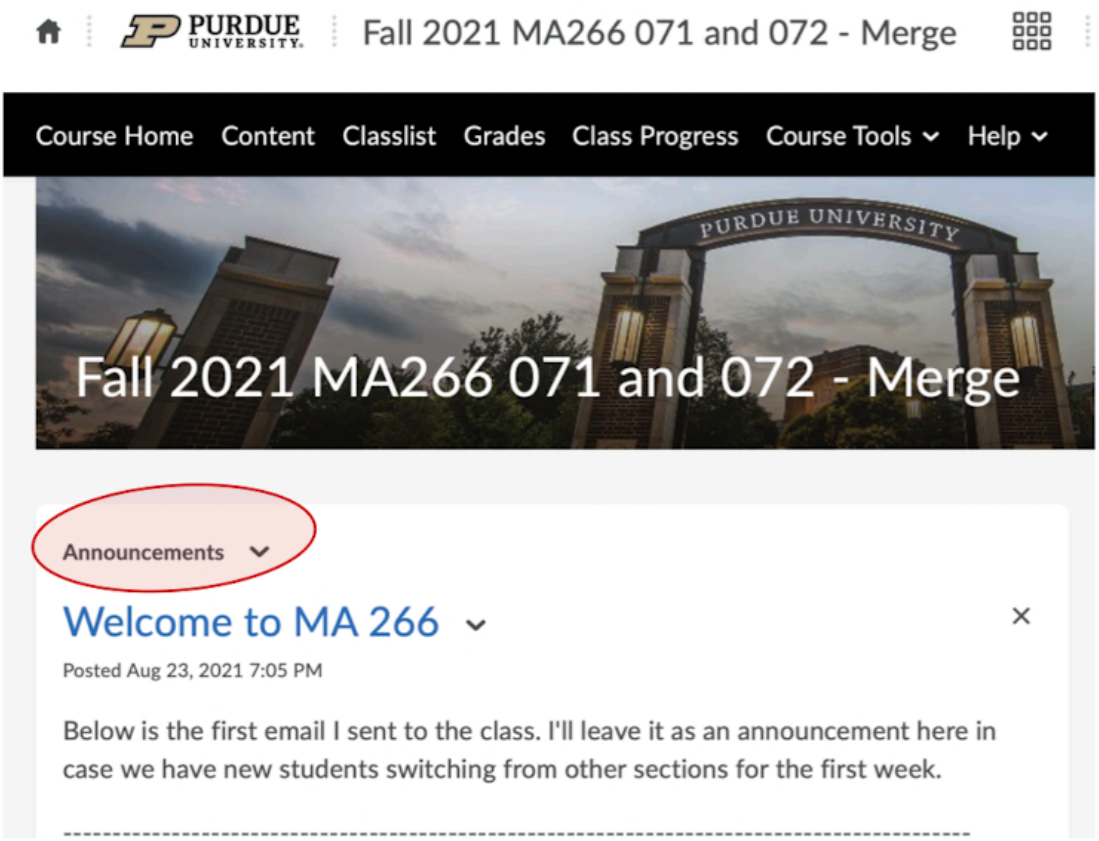
Welcome to MA266

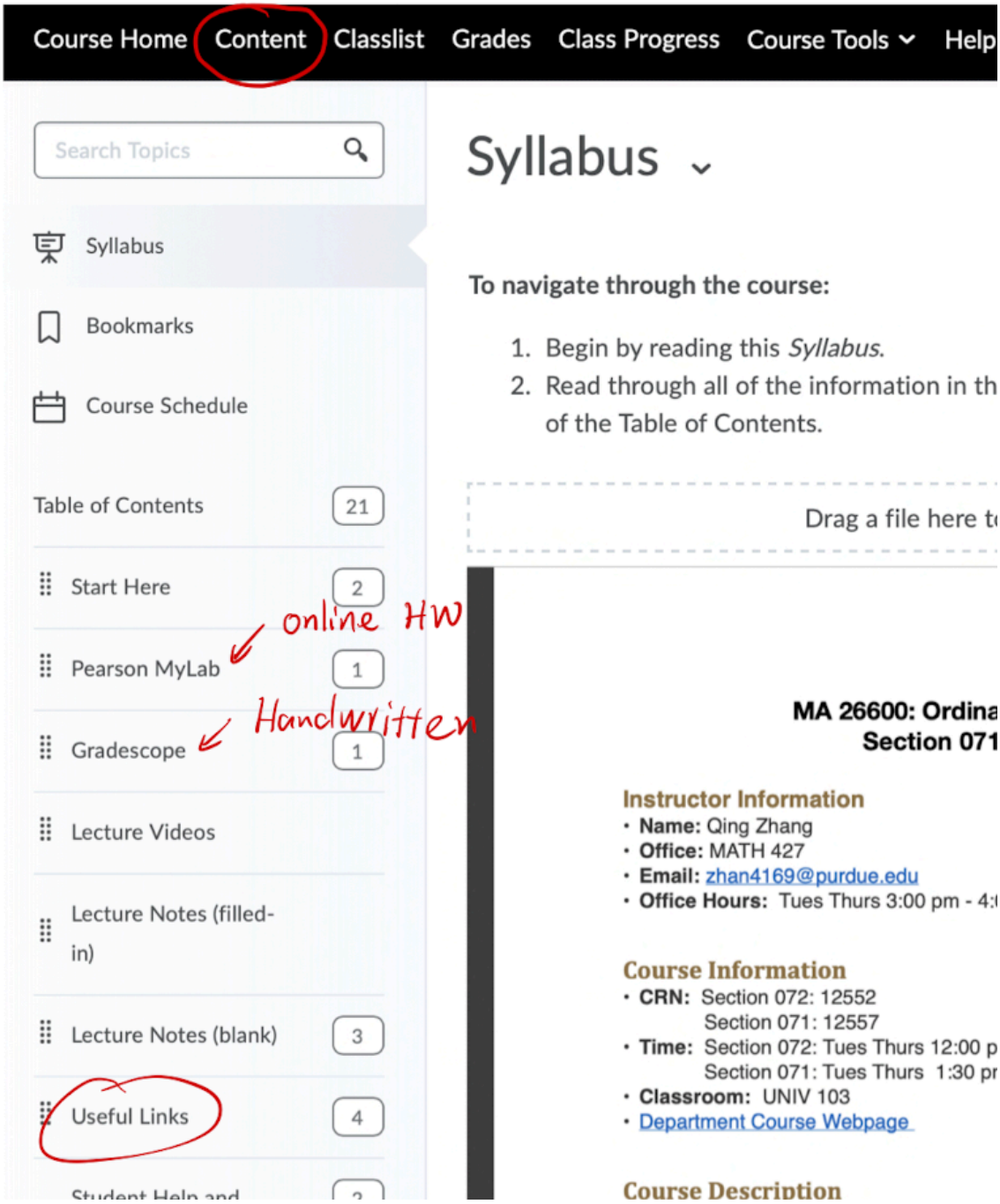
Course Ground Rules

We follow the course ground rules for the homework, midterm exams, grades, etc.

- Homework
- Policy on Late Homework
- Homework Score Appeal
- Midterm Exams
    - EXAM 1 Tuesday, October 5 at 8:00 pm
    - EXAM 2 Tuesday November 9 at 8:00 pm
- Grades
- Important Dates
- And so on.

Brightspace

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Syllabus
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MA 26600: Ordina
Section 071
Instructor Information
• Name: Qing Zhang
• Office: MATH 427
• Email: zhan4169@purdue.edu
• Office Hours: Tues Thurs 3:00 pm - 4:
Course Information
• CRN: Section 072: 12552
Section 071: 12557
• Time: Section 072: Tues Thurs 12:00 p
Section 071: Tues Thurs 1:30 pr
• Classroom: UNIV 103
• Department Course Webpage
Course Description

Syllabus

The course syllabus can be found on Brightspace.

Let's highlight some information from our syllabus:

MA 26600: Ordinary Differential Equations
Section 071 & 072 — Fall 2021

Instructor Information

- **Name:** Qing Zhang
- **Office:** MATH 444
- **Email:** zhan4169@purdue.edu
- **Office Hours:** Tues Thurs 3:00 pm - 4:00 pm or by appointments

Course Information

- **CRN:** Section 072: 12552
  Section 071: 12557
- **Time:** Section 072: Tues Thurs 12:00 pm - 1:15 pm
  Section 071: Tues Thurs 1:30 pm - 2:45 pm
- **Classroom:** UNIV 103
- Department Course Webpage

Exams

Two Midterm Exams
Exam 1, 10/05, Mon, 8:00-9:00 pm, covers Sec 1.1-1.6, 2.1-2.5, 3.1-3.3.
Exam 2, 11/09, Tue, 8:00-9:00 pm, covers Sec 3.4-3.6, 4.1-4.2, 5.1-5.5.

