

Math 3550 - Course Projects

We will have an individual and a group project which are interconnected. In the individual project you will research existing information and models, summarize them, and develop ideas for important questions that should be addressed in your group project. In the group project, you will develop a full model on your own. A second version of the group project should be written for submission for publication or presentation.

Individual Project Submission

The individual project submission will occur as you are working in your groups. As part of developing your group model, you must read existing research/models critically. In some cases, you might find listed material lacking and might want to expand the scope of your search. Feel free to gather more information by contacting sources, listening to podcasts, etc. You may choose different approaches or similar approaches. You will report on them in the same format as your original group work. Your individual submission must include the following.

- Executive Summary
- Describe several different or interrelated models. State precisely the problems addressed.
- Explain how the models were developed; assumptions and rationale/justification, model fitting or estimation of the values used.
- How were model verification, sensitivity analysis, including error analysis, etc. conducted?
- Discuss the strengths and weaknesses of each model or approach.
- What are the important questions you think should be answered or you like to investigate?

Your entire submission cannot exceed 25 pages. See more information in the Group Project section.

Group Project Submission

Choose one of the following projects. Each group will submit one report. You may choose to make a presentation to the class. Presentation can be part of your or your group's score. I will be inclined to give extra credit to exceptional reports or presentations. A partial or less than optimal solution is acceptable. Follow the general style of the sample report in the course website. However, be sure to include the following.

- One-page Executive Summary
- Table of contents
- Restatement and clarification of the problem: state in your own words what you are going to do.
- Clearly list and describe all variable and hypotheses.
- State the assumptions that bear on the problem and their rationale/justification.
- Present an analysis of the problem motivating your model design. Explain your model.
- Present derivations, computations, or illustrative examples. You may need to summarize some of it and leave lengthy derivations and/or calculations in appropriate appendices.
- Describe model testing and discuss sensitivity analysis, error analysis, and/or stability.
- Discuss the strengths and weaknesses of your model or approach.
- Provide a conclusion and report results explicitly.
- Document resources and references.

Groups

Not every group member will earn the same score on their group project. The individual scores for group projects will vary based on the level of participation and contribution of each member.

Group 1

Niki Bell

Loren Hansen

Connor McMillan

Cameron Taylor

Group A

Amber Deamer

Rhett Tuttle

Gavin Whitten

Michael Wittig

Project Dates

Oct 1 – Oct 6: Choose your individual project. Collect many relevant articles, information, data, etc. **Our science librarian Miranda Kispert, mirandakispert@weber.edu can be very helpful.**

Oct 1 – Oct 10: Each student must meet me to discuss their individual project, information collected, etc. Plan the write-up for your individual project.

Week of Oct 13: Start writing your individual project.

Week of Oct 20: Groups will be finalized. Exchange information. Devise a plan for sharing information. Choose a project. Assign roles to group members. All individual work should be carefully read and checked by one other person. There must be someone tasked to keep the group on schedule. Discuss how to proceed and what type of model to use. Start search for relevant articles. **Our science librarian Miranda Kispert, mirandakispert@weber.edu can be very helpful.**

Week of Oct 27: Start the modeling process. Plan your project.

Mon, Oct 27: Individual project due date.

Week of Nov 3: Develop a rough model and test it.

Week of Nov 3: The groups must meet me and discuss their works. Improve the model, test it, and develop the final model. Start the write up.

Week of Nov 10: Finish the final model and the first draft of the write up.

Week of Nov 17: Improve the write up and finalize your project.

Week of Nov 24: The groups must meet me and discuss their works. Have each portion of the project re-read by at least two people. Verify the calculations. Check the resources. Check the spelling, grammar, etc. Finish your project.

Week of Nov 24: Develop new versions for classroom presentation and submission for publication or presentation.

Mon, Dec 1 or 3: Group Project due date.

Week of Nov 24: Develop new versions for classroom presentation and submission for publication or presentation.

Dec 3 or 5: Opportunity for presentation in the classroom.

After the final exam week: Submit for publication to Ergo. Consider publishing your paper in other journals or develop a poster for a poster presentation. Be sure to include me in all emails regarding your submission.

