

## 课程大纲

### COURSE SYLLABUS

1.	<b>课程代码/名称</b> <b>Course Code/Title</b>	CHE5021/杂环化学
2.	<b>课程性质</b> <b>Compulsory/Elective</b>	专业课
3.	<b>课程学分/学时</b> <b>Course Credit/Hours</b>	3.00/48
4.	<b>授课语言</b> <b>Teaching Language</b>	中文
5.	<b>授课教师</b> <b>Instructor(s)</b>	徐明华
6.	<b>先修要求</b> <b>Pre-requisites</b>	无
7.	<b>教学目标</b> <b>Course Objectives</b>	
	设计该课程的目的是为了让了解杂环化合物的一般性质以及杂环化学的基础理论知识，并在此基础之上让学生了解杂环化合物的反应活性以及反应机理，为其在今后的学习工作中解决杂化化学问题提供理论基础。该课程内容涉及到杂环化合物的系统介绍、命名、结构和反应机理。该课程将开阔学生对杂环化学的认识，结合日常生活中接触到的杂化化合物，普及杂环化合物在生命科学中的应用。	
8.	<b>教学方法</b> <b>Teaching Methods</b>	
	讲授	
9.	<b>教学内容</b> <b>Course Contents</b>	
	<b>Section 1</b>	Introduction to Heterocyclic Chemistry
	<b>Section 2</b>	Heterocyclic Nomenclature
	<b>Section 3</b>	Structure of Heteroaromatic Compounds
	<b>Section 4</b>	Common Reaction Types in Heterocyclic Chemistry
	<b>Section 5</b>	Palladium in Heterocyclic Chemistry
	<b>Section 6</b>	Pyridines
	<b>Section 7</b>	Diazines
	<b>Section 8</b>	Quinolines and Isoquinolines
	<b>Section 9</b>	Pyryliums, Benzopyryliums, Pyrones and Benzopyrones
	<b>Section 10</b>	Pyrroles
	<b>Section 11</b>	Indoles
	<b>Section 12</b>	Furans and Thiophenes
	<b>Section 13</b>	1,2-Azoles and 1,3-Azoles
	<b>Section 14</b>	Purines
	<b>Section 15</b>	Heterocycles with More than Two Heteroatoms: Higher Azoles (5-Membered)

	and Higher Azines (6-Membered)
<b>Section 16</b>	Heterocycles with Ring-Junction Nitrogen (Bridgehead Nitrogen)
<b>Section 17</b>	Non-Aromatic Heterocycles
<b>Section 18</b>	Heterocycles in Nature
.....	Applications and Occurrences of Heterocycles in Everyday Life
<b>10.</b>	<b>课程考核 Course Assessment</b>
	①考查; ②平时成绩 70%, 课题报告 30%。
<b>11.</b>	<b>教材及其它参考资料 Textbook and Supplementary Readings</b>
	教材 John A. Joule, Keith Mills, Heterocyclic Chemistry At A Glance (ASIN: 0470971215; 2012-10-1) 其它参考书 John A. Joule, Keith Mills, Heterocyclic Chemistry (ASIN: 1405133007; 2010-06)