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Arts, Sciences, and Engineering Optics

CRN	Course	Course Title	Term	Credits	Status
58652	OPT 202	PHYSICAL OPTICS LAB LECTURE	Spring 2015	2.0	Open

Schedule:

Day	Begin	End	Building	Room
M	900	1015	HUTCH	473

Enrollment:

Section Enroll	Section Cap
41	48

Instructors: BERG D

CRN	Course	Course Title	Term	Credits	Status
58669	OPT 202	PHYSICAL OPTICS - LAB	Spring 2015	LAB	Open

Schedule:

Day	Begin	End	Building	Room
T	1800	2100	WILMT	504

Enrollment:

Section Enroll	Section Cap
8	12

Instructors: BERG D

CRN	Course	Course Title	Term	Credits	Status
58674	OPT 202	PHYSICAL OPTICS - LAB	Spring 2015	LAB	Open

Schedule:

Day	Begin	End	Building	Room
F	1300	1600	WILMT	504

Enrollment:

Section Enroll	Section Cap
2	12

Instructors: BERG D

CRN	Course	Course Title	Term	Credits	Status
58683	OPT 202	PHYSICAL OPTICS - LAB	Spring 2015	LAB	Closed

Schedule:

Day	Begin	End	Building	Room
W	1800	2100	WILMT	504

Enrollment:

Section Enroll	Section Cap
12	12

Instructors: BERG D

CRN	Course	Course Title	Term	Credits	Status
58695	OPT 202	PHYSICAL OPTICS - LAB	Spring 2015	LAB	Open

Schedule:

Day	Begin	End	Building	Room
R	1800	2100	WILMT	504

Enrollment:

Section Enroll	Section Cap
10	12

Instructors: BERG D

CRN	Course	Course Title	Term	Credits	Status

58704	OPT 202	PHYSICAL OPTICS - LAB	Spring 2015	LAB	Open

Schedule:

Day	Begin	End	Building	Room
F	900	1200	WILMT	504

Enrollment:

Section Enroll	Section Cap
8	12

Instructors: BERG D

CRN	Course	Course Title	Term	Credits	Status
58710	OPT 204	SOURCES/DETECTORS LAB LECT	Spring 2015	2.0	Open

Schedule:

Day	Begin	End	Building	Room
M	900	950	GRGEN	109

Enrollment:

Section Enroll	Section Cap
36	50

Instructors: LUKISHOVA S

CRN	Course	Course Title	Term	Credits	Status
58728	OPT 204	SOURCES & DETECTORS LAB -LAB	Spring 2015	LAB	Open

Schedule:

Day	Begin	End	Building	Room
R	1815	2055	WILMT	539

Enrollment:

Section Enroll	Section Cap
7	10

Instructors: LUKISHOVA S

CRN	Course	Course Title	Term	Credits	Status
58732	OPT 204	SOURCES & DETECTORS LAB -LAB	Spring 2015	LAB	Open

Schedule:

Day	Begin	End	Building	Room
W	1815	2055	WILMT	539

Enrollment:

Section Enroll	Section Cap
9	10

Instructors: LUKISHOVA S

CRN	Course	Course Title	Term	Credits	Status
58749	OPT 204	SOURCES & DETECTORS LAB -LAB	Spring 2015	LAB	Open

Schedule:

Day	Begin	End	Building	Room
M	1815	2055	WILMT	539

Enrollment:

Section Enroll	Section Cap
9	10

Instructors: LUKISHOVA S

CRN	Course	Course Title	Term	Credits	Status
58755	OPT 204	SOURCES & DETECTORS LAB -LAB	Spring 2015	LAB	Closed

Schedule:

Day	Begin	End	Building	Room
T	1815	2055	WILMT	539

Enrollment:

Section Enroll	Section Cap
10	10

Instructors: LUKISHOVA S

CRN	Course	Course Title	Term	Credits	Status
82042	OPT 204	SOURCES & DETECTORS LAB -LAB	Spring 2015	LAB	Open

Schedule:

Day	Begin	End	Building	Room
F	900	1200	WILMT	539

Enrollment:

Section Enroll	Section Cap
1	10

Instructors: LUKISHOVA S

CRN	Course	Course Title	Term	Credits	Status
58761	OPT 223	QUANTUM THEORY	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TR	1400	1515	GRGEN	109

Enrollment:

Section Enroll	Section Cap
34	50

Instructors: VAMIVAKAS A

Prerequisites: PHY 123 or 143, MTH 281 may be taken concurrently

Description: Intro to quantum mechanics in the context of modern optics and optical technology. Wave mechanics as applied to electrons in crystals and in quantum wells and the optical properties of materials. Semiconductor junctions in photodetectors and photoemitters.