Problem A: Thirsty Utah

Utah's population is growing at a rapid rate (<http://worldpopulationreview.com/states/utah-population/>). In addition to increase in culinary water usage, secondary water, which is suitable for agricultural use, with very little volume restriction, by homeowners for watering lawns and landscaping is increasing. The demand on water resources for industrial and agricultural use is also on the rise. State of Utah is considering Bear River Development Project and is in the process of building a Lake Powell Pipeline (<https://water.utah.gov/bear-river-dev/> and <http://lpputah.org/>). State has developed and refined water plans over the years; Utah's Water Resources 2001, Water for Utah 2018, Flowing Toward 2050, etc. (<https://water.utah.gov/>, www.nr.state.ut.us/wtrresc/waterplan/, https://drought.unl.edu/archive/plans/Water/state/UT_2001.pdf, <https://water.utah.gov/wp-content/uploads/2019/12/Water-for-Utah-2019.pdf>, <https://extension.usu.edu/employee/files/Recommended-State-Water-Strategy-July-2017.pdf>, <https://www.mdpi.com/2073-4441/9/3/214>, <http://www.utahfoundation.org/reports/flowing-toward-2050-utahs-water-outlook>). Your group, called Thirsty Utah Advisory Group, is formed to provide further unbiased analysis.

Task 1: Determine all sources of water in the state of Utah. Find all water usage, culinary, secondary, agricultural and industrial, information. Determine what happens to all waste water. Determine the rate at which water resources are being replenished. Determine expected growth in water usage.

Task 2: Develop a model for overall water usage (culinary, secondary, agricultural and industrial) in the state of Utah. This model should take into account the growing population and other expected changes in future.

Task 3: (a) Based on your model, determine the level of availability/scarcity of water in future. (b) Conservation and water price have significant impact on water usage. In addition, development of new resources may increase water resources. Determine how these factors, and others, can influence future water usage.

(c) Present a water plan for the state of Utah. The focus of the plan has to be to provide sufficient culinary water for the growing population while meeting the agricultural and industrial needs. The plan may include, conservation, waste water treatment and reuse, changes in landscaping, agricultural and industrial practices.

Task 4: Analyze state of Utah reports and water plans and comment on their feasibility and consistency. Can any of the plans, including yours, accommodate expected growth in the state of Utah? If not, provide possible solutions to be explored by the next Thirsty Utah Advisory Group.

Other possible useful resources:

26, S. H. K. (2023, January 21). *Utah Water Policy issues*. Utah Foundation.

<http://www.utahfoundation.org/reports/flowing-toward-2050-utahs-water-outlook>

Christensen, J. (Ed.). (n.d.). H.B. 371: Changes and Updates Affecting Land Conservation in Utah. <https://ag.utah.gov/wp-content/uploads/2023/07/Final-H.B-371-Handout.pdf/>

Hadas, E., & Gal, Y. (2012). Inter-sector water allocation in israel, 2011-2050: Urban Consumption Versus Farm Usage. *Water and Environment Journal*, 28(1), 63-71. <https://doi.org/10.1111/wej.12011>

US Geological Survey. (n.d.). *Water Use Data For Utah*. USGS water use data for Utah. https://nwis.waterdata.usgs.gov/ut/nwis/water_use/

Utah population 1900-2022. MacroTrends. (n.d.). <https://www.macrotrends.net/states/utah/population>

Utah's Coordinated Action Plan for Water. Governor's Office of Planning and Budget. (n.d.). <https://gopb.utah.gov/waterplan/>

Water Resources Plan 2021. Utah Division of Water Resources. (n.d.). <https://water.utah.gov/utah-division-of-water-resources-announces-finalized-water-resources-plan/>

Winslow, B. (2023, November 15). *Utah needs a comprehensive water plan, legislative audit warns*. standard.net. <https://www.standard.net/news/environment/2023/nov/15/utah-needs-a-comprehensive-water-plan-legislative-audit-warns/>

