

NRT MIDAS traineeship timeline (Year 1)

- **Fall Before Year 1 in NRT program (all trainees)**
 - NRT trainees selected in mid-December – some funded for 2 years/1.5 years/1 year and some for a semester; primary advisor responsible for funding outside of this NRT support
- **Year 1 of NRT program - Winter & Spring (all trainees)**
 - NRT trainees continue to take their PhD **core & elective courses** in their respective departments
 - NRT trainees start their **research** (same timeline as other non-NRT students in your departments)
 - NRT trainees attend **NRT community hours** (see last slide on what happens in these hours)
- **Year 1 of NRT program- Summer (all trainees)**
 - **Summer community outreach:** All NRT trainees pair up to plan and create coordinated activities for outreach to the public/local community – learn to effectively communicate their research work with public and non-scientist audience
- **Year 1 of NRT program - Fall (all trainees)**
 - Present a **technical poster on their ongoing thesis work** in one NRT community hour.

By the end of Year 1 of NRT the NRT trainees should have completed at least **one technical elective in the primary discipline** and **one technical elective in secondary discipline**.

NRT MIDAS traineeship timeline (Year 2)

Year 2 of NRT program – Winter (all trainees)

- NRT trainees continue to do their **research** and **attend one NRT community event**

Year 2 of NRT program - Spring (all trainees)

- All trainees take mandatory NRT course **CHEG/MSEG/CISC/ECEG 848 *Computing and Data Science for Soft Materials Innovation***.
 - In this course, interdisciplinary groups of graduate students work in teams of 3-4 with each team tackling one project submitted by industry/ national lab using computing tools
 - Instructor(s) teach - molecular modeling and simulation, high performance computing, and machine learning with emphasis towards application of these tools to soft materials problems.
 - Students apply these computational tools to solve the industry or national lab problem throughout the semester
 - Students also learn and practice collaborative teamwork, and oral + written communications training regularly; professional skills in interdisciplinary work environment

NRT MIDAS traineeship timeline (Year 2 continued)

Year 2 of NRT program – Summer (mandatory for funded trainees)

- For those interested in industry or national lab

Industry/National Lab Internship

For the entire summer, NRT trainees gain on-site experience with one of our partner companies who combine data science and computing for solving materials problems.

Mandatory for NRT-funded UD & DSU trainees interested in industry/national lab career

OR

- For those interested in academia

2-part Teaching Certificate Program

Part 1 Effective teaching workshop by NRT core faculty in Y2 summer

Part 2 Teaching fellowship in core/elective/NRT course in Y2 Fall or Y3 Spring semester

Open to all NRT trainees (regardless of funding) and other students enrolled in UD & DSU

Year 2 of NRT program – Fall (mandatory for funded trainees)

- **NRT trainees** will present a talk in the NRT community hour to share what they have learned from Summer internship/teaching certificate; we also want to hear how they are combining technical and professional skills they have learned so far in their thesis work.

NRT community activities – throughout the traineeship

Fall & Spring NRT Community Hours

Professional skills development

- RCR (Responsible Conduct in Research)
- Diversity, Equity, Inclusion & Respect (DEIR)
- Ethics in Data Science
- Effective Communications
- Team Building

Networking opportunities

- Speakers from Industry, Academia & National Lab

NRT Community Gathering

- NRT Trainees' poster presentations

UNIVERSITY OF DELAWARE

Spring 2022

NRT - MIDAS COMMUNITY HOURS



JANUARY 21, 2022
DR. ADAM FOLEY
UNIVERSITY OF DELAWARE
DIVERSITY, EQUITY, INCLUSION, & RESPECT WORKSHOP

FEBRUARY 4TH 2022
MS. MELISSA JURIST
UNIVERSITY OF DELAWARE
COLLEGE OF ENGINEERING SUMMER OUTREACH ACTIVITIES

FEBRUARY 18, 2022
NRT-MIDAS SUMMER OUTREACH ACTIVITIES TRAINEE DISCUSSION & SET UP

MARCH 4, 2022
PANEL DISCUSSION ON INTERDISCIPLINARY TRAINING & CO-ADVISED RESEARCH
DR. ARUSHI PRAKASH (AMAZON), MS. KATIE NELSON (CBI, UD), MR. PHILLIP TAYLOR (CBI, UD)

MARCH 18, 2022
DR. MICHAEL WEBB
PRINCETON UNIVERSITY
POLYMER DESIGN AT THE NEXUS OF SIMULATION AND MACHINE LEARNING

APRIL 8, 2022
DR. DEBRA AUDUS
NATIONAL INSTITUTE OF STANDARDS & TECHNOLOGY
ENABLING MACHINE LEARNING FOR POLYMER SCIENCE

APRIL 22, 2022
DR. ANDREW FERGUSON
UNIVERSITY OF CHICAGO
DATA-DRIVEN PROTEIN DESIGN

MAY 6, 2022
INDUSTRY SPEAKERS
COMPUTING & DATA SCIENCE IN CHEMICAL INDUSTRY R&D

For ZOOM LINK to these hybrid events please contact NRT program coordinator
MS. JENN JOHNSTON at UDNRTMIDAS@GMAIL.COM

UNIVERSITY OF DELAWARE

Fall 2022

NRT - MIDAS COMMUNITY HOURS



SEPTEMBER 9TH, 2022
WELCOME BACK, NRT RECAP AND FUTURE PLANNING

SEPTEMBER 23RD, 2022
MS. JENNIFER JOHNSTON
UNIVERSITY OF DELAWARE
EFFECTIVE COMMUNICATIONS WORKSHOP

OCTOBER 7TH, 2022
NRT-MIDAS TRAINEES TECHNICAL PROJECT PRESENTATIONS

OCTOBER 21ST, 2022
DR. TYLER MARTIN (NIST) AND DR. AHMAD GHOBADI (P&G)
TECH TALK - COMPUTING AND DATA SCIENCE IN NATIONAL LAB AND CHEMICAL INDUSTRY

NOVEMBER 4TH, 2022
DR. TOM POWERS
UNIVERSITY OF DELAWARE
DATA SCIENCE ETHICS AS CONSTRAINTS AND AFFORDANCES

NOVEMBER 18TH, 2022
DR. JEFFREY TING
NANITE BIO
TECH TALK - PROFESSIONAL MOVE FROM CHEMICAL INDUSTRY TO START UP

DECEMBER 9TH, 2022
SEMESTER WRAP UP

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Successful completion of all of the above NRT training elements will earn you a

**University of Delaware's Graduate Certificate in
Computing and Data Science for Soft Materials**