The Goal of ACES

Academic Community for Engineering Students (ACES), a joint effort between the University of Virginia and Thomas Nelson Community College, is designed to recruit and retain undergraduate engineering students using a set of activities, such as UVA-to-TNCC Summer Laboratory Research (UTSLR), and personal support, with an emphasis on the recruitment and retention of students from underrepresented populations in STEM fields.

For More Information

Questions? Need more information?
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UVA-to-TNCC
Summer Laboratory Research
(UTSLR)

ACES
Academic Community for Engineering Students

NSF Science, Technology, Engineering, and Mathematics Talent Expansion Program
UTSLR Faculty and Their Research Interest

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<tr>
<th>Faculty Member</th>
<th>Research Interest</th>
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<tbody>
<tr>
<td>Hilary Bart-Smith, Mechanical and Aerospace Engineering</td>
<td>Ultra-light materials, morphing structures and polymer composites</td>
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<tr>
<td>Edward Botchwey, III, Biomedical Engineering</td>
<td>Utilizing bioreactors to develop new tissue engineering approaches for bone repair</td>
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<tr>
<td>Robert Davis, Chemical Engineering</td>
<td>Structural analysis of catalysts in chemical reactions</td>
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<tr>
<td>David Green, Chemical Engineering</td>
<td>Synthesis of well-defined nanoparticles, dispersion into polymer solutions, and melts and suspension rheology</td>
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<tr>
<td>Lloyd Harriott, Electrical and Computer Engineering</td>
<td>Fabrication of nanoscale structures and devices. Electron, ion, and photon beam lithography</td>
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<tr>
<td>Garrick Louis, Systems and Information Engineering</td>
<td>Providing drinking water, wastewater, sewage treatment and solid waste management to underserved countries</td>
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<tr>
<td>Shayn Peirce-Cottler, Biomedical Engineering</td>
<td>Identifying and characterizing a therapeutic role for human adipose-derived multiprogenitor cells in the growth and maintenance of new microvessels</td>
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<tr>
<td>Mary Lou Soffa, Computer Science</td>
<td>Optimizing and parallelizing compilers, program analysis, and software tools for debugging and testing programs</td>
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<tr>
<td>Paul Reynolds, Computer Science</td>
<td>Parallel and distributed computing, fault tolerance, ordered networks, simulation interoperability, multiresolution modeling, computing for the building</td>
</tr>
<tr>
<td>Nathan Swami, Electrical and Computer Engineering</td>
<td>Understanding the surface science of molecular monolayers functionalized for specialized properties, and may eventually be applied as nanoscale devices</td>
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UTSLR Information

IS THERE A COST FOR UTSLR

All students will receive $4000 (pre-tax pay), on campus housing, and a summer meal plan. Charlottesville and the University of Virginia are accessible by automobile, train, bus, and airplane via the Charlottesville Airport.

WHEN AND WHERE IS UTSLR HELD?

The program is traditionally held from June-August for eight weeks. The dates do vary slightly from year to year. This year, UTSLR begins June 6th, 2010 and ends July 30th, 2010, on the University of Virginia grounds in Charlottesville located in central Virginia.

HOW TO APPLY?

Applicants must complete and submit the application before Wednesday, February 17th, 2010. Applications should include:

- Essay
  - Identifying your career objectives
  - Explaining why you are a good candidate for UTSLR
  - Listing your research interests and experience
- Resume
- One letter of recommendation (from current or previous faculty at home institution)
- Official transcript

Deadline: Wednesday, FEBRUARY 17th, 2010

UTSLR aims to encourage interest in conducting engineering research among its participants, improve participant confidence in their ability to perform research, and inspire a greater commitment to engineering. Just as undergraduates who conduct research in a supportive environment are better able to evaluate their inclination for graduate study, this experience will show TNCC students the types of contributions they could make. Additionally, collaboration with and mentoring by graduate students and post-doctoral-researchers in the labs will help participants learn what graduate and post-graduate work entails from a variety of viewpoints.

USTLR is formulated with the idea of interesting students in continuing their studies at the graduate level. Working in labs introduces students to concrete applications of theoretical, classroom concepts, and research has shown that this exposure helps retain students in engineering programs and aids in recruiting them for graduate school.