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| Discipline: Agriculture | Sub-discipline: Wine Education/Enology |
| General Course Title: Fundamentals of Chemistry and Microbiology | Min. Units: 3 Semester |
| Proposed Suffix: L | |
| <p>Course Description:</p> <p>Wine chemistry and microbiology including wine acidity, sulfur dioxide, protein and phenol equilibria and other basic chemical and microbiological concerns. Students learn how to make informed decisions on style, crush options, cellar practices, fining, stabilization and quality assurance.</p> | |
| Required Prerequisites or Co-Requisites ¹ | |
| Advisories/Recommended Preparation ² | |
| <p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> • Identify microbes and their relationship to wines both positive and negative • State the interrelationships in key aspects of wine chemistry • State the effects of wine chemistry variables on sensory traits • Make informed decisions of style • Utilize information on wine acidity, pH and other chemistry variables • Propose chemical additions • Evaluate laboratory reports • Investigate questions of importance in winemaking | |
| <p>Course Content:</p> <ol style="list-style-type: none"> 1. Review of laboratory techniques and chemistry 2. Review of basic laboratory tests used in winemaking 3. Wine acidity 4. H interactions 5. Chemistry of sulfur dioxide 6. Protein and phenolic equilibria 7. Integration of chemical interactions 8. Decisions concerning wine style 9. Applied wine microbiology 10. Microorganisms in winemaking 11. Enhancement of beneficial microorganisms 12. Control of undesirable microorganisms <p>Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.</p> | |
| Methods of Evaluation: Lecture Comprehensive Quizzes and Exams Written Critical Thinking Scenarios | Methods of Evaluation: Laboratory Laboratory Skill Validation by Observation Laboratory Reports |

¹ Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

² Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

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| Problem Analysis and Solution Research and Term Papers | Diagnoses and Problem Solving Laboratory Skill Practicum Certification Exams |
| Typical Textbooks, Manuals, or Other Support Materials Under Review | |
| Statewide Articulation: CSUF-ENOL 125, UCD-VEN 128 | |
| FDRG Lead Signature: | Date: |
| Mark E. Bender, PhD CSU Stanislaus | |
| [For Office Use Only] | Internal Tracking Number |
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