 

**U-RISE at Cal State Fullerton**

**UNDERGRADUATE RESEARCH TRAINING INITIATIVE**

**FOR STUDENT ENHANCEMENT (U-RISE) PROGRAM**

Application Deadline: **March 24, 2025** **-** Submit application materials to [urise@fullerton.edu](mailto:urise@fullerton.edu)

(interviews during spring break and decisions by mid-April)

# **APPLICANT INFORMATION**

Name: CWID:

Last First Middle

Date of Birth (MM/DD/YY): Place of Birth:

Gender (mark with X): Female Male Trans Non-binary Prefer not to say

U.S. Citizen: Yes No If No, Permanent Resident # :

Current Address:

Permanent Address (if different from Current Address):

Telephone (Home): Mobile:

CSUF Email address:

Non-CSUF Email address:

Demographics (select all that apply by marking with X):

Native American/Alaskan African-American (Black) European-American (White)

Hawaiian-American Pacific Islander (Samoa, Tonga, Fiji) Puerto Rican

Asian/Asian-American (Cambodia, China, Indonesia, Japan, Korea, Laos, Malaysia, Philippines, Singapore, Vietnam, etc.)

East Asian/East Asian-American (Bangladesh, India, Pakistan) Latin/South America

Mexican/Mexican-American) Middle Eastern/Middle Eastern-American

Mixed race Other (specify)

Primary language spoken at home:

Parent, Stepparent, or Guardian’s Education Level (highest level completed; mark with X):

Person 1 Some H.S. H.S. Diploma/GED Some College Bachelor’s

Master PhD Other

Person 2 Some H.S. H.S. Diploma/GED Some College Bachelor’s

Master PhD Other

# **YOUR CAREER OBJECTIVE**

Advanced Degree objective (select all that apply by marking with X):

Master (M.S./M.A.) Ph.D. M.D.-Ph.D. M.D./D.O. D.D.S.

O.D. D.D.S./Ph.D. O.D./Ph.D. Pharm.D. D.Sc. Other

# **COLLEGE INFORMATION**

Current CSUF Academic Level:

Date you entered CSUF (MM/YY):

Total units completed since the previous (fall) semester:

Major(s): Minor(s):

According to your TDA, what is your current academic standing?

Overall (cumulative) GPA: Fall 2024 GPA: Science GPA\*:

*\*Please use the GPA calculator:* <https://www.fullerton.edu/academic-advising/tools-resources/gpa-calculator.html>

Will you graduate in June 2026? (mark with X) Yes No

If not June 2026, please indicate your expected graduation date:

Previous college (if applicable)

College/University attended: Dates attended:

Major: Units completed:

College/University attended: Dates attended:

Major: Units completed:

College/University attended: Graduation date:

Major: Degree earned:

# **Optional Information**

Please indicate with an ‘X’ below (if applicable). This information will not be a factor in the selection of our candidates.

Are you LGBTQ+?

Do you come from disadvantaged background (e.g., financial, social, cultural, and/or educational)

Do you have a physical disability and/or known as neuro-diverse?

Are you the first person or generation in your family to attend a four-year university?

# **CURRICULUM VITAE\***

**Please use this template to provide your CV as a separate sheet or electronic file, and include it with this application**

\**Many qualified applicants may not have entries in each category given below so provide only the appropriate information*

**EDUCATION:**

Community College Major Year degree earned, Cumulative GPA

University Major Current status, Cumulative GPA

Intended Degree, Expected date of graduation

**WORK EXPERIENCE:**

This category should include off-campus work as well as any on-campus ***teaching***, ***tutoring***, and ***research*** performed. Indicate location, dates and brief description of activities in reverse chronological order (latest to earliest).

**PROFESSIONAL AND NON-PROFESSIONAL AFFILIATIONS:**

This category should include student- and science-oriented memberships in reverse chronological order.

