课程名（Coursename）
Protein Folding and Human Disease

课程代码（Coursenumber）
 5.48J

课程对象（Audience）
Graduate

选课前提（prerequisite）
7.51 or permission of instructor

单元（units）
3-0-6

添加至时间表 （add to schedule）
Lecture: R2.30-5.30 (Whitehead-705)

开课教师（Teacher）
S. Lindquist, J. A. King

学期（Semester）
spring term

课程描述（Description）
Many chronic human diseases are associated with misfolding or aggregation of particular proteins or their fragments. Notable examples include Alzheimer's disease, Parkinson's disease, Huntington's disease, bovine spongiform encephalopathy (mad cow disease), human prion diseases, and light chain amyloidosis. Covers the underlying protein and cell biochemistry, including folding of newly synthesized polypeptide chains within cells; unfolding and refolding of proteins in vitro; folding intermediates, aggregation, and competing off-pathway reactions; amyloid fibril structure and polymerization; amyloids that produce biofilms, pigments, and other functional structures; roles of chaperonins, isomerases, and other helper proteins. Examines key model systems, including yeast, nematodes, flies and mice, as well as human pathologies and phenotypes.

备注（notes）
H-level Grad Credit
Same subject as 7.88J, 10.543J

教参信息（Textbookinfo）
1 Molecular Chaperones and Folding Catalysts: Regulation, Cellular Functions and Mechanisms by Bernd Bakau (Hardcover - Feb. 22, 1999)
Publisher: CRC Press; 1 edition (February 22, 1999)
ISBN-13: 978-9057023705
2 Biochemistry by Reginald H. Garrett and Charles M. Grisham (Hardcover - Dec. 28, 2008)
Publisher: Brooks Cole; 4 edition (December 28, 2008)
ISBN-13: 978-0495109358
世界各地拥有馆藏的图书馆（OCLC）:77
3 Parkinson's Disease: molecular and therapeutic insights from model systems by Richard Nass and Serge Przedborski (Hardcover - Aug. 1, 2008)
Publisher: Academic Press; 1 edition (August 1, 2008)
ISBN-13: 978-0123740281
世界各地拥有馆藏的图书馆（OCLC）:77
4 Metal-Ligand Interactions Molecular-, Nano-, Micro-systems in Complex Environments (NATO Science Series II: Mathematics, Physics and Chemistry) by N. Russo, Dennis R. Salahub, and Malgorzata Witko (Hardcover - Dec. 31, 2003)Publisher: Springer; 1 edition (December 31, 2003)
ISBN-13: 978-1402014949
世界各地拥有馆藏的图书馆（OCLC）:93
5 Grad Guides BK4: Physical Scis & Math/Ag Scis 2007 (Peterson's Graduate Programs in the Physical Sciences, Mathematics, Agricultural Sciences, the Environment & Natural Resources) by Thomson Peterson's (Hardcover - Nov. 1, 2006)
Publisher: Peterson's; 41 edition (November 1, 2006)
ISBN-13: 978-0768921557
世界各地拥有馆藏的图书馆（OCLC）:95
6 Grad Guides BK4: Physical Scis & Math/Ag Scis 2009 (Peterson's Graduate Programs in the Physical Sciences, Mathematics, Agricultural Sciences, the Environment & Natural Resources) by Peterson's (Hardcover - Oct. 2, 2008)
Publisher: Peterson's; 43 edition (October 2, 2008)
ISBN-13: 978-0768925654
世界各地拥有馆藏的图书馆（OCLC）:83