Course Description

A. COVER PAGE

Date of Submission (Please include Month, Day and Year)

1. Course Title
Science Lab Technician

2. Transcript Title(s) / Abbreviation(s)

3. Transcript Course Code(s) / Number(s)
SC6644 SC6645

4. School
Pioneer Valley High School

5. District
Santa Maria Joint Union High School District

6. City
Santa Maria

7. School / District Web Site
www.smjuhsd.org

8. School Course List Contact

Name: Riccardo Magni

Title/Position: Science Department Head

Phone: (805) 922-1305 **Ext.: *5411**

E-mail: rmagni@smjuhsd.org

9. Subject Area

- ☐ History/Social Science
- ☐ English
- ☐ Mathematics
- ☒ Laboratory Science
- ☐ Language other than English
- ☐ Visual & Performing Arts
  - ☐ Intro ☐ Advanced
- ☐ College Prep Elective

10. Grade Level(s) for which this course is designed

☐ 9 ☐ 10 ☒ 11 ☒ 12

11. Seeking "Honors" Distinction?

☐ Yes ☒ No

12. Unit Value

- ☐ 0.5 (half year or semester equivalent)
- ☒ 1.0 (one year equivalent)
- ☐ 2.0 (two year equivalent)
- ☐ Other: _____

13. **Is this an Internet-based course?** ☐ Yes ☒ No

If "Yes", who is the provider? ☐ UCCP ☐ PASS/Cyber High ☐ Other ____

14. **Complete outlines are not needed for courses that were previously approved by UC. If course was previously approved, indicate in which category it falls.**

☐ A course reinstated after removal within 3 years. Year removed from list?

_____

Same course title? ☐ Yes ☐ No

If no, previous course title?

_____

☐ An identical course approved at another school in same district. Which school?

_____

Same course title? ☐ Yes ☐ No

If no, course title at other school?

_____

☐ Year-long VPA course replacing two approved successive semester courses in the same discipline

☐ Approved Advanced Placement (AP) or International Baccalaureate (IB) course

☐ Approved UC College Prep (UCCP) Online course

☐ Approved CDE Agricultural Education course

☐ Approved P.A.S.S./Cyber High course

☐ Approved ROP/C course. Name of ROP/C?

_____

☐ Approved A.V.I.D. course

☐ Approved C.A.R.T. course

☐ Approved Project Lead the Way course

☐ Other. Explain:

_____

15. **Is this course modeled after an UC-approved course from another school <u>outside</u> your district?** ☐ Yes ☐ No

If so, which school(s)?

_____

Course title at other school

_____

16. **Pre-Requisites**

Teacher recommendation

17. **Co-Requisites**

18. **Is this course a resubmission?** ☐ Yes ☒ No

If yes, date(s) of previous submission?

_____

Title of previous submission?

_____

19. Brief Course Description

This course is for the advanced lab student. Students will be involved in preparing lab materials in advance for the teacher, as well as assisting the teacher and students during labs. This includes but is not limited to gathering materials, aliquoting solutions and supplies, creating dilutions, cutting or building materials, making solutions, repairing lab equipment, and reading lab procedures.

B. COURSE CONTENT

Please refer to instructions

20. Course Goals and/or Major Student Outcomes

Lab Technicians will:

- Be able to read a lab procedure and gather all of the necessary materials for the lab.
- Be able to use good lab safety when they are in the lab.
- Assist other students during the lab activity.

21. Course Objectives

Science Lab Technicians will:

- Accurately mass crystalline powders.
- Be able to follow a lab protocol to make a solution or dilution.
- Accurately setup water baths of varied temperatures.
- Neutralize acids and/or bases.
- Dispose of chemicals properly.

22. Course Outline

Students will learn some or all of the following lab techniques as a science lab technician:

- Distillation of water
- Solution preparation
- Dilution preparation
- Massing of crystalline solids
- Acid/base neutralization
- Making distilled water
- Using an autoclave
- Aliquot lab materials
- Reading lab protocols
- Making and pouring gels

- Using a gel box and comb
- Freezing DNA
- Growing bacterial colonies
- Incubating bacteria
- Reptile husbandry
- Repairing lab equipment
- Rearing and maintaining insect colonies
- Learn chemical disposal techniques
- Become familiar with an MSDS
- Maintain/clean/glassware, check glassware integrity before labs
- Demonstrate safe lab techniques during class
- Make nontoxic, non-corrosive solutions
- Assist special needs students with experimental procedures
- Assist the teacher with any other classroom duties

23. Texts & Supplemental Instructional Materials

24. Key Assignments

25. Instructional Methods and/or Strategies

26. Assessment Methods and/or Tools

C. HONORS COURSES ONLY

Please refer to instructions

27. Indicate how this honors course is different from the standard course.

D. OPTIONAL BACKGROUND INFORMATION

Please refer to instructions

28. Context for Course (optional)

29. History of Course Development (optional)