

Calculus 3

Summer 2018 MATH2210.001

Instructor: *Zhu, Yingxian* Office: LA 109F
Office Hours: 11:30 ~ 12:30 MWR; 09:00 ~ 10:00 T Phone: 801-863-7451
Time & place: MTWR 10:00-11:25 in LA 228 Email: zhuy@uvu.edu

Prerequisite: Math 1220 with a C or better, or equivalent. **Students who have not satisfied the prerequisite will be dropped from the class.**

Textbook: *Calculus*, 8th edition, by Stewart.

Important Dates: The last day to add to class is July 3.
The last day for 100% refund and to withdraw from the class and not show on transcript is June 29.
The last day to withdraw/audit classes is July 16.
Student can withdraw from the class by telephone. Call Registration and Records at 863-8468 to withdraw. AUDIT grades must be requested in person at the Registration and Records windows

Grading: Three tests: 90%; HW: 10%.

Homework will be collected and graded daily. Homework problems are listed below (but possible changes will be announced in class). No late homework will be accepted

In this class students are expected to:

- Compute partial derivatives of functions of several variables; find the gradient, directional derivative, and linear approximations;
- Find critical points and use the Second Partial Derivative Test to identify local extrema and saddle points of functions of two variables;
- Find absolute extreme values; find extreme values using the Lagrange multiplier method;
- Compute double integrals in rectangular or polar coordinates; reverse order of integration;
- Compute triple integrals in rectangular, cylindrical, or spherical coordinates; more generally carry out a change of variables in double and triple integrals and compute a Jacobian;
- Write parametric representations of curves and surfaces; understand orientation of curves and surfaces; compute line and surface integrals of scalar functions and vector fields;
- Use and apply Greens' theorem; find the curl and divergence of a vector field; use and apply Stokes' theorem and the Divergence theorem.

Policies:

1. No make-ups for missed tests will be given.
2. The final exam will be given only at the scheduled time (math department policy).
3. Cheating will not be tolerated.
4. **No calculators are allowed on tests, and the final exam (except for the approximations). There will be no late exams given.**

Attention students with disabilities:

Students who need accommodations because of a disability should contact the UVU Accessibility Services Department (ASD), located on the Orem Campus, in LC 312. To schedule an appointment, or speak with a counselor, call the ASD office at 801-863-8747, or for Deaf/Hard of Hearing individuals, use the video phone number, 886-760-1819.

Note: Deviations from above and changes to the schedule below are at the discretion of the instructor

LECTURE AND ASSIGNED PROBLEMS

Week	Sections	Homework Problems
1 6/25-6/28	14.1 14.2, 14.3, 14.4, 14.5	<u>14.1</u> : 8, 10, 19, 20, 25, 29, 32, 33, 41, 45, 51 <u>14.2</u> : 3, 5-21 every other odd 26, 30, 34, 37, 39 <u>14.3</u> : 1, 3, 6, 8, 10, 16-36 every other even 42, 45, 49, 55, 61, 65, 77 <u>14.4</u> : 2, 6, 11, 15, 18, 25, 28, 31, 35
2 7/2-7/5	14.6, 14.7, 14.8 Independence Day (7/4) Review	<u>14.5</u> : 2, 5, 8, 11, 15, 18, 22, 25, 29, 34, 41, 45 <u>14.6</u> : 1, 4, 9, 12, 14, 16, 21, 23, 25, 33, 42, 45, 55 <u>14.7</u> : 1, 4, 7, 11, 15, 18, 22, 33, 36, 42, 46, 50 <u>14.8</u> : 3, 6, 9, 12, 19, 22, 25, 39
3 7/9- 7/12	Test 1 (7/6, 7/10) 15.1, 15.2, 15.3, 15.4	<u>15.1</u> : 1, 3, 6, 7, 10, 14-34 every other even, 36, 39, 49 <u>15.2</u> : 2, 5, 10, 13, 15, 17, 22, 27, 31, 36, 39, 46, 53, 62 <u>15.3</u> : 1, 2, 12, 14, 15, 19, 23, 24, 29, 36 <u>15.4</u> : 2, 6, 7, 10, 13, 18, 23
4 7/16-7/19	15.5, 15.6, 15.7, 15.8, 15.9	<u>15.5</u> : 3, 6, 9, 10, 14, 23 <u>15.6</u> : 1, 4, 5, 14, 18, 21, 23, 27, 33, 40, 45, 53 <u>15.7</u> : 2, 3, 5, 6, 8, 9, 12, 15, 17, 20, 22, 29 <u>15.8</u> : 4, 7, 10, 13, 14, 16, 19, 23, 35, 43
5 7/23-7/26	16.1, 16.2, 16.3 Pioneer Day (7/24) Review Test 2 (7/26, 7/27)	<u>15.9</u> : 5, 8, 9, 17, 18, 21(a), 23, 25 <u>16.1</u> : 2, 5, 11-14, 15, 18, 21, 22, 23, 25
6 7/30-8/2	16.3, 16.4, 16.5, 16.6, 16.7	<u>16.2</u> : 1-41 every other odd <u>16.3</u> : 2, 5, 8, 11, 15, 20, 23, 25, 29, 31, 35 <u>16.4</u> : 2-26 every other even <u>16.5</u> : 1, 4, 11, 14, 18, 19, 21, 23, 24, 28, 31 <u>16.6</u> : 1, 4, 13-18, 19, 23, 26, 33, 39, 43, 46, 53, 61
7 8/6-8/9	16.7, 16.8, 16.9 Review Test 3 (In Class)	<u>16.7</u> : 2, 6, 10, 16, 20, 24, 28, 32, 39, 47 <u>16.8</u> : 3, 5, 7, 9, 14, 16 <u>16.9</u> : 2, 4, 6, 8, 10, 12, 19, 27

Scaling: A : 93% — 100%; B+ : 87% — 89%; C+ : 77% — 79%; D+ : 65% — 69%; E : 0% — 59%
 A- : 90% — 92%; B : 83% — 86%; C : 73% — 76%; D : 60% — 64%;
 B- : 80% — 82%; C- : 70% — 72%;