课程名（Coursename）  
Molecular Imaging  
  
课程代码（Coursenumber）  
 5.65  
  
课程对象（Audience）  
Graduate  
  
选课前提（prerequisite）  
5.13, 5.60; 5.07 or 7.05  
  
单元（units）  
2-0-4  
  
添加至时间表 （add to schedule）  
  
开课教师（Teacher）  
A. Ting  
  
学期（Semester）  
fall term  
  
课程描述（Description）  
Overview of molecular imaging methods used to study biological systems, ranging from cells to entire organisms. Course begins with micrometer-scale imaging, dominated by visible light microscopy. Students discuss physics and instrumentation, chemical probes, and biological applications. The second unit covers imaging at millimeter scales, focusing on PET and MRI imaging in live organisms. The final unit addresses imaging at the nanometer to micrometer scale: electron microscopy, AFM, and NSOM.  
  
备注（notes）  
H-level Grad Credit  
  
教参信息（Textbookinfo）  
1 Molecular Imaging: Radiopharmaceuticals for PET and SPECT by Shankar Vallabhajosula (Hardcover - Sept. 10, 2009)  
Publisher: Springer; 1 edition (September 10, 2009)   
ISBN-13: 978-3540767343   
世界各地拥有馆藏的图书馆（OCLC）:15  
2 Molecular Imaging: Principles And Applications In Biomedical Research by Markus Rudin (Hardcover - Aug. 1, 2005)  
Publisher: Imperial College Press (August 1, 2005)   
ISBN-13: 978-1860945281   
世界各地拥有馆藏的图书馆（OCLC）:129  
3 Molecular Imaging by Ralph Weissleder, Brian D. Ross, Alnawaz Rehemtulla, and Sanjiv Sam Gambhir (Hardcover - Jan. 31, 2010)  
Publisher: Pmph Usa; 1 edition (January 31, 2010)   
ISBN-13: 978-1607950059   
世界各地拥有馆藏的图书馆（OCLC）:3  
4 Molecular Imaging in Oncology by Juri Gelovani (Hardcover - Oct. 13, 2008)  
Publisher: Informa Healthcare; 1 edition (October 13, 2008)   
ISBN-13: 978-0849374173   
世界各地拥有馆藏的图书馆（OCLC）:28  
5 PET: Molecular Imaging and Its Biological Applications by Michael E. Phelps (Hardcover - May 11, 2004)  
Publisher: Springer; 1 edition (May 11, 2004)   
ISBN-13: 978-0387403595   
世界各地拥有馆藏的图书馆（OCLC）:107  
6 Molecular Imaging I (Handbook of Experimental Pharmacology) by Wolfhard Semmler and Markus Schwaiger (Hardcover - Aug. 15, 2008)  
Publisher: Springer; 1 edition (August 15, 2008)   
ISBN-13: 978-3540727170   
世界各地拥有馆藏的图书馆（OCLC）:66  
7 Nanoplatform-Based Molecular Imaging by Xiaoyuan Chen (Hardcover - Oct. 18, 2010)  
Publisher: Wiley (October 18, 2010)   
ISBN-13: 978-0470521151   
世界各地拥有馆藏的图书馆（OCLC）:2  
8 Mass Spectrometry Imaging: Principles and Protocols (Methods in Molecular Biology) by Stanislav S. Rubakhin and Jonathan V. Sweedler (Hardcover - Aug. 18, 2010)  
Publisher: Humana Press; 1st Edition. edition (August 18, 2010)   
ISBN-13: 978-1607617457   
世界各地拥有馆藏的图书馆（OCLC）:2  
9 Molecular Imaging Probes for Cancer Research by Xiaoyuan Chen (Hardcover - Nov. 30, 2010)  
Publisher: World Scientific Publishing Company (November 30, 2010)   
ISBN-13: 978-9814293679   
世界各地拥有馆藏的图书馆（OCLC）:2  
10 PET Chemistry: The Driving Force in Molecular Imaging (Ernst Schering Foundation Symposium Proceedings) by P.A. Schubiger, L. Lehmann, and M. Friebe (Hardcover - Dec. 4, 2006)   
Publisher: Springer; 1 edition (December 4, 2006)   
ISBN-13: 978-3540326236   
世界各地拥有馆藏的图书馆（OCLC）:182