

# Minnesota State University Moorhead

## PHYS 305: Experimental Physics I

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 1

Lab Hours/Week: 4

OJT Hours/Week: \*.\*

Prerequisites:

This course requires the following prerequisite  
PHYS 201 - General Physics II & Lab

Corequisites: PHYS 202

MnTC Goals: None

Study of laboratory techniques and measuring instruments.

**B. COURSE EFFECTIVE DATES:** 03/04/2013 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Error analysis
2. Technical report writing
3. Experiments typically develop concepts and include measurements in mechanics, optics, waves, modern physics

### D. LEARNING OUTCOMES (General)

1. Develop care in making and recording observations
2. Use the computer as a tool in the laboratory, both as part of the instrumentation system and as a modeling tool
3. Develop the ability to draw both qualitative and quantitative conclusions from experimental data
4. Develop scientific communication skills, both in written and oral form
5. Develop data analysis and error analysis skills within a laboratory experiment

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted