课程名（Coursename）

Frontiers in Chemical Biology

课程代码（Coursenumber）

5.54J

课程对象（Audience）

Graduate

选课前提（prerequisite）

5.13, 5.07, 7.06, permission of instructor

单元（units）

4-0-8

添加至时间表 （add to schedule）

开课教师（Teacher）

B. Imperiali, S. O'Connor

学期（Semester）

fall term

课程描述（Description）

Introduction to current research at the interface of chemistry, biology, and bioengineering. Topics include imaging of biological processes, metabolic pathway engineering, protein engineering, mechanisms of DNA damage, RNA structure and function, macromolecular machines, protein misfolding and disease, metabolomics, and methods for analyzing signaling network dynamics. Lectures are interspersed with class discussions and student presentations based on current literature.

备注（notes）

H-level Grad Credit

Same subject as 7.540J, 20.554J

教参信息（Textbookinfo）

1 Handbook of Chemistry, Biochemistry and Biology: New Frontiers by Ludmila N. Shishkina, Gennady E. Zaikov, and Alexander N. Goloschapov (Hardcover - July 2009)

Publisher: Nova Science Publishers (July 2009)

ISBN-13: 978-1607418610

世界各地拥有馆藏的图书馆（OCLC）:6

2 Insulin Signaling: From Cultured Cells to Animal Models (Frontiers in Animal Diabetes Research) by George Grunberger and Yehiel Zick (Hardcover - Jan. 10, 2002)

Publisher: CRC Press; 1 edition (January 10, 2002)

ISBN-13: 978-0415271745

世界各地拥有馆藏的图书馆（OCLC）:75

3 Advances in Molecular Bioinformatics, (Frontiers in Artificial Intelligence and Applications) by S. Schulze-Kremer and S. Schulze-Kremer (Paperback - Jan. 1, 1994)

Publisher: Ios Pr Inc (January 1, 1994)

ISBN-13: 978-9051991727