

## **AG152 ORCHID CULTURE**

3 Credits (CRN64178)

TR, 2:30 – 3:45 am, Hale 'Imiloa 101

<b>INSTRUCTOR:</b>	Hongwei Li Ph.D.
<b>OFFICE HOURS:</b>	Thursday 4:00 – 5:00 pm, walk-in or by appointment
<b>OFFICE:</b>	Hale 'Imiloa 107
<b>TELEPHONE:</b>	(808) 236-9104
<b>EMAIL:</b>	hli@hawaii.edu
<b>EFFECTIVE DATE:</b>	Fall 2018

### **WINDWARD COMMUNITY COLLEGE MISSION STATEMENT**

*Windward Community College offers innovative programs in the arts and sciences and opportunities to gain knowledge and understanding of Hawai'i and its unique heritage. With a special commitment to support the access and educational needs of Native Hawaiians, we provide the Ko'olau region of O'ahu and beyond with liberal arts, career and lifelong learning in a supportive and challenging environment — inspiring students to excellence.*

### **CATALOG DESCRIPTION**

An extensive study of orchid identification, breeding, growth, and tissue culture. Students are required to write a research paper or provide a power point presentation and active participation in orchid societies.

#### **Activities Required at Scheduled Times Other Than Class Times**

Self-study, homework assignments, field trip and orchid care.

#### **Requirement course satisfies**

- DB for AA in Liberal Arts
- Certificate of Achievement in Agripharmatech
- Certificate of Competence in Plant-Food Production and Technology

### **STUDENT LEARNING OUTCOMES**

The student learning outcomes for the course:

- Identify orchid species, hybrids and trace their pedigrees.
- Provide cultural requirements for each genus, including temperature, light intensity, humidity, watering, fertilizing, media composition, pest/disease control and repotting.
- Perform traditional and *in vitro* propagations.
- Perform orchid breeding and discuss its economic importance.
- Conduct literature or experimental research and submit research paper.

## COURSE TASKS, ASSESSMENTS AND GRADING

### Course Tasks:

- Activities in classroom: lectures, video and demonstration.
- Complete quizzes/homework assignments and review study guides
- Fieldworks: in the climate-controlled greenhouse, Bioprocessing Medicinal Garden Complex, field trips to a local orchid show.
- Reading assignments: assigned handouts prior to lectures, and literature research for preparation of research reports (oral presentation).

### Assessments

- There are 5 quizzes/assignments will be given.
- There are three exams (2 midterms and one final) during the semester. Exams will consist of multiple choices, fill in the blank, matching and short answer questions.  
*NOTE: Make-up quizzes/exams will only be given with a valid reason (i.e. medical or other emergency) on the FIRST day you return to class. In such a circumstance, you should make every reasonable attempt to contact the instructor as soon as possible before the exam. There is No early or make-up exam for the final.*
- Research topic presentation: literature research and oral presentation on a selected orchid species.
- Field trip to Honolulu Orchid Society Orchid Show: volunteer and write an essay.
- Orchid care: take care an assigned orchid plant through the semester.
- Tissue culture: establish and maintain an orchid tissue culture without contamination.

### Grading

The total possible points:

<i>Exams (3)</i>	<i>300</i>	<i>points</i>
<i>Quizzes /Assignments (5)</i>	<i>100</i>	<i>points</i>
<i>Filed trip (volunteer and essay)</i>	<i>50</i>	<i>points</i>
<i>Orchid care</i>	<i>50</i>	<i>points</i>
<i>Tissue Culture</i>	<i>50</i>	<i>points</i>
<i>Research topic presentation (1)</i>	<i>50</i>	<i>points</i>
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Total	600	points

Grading is based on the percentage of total points earned. Final Grades will be assigned as follows:

- A - - - 90% or above in total points.
- B - - - 80-89% of total points.
- C - - - 70-79% of total points.
- D - - - 60-69% of total points.
- F - - - Below 60% of total points

I (incomplete) grade is given at the instructor's option when a student has failed to complete a small part of a course because of circumstances beyond his or her control. It is **your responsibility** to contact the instructor to make up the incomplete work with a minimum level (or better) of achievement. Failure to satisfactorily make up incomplete work within the appropriate time period will result in a grade change for "I" to the contingency grade identified by the instructor.

