

COURSE ID:	Math 266-Differential Equations	
DEPARTMENT:	Mathematics	
SUBMITTED BY:	20 April 2020	
DATE SUBMITTED:	Anthony Castro	
For additional resources on completing this form, please visit the DE Website:		

www.valleycollege.edu/onlinefacultyresources

- 1. Please select the distance education method that describe how the course content will be delivered. Check ALL methods that will be used for offering this course, even if previously approved.
  - ⊠ FO Fully Online
  - ⊠ PO Partially Online
  - ☑ OPA Online with In-Person Proctored Assessments
  - □ FOMA Fully Online with Mutual Agreement
- In what way will this course, being offered in distance education format, meet the needs of the campus? (Ex: Student Access, Campus Strategic Plan, Campus Mission Statement, Online Education Initiative (OEI), Student Equity, Student Needs). Please be specific.

SBVC is a place of access. Offering the course in different formats will give members of the community opportunities to take the course in formats suited to their needs. The online delivery of this course supports the mission of SBVC in that it maintains a culture of continuous improvement and a commitment to provide high-quality education, innovative instruction, and services to a diverse community of learners. Offering the course in an online format will help close the equity gap and is providing an additional platform for student access.

### 3. Will this course require proctored exams?

🗆 No

 $\boxtimes$  Yes - If yes, how?

Exams will be arranged online asynchronously utilizing online proctoring tools such as Proctorio. If online proctoring tools are unavailable, exams can be arranged in person with the instructor or designated proctor. For cases of students who don't live near SBVC, students can arrange a proctor at a local college/university, testing center, or other professional individuals approved by the instructor.

## 4. How will the design of this course address student accessibility? Are you including any of the following?

- $\boxtimes$  Captioned Videos
- ⊠ Transcripts for Audio Files
- ⊠ Alternative Text for Graphics
- ⊠ Formatted Headings
- □ Other If other, please explain.



All course material and operation of the course will be developed to be ADA-compliant to the best of our ability. The @one trainings, now being offer at SBVC, will help train our instructors' so that their courses have ADA compliancy in mind.

## 5. Provide a specific example of how the instructor will provide synchronous office hours for distance education students? (Ex: Online Conference Tool, Cranium Classroom, Zoom, Pisces, Skype, etc.)

Communication tools will be utilized for synchronous office hours such as online conference tools, phone, Pronto, and other applications within the Canvas course management system. An example of a synchronous office hour policy is the following:

I will host weekly office hours on Monday and Wednesday from 1:00pm to 3:00pm in Physical Science 100. If you are not able to attend in person, you can still participate by calling my office phone number or we can meet via Zoom app. Zoom is an online conference tool that can be found on the navigation sidebar on Canvas. For further details, please use link below.

### Join a Meeting

Other office hours are available by appointment. Please email me at <u>instructor@valleycollege.edu</u> to arrange an appointment.

6. Provide a specific example of how this course's design ensures regular and effective instructor-student contact? (Ex: Threaded discussion forums, weekly announcements, instructor prepared materials, posting video and audio files, timely feedback on exams and projects, synchronous online office hours, synchronous online meetings, synchronous online lectures, etc.)

To ensure effective instructor to student contact, the course can be designed to include communication through threaded discussion forums, weekly announcements, instructor prepared materials, posting video files, posting audio files, timely feedback on exams and projects, synchronous online office hours, and synchronous online meetings. An example of a weekly announcement:

Hello Mathematicians,

This week we will learn about first order differential equations! To get you started and motivated on why first order differential equations are important in the real world, please view the videos below:

History of First Order Equations

Is Aids an Invariably Fatal Disease?