URL: http://www.optics.rochester.edu/academic_programs/bs/opt_223.html

Offered: Fall

CRN	Course	Course Title	Term	Credits	Status
58776	OPT 223	QUANTUM THEORY - REC	Spring 2015	REC	Open

Schedule:

Day	Begin	End	Building	Room
F	1525	1640	GRGEN	109

Enrollment:

Section Enroll	Section Cap
34	50

Instructors: VAMIVAKAS A

CRN	Course	Course Title	Term	Credits	Status
58787	OPT 225	SOURCES AND DETECTORS	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MW	1525	1640	HARK	115

Enrollment:

Section Enroll	Section Cap
40	60

Instructors: ZAVISLAN J

Description: This course provides the basic concepts required for understanding radiometry and the operation of optical sources and photodetectors. It covers important sources such as lasers and light-emitting diodes as well several types of photodetectors. Students should also register for the complementary lab, Optics 204

CRN	Course	Course Title	Term	Credits	Status
58793	OPT 232	OPTO-MECHANICAL	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MW	1650	1805	DEWEY	2110E

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
5	No Cap	28	30

Cross Listed: ME 232 (P), ME 432, MSC 432, OPT 232, OPT 432, TEO 432, TME 432

Instructors: GENBERG V

Description: The mechanical design and analysis of optical components and systems will be studied. Topics will include kinematic mounting of optical elements, the analysis of adhesive bonds, and the influence of environmental effects such as gravity, temperature, and vibration on the performance of optical systems. Additional topics include analysis of adaptive optics, the design of lightweight mirrors, thermo-optic and stress-optic (stress birefringence) effects. Emphasis will be placed on integrated analysis which includes the data transfer between optical design codes and mechanical FEA codes. A term project is required for ME 432.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
58807	OPT 244	LENS DESIGN	Spring 2015	4.0	Closed

Schedule:

Day	Begin	End	Building	Room
TR	940	1055	GRGEN	109

Enrollment:

Section Enroll	Section Cap
26	25

Instructors: BENTLEY J

Prerequisites: OPT 241 and OPT 242

Description: 3rd order aberration theory, optimization theory, global optimization, variables and constraints of various lens materials and types. Course concludes with individual lens design projects.

CRN	Course	Course Title	Term	Credits	Status
~~58815~~	~~OPT 247~~	~~ADVANCED THIN FILM COATINGS~~	~~Spring 2015~~	~~4.0~~	Cancelled

Schedule:

Day	Begin	End	Building	Room
MWF	900	950		

Enrollment:

Section Enroll	Section Cap
0	No Cap

Prerequisites: OPT 246

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
58821	OPT 248	VISION AND THE EYE	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TR	1105	1220	MEL	269

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
4	30	20	30

Cross Listed: BCS 223, OPT 248 (P), OPT 448, TEO 448

Instructors: HUNTER J

Description: How the human eye's optical and neural factors process color and spatial information includes comparison with the design and capabilities of other animals' eyes.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
81360	OPT 254	NANOMETROLOGY LABORATORY	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA			WILMT	504

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
4	No Cap	4	6

Cross Listed: OPT 254 (P), PHY 371

Instructors: LUKISHOVA S; BIGELOW N

Prerequisites: Junior or Senior standing with the following courses complete: OPT 201 and OPT 202 or PHY 243.

