课程名（Coursename）
Physical Sciences 3. Electromagnetism, Circuits, Waves, Optics, and Imaging

课程代码（Coursenumber）
5262

课程对象（Audience）
Primarily for Undergraduates

开课教师（Teacher）
John Huth, Timothy A. French, and Sang-Joon Pahk

学期（Semester）
spring term

课程描述（Description））
This course is an introduction to electromagnetism, digital information, waves, optics and sound. Topics covered include: electric and magnetic fields, electrical potential, circuits, simple digital circuits, wave propagation in various media, microscopy, sound and hearing. The course will draw upon a variety of applications to the biological sciences and will use real-world examples to illustrate many of the physical principles described. There are six laboratories.

课时信息（Totalhours）
Tu., Th., 9:30-11, and a weekly section and lab to be arranged. EXAM GROUP: 11, 12

教参信息（Textbookinfo）
1 Beginning Physics II: Waves, Electromagnetism, Optics and Modern Physics - Paperback (June 1, 1998) by Alvin Halpern and Erich Erlbach
ISBN-13: 978-0070257078
2 Foundations for Guided-Wave Optics - Hardcover (Nov. 17, 2006) by Chin-Lin Chen
ISBN-13: 978-0471756873
世界各地拥有馆藏的图书馆（OCLC）:138
3 Modern Electrodynamics and Coupled-Mode Theory: Application to Guided-Wave Optics - Hardcover (Aug. 2002) by Anatoly A. Barybin and Victor A. Dmitriev
ISBN-13: 978-1589490079
世界各地拥有馆藏的图书馆（OCLC）:30
4 Semiconductor Device Physics and Design (Series on Integrated Circuits and Systems) - Hardcover (Dec. 13, 2007) by Umesh Mishra and Jasprit Singh
ISBN-13: 978-1402064807
世界各地拥有馆藏的图书馆（OCLC）:81
5 Physics of Semiconductor Devices - Paperback (Oct. 3, 2005) by J.-P. Colinge and C.A. Colinge
ISBN-13: 978-0387285238
世界各地拥有馆藏的图书馆（OCLC）:32
6 Long Wave Polar Modes in Semiconductor Heterostructures - Hardcover (June 4, 1998) by C. Trallero-Giner, R. PÃ©rez-Alvarez, and F. GarcÃ­a-Moliner
ISBN-13: 978-0080426945
7 Cellular Nanoscale Sensory Wave Computing - Hardcover (Dec. 7, 2009) by Chagaan Baatar, Wolfgang Porod, and Tamas Roska
ISBN-13: 978-1441910103
世界各地拥有馆藏的图书馆（OCLC）:16
8 Complex Computing-Networks : Brain-like and Wave-oriented Electrodynamic Algorithms (Springer Proceedings in Physics) - Hardcover (Apr. 10, 2006) by I.C. Göknar and L. Sevgi
ISBN-13: 978-3540306351
世界各地拥有馆藏的图书馆（OCLC）:65
9 Fundamentals of Polarized Light: A Statistical Optics Approach - Hardcover (Oct. 15, 1998) by Christian Brosseau
ISBN-13: 978-0471143024
10 Electromagnetic Fields and Waves: Including Electric Circuits (Physics Series) - Hardcover (Jan. 1988) by Paul Lorrain and Dale R. Corson
ISBN-13: 978-0716718239
11 Theory and Design of Microwave Filters (IEE Electromagnetic Waves Series) - Hardcover (May 1, 2001) by Ian C. Hunter
ISBN-13: 978-0852967775
世界各地拥有馆藏的图书馆（OCLC）:167
12 The Fourth International Kharkov Symposium Physics and Engineering of Millimeter and Sub-millimeter Waves: Symposium Proceedings, Kharkov, Ukraine, June 4-9, 2001 - Paperback (Oct. 2001) by Ukraine) International Kharkov Symposium "Physics and Engineering of Millimeter and Submillimeter Waves" (4th : 2001 : Kharkov)
ISBN-13: 978-0780364738
世界各地拥有馆藏的图书馆（OCLC）:20