**AWARDS AND HONORS:**

This category should include academic and extracurricular honors and awards, as well as any research grant awards, in reverse chronological order.

**SERVICE AND VOLUNTEER ACTIVITIES:**

These activities should be cumulative and inclusive. Indicate site and dates of involvement in reverse chronological order.

**SPECIAL SKILLS:**

This category may include language proficiency, computer knowledge (both hardware and software), as well as experience with scientific instrumentation and protocols. Rate your ability as: **novice** – have used with supervision/ have some familiarity; **competent** – can use on your own without supervision; **mastery** – can troubleshoot protocol and can teach someone else.

**PUBLICATIONS/PRESENTATIONS (OPTIONAL):**

Most applicants will not have entries in this category (after all, developing this area is one of the purposes of the MARC program). If you have any publications, published abstracts, or presentations (both poster and oral), list them in reverse chronological order. Use this format: Last name of first author, initials, and co-authors last name, initials. (date) “title,” journal. **volume**, pages.

**HOBBIES:**

This category should include activities that show how you spend your non-academic and non-service/volunteer time.

# **ESSAY 1**

*In* *~300 words, please respond to the following prompt.*

What are your future educational and career goals?

Are you interested in pursuing advanced (graduate) degree? Please elaborate whether your answer is yes or no.

# **ESSAY 2**

*In ~300 words, please respond to the following prompt.*

Why are you interested in the U-RISE Program? Please address what you see as the benefits of the program in helping you meet your immediate and long-term educational and/or career goals.

If applicable, please discuss any current research you are conducting and how it has influenced your plan to join U-RISE and your career plan.

What impediments have you had, and how would your pursuit of higher education and participation in the U-RISE Program help you overcome the challenges you have experienced?

# FINANCIAL SUPPORT

Provide any financial aid information that you currently receive and the names of organizations giving this support. This information will not be a factor in the selection of our candidates.

**How did you hear or learn about the U-RISE Program?**

Recruitment flyer/Class or Instructor (specify)

Current U-RISE Scholar (specify) Past U-RISE Scholar (specify)

Faculty member, advisor, department staff, friend (specify)

CSUF website (specify) Other (specify)

# **LETTERS OF RECOMMENDATION**

List the names of two to three individuals, of which **at least one must be a CSUF faculty member,** who will be submitting letters of recommendation on your behalf. Please contact them and request the letter well in advance.

Referee Name: E-mail (required):

Title/University: Telephone:

Referee Name: E-mail (required):

Title/University: Telephone:

Referee Name: E-mail (required):

Title/University: Telephone:

It is the applicant’s responsibility to ensure that their letters are submitted by the referees on or before the application deadline. Submission of fewer than two letters may put an application at a disadvantage.

**ALL LETTERS MUST BE RECEIVED NO LATER THAN THE APPLICATION DEADLINE OF MARCH 24, 2025 VIA EMAL:** [**URISE@FULLERTON.EDU**](mailto:URISE@FULLERTON.EDU)

# **STUDENT INFORMATION**

Name (Last, First, MI) CWID

# **PREDICTED ACADEMIC SCHEDULE for 2025-2026 and 2026-2027**

Please complete the following table, indicating the courses you plan to enroll in each semester over your last two academic years. Include course names, units,and whether the course is a major, minor, GE or U-RISE requirement [e.g., BIOL 309 - Intermediate Molecular Biology (3 units)/Major; BIOL 480U – U-RISE Proseminar (1 unit/U-RISE)].

All U-RISE scholars are expected to enroll in Independent Research (**499** or equivalent, 1 unit) and U-RISE Proseminar (**BIOL 480U**, 1 unit, Wednesday 10:00 AM-11:15 AM) for four semesters.

All U-RISE scholars are required to attend the **Summer Workshop (Session A)** upon acceptance.

During the first year of the program, all scholars will also take Scientific Writing (**ENGL 363**, 3 units) for one semester (fall). If you have taken ENGL 301, this requirement may be waived.