Final Exam There will be a two-hour comprehensive common final exam given during final exam week (Dec 13 - Dec 18).

Course Schedule (tentative)

Week	Date	Sections	Handwritten HW	Online HW	Due Date
#1	08/24 08/26	1.1		HW01	Online 09/02 Handwritten 09/05
		1.2	35, 37	HW02	
		1.3	27, 30	HW03	
#2	08/31 09/02	1.4	29, 49	HW04	Online 09/09 Handwritten 09/12
		1.5	27	HW05	
		1.5	37, 45	HW06	
#3	09/07 09/09	1.6		HW07	Online 09/16 Handwritten 09/19
		1.6	56, 59	HW08	
		2.1	30, 31	HW09	
#4	09/14 09/16	2.2	17, 19	HW10	Online 09/23 Handwritten 09/26
		2.3	9	HW11	
		2.4-2.5	Section 2.5 #28	HW12	
#5	09/21 09/23	3.1	51, 52, 54	HW13	Online 09/30 Handwritten 10/03
		3.2	19, 41	HW14	
		3.3		HW15	
#6	09/28 09/30	3.3	58	HW16	Online 10/14 Handwritten 10/17
		3.4	35	HW17	
		Review			
#7	10/05 10/07	10/05 8:00-9:00 pm Midterm 1			
		10/07 No class			
#8	10/12 Oct. Break 10/14	3.5	21, 22, 24, 29	HW18	Online 10/21 Handwritten 10/24
		3.5	54, 61	HW19	
		3.6	11, 12	HW20	
#9	10/19 10/21	3.6		HW21	Online 10/28 Handwritten 10/31
		4.1		HW22	
		4.1, 4.2	Section 4.1 #27, #30	HW23	
#10	10/26 10/28	5.1	23, 32	HW24	Online 11/04 Handwritten 11/07
		5.2	29	HW25	
		5.2	8, 11, 24	HW26	
#11	11/02 11/04	5.5	2, 3, 4	HW27	Online 11/11 Handwritten 11/14
		5.3	19, 20, 27	HW28	
		Review			

#12	11/09 11/11	11/09 10/05 8:00-9:00 pm Midterm 2			
		Midterm 2 Discussion			
		5.6	22, 26	HW29	Online 11/18 Handwritten 11/21
#13	11/16 11/18	5.7	25	HW30	
		7.1	19, 29	HW31	
		7.2	19, 20, 23	HW32	
#14	11/23 11/25 No class				Online 11/28 Handwritten 11/28
#15	11/30 12/02	7.3	31	HW33	Online 12/02 Handwritten 12/05
		7.4	8, 17, 19, 37	HW34	
		7.5	17, 21	HW35	
#16	12/07 12/09	7.6	7, 11	HW36	Online 12/09 Handwritten 12/11
		Review			
		Review			
#17	Final Exam				

Learning outcomes

Upon successful completion of this course, students will be able to:

- Use differential equations to model mechanical and electrical systems.
- Solve basic first order differential equations and initial-value problems.
- Understand the conditions required for a first order differential equation to have a unique solution.
- Find the equilibrium points of an autonomous differential equation and determine their stability.
- Solve homogenous second order linear differential equations and initial value problems with constant coefficients.
- Use the methods of Undetermined Coefficients and Variation of Parameters to find solutions to non-homogenous second order linear differential equations and initial value problems with constant coefficients.
- Use Laplace Transforms to solve basic initial value problems.
- Determine the mathematical and practical effect of step functions and impulse functions on second order linear initial value problems with constant coefficients.
- Use Power Series to solve second order linear differential equations.
- Write a higher order differential equation as a system of first order differential equations.
- Solve homogenous systems of first order linear differential equations.
- Conduct qualitative analysis of 2 by 2 systems of linear first order differential equations with constant coefficients.

