课程名（Coursename）  
Biosynthesis  
  
课程代码（Coursenumber）  
L9  
  
课程对象（Audience）  
Graduates  
  
开课教师（Teacher）  
Dr F. J. Leeper  
  
学期（Semester）  
  
课程描述（Description））  
Organisms make a vast range of chemical compounds and a great number of these natural products, or compounds derived from them, have been used as medicines. Their great importance to humans has motivated organic chemists to determine their structure, synthesise them and elucidate how they are formed by the producing organism. Despite their great diversity, most natural products are derived by way of one or more of a handful of biosynthetic pathways. This course highlights their common origin from simple building blocks (e.g. acetate or one of the amino acids) and details key reactions involved in their biosynthesis. Examples will be taken from polyketide and glycopeptide antibiotics, terpenes and alkaloids (e.g. cocaine) which are widely used (and abused).  
  
课时信息（Totalhours）  
  
教参信息（Textbookinfo）  
1 Enzyme Technologies: Metagenomics, Evolution, Biocatalysis and Biosynthesis by James R. McCarthy, Hsiu-Chiung Yang, and Wu-Kuang Yeh (Hardcover - Sept. 21, 2010)  
ISBN-13: 978-0470286241  
世界各地拥有馆藏的图书馆（OCLC）:4  
2 Biosynthesis (Molecular and Cell Biochemistry) by C. Smith and E.J. Wood (Paperback - Oct. 10, 2008)  
ISBN-13: 978-0412407604  
世界各地拥有馆藏的图书馆（OCLC）:226  
3 Genetics of Steroid Biosynthesis and Function (Modern Genetics) by J.I. Mason (Hardcover - May 23, 2002)  
ISBN-13: 978-0415278782  
世界各地拥有馆藏的图书馆（OCLC）:  
4 Secondary-Metabolite Biosynthesis and Metabolism (Environmental Science Research) by Richard J. Petroski and Susan P. McCormick (Hardcover - Nov. 30, 1992)  
ISBN-13: 978-0306443091  
5 Carotenoids, Part B: Metabolism, Genetics, and Biosynthesis, Volume 214: Volume 214: Carotenoids Part B (Methods in Enzymology) by John N. Abelson, Melvin I. Simon, and Helmut Sies (Hardcover - Apr. 6, 1993)  
ISBN-13: 978-0121821159  
6 The Porphyrin Handbook, Volumes 11-20, Volume 12: The Iron and Cobalt Pigments: Biosynthesis, Structure and Degradation by Karl Kadish, Kevin M. Smith, and Roger Guilard (Hardcover - Aug. 14, 2002)  
ISBN-13: 978-0123932228  
世界各地拥有馆藏的图书馆（OCLC）:157  
7 Biosynthesis of Secondary Metabolites - Second Edition by R. B. Herbert (Paperback - Mar. 31, 1989)  
ISBN-13: 978-0412277207  
8 Trna: Structure, Biosynthesis, and Function by Dieter Soll and Uttam L. Rajbhandary (Hardcover - Feb. 1995)  
ISBN-13: 978-1555810733  
9 Anthracycline Chemistry and Biology I: Biological Occurence and Biosynthesis, Synthesis and Chemistry (Topics in Current Chemistry) (No. 1) by Karsten Krohn (Hardcover - Aug. 15, 2008)  
ISBN-13: 978-3540758143  
世界各地拥有馆藏的图书馆（OCLC）:60  
10 Anthocyanins: Biosynthesis, Functions, and Applications by Kevin Gould, Kevin Davies, and Chris Winefield (Hardcover - Oct. 8, 2008)  
ISBN-13: 978-0387773346  
世界各地拥有馆藏的图书馆（OCLC）:191