MAT 21D: Vector Analysis

Michael Ragone, Summer Session 2 2021

Draft Date: August 25, 2021

Below is the current schedule for our class. This may be subject to change based off our pace, but the midterm dates should be fixed except in extreme cases.

Italicized numbers correspond to sections in our text, *Thomas's Calculus with Early Trancendentals,* 14th *edition* by Thomas, Weir, and Hass.

"Extra Credit" Tuesdays will be dedicated to synchronous problem solving and discussion: we will work through problems together to get a handle on the more computational aspects of this course. This is the only possible source of extra credit in this course, and it will be based off participation as evidenced by quiz responses following the class.

Midterms are synchronous and proctored, and we will use gradescope for submissions. We will have one practice submission on Tuesday 08/03 to make sure we can do it well.

There will be **no** makeup exams or midterms.

	Monday	Wednesday	Friday
08/02	**First day of class** *15.1, 15.2* PS 1 assigned	*15.3, 15.4* PS 2 assigned UPS 1 due	*15.5, 15.6* PS 1 due PS 3 assigned UPS 2 due
08/09	*15.7, 15.8* PS 2 due PS 4 assigned	*15.8, 13.3* PS 3 due UPS 3 due	*13.4* PS 4 due
08/16	**Midterm 1 (Ch. 15)** PS 5 assigned UPS 4 due	*16.1* PS 6 assigned UPS 5 due	*16.2* PS 5 due PS 7 assigned UPS 6 due
08/23	*16.3*	*16.4* PS 6 due	*16.5* PS 7 due UPS 7 due PS 8 assigned
08/30	**Midterm 2 (Ch. 13.3-4, 16.1-3)** PS 9 assigned	*16.6*	*16.7,16.8* UPS 8 due PS 8 due
09/06	**Labor Day, No Class**	*Review Day* PS 9 due UPS 9 due	**Final Exam**

There are two types of homework: computational (UPS) and conceptual (PS). Late homework will not be accepted, but I will drop the lowest computational homework score and the two lowest conceptual homework scores. Both homework types must be submitted to the "assignments" tab on Canvas according to the schedule.

- (UPS) Computational homeworks correspond to each section covered and are due on the written dates by 11:59 PM PST. These are graded by completion only. (UPS = Unscored problem set)

- (PS) Conceptual homeworks are due on the written dates by 11:59 PM PST. These are graded. (PS = problem set)

Computational Homework Sets (UPS)

Only the first numbers are required. The *Rec:* problems are recommended practice and worth your time, but not required.

UPS 1

- Sec 15.1, p. 901: 1, 16, 19, 30, (*Rec: 4, 13, 22, 29, 37, 40*)

- Sec 15.2, p. 909: 11, 15, 19, 28, 33, 36, 59 (*Rec: 3, 6, 31, 47, 62, 83*)

- Sec 15.3, p. 914: 12, 19, 26 (*Rec: 3, 5, 15, 21, 29*)

UPS 2

- Sec 15.4, p. 919: 3, 7, 9, 13, 23, 33, 37 (*Rec: 17, 20, 29, 42*)

- Sec 15.5, p. 929: 3, 20, 21, 23, 41 (*Rec: 9, 13, 17, 37*)

- Sec 15.6, p. 939: Read Sec. 15.6 (This material won't be examined.)

UPS 3

- Sec 15.7, p. 949: 6, 7, 8, 11, 39, 49, 55, 56, 81, 104 (*Rec: 17, 21, 23, 26, 29, 33, 36, 37, 43, 53, 65, 71, 86, 87*)

UPS 4

- Sec 15.8, p. 961: 1, 5, 6, 9, 12, 18 (*Rec: 17, 23*)

- Review Ch. 12 and Sec. 13.1–13.2 on vectors from 21C

- Sec 13.3, p. 784: 1, 5, 9, 15, 17, 18 (*Rec: 7, 16*)

UPS 5

- Sec 13.4, p. 790: 1, 2, 3, 5, 7, 11, 13, 17 (*Rec: 9, 27*)

- Read Ch. 11.1 and 11.2 on parameterization from 21C. We will be doing parameterization in 2D in the upcoming weeks.

UPS 6

- Sec 16.1, p. 974: 1, 7, 8, 9, 19, 25 (*Rec: 2-6, 9, 15, 18, 21, 23, 26, 33*)

- Sec 16.2, p. 986: 5, 7, 9, 17, 19, 29, 47, 48 (*Rec: 1, 2, 3, 13, 16, 23, 27, 30, 39, 55, 59*)

UPS 7

- Sec 16.3, p. 998: 13, 17, 23, 29, 31 (*Rec: 1, 4, 5, 7, 9, 11, 19, 3, 33, 38*)

- Sec 16.4, p. 1010: 1, 3, 5, 27, 31, 37, 43 (*Rec: 9, 10, 11, 15, 21, 25, 26, 31, 37, 43, 45*)

UPS 8

- Sec 16.5, p. 1020: 1, 5, 11, 19, 21, 23, 31 (*Rec: 33*)

- Sec 16.6, p. 1030: 7, 11, 19, 21, 29 (*Rec: 39*)

UPS 9

- Sec 16.7, p. 1043: 5, 7, 12, 15, 19, 27, 31 (*Rec: 13, 21, 31, 34*)

- Sec 16.8, p. 1056: 1, 7, 13, 15, 21, 29, 35, 36 (*Rec: 25, 33, 34*)