During the second year of the program, all scholars will take Senior Thesis (**BIOL 498**, 1 unit) for two semesters (fall and spring).

The above-mentioned workshop and courses have been pre-filled for each semester in the table. Please fill out the rest of your courses according to your two-year academic plan.

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| **Fall 2025 Courses (units)** | **Level** | **Spring 2026 Courses** | **Level** |
| *Ex: BIOL309 Int Mol Biol (3 units)* | *Major* | *Ex: BIOL480U Proseminar (1 unit)* | *U-RISE* |
| BIOL 480U Proseminar (1 unit) | U-RISE | BIOL 480U Proseminar (1 unit) | U-RISE |
| DEPT 499 Independent res (1 unit) | U-RISE | DEPT 499 Independent res (1 unit) | U-RISE |
| ENGL 363 Sci writing (3 units) | U-RISE |  |  |
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| **Fall 2026 Courses (units)** | **Level** | **Spring 2027 Courses** | **Level** |
| BIOL 480U Proseminar (1 unit) | U-RISE | BIOL 480U Proseminar (1 unit) | U-RISE |
| DEPT 499 Independent res (1 unit) | U-RISE | DEPT 499 Independent res (1 unit) | U-RISE |
| BIOL 498 Senior thesis (1 unit) | U-RISE | BIOL 498 Senior thesis (1 unit) | U-RISE |
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| Total units = |  | Total units = |  |

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| **Summer 2025 Courses (units)** | **Level** |
| *U-RISE Summer Workshop Session A* | *U-RISE* |
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| **Summer 2026 – research experience at another university** |

# **TRANSCRIPTS**

You are required to submit your CSUF TDA and/or non-CSUF transcript (if applicable; unofficial copy is acceptable). **TDA and/or transcripts must be included with this application and must be received before the application deadline of March 24, 2025.**

# **APPLICANT’S SIGNATURE**

Signature (or print your name) Date

By signing or typing my name on this application, I certify that all information provided is true and accurate to the best of my knowledge. I further certify that I am not/will not be a recipient of other federally funded undergraduate traineeships (e.g., McNair, NAARE, M-STEM, LSAMP, CHERP) or a similar training award that provides a stipend or otherwise duplicates of NIH National Research Service Award. I understand and agree that I will not be eligible in the U-RISE Program or if appointed in the U-RISE Program, I will relinquish my position, if I join another federally-sponsored undergraduate traineeship at CSUF.

**Send all application materials to** [**urise@fullerton.edu**](mailto:urise@fullerton.edu) **on or before March 24, 2025 (Monday).**

**For more information about the U-RISE program, please visit the website**: [**www.fullerton.edu/u-rise**](http://www.fullerton.edu/u-rise)

# **RESEARCH INTERESTS**

Indicate with an ‘X’ up to three professors you are interested in conducting research at CSUF. For faculty profiles, visit the Faculty Mentor webpage by [clicking on this link to the U-RISE website](https://www.fullerton.edu/u-rise/faculty-mentors/index.html). If interested in a professor not listed here, write their name at end of the list.

Computational epidemiology, contagion modeling, optimization of disease outbreaks and disaster response, and algorithm analysis.

**Mentor: Dr. Sampson Akwafuo** *Computer Science*

Cell biology of phagocytosis; genetic approaches to elucidating mechanisms used by white blood cells to control the killing of engulfed microbes.

**Mentor: Dr. Catherine Brennan** *Biological Science*

Molecular biology of microbe-host interactions; bacterial genes and signals involved in forming a symbiosis with plants.

**Mentor: Dr. Esther Chen** *Biological Science*

Studies the atomic structures of proteins involved in blood coagulation and cardiovascular health and how these proteins impact bleeding disorders and cardiovascular disease.

