Foundations of QO/Modern Optics — Data Sheet
PHY485/1485F 2008

Lecturer:	Robin Marjoribanks
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Office Hours:	W 2–3 PM (to be confirmed)
Lectures:	T, R 3 (MP137)

Marking Scheme: 60–40 'Flip-flop' weighting between term mark and final exam

Term mark:	problems (4) [best 3/4] & group presentation (1)	40%
	term test	60%
		100%
Final exam:		100%

The course mark is found from: 0.6 * *max*(Term, Final) + 0.4 * *min* (Term, Final)

Problem Sets due:	Thursday, 2 October Tuesday, 21 October Thursday, 13 November Thursday, 4 December (note: Faculty rules prohibit extensions beyond last day of term)
Late policy:	20% off per day; no marks possible once solutions are posted (~3 days after due date)
Term Test:	4–6 pm on Tuesday 31 October [now confirmed] location to be determined
Presentations:	10am-5pm on Saturday 22 November

Other Dates: *(double check these in your Academic Calendar)*

Double-check at: http://www.artsandscience.utoronto.ca/ofr/calendar/dates.htm

September 8 - Fall term classes begin in F and Y section code courses

September 21 -Last day to add courses with F and Y section codes

October 17 - Examination timetable for F section code courses posted

November 3 - Last day to drop courses with F section codes from academic record and GPA. After this deadline a mark is recorded for each course, whether course work is completed or not (a "0" is assigned for incomplete work), and calculated into the GPA.

December 5 - Classes end

TEXT:

Optics 4th ed, Eugene Hecht
(Addison-Wesley, 2002)

Very clear, deep in examples, colour photographs, applications. It is a well-tested textbook, massaged for errors over a number of years. The book's approach is by phenomenon and application, and we will be more systematic — this means we'll move logically and systematically through the physics, but the corresponding sections of Hecht jump around.

RECOMMENDED PURCHASE: (in general, also for other courses!)

A Student's Guide to Fourier Transforms, J.F. James, a small paperback
(2002 printing ~$23 Amazon.ca, cheaper than 1995 printing)

A lovely helper, clear and to the point.

REFERENCES:

Introduction to Modern Optics, Grant R. Fowles
(2nd edition 1975; Dover, reprint 1986)

A clear and easy book, pretty highly rated online by readers, especially for its value (it's cheap). It's reprinted because few texts offer as much classical optics in such a straightforward style. It has many errors, though, so be sure to get an erratum sheet from me.

Lasers, Milonni and Eberly
(Wiley, 1988)

A good standard book, it spans nicely our 4th year undergrad + 1st year grad class makeup. It brings out all the main points, but does not alert you much to where a study area is much deeper, or where there are in practice more subtleties than it brings out.

Modern Optics, Robert Guenther
(Wiley, 1990)

This is a good book, as far as it goes. Which in terms of lasers isn't far enough. If you find Fowles too terse, or too error-prone, you may prefer to find this book somewhere for a 'second opinion' or a second explanation of something you're trying to grasp.

Lasers, A.E. Siegman
(University Science Books, c1986)

We'll perhaps use this as a minor reference. I do not recommend a purchase for this class.

Solid-state Laser Engineering, Walter Koechner, 5th rev.
(Springer, Berlin ; Heidelberg; New York, 1999)

This is a very useful reference for the laboratory, and for engineering; it gives good and pragmatic descriptions of how actually to use and calculate things. Updated to cover ultrafast developments. Might be a reference purchase for lab-use, but not worth the money for this course alone.