



# 2024 CESM Tutorial

## Daily Logistics

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# Code of Conduct

Here we value respectful dialogue, please . . .



**CGD's Vision: A Culture of Respect & Belonging**

<https://www.cgd.ucar.edu/about/diversity>

**UCAR DEI Office**

<https://www.ucar.edu/who-we-are/diversity-inclusion/office>

**Report ethics concerns**

<https://www.ucar.edu/who-we-are/ethics>

Norm	Meeting Agenda and Action
Share the Air OR Share Speaking Time	MEETING AGENDA: specify time for individuals with different and varied perspectives  ACTION: Designate a facilitator (who encourages <b>sharing</b> ). Speak <b>concisely</b> when it's your turn.
Show Appreciation & Acknowledge Teamwork	MEETING AGENDA: Include <b>bright spots</b> as an agenda item; create collaborative time during meetings  ACTION: Include your <b>team member's name</b> on your slides, name who provided you with the idea
Listen to Understand	MEETING AGENDA: everyone <b>summarizes</b> ; write and <b>share</b> meeting minutes  ACTION: Ask real questions to <b>learn more</b> , not to argue - for example, "Tell me more"
Communicate Context	MEETING AGENDA: Items or discussion start with <b>background information</b>  ACTION: Describe the <b>goal/purpose</b> of the conversation/meeting
Value New Ideas & Encourage Innovation	MEETING AGENDA: specify time for new ideas/innovation,  ACTION: "Tell me more," and build on others ideas - "yes, that's great , <b>and.... (not but)</b> "
Offer Constructive Feedback	MEETING AGENDA: make time for <b>review and reflection</b>  ACTION: ask "what worked well?" Check your understanding. Ask "what feedback would be meaningful?"