Each of the topics below are discussed in the Weekly Module. This week you will learn about the following topics: 1. Direction Fields



- 2. Autonomous First Order Des
- 3. Separable Equations
- 4. Linear Equations
- 5. Exact Equations
- 6. Solutions by Substitutions
- 7. A Numerical Method

## Assignments due this week (Due Sunday by 11:59pm).

These assignments can be found in the Weekly Module:

- 1. Complete the "First Order Differential Equation Exercises" assignment
- 2. Participate in "Critical Points of an Autonomous First DE" Discussion
- 3. Complete Quiz 1

Please note the discussion requires an initial post (due Thursday by 11:59pm) and reply to at least two of your classmates' posts by Sunday at 11:59pm. If you need help, I encourage you to sign up for a one-onone appointment with me via Zoom (see syllabus for details). If you have any questions, please do not hesitate to email me at instructor@valleycollege.edu or post your questions in the General Discussion. Good luck studying!

Best,

Instructor

## https://www.valleycollege.edu/online-classes/faculty-resources/reg-effective-contact.php

 Provide a specific example of how this course will ensure regular and effective student-student contact? (Ex: Threaded discussion forums, assigned group projects, threaded discussions, Notebowl, peer-to-peer feedback, synchronous online meetings, etc.)

To ensure regular and effective student to student contact, the course will utilize threaded discussions forums to engage interaction, assign group projects to allow for collaboration, peer-to-peer feedback for educational growth and synchronize online meetings to continue communication among students.

# 8. Describe what students in this online version of the course will do in a typical week on this class. Include the process starting after initial log in.

Weekly agendas will be posted on the homepage upon log in. Students will be prompted to access the module system of Canvas where students will be provided with learning resources (e.g. assigned readings from the text, assigned readings from instructor created notes, PowerPoint files, video presentations). Students will then have electronic weekly assignments (e.g. homework exercise sets, quizzes, exams, discussions, group assignments, worksheets) assigned in the module system.

9. Provide a sample statement that could be included in the syllabus for this course that communicates to students the frequency and timeliness of instructor-initiated contact and student feedback.

Commented [O1]: How often?



Instructor will be engaged frequently and consistently with students. Students will be required to respond to instructor-initiated online discussion prompts each week involving both the course content and/or issues related to the affective domain. Anticipated instructor response time is 48 hours (excluding weekends). Assigned grades for weekly discussion participation will be posted within one week of the due date.

#### 10. Provide a specific example of how regular and effective student-student interaction may occur in this online course.

Discussion. Find and give an application of the material we learned this week and post on discussion board. Post does not have to be on full understanding of application, just give an area where the material is being applied. For example, systems of differential equations can be used to model competitive species in an ecosystem. Initial posts are due by Thursday 11:59pm. Respond to two of your classmates' posts by Sunday 11:59pm.

11. Provide a specific example of how regular and effective instructor-student interaction may occur in this online course.

Discuss at least one question you have about the mathematical material we are covering in sections 7.1 and 7.2 of the text. The question can be about a specific assigned homework problem, application of the material, theorem, connections of material to other stem fields, or any problem you see of interest in the exercise set. Use the equation editor to type mathematical symbols. You may also attach a screenshot or photo the problem you are asking. Post this question in the Discussions Area of Canvas by Thursday night by 11:59pm to receive credit for this week's discussion participation.

13. How will you accommodate the SLO and Course Objectives in an online environment? SLO's will be given in an online-proctored exam format. Students will submit their answers to SLO questions electronically.

14. Are modifications needed to SLOs or Course Objectives in order to teach this course in the online modality? ⊠ No □ Yes – If yes, please explain the changes needed.

(It is advised that if you are changing course content or objectives that you speak with the Curriculum Co-Chair or Articulation Officer for guidance moving forward.)

To be completed by a member of the Curriculum Committee Review Team:

Commented [O2]: How about Objectives?



CURRICULUM CHAIR REVIEWED:	□ YES	□ №
DE REVIEW:	□ YES	□ №
CURRICULUM COMMITTEE DIVISION REPRESENTATIVE REVIEWED:	🗆 YES	

Overall, this is detailed information.