Welcome to the Oakton Community College Remote Access Nanotechnology Education Program supported by the National Science Foundation, Advanced Technological Education Program under Award No. 1304016.

This program begins with an online component covering nanotechnology concepts and the basics of the operation of the instruments that will be used during the hands-on workshops. The online component will take place within the Desire 2 Learn (D2L) course management site through Oakton Community College. To access the D2L site go to d2l.oakton.edu and enter your login ID and password which will be sent to you in a separate communication.

Graduate Credit Through Aurora University

You have the opportunity to earn 3 hours of graduate credit through Aurora University. To be eligible for graduate credit not only must you fully participate in the preliminary online session and the 4-day workshop, but you must work to develop a nanotechnology module that could be used in a course you teach at your institution that makes use of Oakton’s nanotechnology lab through remote access or through actual on-site visits.

The full syllabus, outlining the course requirements, is posted in the Content area on the D2L site. To summarize, listed below are the main required activities:

- Complete online quizzes covering nanotechnology content in physics, chemistry and biology.
- Complete online quizzes covering the basic operation of the atomic force microscope, the scanning electron microscope, the dip-pen nanolithography instrument, the fluorescence microscope and the qNano particle characterization device.
- Participate actively and thoughtfully in discussions of nanotechnology content, lab activities, troubleshooting, and activity development.
- Keep a course notebook. Participants will perform lab activities as if they were a student at their institution. Notebooks should include answers to pre-lab questions, questions that your students might ask as they are working through the activity, records of data collected and corresponding analysis, and a summary of the results of each activity. Participants should write down questions they have as they go through the procedures of each activity, questions about the workings of the instrumentation and questions or statements about how they think their students would succeed in completing each activity. Finally, participants should discuss how they would incorporate each activity, or part of an activity, into the classes they are currently teaching in either a hands-on or remote access environment.
• Develop one or more activities using the instrumentation at Oakton’s Nanotechnology Lab that can be used in the participant’s content area, in his or her own classes, either as a hands-on experience for the students at Nanotechnology lab or as a remote access experience in the classroom at the participant’s institution. A final report on the activity will be due at the conclusion of the course.

• Present activity through a webinar format to the other participants in the class and present a poster to the general Oakton population at a workshop or seminar.

Finally, the following is a timeline for the various components of this seminar.

Program Timeline:

<table>
<thead>
<tr>
<th>Event</th>
<th>2014 Dates</th>
<th>Activities</th>
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<tbody>
<tr>
<td>Online Review</td>
<td>January-February</td>
<td>Review background material in physics, chemistry, and biology.</td>
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<tr>
<td>Kick-Off Workshop</td>
<td>February 18-21</td>
<td>Get hands-on experience with atomic force, scanning electron, and fluorescence microscopes; a dip-pen nanolithography machine; and a qNano particle characterization device at Oakton's state-of-the-art nanotech lab.</td>
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<tr>
<td>Classroom Activity Development</td>
<td>February-April</td>
<td>With online support, create a nanotechnology classroom activity.</td>
</tr>
<tr>
<td>Activity Presentation</td>
<td>TBD</td>
<td>Present your activity via webinar to program participants and to the Oakton community at a STEM seminar.</td>
</tr>
<tr>
<td>Closing Workshop</td>
<td>May 28-29</td>
<td>Fine-tune activities, learn additional nanotechnology content, and gain a deeper understanding of the equipment.</td>
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The 4-day and 2-day workshops will be at the Oakton Community College Nanotechnology Lab at the Illinois Science + Technology Park in Skokie, Illinois. Every day we will be meeting from 8:30am – 4pm with lunch being provided. In addition, dinner will be provided on the first and third day of the 4-day workshop.

Welcome again and thank you for participating in our program. Please watch your email for more information including login information to the D2L site. We are looking
forward to working with you to enhance your knowledge and teaching of nanotechnology.

The Oakton Community College Nanotechnology Team

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