Description: This is a required, 4-credit-hour course for the Certificate in Nanoengineering Program. It consists of three laboratory experimental modules accompanied by lecture materials: Module 1. Scanning electron microscopy (McIntyre); Module 2. Atomic force microscopy (Papernov); Module 3. Confocal microscopy (Lukishova). The laboratory components will use the facilities of the University of Rochester Integrated Nanosystems Center, the Institute of Optics and the Laboratory for Laser Energetics. Topics covered in the 50-min lab lectures include the nature of nanoscale surface forces in solids and principles of scanning force microscopy, function and capabilities of the scanning electron microscope, and confocal fluorescence microscopy of single nanoemitters. Students are expected to have completed a sequence in introductory physics with a strong performance in electromagnetism, the basics of modern physics and physical optics. Junior and Senior level.

CRN	Course	Course Title	Term	Credits	Status
58839	OPT 261	INTERFERENCE AND DIFFRACTION	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MW	1025	1140	GRGEN	101

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
54	No Cap	54	80

Cross Listed: OPT 261 (P), PHY 261

Instructors: VAMIVAKAS A

Prerequisites: MTH 164, PHY 122 or 142

Description: Complex representation of waves; scalar diffraction theory; Fresnel and Fraunhofer diffraction and application to measurement; diffraction and image formation; optical transfer function; coherent optical systems, optical data processing, and holography.

URL: http://www.optics.rochester.edu/academic_programs/bs/opt_261.html

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
58842	OPT 261	INTERFERENCE AND DIFF - REC	Spring 2015	REC	Open

Schedule:

Day	Begin	End	Building	Room
W	900	950	GRGEN	109

Enrollment:

Section Enroll	Section Cap
45	50

Instructors: VAMIVAKAS A

CRN	Course	Course Title	Term	Credits	Status
~~75247~~	~~OPT 276~~	~~BIOMEDICAL OPTICS~~	~~Spring 2015~~	~~4.0~~	Cancelled

Schedule:

Day	Begin	End	Building	Room
TR	1105	1220		

Enrollment:

Section Enroll	Section Cap
0	No Cap

CRN	Course	Course Title	Term	Credits	Status
58850	OPT 287	MATHEMATICAL METHODS FOR OPTICS & PHYSICS	Spring 2015	4.0	Closed

Schedule:

Day	Begin	End	Building	Room
TR	1105	1220	HUTCH	473

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
44	No Cap	48	48

Cross Listed: MTH 287, OPT 287 (P)

Instructors: ALONSO M

Prerequisites: MTH 164

Description: Techniques used in mathematical study of optical phenomena. Emphasis on gaining insight and experience in the use of these powerful and elegant tools for describing, solving and resolving optical systems and schema.

URL: http://www.optics.rochester.edu/academic_programs/bs/opt_287.html

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
58868	OPT 307	SEM PRACTICUM	Spring 2015	4.0	Closed

Schedule:

Day	Begin	End	Building	Room
MW	1525	1640	WILMT	116

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
2	2	11	12

Cross Listed: MSC 307, MSC 507, OPT 307 (P), OPT 407

Instructors: MCINTYRE B

Restrictions: [O] Departmental permission required

Description: Overview of techniques for using the SEM (Scanning Electron Microscope) and Scanning Probe (AFM, STM) and analyzing data. Students perform independent lab projects by semester's end.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
58873	OPT 311	OPTICS SENIOR DESIGN PROJECT	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MWF	1025	1115	WILMT	504

Enrollment:

Section Enroll	Section Cap
23	25

Instructors: KNOX W

Prerequisites: Open only to Optics seniors.

Description: Documenting each stage,student teams design, build, and test an optical device or instrument for a faculty, community or industrial sponsor.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
58884	OPT 321	SENIOR THESES II	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MWF	1025	1115	WILMT	504

Enrollment:

Section Enroll	Section Cap
3	5

Instructors: KNOX W

CRN	Course	Course Title	Term	Credits	Status
58896	OPT 390	SUPERVISED TEACHING	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
58909	OPT 391	INDEPENDENT READING	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
58946	OPT 393	SPECIAL ESSAY	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
58958	OPT 394	UNDERGRADTE RSRCH INTERNSHIP	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
58985	OPT 395	UNDERGRADUATE REARCH PROJECT	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59021	OPT 396	HONORS PROJECTS	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59039	OPT 407	SEM PRACTICUM	Spring 2015	4.0	Closed

