

Wheeling Jesuit University, Department of Business and Engineering Syllabus; MATH 192; Calculus II; Spring 2019

Instructor: Robert Yahn

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Course description: Transcendental functions, applications of integrals, volumes of revolution, surface areas; techniques of integration, including powers of trigonometric functions, integration by parts and by partial fractions, improper integrals, infinite series, Taylor's expansion and indeterminate forms. Prerequisite: MATH 191.

Textbook: Calculus, Single Variables, 7th Edition, Stewart

Course Objective: The students should be able to develop the understanding of the calculus topics and their applications. The students should be able to provide a clearly written description of the solution to a problem, that will help the students improve their analytical skills and problem-solving techniques used in modern science and technology. By the end of this semester the students will develop a solid mathematic foundation for further work in their degree program.

Attendance Policy: none. However, when you do attend class, please do NOT use your cell phone during class.

Last Date to Drop the Course: The last day of the Add/Drop Period for this session is Friday, 11 Jan 2019. The last day to withdraw from this course with a grade of a W is Friday, 8 Feb 2019.

Academic Integrity Statement: Students are advised that WJU's Academic Integrity Policy will strictly be enforced in this course (see www.wju.edu/studenthandbook). Questions regarding the policy may be directed to the Office of the Academic Vice-President

- Collaboration is encouraged for all out-of-class assignments
- In-class evaluations are individual effort ... open textbook (Stewart) and a calculator

Official E-mail: An official WJU e-mail is established for each registered student, each faculty member, and each staff member. All university communications sent via e-mail will be sent to this WJU e-mail address.

The Academic Resource Center: The Academic Resource Center (ARC) is a totally free academic-support service available to all enrolled Wheeling Jesuit University students and staffed almost exclusively by WJU students recommended for employment by WJU faculty. The ARC is located in Bishop Hodges Library and is open five days a week:

Sundays 6:00-8:00 p.m.
Mondays-Thursdays 1:00-9:00 p.m.

Please visit the ARC's website (readily accessible on the Cardinal homepage under "Quick Links" or as the first listing under "Student Services") www.wju.edu/arc to learn about the ARC's services (emphasizing writing, math, and the sciences) and to schedule appointments.

Disability Statement: Wheeling Jesuit University offers students with documented disabilities individual accommodations on a case-by case basis with confidentiality in compliance with the American with Disabilities Act and Section 504 of the Rehabilitation Act of 1973.

In order to receive academic or physical accommodations, students with disabilities must provide current (within three years) and comprehensive documentation concerning the nature and extent of the disability and communicate their needs to the Disability Services Director, located in Ignatius Hall Room G 24 or call 304-243-4484. Students are required to meet with the director to develop accommodation plans that they will present to their course instructors at the beginning of each semester. Students with disabilities that require specific housing accommodations must contact both the Director of Residence Life and the Disability Services Director.

Ultimately, all students with disabilities are responsible for their own academic achievement. They must attend classes, complete course assignments, and fulfill all university requirements for their chosen field of study. It is up to students with disabilities to seek out available assistance on campus and to utilize individualized accommodations that promote academic success.

Title IX Statement: Wheeling Jesuit University seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of sexual harassment, misconduct, or assault we encourage you to report this. If you report this to a faculty member, she or he must notify our college's Title IX coordinator about the basic facts of the incident (you may choose whether you or anyone involved is identified by name). For more information about your options at WJU, please go to <http://wju.edu/titleix/>

Campus Life Policies: All Campus Life Policies apply. Specifically, the Campus Life: Academic Dishonesty & Integrity Policy (http://www.wju.edu/about/hr/policies/cl_academicdishonesty.asp).

- Collaboration is encouraged for all out-of-class assignments
- In-class evaluations are individual effort ... open textbook (Devore) and a calculator

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| Course grading: | Out-of-class assignments | 10% |
| | Exams (3 x 20% each) | 60% |
| | Final Exam ² | 30% |

Course Grade Assignments:

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|----|---------------|----|---------------|
| A | 93% and above | C+ | 77-79% |
| A- | 90-92% | C | 73-76% |
| B+ | 87-89% | C- | 70-72% |
| B | 83-86% | D+ | 67-69% |
| B- | 80-82% | D | 60-66% |
| | | F | 59% and below |

Office hours: by appointment.

My class schedule:

| Course | Monday | Tuesday | Wednesday | Thursday | Friday |
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| MATH 192, Acker 205 | 1000-1050 | 0930-1020 | 1000-1050 | | 1000-1050 |
| MATH 235, Acker 205 | 1100-1150 | | 1100-1150 | | 1100-1150 |
| ENGR 475, Acker 205 | 1300-1350 | | 1300-1350 | | 1300-1350 |
| ENGR 476, Acker 205 | | 1800-1915 | | 1800-1915 | |
| BUSN 410, Acker 205 | | 1930-2045 | | 1930-2045 | |
| MATH 482, Donahue 112 | | | | | 1400-1550 |

