

Creating an AS Atmospheric Sciences Curriculum for Student Success and Seamless 2YC to 4YC Transfer

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SALT LAKE COMMUNITY COLLEGE



Atmospheric Sciences

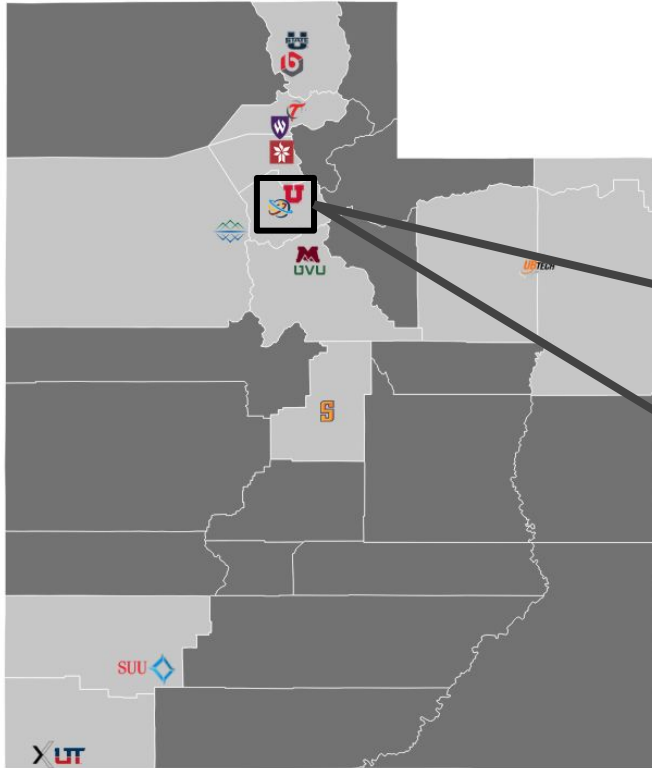


Geosciences Department

SLCC & U of U Institutional Data

Fall 2023 Data	SLCC	U of U
Headcount	26,764	35,310
FTE	10,466	29,908
% Part-time	77.33%	17.07%
% Female	54.64%	48.98%
% Hispanic or Latino	19.73%	12.85%
% 18-24	43.00%	70.98%
% Salt Lake County	81.3%	39.8%

Utah System of Higher Education (USHE)



- 8 Public Colleges & Universities
- 8 Technical Colleges
- SLCC is the only Comprehensive Community College
- U of Utah is only BS Atmospheric Sciences program

Features of USHE as “Overseer”

- System-wide general education agreements
- Focus on post-high school credentials
- Regular institutional interaction/collaboration

