Math 1522 **Calculus II Syllabus** **Fall 2019**, meets Mon&Wed 4:30-6:20p Clifton Murray, UNM-VC
*Prerequisite*: C or better in Calculus I/Math 1520

Office A126A, Hours MW 3:15-4:15p, T 4:15-5:30p, Th 11:45a-12:15p, 1:15-2:30p, 4:15-5:15p
wcmurray@unm.edu, 505-925-8727

*Required Materials:* Textbook, Thomas' Calculus, 14th ed., by Weir & Hass.
Scientific Graphing Calculator.

*Student Learning Objectives (SLO's)*: By the end of the course, the student who earns a grade of B or better in the course should be able to, at a minimum, do the following: Find volumes of solids of revolution, calculate work due to a variable force, and find the fluid force against a submerged plate, all using integration; calculate derivatives and integrals of log, exponential, and inverse trig functions; perform integration by parts, by partial fractions, and by trig substitutions when needed; evaluate improper integrals; solve 1st order linear differential equations, both separable and non-separable; write the nth term of an infinite series; apply tests for series' convergence or divergence; perform Taylor-series expansions of simple power functions; interpret formulas for the conic sections; convert equations into parametric form; and convert between rectangular and polar coordinates.

*Disabilities*: If you have a documented physical disability which could interfere with learning in a standard classroom environment, please inform the instructor, so accommodations can be made.

*Academic dishonesty* as defined in the UNM-Valencia catalog includes copying work from other students. Any student found doing this on tests or the final exam is subject to disciplinary action, ranging from a reduced or failing grade for the work &/or the course, to dismissal from the University.

*Persistent disruptive behavior* which interferes with students' education—such as loud, distractive talking, insulting classmates or the instructor, or other repeated disruptive behavior-- will result in the offenders' being dropped from the course.
*NO text messaging or phone calling is permitted in the classroom—Please turn phones OFF while in the classroom.*

Any *sexual misconduct or gender discrimination* observed by or reported to a UNM Faculty member, TA, or GA must be reported to the UNM Office of Equal Opportunity and the Title IX Coordinator. For information regarding what constitutes sexual misconduct see https://policy .unm.edu/university-policies/2000/2740.html

*Late and Missed Work:* There are no makeup tests, except in verified emergencies—in such cases, expect a maximum score of 80%. Early tests, however, might can be arranged without penalty, depending on the reason.
Homework: 1 day late, -50%. 2 days late, -100%.

*After five accumulated absences*, the student may be dropped from the class without further notice. If you know you have a conflict, such as work schedule, please see the instructor to determine whether an exception can be made.

**Minimum Final Exam Score*: **If the score on the final exam is less than 65%, the student will receive a grade of D or less for the course**, regardless of other test or homework scores.*

Grading:

| | Maximum possible points |
|---|---|
| Homework | 100 |
| 4 tests | 400 |
| Drop lowest one of tests or homework: | -100 |
| Final exam (comprehensive, not dropped) | 150 ← (*if < 97.5, course grade is D or below*) |
| | 550 (max poss course total) |

| | |
|---|---|
| $532 \leq x \leq 550$ | A+ (unless a test is missed, or homework score is less than 50%) |
| $512 \leq x < 532$ | A (unless a test is missed) |
| $495 \leq x < 512$ | A- |
| $477 \leq x < 495$ | B+ |
| $457 \leq x < 477$ | B |
| $440 \leq x < 457$ | B- |
| $422 \leq x < 440$ | C+ |
| $402 \leq x < 422$ | C |
| $385 \leq x < 402$ | C-* |
| $330 \leq x < 385$ | D |
| $0 \leq x < 330$ | F |

* Be aware that a C- may Not meet the requirements for your planned course(s) or degree. It is your responsibility to find out what grades are required for your future courses and/or academic progress.

**The grade of Incomplete ("I") will not be given.

ALL HMWK DUE @ START OF FOLLOWING CLASS.

