

**THE UNIVERSITY OF LETHBRIDGE  
DEPARTMENT OF PHYSICS  
PHYSICS 3925  
INTERMEDIATE EXPERIMENTAL PHYSICS  
FALL 2012**

- INSTRUCTOR:** Lectures and Labs: Steve Patitsas, office: E876,  
phone: 329-2358, email: steve.patitsas@uleth.ca
- TEXT (optional):** The Art of Experimental Physics by Daryl W. Preston and  
Eric R. Dietz, Publisher: John Wiley and Sons, 1991.
- LAB-NOTEBOOKS:** Students must purchase two fixed-leaf lab notebooks.
- LECTURES:** Tu-Th 1:40-2:55 pm, Room PE034
- LABORATORY:** Tuesday 3:05-5:45 pm, Room PE034
- OFFICE HOURS:** Thursday 2:55-4:00pm  
Appointments can also be arranged
- PREREQUISITE COURSES:** Phys 2150 and Phys 2900

**COURSE OUTLINE:**

Physics 3925 is a one-term course which extends the student's knowledge of the instruments and techniques of experimental physics, as well as the handling, analysis, and presentation of data.

In depth experiments will be conducted from the following list of topics: electromagnetic waveguides, nuclear physics, magnetic resonance, gravitation, chaotic systems, damped harmonic oscillator, quantum physics, solid state physics, thermal radiation, process control, gyroscopes, analog and digital electronics.

Emphasis will be placed on basic experimental techniques, proper use of logbooks, data and error analysis, and presentation of results. Students are expected not just to attend all lectures and labs but also to be well prepared on entering the classroom or lab. The level of preparation will be considered when assessing the class participation mark.

**CREDIT DISTRIBUTION:**

<b>5 formal lab reports (with lab-notebook)</b>	<b>70%</b>
<b>class participation (including frequent oral quizzing)</b>	<b>5%</b>
<b>2 class presentations</b>	<b>20%</b>
<b>participation during presentations</b>	<b>5%</b>

All labs that are handed in late will get mark deductions as follows: 25% if no more than 24 hours late and 75% if handed in after that.

Marks (%)	Letter Grade	Grade Point Value
95-100	A+	4.0
85-94	A	4.0
80-84	A-	3.7
77-79	B+	3.3
73-76	B	3.0
70-72	B-	2.7
67-69	C+	2.3
63-66	C	2.0
60-62	C-	1.7
55-59	D+	1.3
50-54	D	1.0
0-49	F	0.0