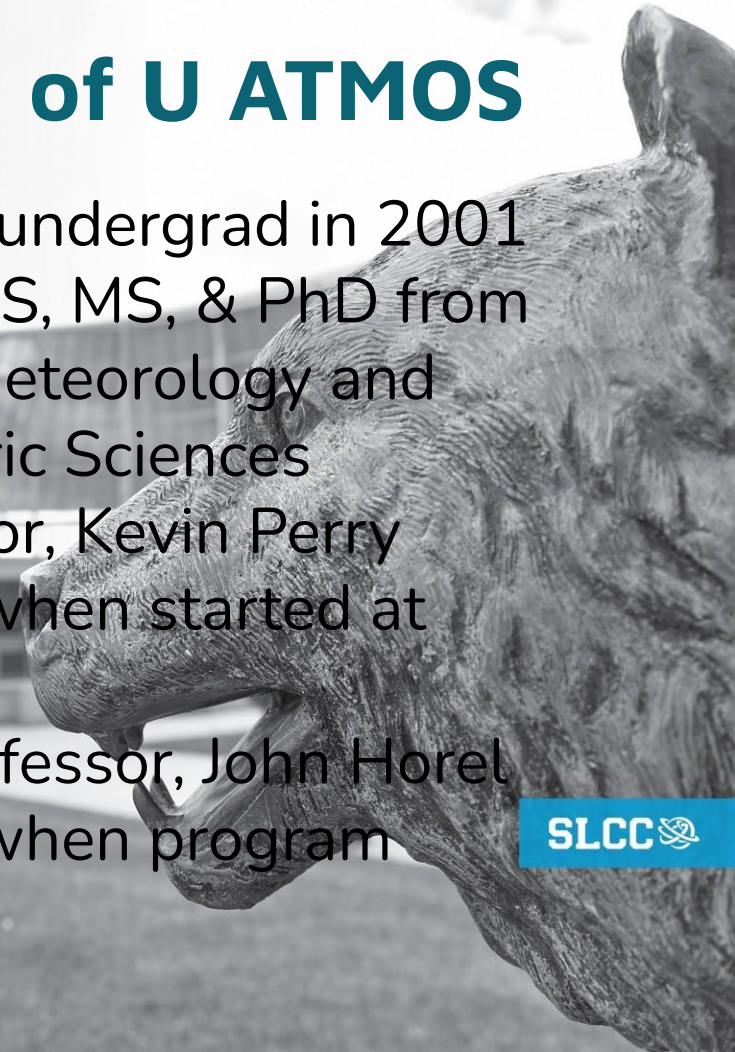
UTAH'S PUBLIC COLLEGES AND UNIVERSITIES



My Relationship with U of U ATMOS



- Started as undergrad in 2001
- Received BS, MS, & PhD from U of U in Meteorology and Atmospheric Sciences
- PhD Advisor, Kevin Perry was chair when started at SLCC
- Former professor, John Horel was chair when program developed

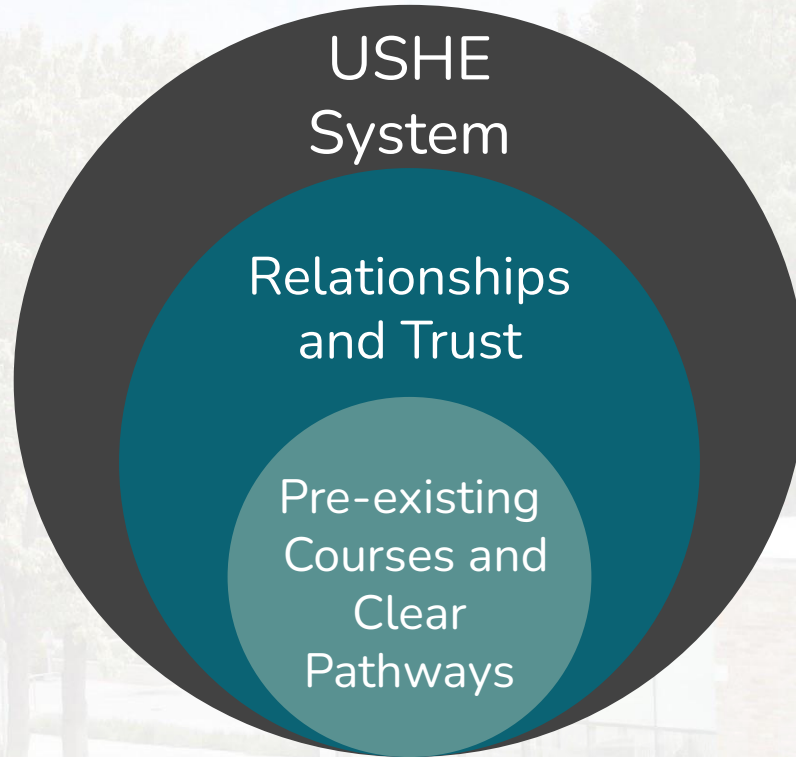


Features of First 2 Years of Meteorology / Atmospheric Science Programs

- General Education
 - Already have Package Transfer
- Math, Physics, & Chemistry
 - Already have Course Transfer
- New Introductory ATMO Courses
 - Was able to custom design to match with U of U classes
 - 2 are general education -> helps with FTEs



Factors for Success of Transfer



HHMI Utah Pathways to STEM (UPSTEM) Grant

- SLCC & U of U co-awardees
- Yearly Faculty Fellows Program
 - 2021-2022
- Disciplinary Articulation Teams
 - 2022-2023 Geosciences
- STEM Success Fair

Great venue for relationship building & transfer conversations!



