Issue 53

Stay informed about what's happening on nanoHUB! Check out featured educational resources, upcoming online workshops, and more below.

Summer Learning on nanoHUB

Looking for free educational content this summer? nanoHUB offers several resources on a variety of topics. We've compiled a curated list of workshops, courses, and tools to kick off your summer learning. Check out the list below or visit the nanoHUB Education Center to explore our offerings.

MATLAB tool and training series

The nanoHUB MATLAB Training Series includes workshops on data analysis and machine learning with MATLAB. There is no need to install any software. Check out Dr. Kelsey Joy's video below to learn more about using the MATLAB tool for free in nanoHUB!
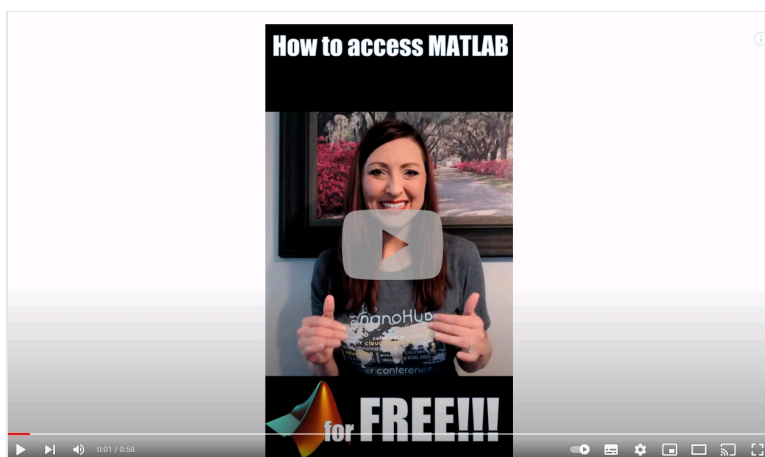
Free online courses

nanoHUB offers several online courses on a variety of subjects, including traditional full semester lecture recordings. You can browse this selection by subject and level.

We also offer self-paced short courses with integrated learning materials. Browse the catalog to find a topic you're interested in, and check out our most recent course, below.

MolSSI Python Data and Scripting

The MolSSI Python Data and Scripting course is designed for students who are currently involved in, or planning to start computational chemistry or data science research. The course will help students develop practical programming skills that will benefit their research, and will take students through introductory programming and scripting with Python.

The audience for this course is students who would like to learn Python. NO prior programming experience is required to participate. **Click the yellow "Enroll in Course" button to enroll for free.**

Molecular Sciences Software Institute (MolSSI) is a nexus for science, education, and cooperation, whose mission is to serve the worldwide community of computational molecular scientists – a broad field that includes biomolecular simulation, quantum chemistry, and materials science.

Thermo-Calc educational workshops

The nanoHUB Thermo-Calc Workshop Series includes educational presentations on Integrated Computational Materials Engineering in the Classroom and Integrating Microelectronics Contexts into Engineering Classrooms.

The Thermo-Calc Educational Package is available to use for free on nanoHUB. This tool is intended for teaching and learning basic thermodynamics and kinetic theory at an undergraduate level. To obtain access, request membership to the nanoHUB Thermo-Calc Group.

Upcoming Events

2022 PhysiCell Workshop and Hackathon

Join PhysiCell for a virtual course that will teach concepts of agent-based biological simulations, through the open source PhysiCell package.

Dates: July 24 - 30, 2022
Time: 11:00 a.m - 6:00 p.m EDT (main session takes place Mon.-Fri.)

The event includes free morning workshop sessions that are open to all with free registration, and a mentored hackathon portion in the afternoon for accepted applicants.

Applications for the hackathon are open now. Applicants should have prior experience in C++ or Python, with an interest in multicellular modeling. **Apply by Wednesday, June 15, 2022 for full consideration**.

PhysiCell is an open source, agent-based simulation framework for simulating complex multicellular systems. It simulates the chemical environment (diffusion of substrates and signaling factors), individual cell behaviors, and cell-cell interactions. It can be tailored to a broad variety of problems in cancer, infectious diseases, developmental biology, immunology, micro-ecosystems, and more.
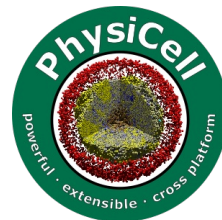
Learn more and apply

For full details including the agenda and expected outcomes, visit the PhysiCell Training GitHub page.

