

ME 503 DESIGN OF INTERNAL COMBUSTION ENGINES
(COMBUSTION MODELING OF INTERNAL COMBUSTION ENGINES)
SPRING 2025

INSTRUCTOR:

Professor Chia-Fon Lee: E-mail: cflee@illinois.edu

TEACHING ASSISTANT:

To be determined.

REFERENCE TEXT:

“Internal Combustion Engine Modeling”, by J. I. Ramos, Hemisphere Publishing, 1989.
“Internal Combustion Engine Fundamentals”, by John B. Heywood, McGraw-Hill, 1988.
“Internal Combustion Engines: Applied Thermosciences”, by Colin R. Ferguson, John Wiley, 1986.
“The Internal-Combustion Engine in Theory and Practice”, by Charles F. Taylor, Second Edition, the M.I.T. Press, 1994.

GRADING:

4 homeworks,	30%
4 CONVERGE projects,	30%
1 take-home final exam,	20%
paper & presentation,	20%

SCHEDULE:

Two two-hours asynchronous video lectures per week (released around 10 am on Tuesday and Thursday, online); and a few optional in-person lecture times to be determined.

HOMEWORK:

Assignments will be distributed periodically in class. Due date will be printed on each homework set.

PAPER PROJECT:

Project Proposal due:	February 6, 2025
First Progress Report due:	March 6, 2025
Second Progress Report due:	April 3, 2025
Oral Project Presentations:	May 6, 2025 (Tentative)
Take-home Exam Release	May 12, 2025 (Tentative)
Take-home Exam Due:	May 13, 2025 (Tentative)
Written Report due:	May 16, 2025 (Tentative)

OFFICE HOURS:

Conducted by TA, times and places to be determined.