| DATE | TOPIC | Out-of-Class Assignments | |
|-----------|---------------------------------|--------------------------|-------------------------------|
| 7 Jan, M | Introductions and CALC I review | - | Read Stewart 5.1 |
| 8 Jan, T | Areas Between Curves | 1 | 5.1: 2, 6, 8, 10 |
| 9 Jan, W | Areas Between Curves | 2 | 5.1: 14, 24, 30, 46, 50 |
| 11 Jan, F | Areas Between Curves | - | Read Stewart 5.2 |
| 14 Jan, M | Volumes | 3 | 5.2: 2, 4 |
| 15 Jan, T | Volumes | - | Read Stewart 5.3 |
| 16 Jan, W | Volumes by Cylindrical Shells | 4 | 5.3: 4, 6 Read Stewart 5.5 |
| 18 Jan, F | Volumes by Cylindrical Shells | 5 | 5.5: 2, 4, 6, 8 |
| 21 Jan, M | Average Value of a Function | - | |
| 22 Jan, T | Review | - | |
| 23 Jan, W | EXAM #1 | - | Read Stewart 6.1 |
| 25 Jan, F | Inverse Functions | - | 6.1: Read Stewart 6.2 |
| 28 Jan, M | Exponential Functions | 6 | 6.2: 32, 34, 36, 40 |
| 29 Jan, T | Exponential Functions | 7 | 6.2: 52, 84, 86, 88 |
| 30 Jan, W | Exponential Functions | - | Read Stewart 6.3 |
| 1 Feb, F | Logarithmic Functions | 8 | 6.3: 28, 30, 38, 64 |
| 4 Feb, M | Logarithmic Functions | - | Read Stewart 6.4 |
| 5 Feb, T | Derivatives of Log Functions | 9 | 6.4: 2, 4, 8, 14 |
| 6 Feb, W | Derivatives of Log Functions | - | Read Stewart 6.5 |
| 8 Feb, F | Exponential Growth & Decay | 10 | 6.5: 2, 4, 16, 18 |
| 11 Feb, M | Exponential Growth & Decay | - | Read Stewart 6.6 |
| 12 Feb, T | Inverse Trigonometric Functions | 11 | 6.6: 2, 6, 20, 22 |

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| 13 Feb, W | Inverse Trigonometric Functions | | Read Stewart 6.7 |
| 15 Feb, F | Hyperbolic Functions | 12 | 6.7: 2, 4, 6, 52 |
| 18 Feb, M | Hyperbolic Functions | | |
| 19 Feb, T | L'Hospital's Rule | - | Read Stewart 6.8 |
| 20 Feb, W | Review | 13 | 6.8: 12, 24, 30 |
| 22 Feb, F | EXAM #2 | - | |
| 4 Mar, M | Review | - | Read Stewart 7.1 |
| 5 Mar, T | Integration by Parts | - | |
| 6 Mar, W | Integration by Parts | 14 | 7.1: 4, 12, 34, 44 |
| 8 Mar, F | Integration by Parts | - | Read Stewart 7.2 |
| 11 Mar, M | Trigonometric Integrals | 15 | 7.2: 2, 4, 10, 56 |
| 12 Mar, T | Trigonometric Integrals | - | Read Stewart 7.3 |
| 13 Mar, W | Trigonometric Substitution | 16 | 7.3: 2, 6, 10 |
| 15 Mar, F | Trigonometric Substitution | - | Read Stewart 7.4 |
| 18 Mar, M | Integration by Partial Fractions | 17 | 7.4: 2, 4, 8, 10 |
| 19 Mar, T | Integration by Partial Fractions | 18 | |
| 20 Mar, W | Integration by Partial Fractions | - | Read Stewart 7.5 |
| 22 Mar, F | Strategy for Integration | 19 | 7.5: 8, 10, 68 |
| 25 Mar, M | Strategy for Integration | - | |
| 26 Mar, T | EXAM #3 | - | Read Stewart 8.1 |
| 27 Mar, W | Arc Length | 20 | 8.1: 8, 10 Read Stewart 8.2 |
| 29 Mar, F | Area of a Surface of Rotation | 21 | 8.2: 6, 8, 10 Read Stewart 8.3 |
| 1 Apr, M | Applications to Physics & Engineering | 22 | 8.3: 14, 30 |
| 2 Apr, T | Research Day | - | Read Stewart 8.4 |
| 3 Apr, W | Applications to Economics & Biology | 23 | 8.4: 10, 14 |
| 5 Apr, F | Applications to Economics & Biology | - | Read Stewart 8.5 |
| 8 Apr, M | Probability | 24 | 8.5: 2, 12, 14 Read Stewart 11.1 & 11.2 |
| 9 Apr, T | Sequences and Series | 25 | 11.1: 4, 6, 8, 26 |
| 10 Apr, W | Sequences and Series | 26 | 11.2: 26, 28, 34, 34 Read Stewart 11.3 |
| 12 Apr, F | The Integral Test | 27 | 11.3: 12, 14, 16, 18, 20, 22 Read Stewart 11.4 |
| 15 Apr, M | The Comparison Test | 28 | 11.4: 4, 6, 8, 10, 12, 14, 16 Read Stewart 11.5 |
| 16 Apr, T | Alternating Series | 29 | 11.5: 6, 8, 12 Read Stewart 11.7 |
| 17 Apr, W | Strategy for Testing Series | - | Read Stewart 11.8 & 11.9 |
| 19 Apr, F | Power Series | - | Read Stewart 11.10 & 11.11 |
| 22-23 Apr | Easter Break | - | |
| 24 Apr W | Taylor & Maclaurin Series | - | |
| 26 Apr, F | Review | - | |
| 29 Apr, M | Final Exam | - | 1100-1330 |