

Finite Element Analysis Schedule, Mech 417 Spring 2018. Revised 1/12/18

Date	Day	Topic	Read/Review*
1/9/18	Tue	Introduction, 1D interpolation	---
1/11	Thur	SolidWorks demonstration, 1D interpolation	T2.2, E2.2-1,-2 F2.2-6, -10, S2.3-1
1/16	Tue	Interpolation, Numerical Integration	T2.5, E2.6-1, F2.6-4, E3.1-1 S3.1-3, F3.2-1, -3, E3.2-1
1/18	Thur	Numerical integration	T3.2, 3.5 Summary, E3.2-4
1/23	Tue	Second Order ODEs Calculus review	F5.2-1, 5.8 Summary T4.2, F4.2-1, E4.2-2, E4.5-1
1/25	Thur	Second Order ODEs Assembly	T8.1, E8.1-1,-2,-3,-4, S8.2-1 E8.2-3, -4, F8.3-1, E8.3-2, -3,
1/30	Tue	Second Order ODEs EBC, solve, post-process	E8.4-1, S8.5-2, -3, -4, S8.5-5, -6
2/1	Thur	Second Order ODEs Numerical integration, symmetry	T8.6, S8.6-1, -2, -3 T8.8, 8.11 Summary
2/6	Tue	Second Order PDE's	T12.1-T12.3
2/8	Thur	Second Order PDE's Calculus review	T12.4, T12.7, E12.9-1, -2 T12.11, T12.14, E12.14-1,
2/13	Tue	Second Order PDE's Applications	Review
2/15	Thur	Second Order PDE's Applications	T12.14(15), F12.14(15)-17, F12.14(15)-25, -30, -37
2/20	Tue	Second Order PDE's Applications	Review T12.16(17), 12Summary
2/22	Thur	1D Beams Applications	T10.2-4, S10.5-3, E10.6-2, E10.6-3, T10.9, S10.9-3
2/27	Tue	Trusses and Frames Applications	T9.1, E9.1-1, T11.1, S11.1-3, F11.2-2, F11.3-1, 11.6 Summary
3/1	Thur	Stress Analysis	T13.1-6
3/6	Tue	Stress Analysis, FE interpolation	T13.8, T13.10, T13.13
3/8	Thur	Strain-displacement matrix Element matrices	lecture lecture
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3/20	Tue	Plane stress applications	lecture
3/22	Thur	Plane stress applications	lecture
3/27	Tue	Makeup Day, or Review	lecture
3/29	Thur	Vibrations	T14.1-3, E14.3-1, E14.4-1, S14.4-1
4/3	Tue	Vibrations	S14.5-1, T14.6
4/5	Thur	Vibrations, Membranes Plane stress vibration	T14.7 T14.11, 14.17 Summary
4/10	Tue	Transient heat transfer	T15.1-2, S15.2-1, F15.3-1
4/12	Thur	Dynamic time history	T15.4
4/17	Tue	Dynamic time history	T15.5, lecture
4/19	Thur	Review	Review

Notes: T= Theory section, E=Example number, F= Figure number, S=Script number (in a figure)