## LEARNING RESOURCES

- Course materials: <https://laulima.hawaii.edu/>
- American Orchid Society <http://www.aos.org/>
- White, I. 2016. Ethnopharmacognosy Series V: Pharmaceutical and Nutraceutical Values of Vanda Miss Joaquim. Windward Community College
- Handouts.

## DISABILITIES ACCOMMODATIONS

If you have a physical, sensory, health, cognitive, or mental health disability that could limit your ability to fully participate in this class, you are encouraged to contact the Disability Specialist Counselor to discuss reasonable accommodations that will help you succeed in this class. Ann Lemke can be reached at 235-7448, [lemke@hawaii.edu](mailto:lemke@hawaii.edu), or you may stop by Hale ‘Ākoakoa 213 for more information.

## TITLE IX

Title IX prohibits discrimination on the basis of sex in education programs and activities that receive federal financial assistance. Specifically, Title IX prohibits sex discrimination; sexual harassment and gender-based harassment, including harassment based on actual or perceived sex, gender, sexual orientation, gender identity, or gender expression; sexual assault; sexual exploitation; domestic violence; dating violence; and stalking. For more information regarding your rights under Title IX, please visit: [https://windward.hawaii.edu/Title\\_IX/](https://windward.hawaii.edu/Title_IX/).

Windward Community College is committed to the pursuit of equal education. If you or someone you know has experienced sex discrimination or gender-based violence, Windward CC has resources to support you. To speak with someone confidentially, contact Karla Silva-Park, Mental Health Counselor, at 808-235- 7468 or [karlas@hawaii.edu](mailto:karlas@hawaii.edu) or Kaahu Alo, Designated Confidential Advocate for Students, at 808-235- 7354 or [kaahualo@hawaii.edu](mailto:kaahualo@hawaii.edu). To make a formal report, contact the Title IX Coordinator at 808-235-7393 or [wcctix@hawaii.edu](mailto:wcctix@hawaii.edu).

## ACADEMIC INTEGRITY

Work submitted by a student must be the student’s own work. The work of others should be explicitly marked, such as through use of quotes or summarizing with reference to the original author.

Students can upload papers to <http://www.TurnItIn.com> to have papers checked for authenticity, highlighting where the paper potentially fails to appropriately reference sources.

In this class, students who commit academic dishonesty, cheating or plagiarism will have the following consequence(s): Students will receive a failing grade for plagiarized assignments. All cases of academic dishonesty are referred to the Vice Chancellor for Student Affairs.

## ALTERNATE CONTACT INFORMATION

If you are unable to contact the instructor, have questions that your instructor cannot answer, or for any other issues, please contact the Academic Affairs Office:

Location: Alakai 121  
 Phone: 808-235-7422  
 Email: [wccaa@hawaii.edu](mailto:wccaa@hawaii.edu)

*Windward Community College is an equal opportunity, affirmative action institution.*

## CLASS SCHEDULE

<b>Date</b>	<b>Lecture/Lab topics</b>
08/21	Introduction and General Botany
08/23	Characteristics of Orchids
08/28	Classification and Nomenclature
08/30	Orchid Identification
09/04	Orchid Pollination
09/06	Orchid and Fungi
09/11	Orchid Genetics
09/13	Orchid Genetics
09/18	Orchid pedigrees
09/20	Orchid pedigrees
<b>09/25</b>	<b>Midterm Exam 1</b>
09/27	Orchid Propagation
10/02	Orchid Growth: potting media and containers/supports
10/04	Orchid Show
10/09	Field trip to HOS orchid show
10/11	Field trip to HOS orchid show
10/16	Orchid Growth: potting and repotting
10/18	Orchid Growth: Watering, Light, Temperature, Humidity and Fertilizing
10/23	Pests and Diseases
10/25	Cultural problems
10/30	<b>Midterm Exam 2</b>
11/01	Plant tissue culture (video)
11/06	<i>Holiday</i>
11/08	Plant tissue culture (principles and techniques)
11/13	Orchid tissue culture (media preparation)
11/15	Orchid tissue culture (seed and embryo cultures)
11/20	Orchid tissue culture (Meristem, inflorescence, and stem cultures)
11/22	<i>Holiday</i>
11/27	Commercial Orchids
11/29	Orchid Conservation
12/04	Research topic presentation
12/06	Research topic presentation
<b>12/13</b>	<b>Final Exam (02:30 - 04:30 pm)</b>