# Differential Equations

MTH 335 || CRN: 2820 || Fall 2026

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| **Instructor:** | Dr. Tom Cuchta |
| **Time:** | MWF 12:00-12:50 |
| **Credits:** | 3 undergraduate credit hours |
| **Location:** | Smith Hall 612 |
| **E-mail:** | cuchta@marshall.edu |
| **Office:** | Smith Hall 614 (walk into room, turn left – my office is inside!) |
| **Office phone:** | 304-696-3050 |
| **Open office hours:** | See my website http://tomcuchta.com. They may change throughout the semester without notice. Alternate office hours may always be scheduled via e-mail. |
| **Class webpage:** | https://tomcuchta.com/teach/classes/2026/MTH335-Fall2026-Marshall/ |
| **Textbook:** | **FREE:** https://debook.tomcuchta.com/frontmatter.html |
| **Course Description:** | A study of differential equations, their solutions, and applications to physical systems, emphasizing closed-form solving methods. Laplace transforms, orthogonal functions, approximation and numerical methods with applications. |
| **FREE math tutoring:** | Virtual and drop-in tutoring are offered by the math department online and in SH625: https://www.marshall.edu/math/tutoring/ |
| **Prerequisites:** | MTH 230 with a minimum grade of C. |
| **Online Homework:** | Administered through WeBWorK: `https://webwork.marshall.edu/`. The total percentage of online homework completed determines your **OH** grade (see grading policy below). |
| **Quizzes:** | Quizzes will be given randomly in class and will be unannounced in advance. Past quizzes will always be posted to the class webpage. Each quiz will be scored out of 10 points. The percentage of the possible points earned from quizzes determines your **Q** grade (see grading policy below). The lowest 15% of quiz grades will be dropped. |
| **Exams:** | There will be three regular exams in the course, each worth 100 points. The sum is your **HE** grade (see grading policy below). |
| **Final exam:** | There will be a cumulative final exam worth 200 points and is referred to as your **FE** grade in the grading policy below. The percentage earned on the final exam will replace the lowest hour exam grade (if and only if it helps). |
| **Attendance policy:** | Regular attendance is recommended for a complete understanding of course material. However, attendance will not be graded. |
| **Generative AI Policy:** | The use of generative AI is not permitted in this course. |
| **Final exam:** | There will be a cumulative final exam in this course. |
| **Make-up exam policy:** | If an exam is to be missed due to an excused absence (defined as in this page), then it is the ***student's responsibility*** to arrange an alternative time to take the exam at least one week before the exam is given. If the student misses an exam due to an unexcused absence, the exam may be replaced with the percentage earned on the final exam. The unexcused absence policy applies ***only once***. |
| **University policies:** | Various university policies such as Academic Dishonesty, Academic Dismissal, Academic Forgiveness, Academic Probation & Suspension, Affirmative Action, Pre-Finals Week, D/F Repeat Rule, Excused Absence, Inclement Weather, Sexual Harassment, Students with Disabilities, and University Computing Services Acceptable Use can be found at the Marshall University academic affairs webpage here: `https://www.marshall.edu/academic-affairs/policies/` |

**Grading policy:** Your **Final Score** is a weighted sum of your **Q** (worth 10%), **OH** (worth 20%), **HE** (worth 40%), and **FE** (worth 30%) scores:

$$\textbf{Final Score} = 0.10(\textbf{Q}) + 0.20(\textbf{OH}) + 0.4(\textbf{HE}) + 0.3(\textbf{FE})$$

Your final grade in the class is determined by what percentage of the maximum possible Final Score you earn:

$$\textbf{Percent Earned} = \frac{\textbf{Final Score}}{\textbf{Max Possible Final Score}}$$

Once the **Percent Earned** is known, the final grade follows as in this table:

| Grade | Percentage Range |
|---|---|
| A | $90\% \leq$ **Percent Earned (PE)** $\leq 100\%$ |
| B | $80 \leq$ **PE** $< 90$ |
| C | $70 \leq$ **PE** $< 80$ |
| D | $60 \leq$ **PE** $< 70$ |
| F | $0 \leq$ **PE** $< 60$ |

**Midterm Grades:** You will receive a midterm grade in this course. This grade will reflect your performance on the course requirements we have had up to this point in the class and is not a guarantee that you will receive the same grade as your final grade in the course. Be advised that you must complete all remaining requirements. Students wishing to improve their performance should contact me to discuss strategies to do so.

**Campus Carry Policy:** University Policy, UPGA-12 (Campus Carry Policy) derives its authority from West Virginia State law, including the Campus Self-defense Act (WV Code §18B-4-5b). It pertains to the exercise of concealed carry on Marshall University's campus, except in designated areas, by individuals with a valid permit to conceal carry.

Individuals who choose to conceal carry are responsible for knowing and understanding all applicable federal, state, and local laws and Marshall University Board of Governors Rules, university policies, and administrative procedures. University Policy, UPGA-12 applies to areas of campus and buildings that are directly under the possession or control of Marshall University.

Concealed handguns are not observable to others and must be holstered and concealed on the body of the permit holder or in a personal carrier, such as a backpack, purse, or other bag that remains under the exclusive and uninterrupted control of the permit holder. This includes wearing the personal carrier with a strap, carrying or holding the personal carrier, or setting the personal carrier next to or within your immediate reach at all times. If your participation in class activities impedes your ability to maintain constant control of your handgun, please make alternate arrangements prior to coming to class.

**Academic calendar:** For beginning, ending, and add/drop dates, see the Marshall University Academic Calendar: https://www.marshall.edu/academic-calendar/

# MTH 335 FALL 2026

| Week # | Dates | Sections |
|---|---|---|
| 1 | 17 Aug – 21 Aug | |
| 2 | 24 Aug – 28 Aug | |
| 3 | 31 Aug – 4 Sep | **ASYNCHRONOUS CLASS WEEK** |
| 4 | 7 Sep – 11 Sep | **NO CLASS, LABOR DAY** 7 Sep |
| 5 | 14 Sep – 18 Sep | ***EXAM 1*** 18 Sep |
| 6 | 21 Sep – 25 Sep | |
| 7 | 28 Sep – 2 Oct | |
| 8 | 5 Oct – 9 Oct | **NO CLASS, OCTOBER BREAK** 9 Oct |
| 9 | 12 Oct – 16 Oct | ***EXAM 2*** 16 Oct |
| 10 | 19 Oct – 23 Oct | |
| 11 | 26 Oct – 30 Oct 👻 | |
| 12 | 2 Nov – 6 Nov | |
| 13 | 9 Nov – 13 Nov | ***EXAM 3*** 13 Nov |
| 14 | 16 Nov – 20 Nov | |
| – | 23 Nov – 27 Nov | ***THANKSGIVING BREAK*** |
| 15 | 30 Nov – 4 Dec | |
| 16 | 7 Dec – 11 Dec | ***FINAL EXAMS*** |