Ceramic & Glass Engineering
June 26-30, 2016
For students entering grades 11 or 12

Students attending this camp will learn about ceramic and glass engineering and participate in exciting hands-on lab experiences in ceramic processing & tape casting, and glass melting & press forming, working alongside faculty who know how to make learning fun.

- Ceramic Processing and Tape Casting: Ceramic components are at the heart of a vast majority of everyday items, from cell phones to toilets. At the center of the manufacturing process is ceramic processing - using powders to make usable items. We will focus on making a ceramic "sun-catcher" that will be fabricated using tape casting, lamination, and glazing, capturing aspects of both historical and advanced ceramic materials and processing techniques. We will discuss the chemistry involved, the reactions that occur at both room temperature and at high temperature, and how these processes affect the properties (light transmission, strength, etc.) of the ceramic component.

- Glass Melting and Press Forming: Glass is everywhere in our daily lives, from the screen on your cell phone and LCD television, to windows, bottles, and fiber optic cables. Unlike other ceramics and materials, glass is not a solid, but a super-cooled liquid. How glass is made, however, is an exciting and visually spectacular event, where raw materials (sand, limestone, and soda ash) are blended and melted at high temperature to form a viscous liquid that can be cast and shaped into objects. We will demonstrate and discuss how chemistry affects glass properties and color, making glass, and stress in glass due to cooling. In addition, each student will cast a glass piece to take home!

Program Director:
Dr. William Carty, Professor and Chair of Ceramic Engineering, Kazuo Inamori School of Engineering at Alfred University
carty@alfred.edu

www.alfred.edu/summer/camps/science.cfm

Computer Camp
July 10-14, 2016
For students ages 12-17

This camp offers computing experiences for both basic and advanced students concentrating on essential computing concepts, programming and web development. Students will be introduced to these topics through a variety of activities and can work at their own computer station. Students will also learn on their own and within a group setting. While creative and practical computer concepts and skills will be covered, the emphasis is on having fun.

Instruction topics will include an overview and lab activities for the following:
- Essential Computing Concepts focusing on building the student's understanding of:
  - Computer Processing and Processing Models
  - Computer Hardware Uses and Configurations
  - Computer Networking Concepts
  - Software Engineering Concepts
  - Cybersecurity Concepts
- Computer Programming Concepts and Logic focusing on:
  - Computer Programming Fundamentals
  - Programming Design Patterns
- Problem Solving through Testing and Review
- Application Development and Review
- Web Development and Design focusing on:
  - Development using Scripting languages and Libraries
  - Interface Design
  - Basic Mobile Application Development
  - Enhanced User Interactions

Throughout the camp's sessions students will be exposed to a variety of programming and scripting languages and technologies. Each topic is designed to build on the students overall understanding and will produce different applications that they will then be able to take home.

Program Director:
Mr. Evan Enke, Assistant Professor, Computer and Information Technology, Alfred State College, enkeeg@alfredstate.edu

www.alfred.edu/summer/camps/computer-engr.cfm

Consumer Chemistry
July 10-14, 2016
For students ages 14-17

This camp is for students who want to know more about the chemistry of food, toys, and household products. No prior chemistry background is needed! This camp is great for students who want some exposure to chemistry before taking it formally, and for those who have already taken chemistry but want to learn more about its applications.

Have you ever wondered:
- What makes diet soda sweet?
- How to pronounce the ingredients in your shampoo?
- What polymers are used in amusing science toys?
- How to find reliable information about controversial ingredients?

This program will help answer those questions and many more! You will discover how to interpret the ingredients lists of your favorite foods and products while learning some basic chemistry.

Camp topics are tailored to student interests, and students are given the opportunity to explore topics of individual curiosity. Daily labs include:
- Tie-dye, chromatography and distillation.
- Students take home a shirt, book, and course binder.

This camp enables you to develop a deeper understanding of household products in a fun and safe environment.

Program Director:
Mrs. Ruth Bowser, Adjunct Instructor of Chemistry
bowser@alfred.edu

www.alfred.edu/summer/camps/chemistry.cfm

Schedule
Students check-in between 2:00 and 4:00 p.m. on Sunday and check-out after lunch on Thursday. They attend classes each day and participate in recreational activities off and off campus each evening. Further information, including a detailed program schedule and driving directions to campus, will be sent to all students upon acceptance.

Supervision
Voten camps are not a class they are supervised by our wonderful team of Camp Counselors who are specifically trained to serve as positive role models, mentors and friends.

Housing and Meals
Students stay in secure University residence halls dedicated to summer camps. Males and females are housed in separate buildings. Camp Counselors will be on-site in the residence halls at all times. Laundry facilities are available in each hall at no charge.

Cafeteria-style meals are served in the campus dining hall. Our Dining Services chefs do an excellent job in accommodating campers with food allergies and other special requirements.

Cost
The fee is $895 per camp. This covers tuition, supervision, program materials & equipment, recreational activities, room and board from dinner on the first day through lunch on the last day. Students living locally who wish to attend these camps as commuters may do so. Please visit our website for commuter rates and other details.

