INSTRUCTOR JOB DESCRIPTION

Summer Illinois Math (SIM) Camp is a week-long math day camp for local middle and high school students hosted by the University of Illinois at Urbana-Champaign Department of Mathematics. Campers will see the creative, discovery driven side of mathematics. By showing them some of the ways mathematicians approach problems, SIM Camp hopes to encourage them to continue studying math beyond the high school level.

For summer 2021, there will be two camps: SIM Camp Epsilon for rising 8th-10th graders, and SIM Camp Delta for rising 10th-12th graders. Both will take place entirely online. The dates for camp as well as staff orientation and training have not yet been determined.

Position Summary

Instructors will teach a course that will meet for four days during one week of SIM Camp. They are welcome to choose from the list of past topics below, but are expected to primarily create their own content:

- Counting Pigeons and Other Problem Solving Techniques (8th-10th grade)
- Tropical Geometry (8th-10th grade)
- Beyond 1, 2, 3: How Mathematicians Count (8th-10th grade)
- From Snowflakes to Seashells: Exploring Fractals (10th-12th grade)
- Topological Invariants: How to Know the Answer in Advance (10th-12th grade)
- Mathematical Biology (10th-12th grade)

Instructors are also encouraged to consider creating their own course for a topic not listed above.

Instructors will provide undergraduate assistant instructors with materials and homework to give them the necessary mathematical background. Additionally, assistant instructors should be incorporated into the lesson planning and teaching process.

This is an hourly position at $20 per hour for up to 160 hours total which may be billed between May 17th and July 31st. The number of hours spent working each week is likely to vary between preparation weeks, actual camp weeks, and post-camp documentation weeks. All work will be done remotely. There is no need to be on campus during any part of camp, but a reliable internet connection throughout is required.

General Duties:

- Abide by policies and procedures set forth by SIM Camp and the University of Illinois
- Support administrative decisions
- Demonstrate exemplary behavior as it relates to being a representative of the University of Illinois, the Department of Mathematics, and SIM Camp
- Attend all designated orientation sessions and scheduled meetings before and during the camp
- Maintain professional relationships with all students and staff members
- Enforce all student rules fairly and consistently

Specific Duties:

Before Staff Training.

- Familiarize yourself with undergraduate assistant instructors’ job description
- Review assistant instructor applications and help in the hiring process
- Complete any required pre-summer training, including any online training courses
- Put together list of resources or notes for assistant instructors
- Develop preliminary lesson plans for your course
INSTRUCTOR JOB DESCRIPTION

- Give appropriate administrator a supply list at least two weeks before supplies are needed
- Attend all pre-camp meetings

**During Staff Training.**
- Share preliminary course plan with AIs
- Attend pedagogy training
- Work with undergraduate assistant instructors to make sure they have the necessary mathematical background
- Be available for communication with your assistant instructors about ideas for structuring the course and their role in the class
- Work with assistant instructors to make sure they understand their role in teaching the course
- Work with assistant instructors to further develop camp lesson plans

**During Camp.**
- Serve as a positive role model for students
- Teach the class along with undergraduate assistant instructors
- Document noticeable changes in behavior, concerns about students, and issues with discipline
- Attend the entire class period each day. Monitor the class as a whole, and work with individual students as necessary
- Supervise and guide your assistant instructors. Ensure that they have an appropriate workload and are involved in the lesson planning and teaching process
- Update lesson plans on a day-to-day basis as needed
- Attend all staff and management meetings
- Regularly consult with your assistant instructors and other teaching team members to monitor student progress and ensure that the amount and type of assignments for your students are appropriately challenging. If a student takes significantly more or less time to complete their work than you had planned, that student’s assignments should be adjusted accordingly
- Advise program coordinator and/or director of any disciplinary, emotional, or academic problem a student may be having as soon as you are aware of the problem

**After Camp:**
- Provide director and program coordinator with finalized lesson plans
- Provide contact information to director where you can be reached in the next year