SLCC

Timeline of Course & Program Approval

2014

I arrive at SLCC, hired as a "Geography" professor. There is one general education Introduction to Meteorology course.

2015

Begin curriculum process for 4 new ATMO courses and new AS Atmospheric Sciences program.

2016

Curriculum process complete for courses. Begin teaching new gen ed and majors courses.

2019

Curriculum process complete for AS Atmospheric Sciences pre-major program. Students can begin enrolling.

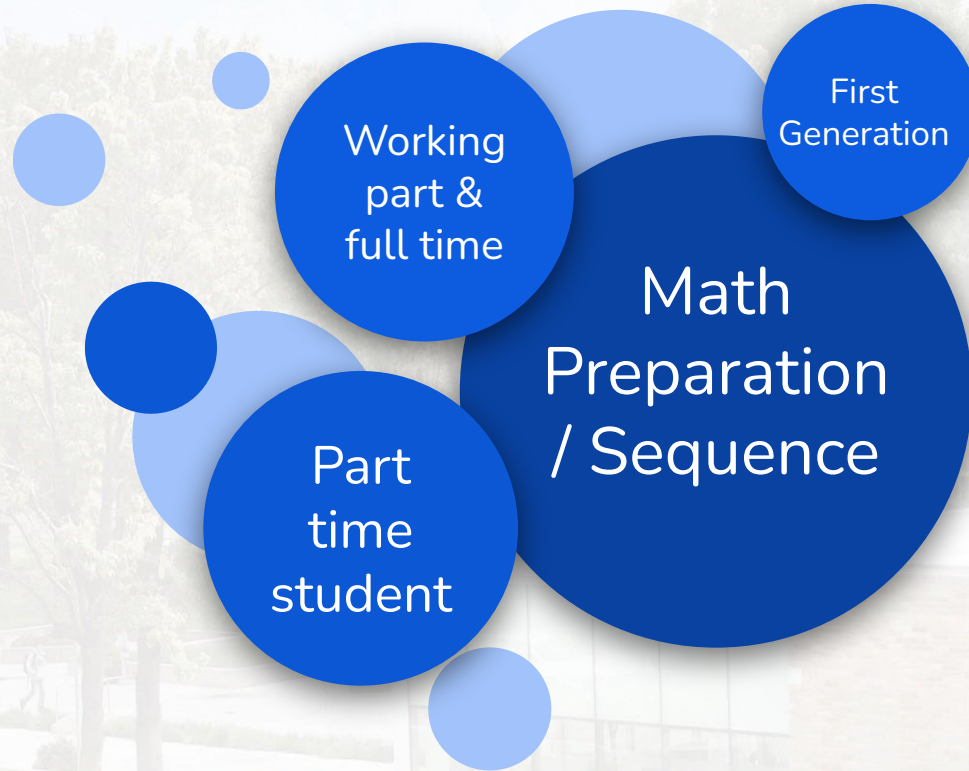
AS Atmospheric Sciences

Program Component	Credit Hours
General Education	31
Chemistry I + Lab	5
Calculus Physics I & II + Labs	10
Math	4-20
ATMO Courses	12
Electives	0-8
Total	62-86