**Mentor: Dr. Kenneth Childers** *Chemistry and Biochemistry*

Investigation of the roles that zinc transporters play in the neuropathology of certain brain diseases; Drug discovery; Brain transcriptomics (RNA sequencing)

**Mentor:** **Dr. Math P. Cuajungco** *Biological Science*

Investigates the development of glycopeptide-based inhibitors of glycoprotease enzymes secreted by bacteria of the gut microbiome.

**Mentor: Dr. Michael Ferracane**  *Chemistry and Biochemistry*

Reproductive anatomy and physiology of internally fertilizing fishes; endocrine regulation of gamete development in fishes.

**Mentor: Dr. Kristy Forsgren** *Biological Science*

Role of ion channels in sensing and adaptation to environmental conditions in protozoan parasites. Electrophysiological characterization of channels in parasites.

**Mentor: Dr. Veronica Jimenez Ortiz** *Biological Science*

Physiology and biochemistry of microbial manganese oxidation. Microbial interactions with metals and metal cycling.

**Mentor: Dr. Hope Johnson** *Biological Science*

Understanding how post-translational modifications alter the activity of splicing factors and in turn affect cellular gene expression.

**Mentor: Dr. Niroshika Keppetipola** *Biochemistry*

Evolution and functional differentiation of proteins involved in stress and immune responses.

**Mentor: Dr. Nikolas Nikolaidis** *Biological Science*

Studies biological movement (biomechanics), animal behaviors (feeding or locomotion), and physiology of the musculo-skeletal systems.

**Mentor: Dr. Jeffrey Olberding** *Biological Science*

Drug discovery relating to cancer cell signaling and stem cell biology.

**Mentor: Dr. Nilay Patel** *Biological Science*

Identification of novel inhibitors of enzymes involved in lipid metabolism and their evaluation as potential therapeutics and development of DNA-based biosensors for detection of various small molecules of interest.

**Mentor: Dr. Stevan Pecic**  *Chemistry and Biochemistry*

Visual recognition of objects and faces, using both applied and evolutionary perspectives.

**Mentor: Dr. Jessie Peissig** *Psychology*

Identification and characterization of antibiotic resistance mechanisms, their dissemination, evolution and impact in morbidity and mortality of bacterial infections.

**Mentor: Dr. Maria Soledad Ramirez** *Biological Science*

Investigation of the neurophysiological basis of memory in larval zebrafish -- an impressive molecular vertebrate system to further understand the neural basis of learning and memory.

**Mentor: Dr. Adam Roberts**  *Psychology*

Mechanism Design, robotics, biomechanics, assistive technologies, and human-robot interaction.

**Mentor: Dr. Nina Robson**  *Mechanical Engineering*

Investigates cardio-metabolic risk factors, exercise endocrinology, obesity-induced inflammation, body composition, and physical activity promotion.

**Mentor: Dr. Daniela Rubin** *Kinesiology*

Molecular biology of plant-pathogen interactions; protein-protein interactions and signaling in disease resistance.

**Mentor: Dr. Melanie Sacco** *Biological Science*

Synthesis and evaluation of small molecule inhibitors for proteins related to human health and disease.

**Mentor: Dr. Nicholas Salzameda** *Chemistry and Biochemistry*

Investigates how astrocytes regulate auditory sensory perception from the molecular level to the organismal level using cutting-edge neuroscience techniques.

**Mentor: Dr. Joselyn Soto**  *Biological Science*

Development of biomaterial and biodevices, and design of manufacturing systems.

**Mentor: Dr. Siheng Su** *Mechanical Engineering*

Molecular genetics and mechanism that contribute to the virulence of pathogenic bacteria.

**Mentor: Dr. Marcelo Tolmasky** *Biological Science*

Mathematical modeling of biological systems. Computational studies of cellular stress responses and biochemical oscillators.

**Mentor: Dr. Anael Verdugo** *Mathematics*

**Potential (or current) mentor(s) not listed above**