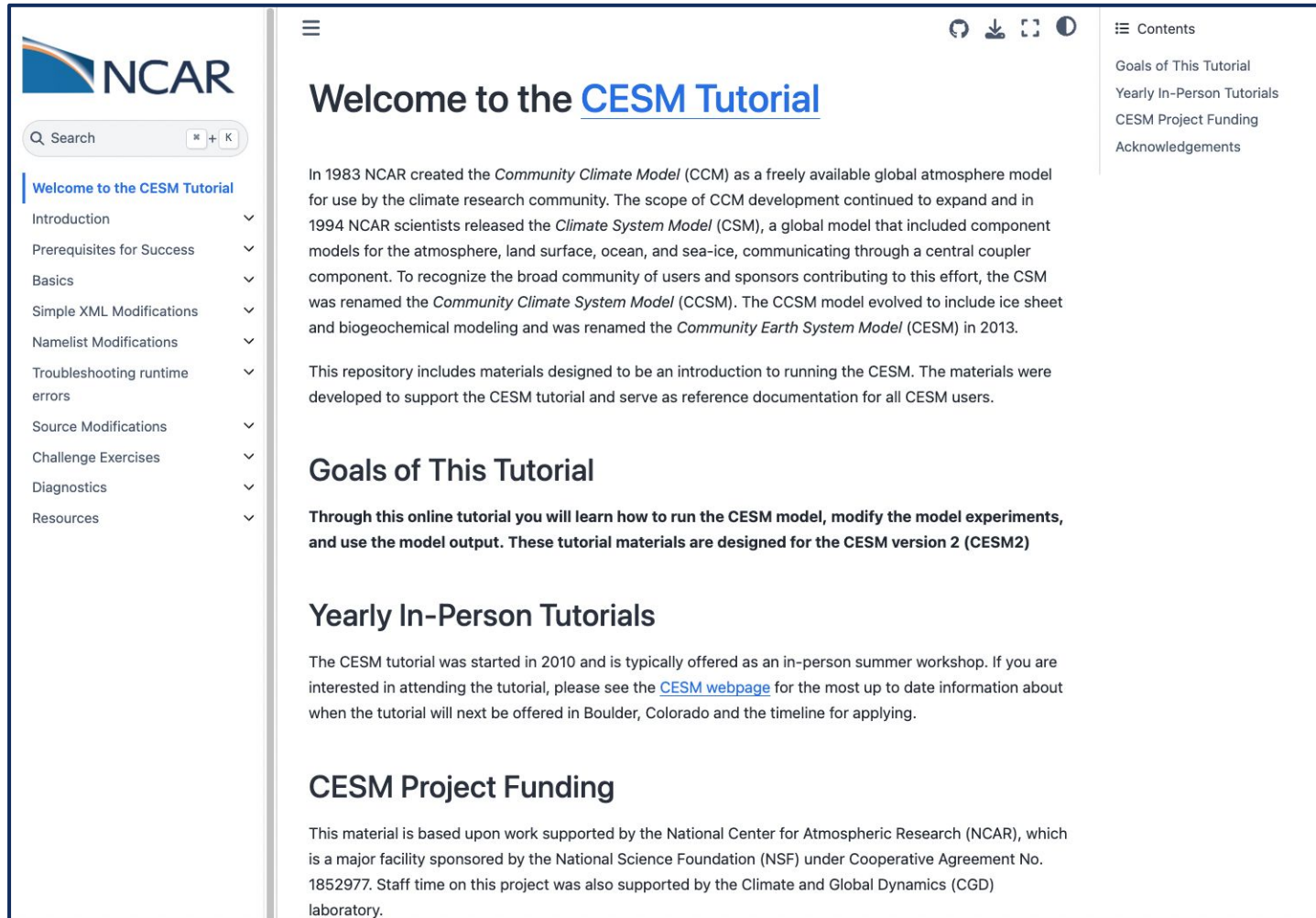
# Meet a scientist

Assignments have been made. Check you email

<b>TUESDAY</b>					
Scientist	Room	Participant	Participant	Participant	Participant
Will Wieder	<a href="#">Chapman</a>	Aandishah Samara	Shihan Li	Song Jiang	
Christina McCluskey	<a href="#">Inner Cafeteria</a>	Abdulamid Fakoya	Ashok Gupta	George Gyabaah	Sisi Chen
Frank Bryan	<a href="#">Director's Conference</a>	Hillary Beckmeyer	Sandra Manulat	Arghya Goswami	Cassia Cai
Peter Lawrence	<a href="#">Inner Cafeteria</a>	Massimo Martina	Ran Qi	Lyssa Freese	Ishrat J. Dollan
Bette Otto-Blieser	<a href="#">Outer Damon</a>	Ana Isabel Gonzalez Mendez	Benjamin Tiger	Ibuki Sugiura	Meredith Parish
Jiang Zhu	<a href="#">Outer Cafeteria</a>	Stephen Cropper	Becca Cleveland-Stout	Andrew Feder	Emily Wisinski
<b>Wednesday</b>					
Scientist	Room	Participant	Participant	Participant	Participant
Marika Holland	<a href="#">Director's Conference</a>	Yu-Chi Lee	Samuel Brenner	Theo Carr	Chen Zhang
Kristen Krumhar	<a href="#">Inner Damon</a>	Chun Yin Anthony Chan	Prani Nalluri	Zhuyi Wang	
Alice DuVivier	<a href="#">Cafeteria</a>	Maria Inês Buco Cajada	Cyric Ng	Evan Meeker	Pappu Paul
Brian Dobbins	<a href="#">Cafeteria</a>	Cameron Cummins	Luca Jeongsuk Oh	Temitope S. Egbebiyi	
Adrianna Foster	<a href="#">Chapman</a>	Ben Felzer	Tyler Tatro	Trent Robinett	
Gunter Leguy	<a href="#">Outer Damon</a>	Sioumin Tsao	Saidat Rasaq-Balogun		
<b>Thursday</b>					
Scientist	Room	Participant	Participant	Participant	Participant
Jesse Nusbaum	<a href="#">Cafeteria</a>	Andrew Reiser	Qingyuan Yang	Emily Hayden	Madeleine Beckner
Hui Li	<a href="#">Chapman Room</a>	Cong Gao	Fouzia Fahrin	Ishrat J. Dollan	
Peter Lauritzen	<a href="#">Director's Conference</a>	Noah Kravette	Bob Payne	Hsing-Hung Chou	
Monica Morrison	<a href="#">Cafeteria</a>	Carly Frank	Frank Mackenzie	Selena Zhang	
Isla Simpson	<a href="#">Inner Damon</a>	Holly Thomas	Yifei Fan	Sam Bartusek	Prasad Shelke
Meg Fowler	<a href="#">Outer Damon</a>	Greta Miller	Julia Miller	An-Yi Huang	José Luis Del Castillo Castillo