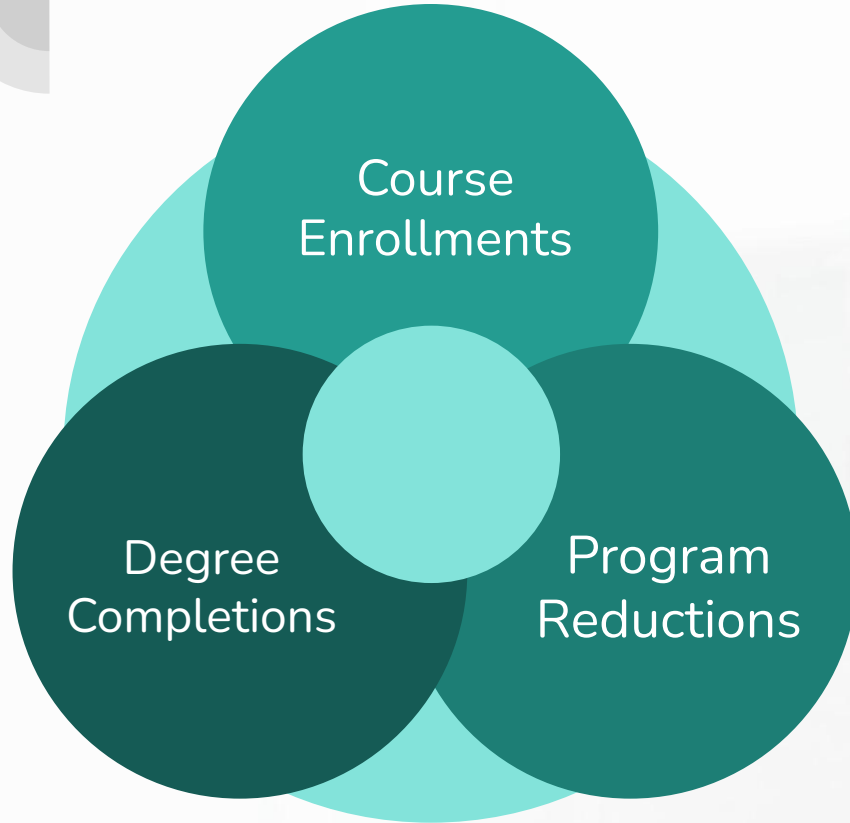
SLCC Atmospheric Sciences Courses

Course	Curriculum & Features
ATMO 1010 Severe and Hazardous Weather (PS)	Physical Sciences General Education; Basics of Weather & Forecasting; Application to Severe Weather case studies; Weather and Your Major project
ATMO 1020 Climate Change (PS)	Physical Sciences General Education; Climate System; Paleoclimate; Human-caused climate change; Civic engagement with Climate Action Project
ATMO 2100 Air Pollution & Atmospheric Chemistry	Basics of air pollution science; Research project presented via poster at Air Quality Symposium;
ATMO 2200 Mountain Weather & Climate	Focus on snow science, avalanches, and mountain winds; research project presented orally

Student Challenges at SLCC



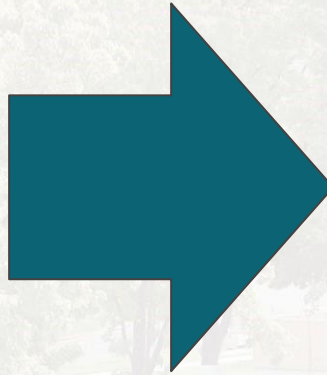
Institutional Challenges at SLCC



- Challenging to recruit, enroll, retain, and track students
- Do not get “credit” for students who transfer and successfully complete BS if they didn’t complete AS

So... AS ATMO 2019-2024 RIP

1. AS Atmospheric Sciences
2. AS Geology
3. AS Geographic Information Science
4. CP Environmental Science & Sustainability



1. AS Earth & Environmental Science
 - a. Atmospheric & Climate Science
 - b. Geographic Information Science
 - c. Geology
 - d. Ecosystem Science

Where we are now...

GRANT ME THE SERENITY
TO ACCEPT THE THINGS
I CANNOT CHANGE,
**THE COURAGE
TO CHANGE**
THE THINGS I CAN, AND
THE WISDOM TO KNOW
THE DIFFERENCE.

REINHOLD NIEBUHR

PassItOn.com

Work has not been lost...

- Articulation and transfer agreements remain

We will just be working with & advising students in a new context.



SALT LAKE COMMUNITY COLLEGE



Earth & Environmental Sciences

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