

# Fusion Reactor Technology 1

(459.760, 3 credits)

1<sup>st</sup> Semester of 2011

Department of Nuclear Engineering

## Class Schedule

Week	Contents
1	Magnetic Confinement
2	Fusion Reactor Energetics (Harms 2.4, 7.1-7.5)
3	How to Build a Tokamak (T. N. Todd)
4	Tokamak Operation (I): Startup
5	Tokamak Operation (II): Basic Tokamak Plasma Parameters (Wood 1.2, 1.3)
6	Midterm Exam
7	Tokamak Operation (III): Tokamak Operation Mode I
8	Tokamak Operation (III): Tokamak Operation Mode II
9	Tokamak Operation Limits (I): Plasma Instabilities I (Kadomtsev 6, 7, Wood 6)
10	Tokamak Operation Limits (I): Plasma Instabilities II (Kadomtsev 6, 7, Wood 6)
11	Tokamak Operation Limits (II): Plasma Transport I (Kadomtsev 8, 9, Wood 3, 4)
12	Tokamak Operation Limits (II): Plasma Transport II (Kadomtsev 8, 9, Wood 3, 4)
13	Heating and Current Drive (Kadomtsev 10)
14	Divertor and Plasma-Wall Interaction
15	Final Exam