



**The First Annual Nanomedicine Short Course**

**June 13-14, 2018**

The Minnesota Nano Center is offering its first annual **Nanomedicine Short Course**.

The short course offers attendees an introduction to the world of nanomedicine, covering topics including nano-biosensors and nanoparticle drug delivery. The course will take place June 13-14, 2018 in room 110 of the Physics and Nanotechnology Building on the East Bank Campus of the University of Minnesota.

The first day of the course features presenters from a variety of institutions and academic backgrounds, describing their work in applying nanoscience to the life sciences. During the second day, registered attendees will take part in a hands-on laboratory session to learn more about the techniques used in the field. A full course schedule is listed below.

**There is no charge to attend** the Nanomedicine Short Course, but preregistration is encouraged for the June 13 presentation session. To register, please contact Ms. Becky von Dissen at [vondi001@umn.edu](mailto:vondi001@umn.edu) or at 612 -625-3069.

**The June 14 hands-on lab session is limited to 20 attendees, and is now full.**

We hope to see you at the Nanomedicine Short Course!

**For more information:** Contact Dr. Jim Marti, at [jmarti@umn.edu](mailto:jmarti@umn.edu) or 612 626-0732.

## Course Schedule

<b>June 13</b>	<b>Seminar Session</b>	<b>Speaker</b>
9:00 AM	Welcome	Steve Campbell, Director, Minnesota Nano Center
9:05	Review of short course aims and schedule	Jim Marti, Senior Scientist and Associate Director, MNC
9:15	Nanomedicine: The Concept, Success, Opportunities, and Challenges	Younan Xia, Professor of Biomedical Engineering, Georgia Institute of Technology
10:00	Combatting Aggressive Cancers with High Precision Nanomedicines	Emily Day, Professor of Biomedical Engineering, University of Delaware
10:45	Break	
11:00	Nanoparticle-Based Sensors for Pathogen Detection: From Bench-side to Field Ready Application	Sylvia Vetrone, Professor of Biology, Whittier College
11:45	Break for lunch set up	
Noon	Lunch	
1:30 PM	Drug-Loaded Block Copolymer Nanoparticles: Using Chemistry to Control Both the Cargo and the Packaging	Tom Hoyer, Professor of Chemistry, University of Minnesota
2:15	Drug-Conjugated Gold Nanoparticles for Pediatric Cancer Therapy	Peter Gordon, Professor of Pediatrics, University of Minnesota
3:00	Break	
3:20	Polymeric Vehicles for Delivering Nucleic Acids	Theresa Reineke, Professor of Chemistry, University of Minnesota
4:00	Wrap up	Jim Marti
<b>June 14</b>	<b>Hands-on Session: Nanoparticle synthesis and characterization</b>	<i>Enrollment limited to 20, preregistration is required</i>
9:00	Review of common synthesis routes and characterization techniques	Jim Marti
10:00	Break	
10:20 - 12:30 PM	Participants will make nanoparticles of various types; analyze them using DLS, NTA, and zeta potential analyzers; explore some methods to functionalize the nanoparticles, and see demonstrations of applying the particles to cells.	Minnesota Nano Center Staff