

# Forensic Microscopy

FIS 40600 (01)  
Fall Course Syllabus

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**Prerequisites:** FIS 206. Open only to FIS majors

**Textbook:** Essentials of Polarizing Light Microscopy, by John Gustav Delly. You will also need safety glasses.

## Course Description

Learn techniques in the analysis of forensic microscopic evidence. Topics include property of light, compound microscopy, micrometry, refraction, dispersion, stereomicroscopy, sample preparation, polarizing light microscopy, and instrumental microscopy.

## Course Content and Organization

This course will cover the major techniques used in the analysis trace evidence commonly encountered at crime scenes. The techniques of stereo and compound light microscopy and polarizing light microscopy will be studied and used extensively. Instrumental microscopy techniques such as infrared microscopy, UV-Vis microspectrophotometry, and Raman microscopy will be discussed. There will lecture and lab components for each of topics covered in the course.

## Course objectives

1. Explain the principles, instrumentation and applications of microscopic techniques such as light microscopy, polarizing light microscopy, hot stage microscopy, and microspectrophotometry UV-Vis-reflectance-fluorescence, Raman and Infrared.
2. Demonstrate the ability to prepare and examine samples using microscopic techniques such as light microscopy, polarizing light microscopy, hot stage microscopy, and microspectrophotometry such as UV-Vis-reflectance-fluorescence, Raman and Infrared.

## Grading

	<b>Points</b>
9 Pre-lab exercises at 5 points	45
9 Lab Reports at 40 points	360
9 Lab Notebook pages at 5 points	45
5 Unknown Results at 10 points	50
Final Lab Exercise	150
<b>Total</b>	<b>650</b>

Pre-lab exercises are due before the start of each lab exercise. Each exercise is worth 5 points and is to be turned at the beginning of the lab period. Late pre-labs will not be accepted. Laboratory reports and notebook pages are worth a total of 45 points and are due one week after completing the lab exercise. These are to be turned in to your course supervisor along with copies of your lab notebook pages for that exercise. The late penalty is 3 points per day late. This includes the total grade on report and notebook pages. Unknown results should also be turned in with your report. Late unknown results will result in 1 point per day late. Weekends do not count towards late penalty. Reports will have a cover sheet to be turned in with report. These include point break down of report and unknown result. These can be found on OnCourse CL.

## Grading Scale

Your grade will be based on a strict grading scale as outlined below. There will be no curving of final grades.

A: 100 – 93%	A-: 92.9 – 90%	B+: 89.9 – 87%	B: 86.9 – 83%	B-: 82.9 – 80%	C+: 79.9 – 77%
C: 76.9 – 73%	C-: 72.9 – 70%	D+: 69.9 – 67%	D: 66.9 – 63%	D-: 62.9 – 60%	F: less than 60%