

Faculty Member Contact Information

Name: Majid Molki

Department: Mechanical Engineering

E-mail Address: mmolki@siue.edu

Phone Number: 618-650-2372

Campus Box: 1805

Description of the URCA Assistant Position


This posting includes one funded position. In addition, the faculty member may be willing to mentor additional, unfunded students.


How many unfunded students is this professor taking in addition to his/her one funded student? 0

(Students, if the faculty member will have both funded and unfunded students, he or she is free to select which student receives the funding. Funding cannot be split up between multiple students; only one student will receive it.)

Which of the following apply to this position?

This position is **only** open to students who have declared a major in this discipline. **M**

This project deals with social justice issues. 

This project deals with sustainability (green) issues. 

This project deals with human health and wellness issues. 

How many hours per week will your student(s) be required to work in this position? 9

(Minimum is 6 hours per week; typical is 9.)

Will it be possible for your student(s) to earn course credit? Yes No

If yes, in which course? N/A

If yes, for how many credit hours? N/A

Location of research/creative activities: School of Engineering at SIUE

Brief description of the nature of the research/creative activity:

The student will help me to perform computational fluid dynamics using ANSYS Fluent software. The work will be done in computer labs in School of Engineering.

Brief description of student responsibilities:

The student will be responsible for:

- 1- learning ANSYS Fluent software under my guidance
- 2- creating the geometry, meshing, and performing the computations in computer labs
- 3- searching the literature for articles related to the subject

URCA Assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?

By end of semester, the student should have learned:

- 1- to perform computations with ANSYS Fluent (a major software used by the industry today)
- 2- compressible flows in shock tubes involving shock and expansion waves (application in aerospace engineering)
- 3- how to search for articles in databases of the library

Requirements of Students

If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours), please indicate all required days and times:

A mutually agreeable time will be found; in general, the student should be available two half days (starting anytime from 8 AM to 5 PM) in School of Engineering. Weekends are not allowed.

If the location of the research/creative activities involves off campus work, must students provide their own transportation?

Work will be performed in School of Engineering at SIUE.

Must students have taken any prerequisite classes? Please list classes and preferred grades:

I prefer junior or senior Mechanical Engineering students with GPA > 3 for this project. I will train the student to work with ANSYS Fluent software.

Other requirements or notes to applicants:

N/A