



# MESA DAY RULES

## 2020-2021

(FINAL/OFFICIAL)

### Coding Solutions – Virtual

- LEVEL:** High School
- DIVISION(S):** HS / Grades 9-12
- COMPOSITION OF TEAM:** 1-2 individual(s) per team
- NUMBER OF TEAMS:** Preliminary – Determined by your local MESA Center  
Regional – one team per Center
- SPONSORS:** UC Santa Barbara MESA College Prep  
UC Riverside MESA College Prep

**OVERVIEW:** Congratulations! Thanks to your outstanding participation with the MESA Program. You have been invited to a virtual interview for a software company to obtain an internship. As part of the interview process they would like to test your knowledge virtually on programming fundamentals using the Python 3 programming language. **This competition is virtual for 2020-2021.**

**MATERIALS:**

- An internet connected device with keyboard (recommended)
- Students must create their own account on CodeHS (see Regional links on Page 3)

**GENERAL RULES:**

- 1) Students must have their full name(s), grades, school, and MESA Center commented at the top within each of the programs. A 10% penalty in the score will be assessed for failing to properly label.
- 2) This competition will have two challenges to be completed during a 60-minute window. **The Debugging challenge must be completed first** for the Technical Challenge to be valid.
  - a. The Debugging challenge (50 points):
    - i. Students will debug a program. In other words, students will correct code to get the program working again.
      - Sample output/test cases will be provided but is not indicative of all the test cases (including edge case) used for final scoring.
    - ii. Teams will be awarded 10 points for each test case their submission passes. There will be 5 hidden test cases.
  - b. The Technical Test (50 points):
    - i. Students will create a program that creates the desired output based on the prompt provided.
    - ii. Teams will be awarded 10 points for each test case their submission Passes. There will be 5 hidden test cases.

- 3) To be eligible to compete in this competition, at least one individual in the team must have completed at least 60% of MESA Day Python Course assignments on the specified **CodeHS** by a date determined by your local MESA Center for local event and region for Regional event.

### **JUDGING:**

- 1) Teams will have one single 60-minute block to complete both the debugging and the technical challenge.
- 2) It is the responsibility of the student(s) to log in and enroll in the appropriate “Course.”
- 3) The challenges will be scheduled to be published to start and to end at a time and date specified by your local MESA Center for local event and region for Regional event.
- 4) Students will have 60 minutes to complete the following tasks:
  - a. To debug the given program to get the desired outputs without radically altering the code (i.e., creating a new program from scratch).
  - b. To create a program that would produce the desired output(s).
- 5) Teams may submit their completed programs as soon as they like or make revisions within the time block but their last submission for each challenge will be used to determine the winners.
- 6) The final submission will be the last project that was submitted before time runs out.
- 7) Winners will be determined based on the following order:
  - a. The first individual or team based on time stamp to
    - i. Successfully submit programs that pass all test cases for both challenges.
    - ii. Programs that successfully pass all debugging test cases and has the most test cases passed for the technical challenge.
    - iii. The debugging programs that pass with the most cases passed.
- 8) **TIEBREAKERS:** In an event of a tie, the team that submitted their final submission first takes priority.
- 9) If no teams are successful, no awards will be given.
- 10) All testing of code will occur within CodeHS.

### **AWARDS:**

- Medals will be awarded for 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place based on the Final Score.
- Only 1<sup>st</sup> Place will advance to Regional/State MESA Day.

### **ATTACHMENTS/APPENDIX:**

- Topics Student(s) Need to Know
- Resources
- Python Course Enrollment Links by Region
- Specification and Score Sheet

### **Topics Student(s) Need to Know**

- Math operators
- User input out put
- Control and conditional statements
- Loops, iterations and nesting
- Boolean Algebra
- Lists
- Functions and user defined functions

### **Resources**

- <https://www.sololearn.com/Course/Python/>
- <https://www.w3schools.com/python/default.asp>
- <https://www.learnpython.org/>

## Python Course Enrollment Links by Region

When enrolling in CodeHS, please include your MESA CENTER and School in your registration. See below for example:

### Account Settings



**Title:** None ▾

**First Name:** Enrique ✎

**Last Name:** UCSB SBHS Guzman ✎

**Email:** ✎

**Username:** ✎

Your username is how you log in to your account.  
You also get a site at yourusername.codehs.me

**Sections:**

A Python course has been created to match the MESA region your local MESA Center is affiliated with. **Please register for your appropriate course below:**

**Northern California:** For students affiliated with Ukiah, RISE, CSU East Bay, San Jose State, University of the Pacific, UC Davis, UCSF

- Northern Region: <https://codehs.com/go/54F43>

**Central California:** For students affiliated with Fresno State, UCSB, UCSC

- Central Region: <https://codehs.com/go/BA4AE>

**Los Angeles Metro Area:** For students affiliated with USC, UCLA, CSULB, CSULA

- LA Metro Region: <https://codehs.com/go/BCB9D>

**Southern California Area:** For students affiliated with UCI, UCR, Imperial Valley, San Diego State University

- South Region: <https://codehs.com/go/27473>

**SPECIFICATION AND SCORE SHEET FOR CODING SOLUTIONS**  
**High School – Grades 9-12**

MESA Center: \_\_\_\_\_ Student 1: \_\_\_\_\_ Grade: \_\_\_\_\_

School: \_\_\_\_\_ Student 2: \_\_\_\_\_ Grade: \_\_\_\_\_

**Specification Criteria**

- A) 2020-2021 rules were followed
- B) Each Program is properly labeled and commented within coding project with team members' names, grade level, school, and MESA Center:  
(10% penalty for each program if not properly labeled)
- C) At least one team member completed more than 60% of MESA Day course assignments
- D) Program submission will be under the following team members account:  
\_\_\_\_\_

**Judging Criteria**

<b>Project Submissions:</b>	<b>Debugging</b>	<b>Technical Challenge</b>		
<b>Time of Final Submission:</b>	:    :	:    :		
<b>Case #1</b>	Pass   No Pass	Pass   No Pass		
<b>Case #2</b>	Pass   No Pass	Pass   No Pass		
<b>Case #3</b>	Pass   No Pass	Pass   No Pass		
<b>Case #4</b>	Pass   No Pass	Pass   No Pass		
<b>Case #5</b>	Pass   No Pass	Pass   No Pass		
	<b>Total Pass:</b>	<b>Total No Pass:</b>		
<b>Total # of Ps X 10 =</b>	<b>Debug Sub score:</b>	<b>Technical Subscore:</b>	<b>Labeling Penalty</b>	<b>Grand Total</b>
	<b>+</b>	<b>-</b>	<b>=</b>	