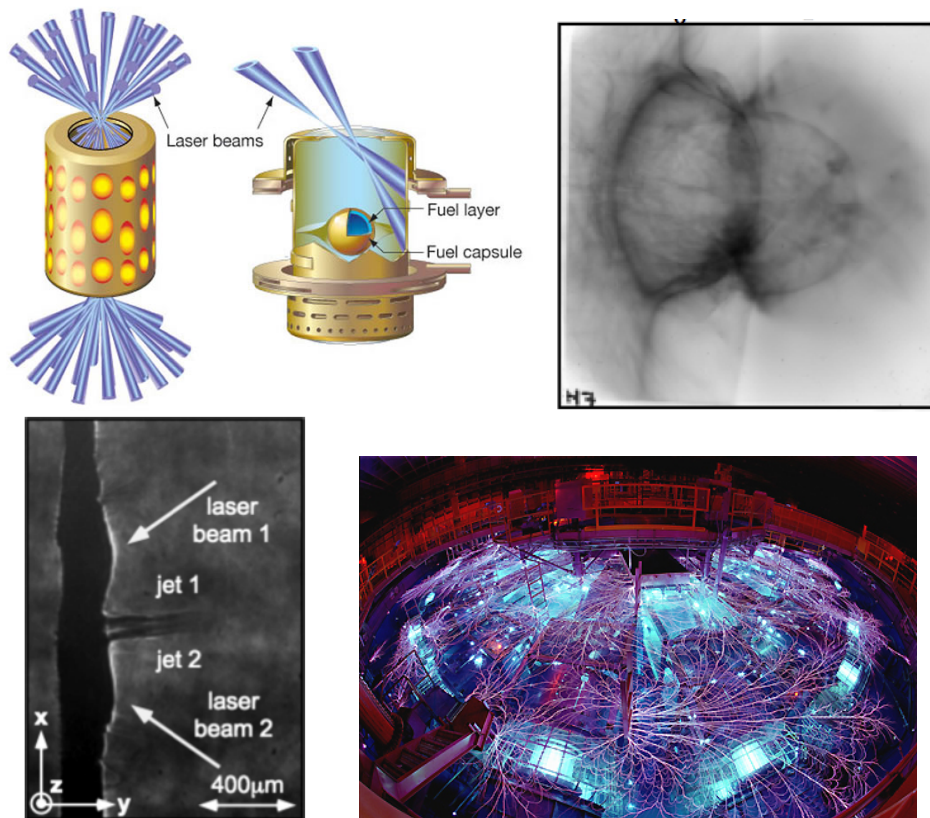


## EECS 598 Special Topics 004: Laser Plasma Diagnostics

High power laser pulses are used to both create and diagnose high-energy density systems. In this course, we will discuss the techniques used for creating, characterizing and timing high power laser pulses from megajoule-nanosecond pulses to relativistic-intensity femtosecond pulses. We will explore the diagnostics used to characterize high-energy density plasmas through optical and other radiation measurements as well as backlighting techniques. Other important aspects of performing experiments, such as target positioning techniques, will be touched on. In addition to the material discussed in lectures, students will consider real experimental data and recent research publications to learn analysis techniques, gain appreciation for physical limitations (such as instrument resolution and background signals), and comparison with theoretical models. This course is suitable for graduate students studying plasma physics, optics and laser science and other related areas. A design project based around an experimental proposal will involve a peer review process, written proposal and oral presentation.



Prerequisites: EECS537 or permission of instructor

Lectures: Tuesday and Thursday, 12noon - 1:30pm

Instructor: Prof Louise Willingale, EECS

For additional information please contact <wlouise@umich.edu>