The non-refundable $100 deposit must be submitted with the application. Full payment of the balance is due June 1, 2016. Sorry, no financial aid or scholarships are available.

With our dynamic, engaging, talented and caring faculty and staff; terrific facilities; and lovely surroundings, an Alfred University Summer Program could make this your best summer ever!
How to Apply
We will begin accepting applications in early January. Students who wish to apply must:
1. Complete the on-line application (please visit camp web page to access). Application due by May 1, 2016.
2. Submit the $100 deposit electronically with the on-line application. Deposit due by May 1, 2016 (balance is due
June 1, 2016).
3. Provide a copy of an up-to-date transcript or report card.
4. Provide 2 Letters of Recommendation from teachers.
5. Provide a one-page essay telling us why you would like to
attend the camp (in your own words, signed).
6. If applying to Chemistry Camp, also provide a list of math
and science courses you have completed.
Please submit the application and deposit online by dates
listed above. All remaining required materials must be
received by our office no later than June 1, 2016. (Letters
applications will only be considered if space is available.)
Materials can also be faxed to 607-871-2045, or scanned and
enrolled in PDF form to summerpro@alfred.edu.
*If you do not have access to a computer and wish to apply
please contact us at 607-871-2612.

Acceptance Procedure
The Director of Summer Programs along with the Director/
Instructors of the camps will review all applications after the
May deadline and determine who will be accepted.
Accepted students will receive, along with the acceptance
letter, instructions on how to access required forms such as the
medical form, health history form, parental permission
and emergency notifications forms, etc. These materials must
be downloaded, completed and emailed to our office no later than June 1, 2016. Updated
immunization information (including dates) is also required at
that time. (If you do not have updated immunization
information on hand, you may want to acquire this from your
physician now to avoid processing delays.)

Questions?
For further general information, please contact:
The Office of Summer Programs at summers@alfred.edu or
607-871-5812. For specific information concerning class
content please contact the appropriate Camp Director
(indicated in each camp description).

About Alfred
Alfred University is located in the peaceful village of Alfred in western New York State, where summer days are warm and
nights are cool and comfortable. Surrounded by rolling hills
and beautiful meadows and valleys, Alfred University is the
perfect place to spend an enjoyable week learning more about a
favorite subject and meeting other students who share your
interests!

about the University
Alfred University has a long history, dating back to the Civil War when the University purchased its first
telescope, a 9-inch refractor made by Henry Fitz. Since the
mid-1960s, first under the guidance of the late Dr. John Stull,
AU professor emeritus in physics, and now under Dr. David
Toot, the observatory has grown to such a size and stature
that it is considered one of the finest teaching observatories in
the United States.

Astronomy faculty, all recognized experts in their fields. Current
research interests of the faculty include variable stars, asteroid
astrometry and photometry - measurement of the
positions and motions of asteroids, including those which pass
close to the Earth.

Astronomical Imaging of Nebulae, Clusters and Galaxies
- Observation and Analysis of Solar Activity
- Imaging and Lunar/Solar System Studies
- Lunar and Planetary Science
- Asteroids
- Solar Flares
- Stellar Evolution
- Galactic Structure
- Black Holes

Classes are taught by the Alfred University Physics and
Astronomy faculty, all recognized experts in their fields. Current
research interests of the faculty include variable stars, asteroid
measurements, the study of solar activity, computational physics
and fluid dynamics.

Camp Director
Dr. G. David Toot,Adj Professor of Physics and Astronomy
tootgd@alfred.edu

Alfred University Policy Against Discrimination
Whether considering candidates for admission or financial aid, applicants
for employment or the management of its policies and school administered
programs, Alfred University does not discriminate on the basis of gender, sexual
orientation, age, sex, color, national or ethnic origin, religion, or disability.
Alfred University is an affirmative action, equal opportunity employer.

Cancellation:
The University may cancel any course or activity at any time
because of insufficient enrollment or other unforeseen circumstance. If a
program is canceled or postponed, the University will refund registration fees
but cannot be held responsible for other costs, charges, or expenses, including
cancellation/change charges assessed by airlines or travel agencies.

Astronomy at Alfred University has a long history, dating
back to the Civil War when the University purchased its first
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In addition to the original 9-inch f/13 reflector, the John L.
Stull Observatory now has a 9-inch Newtonian, two 8-inch
Schmidt-Cassegrain reflectors (one computer controlled), a
14-inch, f/6 Newtonian reflector; a 16-inch, f/8 RC-Cassegrain
(internet-controllable), a 20-inch, f/5.5 newtonian, and a 32-
inch, automatic f/4.5 newtonian.

Astronomy
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This popular program is conducted at AU’s Stull
Observatory, one of the best teaching observatories in
the country, which is equipped with telescopes ranging from 8
to 32 inches in diameter as well as electronic detectors and
support computers.

www.alfred.edu/summer/camps/astronomy.cfm