Problem B: Great Salt Lake

The Great Salt Lake is a very large, shallow, terminal, salt water lake that has a significant effect on the local climate. The lake provides critical wetland/marsh habitat for migratory shorebirds and waterfowls. Due to its high salinity, it doesn't have any fish, but supports brine shrimp whose eggs are harvested and used worldwide. Mineral extraction in the form of sodium chloride, potassium sulfate, and magnesium, is the main industry. The lake being a terminal lake it is highly sensitive to annual precipitation as evident by 1983 flood of Salt Lake City and reaching its lowest level and losing one-half its surface area recently. As the lake dries up, the amount of dust in the air increases, exposing resident to increased level of toxic metals, such as arsenic and mercury, in addition to increase in cases of asthma attacks and lung and heart diseases. Your group, called Great Salt Lake Advisory Group, is formed to provide further unbiased analysis.

Task 1: Determine sources of water of the Salt Lake. Determine changes to its water resources over the years. Determine the portion of available water used for other purposes; farming, secondary water, industry, and culinary water. Develop a model for the amount of water needed to maintain the lake at different levels and (monthly/quarterly/annual) average temperatures or other variables you deem important.

Task 2: (a) Develop a model for the annual precipitation (rain and snow). Develop a model for the availability of water for the Great Salt Lake based on total available water and diversions for human

usage. Your model has to take account of our growing population, growing square footage of lawns, etc.

(b) Conservation may have significant impact on overall water usage. In addition, development of new or unused resources may increase water availability. Determine how these factors, and others, can influence future of the Great Salt Lake.

(c) Develop a Great Salt Lake Water Plan for the state of Utah. The focus of the plan has to be to save the lake while still providing sufficient culinary water for the growing population. The plan may include, conservation, waste water treatment and reuse, changes in landscaping, agricultural and industrial practices, undoing changes to the water system, and limiting/stopping the growth of human consumption of fresh water.

Task 3: (a) There must be correct incentives to implement a plan. For example, “use it or lose it” system for farmers only encourages maximum use of water resources. Present a system of incentives to help implement your plan.

(b) Based on the earlier models, determine the future of Salt Lake under different scenarios.

(c) Analyze existing reports and plans, and comment on their feasibility and consistency. Can any of the plans, including yours, prevent the inevitable drying of the lake? If not, provide possible ways of dealing with its health effects and other consequences.

<https://www.usgs.gov/news/state-news-release/new-one-stop-shop-webpage-all-things-great-salt-lake>

<https://www.usgs.gov/centers/utah-water-science-center>

<https://www.usgs.gov/news/state-news-release/great-salt-lake-reaches-new-historic-low>

<https://earthobservatory.nasa.gov/images/148700/record-low-for-great-salt-lake>

<https://web.archive.org/web/20060724104310/http://www.waterquality.utah.gov/watersheds/lakes/BEARLAKE.pdf>

<https://web.archive.org/web/20051218091807/http://www.manomet.org/WHSRN/sites/Great%20Salt%20Lake.htm>

<http://faculty.weber.edu/sharley/AIFT/GSL-Life.htm>

<https://web.archive.org/web/20131029201307/http://www.ksl.com/?nid=148&sid=10121605>

The Great Salt Lake is getting a little less great – here’s why, 2022, 15 Oct. 2022

<https://www.weforum.org/agenda/2022/08/great-salt-lake-shrinking-climate-change/#:~:text=Population%20growth%20and%20climate%20change,the%20lake%2C%20according%20to%20NASA.>

Utah Division of Water Resources, 2022, 15 Oct, 2022 <https://water.utah.gov/great-salt-lake/#:~:text=At%20an%20average%20water%20level,with%20335%20miles%20of%20shoreline.>

Historic low stand of Great Salt Lake, Utah, 2021. 15 Oct. 2022
<https://link.springer.com/article/10.1007/s42452-021-04691-5>

<https://www.weather.gov/wrh/Climate?wfo=slc>

Glad you asked: Does Utah really use more water than any other state? 2021, Oct. 2022.
<https://geology.utah.gov/map-pub/survey-notes/glad-you-asked/does-utah-use-more-water/>

Utah State Profile and Energy Estimates. 2022, Nov. 2022.
<https://www.eia.gov/state/?sid=UT>

