课程名（Coursename）
Medicinal Chemistry

课程代码（Coursenumber）
L1

课程对象（Audience）
Graduates

开课教师（Teacher）
Dr D. A. Longbottom, Dr R. I. Storer (Pfizer), and Dr A. J. Hazelwood (GlaxoSmithKline)

学期（Semester）

课程描述（Description）

The pharmaceutical industry is one of the major employers of organic chemistry graduates in discovery, development and production. This course gives an overview of the type of reactions often used in medicinal and process chemistry and some case histories of modern drugs. It will apply all the organic Part II courses to this very important topic, whilst introducing a wide range of new reactions, mainly (though not exclusively) concerning heterocycle formation.
It is an organic chemistry course with a strong focus on reaction mechanisms and no prior knowledge of biochemistry is required. Usually, students that do this course will have done the following courses in Part II: A2 The foundations of organic synthesis; B2 Structure and reactivity; C4: Control in organic chemistry.
Topics The background and history of modern medicinal chemistry will be given as a context for the course. The drug discovery process will also be discussed: how do drugs go from the chemist’s bench to being multi-million dollar earners? Modern heterocyclic chemistry: most drugs contain heterocyclic rings and the structure, synthesis and reactions of both aromatic and non-aromatic heterocycles will be described, within the context of drugs for the treatment of many disease areas e.g. ulcers, bacterial and viral infections, influenza and malaria. There will be the chance to hear about medicinal and process chemistry through a workshop (Dr Ian Storer - Medicinal Chemistry, Pfizer) and lecture (Dr Andrew Hazelwood – Process Chemistry, GSK) given by people currently working in the pharmaceutical industry. An opportunity to learn about interviews for jobs in the pharmaceutical industry will be given.

课时信息（Totalhours）

教参信息（Textbookinfo）
1 Drug Delivery: Principles and Applications (Wiley Series in Drug Discovery and Development) by Binghe Wang, Teruna J. Siahaan, and Richard A. Soltero (Hardcover - Mar. 28, 2005)
ISBN-13: 978-0471474890
世界各地拥有馆藏的图书馆（OCLC）:164
2 Mass Spectrometry in Medicinal Chemistry: Applications in Drug Discovery (Methods and Principles in Medicinal Chemistry) by Klaus Wanner, Georg H?fner, Raimund Mannhold, and Hugo Kubinyi (Hardcover - Apr. 20, 2007)
ISBN-13: 978-3527314560
世界各地拥有馆藏的图书馆（OCLC）:137
3 Principles of CNS Drug Development: From Test Tube to Patient by John Kelly (Hardcover - Mar. 8, 2010)
ISBN-13: 978-0470519790
世界各地拥有馆藏的图书馆（OCLC）:27
4 High-Throughput Screening in Drug Discovery (Methods and Principles in Medicinal Chemistry) by J&#246;rg H&#252;ser, Raimund Mannhold, Hugo Kubinyi, and Gerd Folkers (Hardcover - Dec. 15, 2006)
ISBN-13: 978-3527312832
世界各地拥有馆藏的图书馆（OCLC）:74
5 Fragment-based Approaches in Drug Discovery (Methods and Principles in Medicinal Chemistry) by Wolfgang Jahnke, Daniel A. Erlanson, Raimund Mannhold, and Hugo Kubinyi (Hardcover - Oct. 27, 2006)
ISBN-13: 978-3527312917
世界各地拥有馆藏的图书馆（OCLC）:80
6 Protein Crystallography in Drug Discovery (Methods and Principles in Medicinal Chemistry) by Robert E. Babine, Sherin S. Abdel-Meguid, Raimund Mannhold, and Hugo Kubinyi (Hardcover - Mar. 5, 2004)
ISBN-13: 978-3527306787
世界各地拥有馆藏的图书馆（OCLC）:120
7 Drug Discovery and Development, Drug Development (Volume 2) by Mukund S. Chorghade (Hardcover - Aug. 31, 2007)
ISBN-13: 978-0471398479
世界各地拥有馆藏的图书馆（OCLC）:172
8 Photosensitisers in Biomedicine by Mark Wainwright (Hardcover - Apr. 19, 2010)
ISBN-13: 978-0470510605
世界各地拥有馆藏的图书馆（OCLC）:20
9 Advances in Pharmacology, Volume 33 by J. Thomas August, M. W. Anders, Ferid Murad, and Joseph T. Coyle (Hardcover - Sept. 25, 1995)
ISBN-13: 978-0120329342
10 Membrane Transporters: Methods and Protocols (Methods in Molecular Biology) by Qing Yan (Hardcover - May 2, 2003)
ISBN-13: 978-1588291042
世界各地拥有馆藏的图书馆（OCLC）:170
11 Peptides (Neuromethods) by Alan A. Boulton, Glen B. Baker, and Q. J. Pittman (Hardcover - Aug. 12, 1987)
ISBN-13: 978-0896031050