



Distance Learning, International Studies & Outreach
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A summer enrichment experience for students on the WIU-QC campus

Math on the Mississippi

WIU-QC Summer Enrichment Programs
Grades 5-8 • July 10-14, 2017



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Quad Cities

Explore Math in a Hands-on Learning Environment

GENERAL INFORMATION

REGISTRATION: Enrollment is limited; the program accepts only 24 participants. Please register early; students are admitted on a first-come, first-served basis. The registration fee is \$275 and includes class room instruction, supplies, lunch and field trips. Please include a minimum \$100 deposit with your registration. The remaining balance of \$175 is due by June 9, 2017.

Mail the attached registration form, with check (made payable to "Western Illinois University") or credit card information, to: **WIU-QC, Distance Learning, International Studies and Outreach, 3300 River Drive, Moline, IL 61265**. You may fax your registration, with credit card information, to **(309) 762-8980**. Please duplicate the registration form for additional registrations.

MEDICAL: Students do not qualify for University health care, so parents should check family insurance policies for health and accident coverage.

ADA COMPLIANCE: Western Illinois University is in compliance with the Americans with Disabilities Act of 1990. Please let **Distance Learning, International Studies and Outreach** know of any special needs students may have at least two weeks prior to the program start date. The office phone number is **(309) 762-9481, ext. 62357**.

REFUND POLICY: Western Illinois University reserves the right to withdraw a program because of unforeseen circumstances or insufficient enrollment. If a program is withdrawn, participants are notified and fees are refunded. Participants who cancel within 14 calendar days of the program start date will receive a refund, minus a \$50 fee. **No refunds will be made after Wednesday, July 5, 2017.**

FURTHER INFORMATION: For further information, call **Distance Learning, International Studies and Outreach** at **(309) 762-9481, ext. 62357**.

Math on the Mississippi

THE PROGRAM

“Math on the Mississippi,” is a fun and interactive weeklong summer enrichment camp at Western Illinois University-Quad Cities. This program is offered in July to engage students in math concepts prior to the beginning of school in August.

Each morning, participants begin their day with brain teasers or an outing in the local area. A science concept, such as pressure, indirect measurement, force, or buoyancy are introduced in the day’s lesson. In addition to using the University’s 3-D printing lab and Global Positioning System (GPS) resources, participants create a blog of the day’s lessons, detailing what they have learned. Members of the math education department, as well as physics and math faculty and University students, take part in instruction for the program. On the closing day of the program, a panel of professionals in various STEM fields discuss how they use math in their career choices.

TOPICS

Buoyancy: During the program, participants have the opportunity to learn about buoyancy through lessons using the Mississippi’s Sylvan Slough. Under the supervision and guidance of faculty, students design and build a cardboard boat to test on the water. They also paddle board with faculty as part of this interactive day.

Pressure: Participants learn about air, water and surface area pressure during the program. Students are given a tour of Lock & Dam 15 by a U.S. Army Corps of Engineers civil engineer to examine the concept of water pressure and learn how the dam opens and closes. In addition to the field trip, students create bottle rockets to study air pressure, and examine surface area pressure through a variety of demonstrations.

Mapping/Measurement: Participants study indirect measurement in astronomy and visit Black Hawk State Park. They examine how astronomers were able to estimate distances from the earth to the sun and moon. They also determine circumference, height and distance based on their own reasoning within the natural environment of Black Hawk State Park. Lessons centered around Global Positioning Systems (GPS) will also be included, enabling students to create their own maps of the QC campus and other locations.

Force/Structure: Participants study the concept of force and its importance in creating structures. Students will study bridge building and structural integrity

Western Illinois University is an Affirmative Action and Equal Opportunity employer with a strong commitment to diversity. In that spirit, we are particularly interested in receiving applications from a broad spectrum of people, including, but not limited to, minorities, women and individuals with disabilities. WIU has a non-discrimination policy that includes sex, race, color, sexual orientation, gender identity and gender expression, religion, age, marital status, national origin, disability and veteran status.

within the course of the Force/Structure lesson. In addition, they will see a demonstration of the university’s 3-D printing equipment in operation.

Program coordinators and instructors include **Kathy Felt**, associate faculty in the WIU Department of Mathematics, specializing in math education; **Susan Brooks**, mathematics assistant professor and recipient of the WIU-Quad Cities Core Value Award for Academic Excellence in 2015; **James Rabchuk**, physics professor and assistant dean of the College of Arts and Sciences; **Ranbir Kang**, assistant professor in the WIU Department of Geography; and **Jeffrey Rose**, faculty assistant in the WIU-QC Department of Engineering.

PARTICIPATION CRITERIA

Open to fifth, sixth, seventh and eighth graders, this program focuses on grade-appropriate science and math concepts for the middle school student. This program is a co-educational offering on the WIU-QC Campus. Gifted status or minimum qualifying scores on standardized tests are not requirements for the program. Please note that this is not a remedial program. Participants should have sufficient curiosity, motivation, achievement level, and maturity to benefit from the program. Students are admitted on a first-come, first-served basis.

WIU-QUAD CITIES

The WIU-QC campus is easily accessible from either side of the Mississippi River. Participants will experience WIU-QC’s state of the art classrooms and facilities. As part of the program, participants use calculators from Texas Instruments and University laptops for instructional purposes while on campus.

The new Western Illinois University-Quad Cities Complex has LEED (Leadership in Energy and Environmental Design) Silver certification and uses a geothermal heating and cooling system, energy-efficient lighting and controls, recycled building materials and finishes and a vegetative roof system as part of its commitment to sustainability.

SPONSORS

Western Illinois University
School of Distance Learning, International Studies and Outreach
College of Arts and Sciences
Department of Mathematics

To view our 2016 math camp blog, visit mathmississippilogin.wordpress.com.

REGISTRATION – Math on the Mississippi July 10-14, 2017

Name _____

Address _____

City/State/Zip Code _____

Phone Number (include area code) _____ E-Mail _____

Age _____ Grade as of Jan. 2017 _____

How did you hear about the program? _____

1. This student is sufficiently mature to benefit from this program, to observe campus rules and to live under supervision in a campus environment.
2. I understand and accept all program policies and conditions as set forth in this brochure.

Parent or Guardian Signature _____

Parent or Guardian Name (printed) _____

Teacher/Administrator Name (printed) _____

Title _____ School/City/State _____

Phone Number (include area code) _____ E-Mail _____

Please make check payable in the amount of \$275 to **Western Illinois University**, or pay by credit card:

Visa MasterCard Discover

Card No. _____ Exp. Date _____ CV Code (3 digits) _____

Authorized Signature _____