Schedule:

Day	Begin	End	Building	Room
MW	1525	1640	WILMT	116

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
8	4	11	12

Cross Listed: MSC 307, MSC 507, OPT 307 (P), OPT 407

Instructors: MCINTYRE B

Restrictions: [O] Departmental permission required

Description: Overview of techniques for using the SEM (Scanning Electron Microscope) and Scanning Probe (AFM, STM) and analyzing data. Students perform independent lab projects by semester's end.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59042	OPT 412	QUANTUM MECHANICS FOR OPTICS	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TR	1400	1515	WILMT	116

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
9	No Cap	9	25

Cross Listed: OPT 412 (P), TEO 412

Instructors: STROUD C

Description: Quantum theory topics relevant to atomic physics, radiation theory and quantum optics.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59050	OPT 421	OPT PROPERTIES OF MATERIALS	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TR	1105	1220	WILMT	116

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
21	No Cap	23	30

Cross Listed: ECE 421, MSC 470, OPT 421 (P), TEO 421

Instructors: WICKS G

Prerequisites: Undergraduate Quantum Mechanics

Description: Interaction of light with materials' electrons, phonons, plasmons, and polaritons. Optical reflection, refraction, absorption, scattering, Raman scattering (spontaneous and stimulated), light emission (spontaneous and stimulated). Electrooptic effects and optical nonlinearities in solids. Plasmonics. Semiconductors and their nanostructures are emphasized; metals and insulators also discussed.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59068	OPT 429	CHEMICAL BONDS: FROM MOLECULES TO MATERIALS	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MW	1025	1140	HYLAN	306

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
0	No Cap	4	15

Cross Listed: CHM 456 (P), MSC 456, OPT 429

Instructors: KRAUSS T

Prerequisites: CHM 251 or an equivalent course on introductory quantum mechanics

Description: An introduction to the electronic structure of extended materials systems from both a chemical bonding and a condensed matter physics perspective. The course will discuss materials of all length scales from individual molecules to macroscopic three-dimensional crystals, but will focus on zero, one, and two dimensional inorganic materials at the nanometer scale. Specific topics include semiconductor nanocrystals, quantum wires, carbon nanotubes, and conjugated polymers. Two weekly lectures of 75 minutes each. Cross listed with MSC 456 & OPT 429. (Spring).

URL: http://www.chem.rochester.edu/courses/courses.php?id=36

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59073	OPT 432	OPTO-MECHANICAL	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MW	1650	1805	DEWEY	2110E

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
7	No Cap	28	30

Cross Listed: ME 232 (P), ME 432, MSC 432, OPT 232, OPT 432, TEO 432, TME 432

Instructors: GENBERG V

Description: The mechanical design and analysis of optical components and systems will be studied. Topics will include kinematic mounting of optical elements, the analysis of adhesive bonds, and the influence of environmental effects such as gravity, temperature, and vibration on the performance of optical systems. Additional topics include analysis of adaptive optics, the design of lightweight mirrors, thermo-optic and stress-optic (stress birefringence) effects. Emphasis will be placed on integrated analysis which includes the data transfer between optical design codes and mechanical FEA codes. A term project is required for ME 432.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59084	OPT 442	INSTRUMENTAL OPTICS	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TR	1230	1345	WILMT	116

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
21	No Cap	22	40

Cross Listed: OPT 442 (P), TEO 442

Instructors: BROWN T

Prerequisites: OPT 441

Description: Principles and practices for solving problems of optical imaging, optical instruments and optical systems.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59096	OPT 442	INSTRUMENTAL OPTICS - REC	Spring 2015	REC	Open

Schedule:

Day	Begin	End	Building	Room
F	1025	1115	GRGEN	110

Enrollment:

Section Enroll	Section Cap
19	35

Instructors: BROWN T

CRN	Course	Course Title	Term	Credits	Status
59117	OPT 444	LENS DESIGN	Spring 2015	4.0	Closed

Schedule:

