**College of Agricultural, Human, and Natural Resource Sciences (CAHNRS)**

**CAHNRS Undergraduate Internships for Spring and Summer 2016**

**Part 1.**

**Mentor’s Name, Affiliation with CAHNRS, and Contact Information:**

**Naidu Rayapati**, Associate Professor, Department of Plant Pathology, Irrigated Agriculture Research and Extension center, Prosser, WA 99350

Contact: Phone: 509-786-9215; Email: naidu.rayapati@wsu.edu

Appointment split: Research = 60%, Extension = 30%, Teaching = 10%

**Duration of the internship**:

The internship will be offered at WSU-IAREC, Prosser, for three months during Summer 2017. The selected intern will spend a minimum of 40 hrs per week in Rayapati’s lab to conduct hands-on research and participate in other educational activities in the lab and grower vineyards. The student intern will enroll up to 2 credits in PlP 499 (Special Problems – Independent Study). The rate of pay will be $12.50/hour during the internship period. In addition to $2,500 offered by the CAHNRS for the internship program, Rayapati intends to use additional funds from his research grants to support the undergraduate intern (for hourly time slip payment, research supplies and local travel to vineyards) for successful completion of the internship program. Since the season for grapevines extends into Fall, Rayapati will encourage the undergraduate intern to continue his/her research project during Fall 2017 and support expenses from his research grants in order for the undergraduate intern to continue his/her program beyond Summer 2017. Students in V&E Program at Tri-Cities campus have expressed interest to participate in this internship program to gain hands-on experiences in viticulture.

**Student Learning Outcomes**:

* Due to the strategic location of IAREC, the internship in Rayapati’s lab will provide opportunities for the undergraduate student intern to:
1. improve his/her educational standards and scientific literacy for advancing career prospects (gaining employment or seeking higher studies);
2. understand the subject by a combination of three learning styles; namely, visual, auditory and experiential;
3. gain cultural competency and hone essential life skills to be successful in multicultural, team-based environments;
4. realize the significance of translational research for practical applications in vineyards benefiting grape and wine industry;
5. relate classroom learning with real-world happenings in the field;
6. learn presentation skills to a variety of audience, such as grape industry stakeholders, research and extension faculty and students;
7. appreciate global dimensions of agriculture, especially the key role of Washington State’s grape and wine industry in global agricultural economy.
* In addition, working with WSU faculty and students at IAREC and interactions with grape industry professionals will help the student strengthening his/her occupational competencies for gaining employment and become a valued contributor to the growth of Washington’s grape and wine industry. **At least five undergraduate students, who have participated in the CAHNRS Undergraduate Internship program under the mentorship of Rayapati, have gained employment as Viticulturists with Washington’s grape industry.**
* Completion of the internship will also contribute to successful attainment of CAHNRS 2022 Strategic Plan and advancing the land-grant mission of the university in support of WSU’s ‘Drive to 25’ initiative.

**Part 2.**

**Internship title:** Research Assistant

**Location of the internship:** WSU Irrigated Agriculture Research and Extension Center, Prosser, WA 99350.

**Is there a desired start date? If so, when?**

The internship will begin soon after the spring semester in May 2017 until the beginning of fall semester. The student will be encouraged to continue his/her research through fall 2017 supported by Rayapati’s research grants.

**Is the position flexible, or are there set hours? If so, how many hours per week?**

The working hours are between 8:00AM and 5:00PM Monday through Friday. The selected intern will work 40 hours per week to conduct hands-on research and participate in other educational activities in the lab and grower vineyards.

**Are there specific majors you feel would best fit your internship?**

Undergraduate students majoring in Viticulture & Enology and Fruit and Vegetable Management are suitable for this internship position.

**Position Description:**

We are seeking an enthusiastic and motivated undergraduate student majoring in Viticulture & Enology to conduct independent research in an exciting area of viticulture at Prosser, the birth place of Washington’s wine industry. The internship provides fantastic opportunity for the student to gain hands-on experiences in dealing with a broad range of virus diseases impacting grapevine health and quality of grapes. The student intern will join Naidu Rayapati (Associate Professor in Plant Pathology) and his team of doctoral and post-doctoral associates, based at WSU-IAREC, Prosser, to conduct team-based research benefiting Washington’s grape and wine industry. Proximity to grape growers and access to vineyards helps the student to master the ‘science and art’ of growing healthy vines for ‘healthy’ wines to become a successful viticulturist or wine maker. During the internship, the student will have opportunities to interact with wine grape industry stakeholders and gain practical skills and experiences essential for gaining suitable employment soon after graduation! Thus, the internship is considered as the ‘gateway’ for an exciting job opportunity with Washington’s rapidly expanding grape & wine industry.

Student interns will work with Rayapati and his team to learn how viruses can affect the health of a grapevine. The students will have opportunities in the lab to learn how viruses can be diagnosed in grapevines using sophisticated instruments and state-of-the-art techniques in molecular biology. The student intern will have many opportunities to interact with grape industry stakeholders and learn ‘ins and outs’ of growing grapevines for producing high quality premium grapes. By conducting this research, the student will master skills to translate scientific knowledge for practical applications in vineyards. After completion of the internship, the student will share research results with wine industry stakeholders at the Washington Association of Wine Grape Growers annual meeting in February 2018 and with WSU community at SURCA: The WSU Showcase for Undergraduate Research and Creative Activities in March 2018.