# FALL 2019
# CALC II (1522)

CLIFTON MURRAY
UNM-VALENCIA
4:30 - 6:20 P

| M | W |
|---|---|
| 19 AUG FROM CHAPT 8: RVW BASIC ANTIDERIVS PRACTICE IN CLASS. HMWK DUE NEXT CLASS: Sec 8.1 #1, 3, 4, 8, 10, 15, 18, 19, 23, 25, 32 34 | 21 AUG 6.1 SOLIDS OF REVOLUTION: VOLUME BY SLICES: 6.1 # 2, 4, 17, 33 |
| 26 AUG 6.2 SOLIDS OF REVOLUTION: VOL BY SHELLS: # 1, 7, 15<br>6.3 ARC LENGTH #2 | 28 AUG 6.4 SOLID OF REVOL: SURFACE AREA # 13<br>6.5 CALCULATE WORK BY VARYING FORCE #3, 4, 9, 10<br>6.6 ROD'S CENTER OF MASS: #1 |
| 2 SEP<br>LABOR DAY | 4 SEP FIND FORCE DUE TO FLUID STATIC PRESSURE<br>6.5 # 35, 36, 48, 42 |
| 9 SEP<br>RVW | 11 SEP<br>TEST #1 INTEGRALS & APPLICATIONS: VOLUME, WORK, PRESSURE-FORCE |
| 16 SEP 7.2 CALCULUS WITH $\ln x$<br># 1, 4, 7, 9, 13, 17, 23, 39, 41, 43, 45, 57 | 18 SEP 7.3 CALCULUS WITH $e^x$<br>#9, 11, 21, 23, 33, 35, 39, 41, 43, 45, 57 |
| 23 SEP 7.4 SEPARABLE DIFF'L EQUATIONS<br># 1a, 1c, 6, 11, 19<br>7.4 CONTIN'T GROWTH/EXPONENTIAL CHANGE # 34, 45 | 25 SEP 7.5 L'HOPITAL'S RULE #1, 5, 13, 69.<br>7.6 INVERSE TRIG FNS: #1, 3, 9, 13, 21, 23, 47, 51, 55. *BRING GRAPHER NEXT CLASS* |
| 30 SEP 7.7 HYPERBOLIC FUNCTIONS #1, 5, 6, 13, 41, 51<br>7.8 WHICH FUNCTIONS GROW FASTER? -- #3a, 3b, 3c, 5a, 5b, 5c, 7 | 2 OCT<br>RVW |
| 7 OCT<br>TEST # 2 CALCULUS WITH TRANSCENDENTAL FUNCTIONS | 9 OCT 8.2 HOW DO $\int f(x)g(x)\,dx$? BY PARTS! #1, 5, 41<br>8.3 $\int$ TRIG FNS #1, 4, 11, 21 |
| 14 OCT 8.4 CERTAIN $\int$ CAN BE DONE W/ "TRIG SUBSTIT" #1, 5, 9, 15<br>8.5 HOW DO $\int \frac{f(x)}{g(x)}\,dx$? PARTIAL FRACTIONS! #1, 7, 11, 21 | 16 OCT 8.7 NUMERICAL INTEGRATION # 3I, 3II, 23, 25<br>8.8 IMPROPER INTEGRALS #1, 3, 7, 9, 39, 43 |
| 21 OCT 9.2 HOW SOLVE 1ST ORD LIN DE? #1, 5, 17<br>APPLICATIONS: 9.2 #26. 9.3 #14. | 23 OCT<br>RVW |
| 28 OCT<br>TEST # 3 TECHNIQUES, SEP'BL & 1ST ORD LIN DE's, IMPROPER $\int$. | 30 OCT 10.1 SEQUENCES #1, 3, 7, 13, 16, 31, 37<br>10.2 INFINITE SERIES #1, 3, 7 |
| 4 NOV 10.2 CONTIN #9, 34, 37, 53, 54, 55, 56, 59, 81<br>10.3 $\int$ TEST FOR INF. SERIES CONV OR DIV. #1, 2, 5, 13 | 6 NOV 10.5 RATIO TEST. # 1, 17, 19<br>10.6 ALTER. SERIES TEST #2, 9, 15, 17, 23<br>10.7 POWER SERIES: #3, 6 |
| 11 NOV 10.8 PWR SERIES; TAYLOR #11, 15, 25<br>10.10 APPLIC OF ↗ #15, 29 *BRING GRAPHER NEXT CLASSES* | 13 NOV 11.1 PARAMETRIC CURVES #3, 5, 7, 29, 31<br>SKETCH #51a, 52a, 53<br>11.2 #1 (1ST DERIV IS ENOUGH.), #25 *BRING GRAPHER NEXT TIME* |
| 18 NOV 11.3 POLAR COORDS #6a, b, c, d, #11, 13, 15, 27, 33, 55, 57<br>11.5 AREA IN POLAR COORDS #1 | 20 NOV 11.6 CONIC SECTIONS #9, 17, 27<br>11.7 MORE ON ↗ #1, 9, 17 |
| 25 NOV<br>RVW | 27 NOV<br>TEST #4 INF. SERIES, PARAMETRIC EQ'S, POLAR COORDS, CONIC SECTIONS. |
| 2 DEC<br>RVW FOR FINAL | 4 DEC<br>RVW FOR FINAL |
| 9 DEC FINAL EXAM<br>4:30 - 6:30 P | 11 DEC |