Day	Begin	End	Building	Room
TR	1525	1640	GRGEN	109

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
25	No Cap	25	25

Cross Listed: OPT 444 (P), TEO 444

Instructors: BENTLEY J

Description: 3rd order aberration theory, optimization theory, global optimization, variables and constraints of various lens materials and types. Course concludes with individual lens design projects.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59126	OPT 444	LENS DESIGN - REC	Spring 2015	REC	Open

Schedule:

Day	Begin	End	Building	Room
R	1650	1805	GRGEN	109

Enrollment:

Section Enroll	Section Cap
19	50

Instructors: BENTLEY J

CRN	Course	Course Title	Term	Credits	Status
~~59134~~	~~OPT 447~~	~~ADVANCED THIN FILM COATINGS~~	~~Spring 2015~~	~~4.0~~	Cancelled

Schedule:

Day	Begin	End	Building	Room
MWF	900	950		

Enrollment:

Section Enroll	Section Cap
0	5

Prerequisites: OPT 246

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59143	OPT 448	VISION AND THE EYE	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TR	1105	1220	MEL	269

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
8	30	20	30

Cross Listed: BCS 223, OPT 248 (P), OPT 448, TEO 448

Instructors: HUNTER J

Description: How the human eye's optical and neural factors process color and spatial information includes comparison with the design and capabilities of other animals' eyes.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
75218	OPT 450	POLARIZATION	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
W	1815	2115	GRGEN	110

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
10	No Cap	11	20

Cross Listed: OPT 450 (P), TEO 450

Instructors: BROWN T

Description: The physics and engineering of polarized light, including polarization ray tracing and polarization in high numerical aperture focusing.

CRN	Course	Course Title	Term	Credits	Status
59151	OPT 456	OPTICS LABORATORY	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MW	1300	1600	WILMT	504

Enrollment:

Section Enroll	Section Cap
15	No Cap

Instructors: MARCIANTE J

CRN	Course	Course Title	Term	Credits	Status
59165	OPT 462	Electromagnetic Waves	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
TR	940	1055	WILMT	116

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
15	No Cap	15	30

Cross Listed: OPT 462 (P), TEO 462

Instructors: AGRAWAL G

Description: Electromagnetic theory as a foundation for classical descriptions of many optical phenomena. Pertaining topics reviewed and expanded upon.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59178	OPT 465	PRINCIPLES OF LASERS	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
M	1700	2000	GRGEN	109

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
10	50	11	50

Cross Listed: MSC 465, OPT 465 (P), PHY 435, TEO 465

Instructors: GUO C

Description: Topics include quantum mechanical treatments to two-level atomic systems, optical gain, homogeneous and inhomogeneous broadening, laser resonators, cavity design, pumping schemes, rate equations, Q-switching for various lasers.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
~~59180~~	~~OPT 468~~	~~WAVEGUIDES & OPTOELECTRONIC DEVICES~~	~~Spring 2015~~	~~4.0~~	Cancelled

Schedule:

Day	Begin	End	Building	Room
TR	940	1055		

Enrollment:

Section Enroll	Section Cap
0	No Cap

Offered: Fall

CRN	Course	Course Title	Term	Credits	Status
59199	OPT 481	TECHNICAL ENTREPRENEURSHIP	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
T	1815	2055	SCHGL	407

Enrollment:

Section Enroll	Section Cap
22	30

Instructors: MOORE D

Description: Analysis of entrepreneurship from the perspective of start-up ventures and established companies. A range of management issues is discussed.

Offered: Spring

CRN	Course	Course Title	Term	Credits	Status
59206	OPT 482	PRODUCT DEV & TECH MGMT	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MW	1815	1930	GAVET	310

Enrollment:

Section Enroll	Section Cap	Total Enroll	Total Cap
5	No Cap	33	35

Cross Listed: OPT 482, TEM 441 (P)

Instructors: EASTMAN J

Description: In this class we will explore system engineering via the ISO9000 product development process and will illustrate how to use this process to develop both products and research systems that meet necessary specifications. The first eight weeks emphasize system integration including the development of the product development plans, partitioning of a system into subsystems, quantitative analysis of system performance and the role of prototypes. The second half of the semester emphasizes the planning needed to take systems to manufacture. During the course the students will prepare a product development plan on a project that was selected during TEM 440 Screening Technical Opportunities. The course is intended to be interactive. A portion of the classes will be dedicated to "brain-storming" solutions to technical problems and formal design reviews where the students will review the project plans of other students.