# Lab documentation

<https://ncar.github.io/CESM-Tutorial/README.html>



The screenshot shows the NCAR website for the CESM Tutorial. The header includes the NCAR logo and a search bar. A left sidebar contains a navigation menu with items like 'Introduction', 'Prerequisites for Success', 'Basics', 'Simple XML Modifications', 'Namelist Modifications', 'Troubleshooting runtime errors', 'Source Modifications', 'Challenge Exercises', 'Diagnostics', and 'Resources'. The main content area is titled 'Welcome to the CESM Tutorial' and contains several sections: a paragraph about the history of the model, a 'Goals of This Tutorial' section with a bolded statement, a 'Yearly In-Person Tutorials' section, and a 'CESM Project Funding' section. A right sidebar contains a 'Contents' menu with links to 'Goals of This Tutorial', 'Yearly In-Person Tutorials', 'CESM Project Funding', and 'Acknowledgements'.

**Welcome to the CESM Tutorial**

In 1983 NCAR created the *Community Climate Model* (CCM) as a freely available global atmosphere model for use by the climate research community. The scope of CCM development continued to expand and in 1994 NCAR scientists released the *Climate System Model* (CSM), a global model that included component models for the atmosphere, land surface, ocean, and sea-ice, communicating through a central coupler component. To recognize the broad community of users and sponsors contributing to this effort, the CSM was renamed the *Community Climate System Model* (CCSM). The CCSM model evolved to include ice sheet and biogeochemical modeling and was renamed the *Community Earth System Model* (CESM) in 2013.

This repository includes materials designed to be an introduction to running the CESM. The materials were developed to support the CESM tutorial and serve as reference documentation for all CESM users.

**Goals of This Tutorial**

**Through this online tutorial you will learn how to run the CESM model, modify the model experiments, and use the model output. These tutorial materials are designed for the CESM version 2 (CESM2)**

**Yearly In-Person Tutorials**

The CESM tutorial was started in 2010 and is typically offered as an in-person summer workshop. If you are interested in attending the tutorial, please see the [CESM webpage](#) for the most up to date information about when the tutorial will next be offered in Boulder, Colorado and the timeline for applying.

**CESM Project Funding**

This material is based upon work supported by the National Center for Atmospheric Research (NCAR), which is a major facility sponsored by the National Science Foundation (NSF) under Cooperative Agreement No. 1852977. Staff time on this project was also supported by the Climate and Global Dynamics (CGD) laboratory.

## Rough guidelines for the lab

Day 1: Basics

Day 2: Simple xml modifications

Day 3: Namelist, Troubleshooting, Source Mods

Day 4: Challenge exercises

Day 5: Diagnostics

**BUT**

This is a **self-paced lab**.

We all come from different backgrounds. Some people will move faster, and some will move slower. It's completely okay.

# How to use project number and reservation queue

To use project number (in theory it is set in your profile)

```
./xmlchange PROJECT=UESM0013
```

How do I use the reservation queue (active during lab)

during lab

```
cd /glade/u/home/$USER/code/my_cesm_code/cime/scripts  
./create_newcase --case ~/cases/b1850.basics --res f19_g17 --compset B1850
```

```
cd ~/cases/cases/b1850.basics  
./case.setup
```

```
qcmd -q tutorial -- ./case.build
```

```
./xmlchange JOB_QUEUE=tutorial --force
```

```
./case.submit
```

outside lab

```
cd /glade/u/home/$USER/code/my_cesm_code/cime/scripts  
./create_newcase --case ~/cases/b1850.basics --res f19_g17 --compset B1850
```

```
cd ~/cases/cases/b1850.basics  
./case.setup
```

```
qcmd -- ./case.build
```

```
./xmlchange JOB_QUEUE=main
```

```
./case.submit
```

Questions ?

