名称 <b>Course Title</b>	药物化学 <b>Medicinal Chemistry</b>				
2.	授课院系 <b>Originating Department</b>	化学系 Department of Chemistry				
3.	课程编号 <b>Course Code</b>	CH317				
4.	课程学分 <b>Credit Value</b>	3				
5.	课程类别 <b>Course Type</b>	专业选修课 Major Elective Courses				
6.	授课学期 <b>Semester</b>	秋季 Fall				
7.	授课语言 <b>Teaching Language</b>	中文 Chinese				
8.	授课教师、所属学系、联系方式（如属团队授课，请列明其他授课教师） <b>Instructor(s), Affiliation &amp; Contact</b> (For team teaching, please list all instructors)	李闯创, 教授, 化学系 第一科研楼 526 室 ccli@sustech.edu.cn 0755-88018333 Li Chuang-Chuang, Professor, Department of Chemistry Rm.526, No.1 Research Bldg. ccli@sustech.edu.cn 0755-88018333				
9.	实验员/助教、所属学系、联系方式 <b>Tutor/TA(s), Contact</b>	刘鑫, 助教, 化学系, liux@mail.sustech.edu.cn Liu Xin, TA, Chemistry Department, liux@mail.sustech.edu.cn				
10.	选课人数限额(可不填) <b>Maximum Enrolment (Optional)</b>					
11.	授课方式 <b>Delivery Method</b>	讲授 <b>Lectures</b>	习题/辅导/讨论 <b>Tutorials</b>	实验/实习 <b>Lab/Practical</b>	其它(请具体注明) <b>Other (Please specify)</b>	总学时 <b>Total</b>
	学时数 <b>Credit Hours</b>	46	2		化学系举行的相关科研讲座 Lectures on scientific research held by the Department of Chemistry	48

<p>12. 先修课程、其它学习要求 <b>Pre-requisites or Other Academic Requirements</b></p>	<p>有机化学 II (CH206)</p>
<p>13. 后续课程、其它学习规划 <b>Courses for which this course is a pre-requisite</b></p>	<p>本课程为化学专业选修课，主要介绍一些与日常生活密切相关的常用各类药物的结构、性质、合成、代谢等；想多了解一些药物常识或以后从事药物化学/有机化学研究的学生可以选修本课程。 The selective course is designed for student in chemistry. We mainly introduce some important drugs which are close to our daily life. We will introduce the structure, property, synthesis and metabolism and so on about these important drugs. Students who want to learn more pharmaceutical knowledge or to research drugs can choose this course.</p>
<p>14. 其它要求修读本课程的学系 <b>Cross-listing Dept.</b></p>	<p>无 None</p>

### 教学大纲及教学日历 SYLLABUS

15. 教学目标 **Course Objectives**

讲解与我们日常生活密切相关的各类药物，比如常用抗生素青霉素，头孢；抗肿瘤药，降血糖药，解热镇痛药，各类维生素等，讲解药物的结构、性质、合成、代谢等。不仅有趣，更重要的是有用。

To introduce some important drugs which are close to our daily life. Such as antibiotics: penicillin, cephalosporin; Anticancer Agents, hypoglycaemic agent, antipyretic analgesics and Vitamins and so on. We mainly introduce the structure, property, synthesis and metabolism and so on about the important drugs. It is not only interesting, but also important to our life.

16. 预达学习成果 **Learning Outcomes**

通过本课程的学习，学生应该掌握一些重点药物的结构以及性质，以及使用过程注意事项等，为以后学习药学相关知识打下基础，同时提高有机化学基础知识；此外，通过本课学习，更好的指导日常生活中合理安全的使用药物，保障自身健康。

After completing this course, students should master the structures, properties and the guidelines about those key drugs. After learning this course, they should be familiar with some pharmaceutical knowledge. Besides, students should also guide the safe use of drugs in daily life to ensure their own health.

17. 课程内容及教学日历（如授课语言以英文为主，则课程内容介绍可以用英文；如团队教学或模块教学，教学日历须注明主讲人）  
**Course Contents (in Parts/Chapters/Sections/Weeks. Please notify name of instructor for course section(s), if this is a team teaching or module course.)**

第一章 绪论，主要讲解药物化学概论；（4 学时）

第二章 抗肿瘤药，重点介绍一些抗肿瘤常用药，如氮芥、环磷酰胺等；（8 学时）

第三章 抗生素，重点介绍抗生素类药物如：青霉素以及头孢等，并普及滥用抗生素的危害等常识性知识；（8 学时）

第四章 中枢神经系统药物，重点介绍地西洋、巴比妥等药物以及一些重点药物的全合成知识；（8 学时）

第五章 外周神经系统药物，重点介绍溴新斯的明、阿托品等药物；（6 学时）

第六章 循环系统药物，主要介绍盐酸普萘洛尔、硝苯地平、盐酸胺碘酮等药物；（6 学时）

第七章 消化系统药物，主要讲解 H<sub>2</sub> 受体拮抗剂、质子泵抑制剂等；（4 学时）

第八章 解热镇痛药和非甾体抗炎药，本章重点药物阿司匹林；（4 学时）

The first chapter is introduction, which mainly introduces the introduction of medicinal chemistry. (4 credit hours)

The second chapter antineoplastic drugs, focuses on some antineoplastic commonly used drugs, such as nitrogen mustard, cyclophosphamide and so on. (8 credit hours)

The third chapter, antibiotics, focusing on antibiotics such as penicillin and cephalosporin, and popularizing the common knowledge of the abuse of antibiotics. (8 credit hours)

The fourth chapter, the central nervous system drugs, focuses on diazepam, barbiturates and other drugs, as well as the synthesis of some key drugs knowledge. (8 credit hours)

The fifth chapter, peripheral nervous system drugs, focuses on the neostigmine, atropine and other drugs. (6 credit hours)

The sixth chapter, circulatory system drugs, mainly introduce propranolol hydrochloride, nifedipine, amiodarone hydrochloride and other drugs. (6 credit hours)

The seventh chapter, digestive system drugs, mainly on H<sub>2</sub> receptor antagonists, proton pump inhibitors and so on. (4 credit hours)

The eighth chapter is antipyretic analgesics and non-steroidal anti-inflammatory drugs, and this chapter focuses on aspirin. (4 credit hours)

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

指定教材：药物化学（第七版）；著译者：尤启冬；出版社：人民卫生出版社

其他参考书：“实用药物化学-原著第三版-中文版-全彩色”；作者：沃尔穆什；出版社：科学

Required: medicinal chemistry (the seventh edition); The Author: You Qidong; publishing house: people's medical publishing house

#### 课程评估 ASSESSMENT

19. 评估形式 Type of Assessment	评估时间 Time	占考试总成绩百分比 % of final score	违纪处罚 Penalty	备注 Notes
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出勤 Attendance			
课堂表现 Class Performance	10		
小测验 Quiz			
课程项目 Projects			
平时作业 Assignments	40		
期中考试 Mid-Term Test			
期末考试 Final Exam			
期末报告 Final Presentation	50		
其它（可根据需要 改写以上评估方式） Others (The above may be modified as necessary)			

20. 记分方式 GRADING SYSTEM

- A. 十三级等级制 Letter Grading  
 B. 二级记分制（通过/不通过） Pass/Fail Grading

课程审批 REVIEW AND APPROVAL

21. 本课程设置已经过以下责任人/委员会审议通过  
 This Course has been approved by the following person or committee of authority

化学系教学指导委员会  
 Teaching committee of the chemistry department