CRN	Course	Course Title	Term	Credits	Status
59219	OPT 491	MASTER'S READING IN OPTICS	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

CRN	Course	Course Title	Term	Credits	Status
59222	OPT 494	RESEARCH IN OPTICS	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

CRN	Course	Course Title	Term	Credits	Status
59241	OPT 495	MASTER'S RESEARCH IN OPTICS	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
1	30

CRN	Course	Course Title	Term	Credits	Status
75435	OPT 561	ADVANCED IMAGING	Spring 2015	4.0	Open

Schedule:

Day	Begin	End	Building	Room
MW	1025	1140	GRGEN	110

Enrollment:

Section Enroll	Section Cap
14	30

Instructors: FIENUP J

Prerequisites: OPT 461

Description: Advanced topics in imaging, concentrating on computed imaging, Fourier-transform-based imaging, and unconventional imaging, with emphasis on imaging through aberrating media (particularly atmospheric turbulence), in mathematical depth.

CRN	Course	Course Title	Term	Credits	Status
59288	OPT 591	PHD READING COURSE	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

CRN	Course	Course Title	Term	Credits	Status
59345	OPT 594	INTERNSHIP	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

CRN	Course	Course Title	Term	Credits	Status
59359	OPT 595	PHD RESEARCH IN OPTICS	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

CRN	Course	Course Title	Term	Credits	Status
59532	OPT 595A	PHD RESEARCH IN ABSENTIA	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59549	OPT 595B	PHD RSRCH IN ABSENTIA ABROAD	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
~~59576~~	~~OPT 890~~	~~SUMMER IN RESIDENCE~~	~~Spring 2015~~	~~0.0~~	Cancelled

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	No Cap

CRN	Course	Course Title	Term	Credits	Status
59587	OPT 895	CONT OF MASTER'S ENROLLMENT	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	30

CRN	Course	Course Title	Term	Credits	Status
59593	OPT 897	MASTER'S DISSERTATION	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	No Cap

CRN	Course	Course Title	Term	Credits	Status
84400	OPT 897B	MASTER'S IN ABSENTIA	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment:

Section Enroll	Section Cap
0	No Cap

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59623	OPT 899	MASTER'S DISSERTATION	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll: 0 Section Cap: No Cap

CRN	Course	Course Title	Term	Credits	Status
59637	OPT 985	LEAVE OF ABSENCE	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll: 0 Section Cap: No Cap

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59646	OPT 986V	FULL TIME VISITING STUDENT	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll: 3 Section Cap: No Cap

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59658	OPT 987V	PART TIME VISITING STUDENT	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll: 0 Section Cap: No Cap

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59660	OPT 995	CONT OF DOCTORAL ENROLLMENT	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll: 2 Section Cap: No Cap

CRN	Course	Course Title	Term	Credits	Status
59671	OPT 997	DOCTORAL DISSERATION	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll: 0 Section Cap: No Cap

CRN	Course	Course Title	Term	Credits	Status
59727	OPT 997A	DOCT DISSERTATN IN ABSENTIA	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll 0 Section Cap No Cap

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59740	OPT 997B	PHD IN ABSENTIA ABROAD	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll 0 Section Cap No Cap

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59769	OPT 999	DOCTORAL DISSERTATION	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll 0 Section Cap No Cap

CRN	Course	Course Title	Term	Credits	Status
59944	OPT 999A	DOCT DISSERTATN IN ABSENTIA	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll 0 Section Cap No Cap

Restrictions: [G] Special application required [J] Permission of School Dean required

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CRN	Course	Course Title	Term	Credits	Status
59966	OPT 999B	DOC DISS IN-ABSENTIA ABROAD	Spring 2015	0.0	Open

Schedule:

Day	Begin	End	Building	Room
TBA				

Enrollment: Section Enroll 2 Section Cap No Cap

Restrictions: [G] Special application required [J] Permission of School Dean required