2022 Multicell Virtual Tissue Modeling Online Summer School and Hackathon

You're invited to apply for the 2022 Multicell Virtual Tissue Modeling Online Summer School and Hackathon. Registration is free, enrollment is limited and by application only. **Kindly apply by Wednesday, June 15, 2022** at the link below.

Intro to Computational Modeling & Python: Sunday, July 31, 2022
Summer School: Monday, August 1 - Friday, August 5, 2022
Model-Building Hackathon: Saturday, August 6 - Sunday, August 7, 2022

Topics include Python scripting, Introduction to virtual-tissue simulations using CompuCell3D, how to integrate SBML and MaBoSS models into CC3D models, and principles of biological model building and practical examples in diverse biological systems. View the event flyer for more details.

The CompuCell3D modeling environment allow researchers to rapidly build and execute complex Virtual Tissue simulations with minimal programming experience. CompuCell3D enables biological simulation from the subcellular scale to the tissue scale, such as tumor growth, what happens to tissues and cells when exposed to toxic compounds, viral spread in tissues, early embryonic development, intra/extra-cellular biochemical networks, and more. Try out some example models on nanoHUB without any installation: CompuCell3D on nanoHUB.

Learn more and apply

nanoHUB Tips and Tricks

How to terminate a tool session

When you are logged in to your nanoHUB account, you can have a maximum of three tool sessions running at once. If you try to open a fourth tool session you will receive a message letting you know that you have reached the maximum number of allowed sessions.

To terminate any open tool sessions, navigate to your member dashboard by clicking "Logged in" in the upper right corner on nanoHUB. From there you will see a box that says "My Sessions" and you will see the option to terminate any active sessions. Once you terminate at least one open session you are able to run another tool.
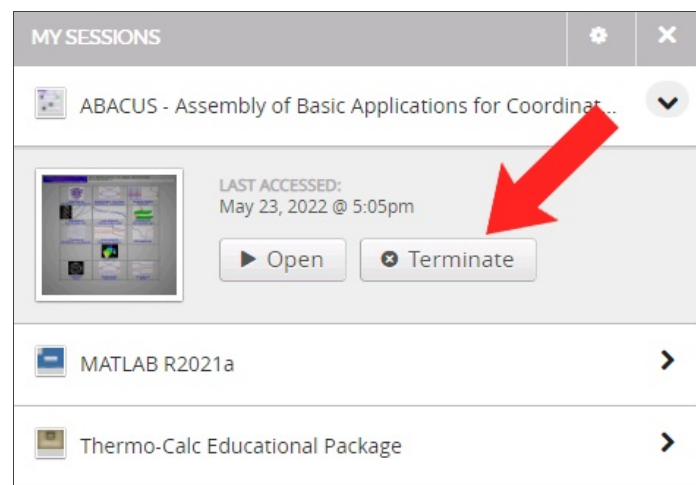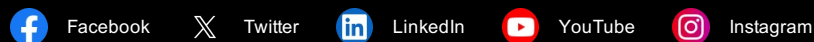

Another easy way to terminate a tool session is within the tool. There is a "Terminate" button in the upper right corner of the tool window.
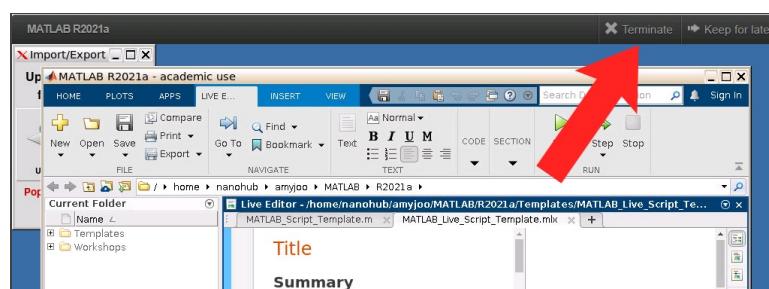
Do you have a suggestion or nanoHUB success story you'd like to share? Use our Contact Us form and you may see your submission in a future newsletter!

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