

### ENGR 292 Course Schedule

Week	Class	Contents	Date
1	1	Introduction • Class Information	Jan.10
	2 (FS-1)	General • Fluid Properties - Assignment 1	Jan.13
2	3 (FS-2)	Fluid Statics • Examples: Fluid Properties, Pressure, Bulk Modulus	Jan.17
	4 (FS-3)	Fluid Statics • Pressure, Pressure Measurement and Examples • Hydrostatics Forces • Vertical Wall • Center of Pressure • Buoyancy	Jan.20

*FS: Fluid Statics* 1

### ENGR 292 Course Schedule

Week	Class	Contents	Date
3	5 (FS-4)	Fluid Statics • Viscosity • Hydrostatics Forces • Submerged plane areas – General • Inclined Wall • Curved Surface • Buoyancy and Stability	Jan.24
	6 (FS-5)	Fluid Statics • Buoyancy Stability and anything left • Review and Examples	Jan.27

*FD: Fluid Dynamics* 2

### ENGR 292 Course Schedule

Week	Class	Contents	Date
4	7 (FD-1)	Fluid Dynamics • Conservation of Mass • Momentum and Energy • Bernoulli's Equation • Navier-Stokes Equation • Laminar & Turbulent Flow in Pipes  • Pump and Pipe – Complete example; • Suction Pipe Design, NPSH • Assignment 1 Due • Assignment 2 Starts	Jan.31
	8 (FD-2)	Fluid Dynamics • Pump and Pipe – Complete example; • Suction Pipe Design, NPSH	Feb.03

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### ENGR 292 Course Schedule

Week	Class	Contents	Date
5	9 (FD-3)	Fluid Dynamics • Pump and Pipe – Complete example; • Suction Pipe Design, NPSH	Feb.07
	10 (FD-4)	Fluid Dynamics • Pump and Pipe – Complete example; • Suction Pipe Design, NPSH • Assignment 2 Due	Feb.10
6	11	No Class (Reading Break)	Feb.14
	12	No Class (Reading Break)	Feb.17

*FD: Fluid Dynamics* 4

### ENGR 292 Course Schedule

Week	Class	Contents	Date
7	13	Midterm Review (FS, FD)	Feb.21
	14 (Thermo-1)	Thermodynamics & Heat Transfer • Introduction • 1 <sup>st</sup> Law • Control Volume Analysis • The Rankine Cycle • Assignment 3	Feb.24
	15	Midterm Exam	Feb.28
8	16 (Thermo-2)	Thermodynamics & Heat Transfer • Isentropic Efficiency • Entropy & The 2nd Law	Mar.03

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### ENGR 292 Course Schedule

Week	Class	Contents	Date
9	17 (Thermo-3)	Thermodynamics & Heat Transfer • Introduction to Heater Transfer • Convective Heat Transfer - Finding 'h'	Mar.07
	18 (Thermo-4)	Thermodynamics & Heat Transfer • Finned Surfaces • Finned Surface Heat Transfer – Examples • Dimensional Analysis • Assignment 3 Due • Assignment 4 Starts	Mar.10

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### ENGR 292 Course Schedule

Week	Class	Contents	Date
10	19 (Thermo-5)	Thermodynamics & Heat Transfer <ul style="list-style-type: none"> <li>• General Energy Equation - Hand Made Derivation</li> <li>• General Energy Equation - Textbook Derivation</li> </ul>	Mar.14
	20 (Thermo-6)	Thermodynamics & Heat Transfer <ul style="list-style-type: none"> <li>• Lagrangian and Eulerian Reference Frames</li> <li>• Navier-Stokes</li> <li>• Entropy Example                             <ul style="list-style-type: none"> <li>• Assignment 4 Due</li> <li>• Assignment 5 Starts</li> </ul> </li> </ul>	Mar.17

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### ENGR 292 Course Schedule

Week	Class	Contents	Date
11	21 (Thermo-7)	Thermodynamics & Heat Transfer <ul style="list-style-type: none"> <li>• Equations of State</li> <li>• Conduction</li> <li>• Convection</li> </ul>	Mar.21
	22 (Thermo-8)	Thermodynamics & Heat Transfer <ul style="list-style-type: none"> <li>• Equations of State</li> <li>• Conduction</li> <li>• Convection</li> </ul>	Mar.24

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### ENGR 292 Course Schedule

Week	Class	Contents	Date
12	23 (Thermo-9)	Thermodynamics & Heat Transfer <ul style="list-style-type: none"> <li>• Equations of State</li> <li>• Conduction</li> <li>• Convection</li> </ul>	Mar.28
	24 (Thermo-10)	Thermodynamics & Heat Transfer <ul style="list-style-type: none"> <li>• Equations of State</li> <li>• Conduction</li> <li>• Convection</li> </ul>	Mar.31

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### ENGR 292 Course Schedule

Week	Class	Contents	Date
13	25 (Other-1)	Analytical Tools <ul style="list-style-type: none"> <li>• Dimensional Analysis</li> <li>• Modeling</li> <li>• LaGrange Multipliers</li> <li>• Second Derivative Test</li> <li>• Multiple Integrals and Applications</li> </ul>	Apr.04
	26 (Other-2)	Analytical Tools (cont.)  Other topics as required to ensure the student has a rounded knowledge of Fluid Dynamics, Thermodynamics & Heat Transfer  Assignment 5 Due	Apr.07

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### ENGR 292 Course Schedule

Week	Class	Contents	Date
14	27	Final Review (FS, FD, Thermo)	Apr.11
	28	No Class (Good Friday)	Apr.14
	29	Final Exam	Apr.18

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