

HW 1, Due Week 2

1.1: 1, 4, 5, 6, 9, 15, 19, 27, 29, 30, 32, 33, 34

Reading. Required background. Nothing graded from 1.1.

1.2: 1, 2, 4, 5, 6, 7, 9, 10, 13, 15, 16, 18,  
21, 22, 24, 26, 29, 31, 32, 33, 35, 40, 41

1.3: 2, 3, 5, 6, 8, 10, 11, 13, 14, 23, 25, 26, 33

1.4: 2, 3, 4, 6, 9, 12, 13, 18, 19, 20, 21, 22, 26, 36,  
41, 42, 45, 46, 49, 51, 56, 59

Print Exercise 1.3-8 image at 200% from here:

<http://www.math.utah.edu/~gustafso/exercise1.3-8-EdwardsPenney.jpg>

All homework listed in one file [Here](#).

HW 2, Due Week 3

1.5: 1, 7, **8**, **10**, 13, **18**, **20**, 21, 23, 24, 33, **34**, 36, 39

3.7: 1, 2, **4**, 7 [LC and RC circuits, LRC after 3.6]

2.1: 1, 3, 4, 6, **8**, 10, 12, **16**, 22, 23, 33, 37

2.2: 5, 7, 8, 9, **10**, 11, 15, 17, **18**

2.3: 2, 3, 9, **10**, 13, 14, 17, 18, 19, **20**, **22**, 24, 25

**Computer Lab 1**, Due Week 5:

<http://www.math.utah.edu/~gustafso/s2016/2280/2280mapleL1-intro-S2016.pdf>

All homework listed in one file [Here](#).

HW 3, Due Week 4

No exercises due, only the computer Numerical DE Project (below),  
which uses the statements from exercises 2.4-6, 2.5-6, 2.6-6.

2.4: 2, 3, 4, 6, 10, 12, 17 Euler's method

2.5: 3, 4, 5, 6, 10, 12 Improved Euler or Heun

2.6: 3, 4, 5, 6, 10, 12 Runge-Kutta, RK4

<http://www.math.utah.edu/~gustafso/s2016/2280/numericalDEproject-S2016.pdf>

All homework listed in one file [Here](#).

HW 4, Due Week 5

**3.1:** 1, 6, 10, 27, 33, 34, 36, 37, 38, 39, 40, 41, 42, 43, 46, 48, 53

**3.2:** 1, 2, 5, 8, 11,13, 16, 18, 19, 20, 21, 22, 23, 25, 26

**3.3:** 3, 7, 8, 9, 10, 11, 16, 17, 23, 27, 31, 32, 37, 40

**3.4:** 3, 4, 5, 6, 10, 11, 15, 17, 19, 20, 21, 33, 34

All homework listed in one file [Here](#).

HW 5, Due Week 6

**3.5:** 2, 3, 5, 6, 10, 11, 12, 19, 21, 22, 25, 27, 29, 31, 34, 39,  
43, 45, 47, 51, 52, 54, 57, 58, 59

**3.6:** 3, 4, 5, 7, 8, 9, 11, 13, 15, 17, 18, 20, 21, 22

**3.7:** 1, 2, 4, 7, 12, 15, 18, 19 [LRC circuits]

**Computer Lab 2, Newton Cooling**, Due Week 6. Choose one project.

<http://www.math.utah.edu/~gustafso/s2016/2280/2280mapleL2-freezing-pipes-S2016.pdf>

<http://www.math.utah.edu/~gustafso/s2016/2280/2280mapleL2-swamp-cooler-S2016.pdf>

All homework listed in one file [Here](#).

HW 6, Due Week 7

7.1: 1, 3, 7, 9, 11, 13, 17, 18, 19, 22, 23, 27, 28, 29, 31, 40

7.2: 3, 7, 9, 10, 15, 16, 17, 19, 20, 21, 23, 24, 35, 37

7.3: 3, 6, 7, 9, 12, 13, 17, 18, 20, 23, 27, 28, 29, 30, 32, 34, 37

All homework listed in one file [Here](#).

HW 7, Due Week 8

7.4: **2**, 3, 9, 13, 15, 17, **22**, 23, 26, 27, 29, 30, **36**, 37

7.5: 3, **4**, 7, 9, 11, 13, **14**, 21, **22**, 25, 27, **28**, 31, 33, 34, 37

All homework listed in one file [Here](#).

HW 8, Due Week 9

7.6: 2, 5, 6, 7, 8, 11, 12, 18, 21, 22 [impulses and Laplace]

4.1: 1, 3, 2, 5, 7, 8, 11, 12, 15, 17, 20, 21, 24, 26

4.2: 7, 12, 27; A Laplace or Cayley-Hamilton-Ziebur solution is acceptable.

4.3: 7, 9, 21;

See RK4 for systems <http://www.math.utah.edu/~gustafso/s2016/2280/numericalVectorMethods.pdf>

All homework listed in one file [Here](#).



HW 9, Due Week 11 after Spring Break (Week 10, no classes)

5.1: 16, 17, 20, 22, 24, 25, 28

**Computer Lab 3, Laplace:**

<http://www.math.utah.edu/~gustafso/s2016/2280/2280mapleL3-laplace-S2016.pdf>

All homework listed in one file [Here](#).

HW 10 does not exist. Spring Break.  
No Quiz 10. No Lab 10.

All homework listed in one file [Here](#).

HW 11, due Week 12

5.2: 8, 11, 13, 20, 21, 27, 29, 30, 31, 35, 39, 43, 45, 49

5.3 [5.4 in edition 5/E]: 6, 9, 13, 19, 24, 27

5.4 [5.5 in edition 5/E]: 1, 7, 11 , 29

5.5 [5.6 in edition 5/E]: 1, 3, 4, 11, 12, 23, 38

Edition 5/E problems are identical in matching sections:

Edition 4/E

Edition 5/E

5.1

5.1

5.2

5.2

5.3

5.4 [a new 5.3 was inserted]

5.4

5.5

5.5

5.6

5.6

5.7

We don't do the 5/E section 5.3 problems.

The material in 5/E section 5.3 is a reference  
for Chapter 6 in both 4/E and 5/E.

All homework listed in one file [Here](#).

HW 12, due Week 13

5.6 [5.7 in edition 5/E]: 1, 13, 15, 19, 23

6.1: 3, 4, 5, 7, 8, 11, 15, 17, 18

6.2: 2, 5, 7, 9, 12, 13, 17, 19, 21, 22, 23, 29

6.3: 5, 7, 8, 9, 10, 11, 18, 19

All homework listed in one file [Here](#).

HW 13, due Week 14

6.4: 1, 3, 4, 8, 9, 10, 11, 13, 14

6.5: Not covered in class, nothing due.

**Computer Lab 4, Resonance:**

<http://www.math.utah.edu/~gustafso/s2016/2280/2280mapleL4-resonance-S2016.pdf>

All homework listed in one file [Here](#).

HW 14, due Week 15

9.1:  $\boxed{6}$ , 7,  $\boxed{10}$ ,  $\boxed{13}$ , 15, 17, 20,  $\boxed{24}$ , 30

9.2: 2,  $\boxed{8}$ , 9,  $\boxed{20}$

9.3: 1,  $\boxed{4}$ , 9,  $\boxed{17}$ ,  $\boxed{20}$

9.4:  $\boxed{1}$ , 7,  $\boxed{9}$ , 13

All homework listed in one file [Here](#).

HW 15, due by 6pm Tuesday May 3 under the door JWB 113

9.5: 1, 2, , ,

9.6: 1,

All homework listed in one file Here.