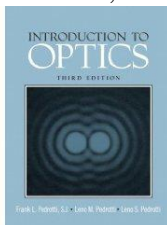


PC237 Optics

Winter 2016

Lecture Instructor: Li Wei
Office location: Science N2084B
Email: lwei@wlu.ca; **Phone:** 519(884)1970, ext. 2903
Lectures: Tue, Thu 1:00 – 2:20 pm in N1059
Office hours: Friday: 10:30 – 11:30 am in N2084B or by appointment
Course Website: <http://bohr.wlu.ca/lwei/PC237/index.html>
Textbook *Introduction to Optics*, by Frank L. Pedrotti, Leno M. Pedrotti and Leno S. Pedrotti, Third edition, Prentice Hall, 2007



Lab Instructor: Terry Sturtevant
Office location: Science Building, Room N2092A
Email: tsturtevant@wlu.ca; **Telephone:** (519)884-0710 ext. 2049
Labs: W 11:30 - 1:20 pm, N2088
Lab Website: <http://denethor.wlu.ca/pc237/index.shtml>

Course Objective:

The main objective of this course is to develop a fundamental understanding of the light nature. This goal is achieved through a study of geometrical and wave (physical) optics. The former is used in tracing the light ray paths in optical systems and describes the formation of images. The latter explains such amazing phenomena as interference, diffraction and polarization of light.

Tentative Schedule:

1. Nature of Light (Chapter 1)
2. Geometrical Optics (Chapter 2)
3. Optical Instrumentation (Chapter 3)
4. Wave Equation (Chapter 4)
5. Superposition of Waves (Chapter 5)
6. Interference of Light (Chapter 7)
7. Optical Interferometry (Chapter 8)
8. Coherence (Chapter 9)
9. Fraunhofer Diffraction (Chapter 11)
10. The Diffraction Grating (Chapter 12)
11. Fresnel Diffraction (Chapter 13)
12. Matrix Treatment of Polarization (Chapter 14)
13. Production of Polarized Light (Chapter 15)
14. Fresnel Equations (Chapter 23)

Evaluation:

Assignment	20 %	(Five equal-weighted assignments)
Midterm	25 %	(Tentative date: Feb. 25, 2016)
Final exam	35 %	
Lab	20 %	

PHYSICS AND COMPUTER SCIENCE

Course Drop Dates Fall 2015 and Winter 2016:

September 16: Final day to drop/withdraw from 12-week course(s) at no tuition charge (provided the student remains registered in at least one course)

September 23: Last day to drop 12-week and full-year course(s) or withdraw at 10 percent tuition charge (tuition charge assessed at 10% of course rate)

November 11: Last day to drop 12-week course(s) or withdraw without failure. Students who drop course or withdraw may be eligible for a tuition adjustment (assessed at 55% of course rate)

January 10: Final day to drop/withdraw from 12-week course(s) at no tuition charge (provided the student remains registered in at least one course)

January 17: Last day to drop 12-week and full-year course(s) or withdraw at 10 percent tuition charge (tuition charge assessed at 10% of course rate)

March 4: Last day to drop 12-week course(s) or withdraw without failure. Students who drop course or withdraw may be eligible for a tuition adjustment (assessed at 55% of course rate)

Examination Deferrals

Students must note that they are required to reserve this time in their personal calendars for the examinations. The examination periods: FALL 2015: December 12 – 23 WINTER 2016: APR. 7 - 23

Students registering to write MCAT, LSAT or GMAT or a similar examination, should select a time for those examinations that occurs outside the University examination period.

Student Awareness of Accessible Learning Centre

Students with disabilities or special needs are advised to contact Laurier's Accessible Learning Centre for information regarding its services and resources. Students are encouraged to review the Calendar for information regarding all services available on campus.

Academic and Research Misconduct

Academic misconduct is an act by a student, or by students working on a team project, which may result in a false evaluation of the student(s), or which represents a deliberate attempt to unfairly gain an academic advantage. Academic misconduct includes: *please refer to* http://www.wlu.ca/page.php?grp_id=2505&p=11452

Plagiarism Detection Software

Wilfrid Laurier University uses software that can check for plagiarism. Students may be required to submit their written work in electronic form and have it checked for plagiarism.

Learning Services

There is a range of academic learning support services offered at Laurier designed for all students who want to improve their academic achievement in the classroom. These services include the following specific areas: Central Academic Advising Office, Mathematics Assistance Centre, Study Skills and Supplemental Instruction Centre, Writing Centre
Please access the following web page for detailed information: www.wlu.ca/learningservices

Laurier Email Account

Our official means of communication is with your Laurier email account. Students are expected to regularly check their Laurier email account for important notices from the university community. Students are also expected to send emails to official members of the university community from their Laurier email account in order to ensure delivery. Emails sent from non-Laurier accounts, such as hotmail, may be identified as spam and not delivered. Your co-operation is appreciated.

Student Food Bank | www.wlusu.com/food-bank/

All students are eligible to use this service to ensure they're eating healthy when overwhelmed, stressed or financially strained. Anonymously request a package online 24-7. All dietary restrictions accommodated.

Foot Patrol – 519.886.FOOT (3668)

A volunteer operated safe-walk program, available Fall and Winter, daily from 6:30pm to 3am. Teams of two are assigned to escort students to and from campus by foot or by van. <http://www.wlusu.com/foot-patrol/>

Peer Connect – 1.866.281.PEER (7337)

A confidential listening, referral, information and support line, is available during evening hours to provide support and resources. Sunday to Thursday, 12pm – 2am | Friday to Saturday 12pm – 3am <http://www.wlusu.com/peer-help-line/>

The Wellness Centre | 519-884-0710, x3146

The Wellness Centre supports students' physical, emotional and mental health needs. Located on the 2nd floor of the Student Services building, booked and same-day appointments are available Monday to Wednesday 8:30 am – 7:30 pm, Thursday to Friday 8:30 am-4:15 pm. Contact: x3146, wellness@wlu.ca or @LaurierWellness. After hours crisis support available 24/7 - "Good 2 Talk" 1-866-925-5454.