Attendance Policy

This course is designed in a hybrid model, with some face-to-face meetings and others completed remotely. University policy states that students are expected to be present for every meeting of the classes in which they are enrolled. For the purposes of this course, being "present" means attending all face-to-face meetings unless you are ill or need to be absent for one of four "excused" reasons: grief/bereavement, military service, jury duty, or parenting leave (go to the Office of the Dean of Students website for details on how to submit those requests).
Being "present" also means participating remotely and completing work assigned for days when we do not meet face-to-face. This work is required to help you meet the course learning outcomes. These times count toward the course contact hours and your course grade.

Guidance on class attendance related to COVID-19 are outlined in the Protect Purdue Pledge for Fall 2021 on the Protect Purdue website.

Academic Guidance in the Event a Student is Quarantined/Isolated

If you must miss class at any point in time during the semester, please reach out to me via email so that we can communicate about how you can maintain your academic progress. If you find yourself too sick to progress in the course, notify your adviser and notify me via email or Brightspace. We will make arrangements based on your particular situation. Please note that, according to Details for Students on Normal Operations for Fall 2021 announced on the Protect Purdue website, "individuals who test positive for COVID-19 are not guaranteed remote access to all course activities, materials, and assignments."

Classroom Guidance Regarding Protect Purdue

Any student who has substantial reason to believe that another person is threatening the safety of others by not complying with Protect Purdue protocols is encouraged to report the behavior to and discuss the next steps with their instructor. Students also have the option of reporting the behavior to the Office of the Student Rights and Responsibilities. See also Purdue University Bill of Student Rights and the Violent Behavior Policy under University Resources in Brightspace.

Academic Integrity

Purdue prohibits "dishonesty in connection with any University activity. Cheating, plagiarism, or knowingly furnishing false information to the University are examples of dishonesty." [Part 5, Section III- -B- -2- -a, Student Regulations] Furthermore, the University Senate has stipulated that "the commitment of acts of cheating, lying, and deceit in any of their diverse forms (such as the use of substitutes for taking examinations, the use of illegal cribs, plagiarism, and copying during examinations) is dishonest and must not be tolerated. Moreover, knowingly to aid and abet, directly or indirectly, other parties in committing dishonest acts is in itself dishonest." [University Senate Document 72- -18, December 15, 1972] Please refer to Purdue's student guide for academic integrity (https://www.purdue.edu/odos/osrr/academic-integrity/index.html).

Students with disabilities

Purdue University strives to make learning experiences accessible to all participants. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let me know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: drc@purdue.edu or by phone at 765-494-1247.
If you have been certified by the Disability Resource Center (DRC) as eligible for accommodations, you should contact your instructor to discuss your accommodations as soon as possible. Here are instructions for sending your Course Accessibility Letter to your instructor: https://www.purdue.edu/drc/students/course-accessibility-letter.php

Use of Copyrighted Materials

Students are expected, within the context of the Regulations Governing Student Conduct and other applicable University policies, to act responsibly and ethically by applying the appropriate exception under the Copyright Act to the use of copyrighted works in their activities and studies. The University does not assume legal responsibility for violations of copyright law by students who are not employees of the University.

A Copyrightable Work created by any person subject to this policy primarily to express and preserve scholarship as evidence of academic advancement or academic accomplishment. Such works may include, but are not limited to, scholarly publications, journal articles, research bulletins, monographs, books, plays, poems, musical compositions and other works of artistic imagination, and works of students created in the course of their education, such as exams, projects, theses or dissertations, papers and articles. Please refer to the University Regulations on policies (https://catalog.purdue.edu/content.php?catoid=13&navoid=16335).

Missed or Late Work

Late work (for which you do not have a University approved excused absence) will NOT be accepted.

Nondiscrimination Statement

Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person; fosters tolerance, sensitivity, understanding, and mutual respect among its members; and encourages each individual to strive to reach his or her potential. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. The University believes that diversity among its many members strengthens the institution, stimulates creativity, promotes the exchange of ideas, and enriches campus life. A hyperlink to Purdue's full Nondiscrimination Policy Statement is included in our course Brightspace under University Policies.

Basic Needs Security

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. There is no appointment needed and Student Support Services is available to serve students 8 a.m.-5 p.m. Monday through Friday. Considering the significant disruptions caused by the current global crisis as

it related to COVID-19, students may submit requests for emergency assistance from the Critical Needs Fund

Emergency Preparation

In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted onto the course website or can be obtained by contacting the instructors or TAs via email or phone. You are expected to read your @purdue.edu email on a frequent basis.