Groundwater: It's The Water We Drink., 2022, Nov. 2022
<https://groundwater.org/threats/overuse-depletion/>

Energy and Minerals, 2019. Nov. 2022
<https://geology.utah.gov/energy-minerals/metals/>

How to Irrigate Efficiently, 2021. Nov. 2022.
<https://extension.usu.edu/cwel/irrigation-extension>

Utah's Drinking Water, 2019. Nov. 2022.
<https://deq.utah.gov/drinking-water/utahs-drinking-water>

Rebate Information: Get money back for purchasing water-saving technology, 2022. Nov. 2022.
<https://weberbasin.com/Conservation/Rebates>

Utah residents use the most water of any Northwestern state. They also pay some of the lowest water rates, 2022. Nov. 2022. <https://www.sltrib.com/news/2021/09/20/utah-residents-use-most/>
Outline of Utah, 2022, Oct. 2022, https://en.wikipedia.org/wiki/Outline_of_Utah

Utah Division of Water Rights, 2022, Oct. 2022,
https://waterrights.utah.gov/asp_apps/viewEditPWS/pwsView.asp?SYSTEM_ID=1127

Our Changing Population: Utah, 2022. <https://usafacts.org/data/topics/people-society/population-and-demographics/our-changing-population/state/utah>

Water Use Data for Utah, 2022,
https://waterdata.usgs.gov/ut/nwis/water_use/

Utah's Great Salt Lake has lost half its water, thanks to thirsty humans, 2017,
<https://www.science.org/content/article/utah-s-great-salt-lake-has-lost-half-its-water-thanks-thirsty-humans>

MODELING THE GREAT SALT LAKE By Ibrahim Nourain Mohammed, 2006.
https://hydrology.usu.edu/dtarb/ibrahim_thesis.pdf

Amazing Great Salt Lake, 2022. [https://slco.org/watershed/know-your-local-waters/amazing-great-salt-lake/#:~:text=The%20Great%20Salt%20Lake%20Watershed%20is%20over%2021%2C000%20square%20miles,Jordan%20River\)%20and%20internal%20springs.](https://slco.org/watershed/know-your-local-waters/amazing-great-salt-lake/#:~:text=The%20Great%20Salt%20Lake%20Watershed%20is%20over%2021%2C000%20square%20miles,Jordan%20River)%20and%20internal%20springs.)

USGS Current Water Data for Utah, 2022.

<https://waterdata.usgs.gov/ut/nwis/rt>

Severe Weather 101 NOAA, 2022.

<https://www.nssl.noaa.gov/education/svrwx101/winter/faq/#:~:text=On%20average%2C%20thirteen%20inches%20of,powdery%20snow%20under%20certain%20conditions.>

Simplified versions for the Penman evaporation equation using routine weather data, 2006.

<https://www.sciencedirect.com/science/article/abs/pii/S002216940600326X#:~:text=The%20simplified%20formula%20for%20the,d%20is%20the%20extraterrestrial%20radiation.>

Effect of Water Surface Salinity on Evaporation: The Case of a Diluted Buoyant Plume Over the Dead Sea, 2018.

<https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1002/2017WR021995#:~:text=Increasing%20water%20salinity%20reduces%20evaporation,%2C%201985%3B%20Stumm%20%26%20Morgan%2C>

Water Quality Utah - Willard Bay Watershed, 2022.

<http://www.waterquality.utah.gov/watersheds/lakes/WILLARD.pdf>

Water Quality Utah - Bear Lake Watershed, 2022.

<https://web.archive.org/web/20060724104310/http://www.waterquality.utah.gov/watersheds/lakes/BEARLAKE.pdf>

Bear River Diverted to Bear Lake, 2022. <https://bearriverinfo.org/watershed-description/bear-lake/index>

Ghost Towns and Toxic Fumes: How an Idyllic California Lake Became a Disaster, 2021.

<https://www.cnbc.com/2021/11/06/californias-salton-sea-spewing-toxic-fumes-creating-ghost-towns-.html>

Isolation and characterization of halophilic bacteria with the ability of heavy metal bioremediation and nanoparticle synthesis from Khara salt lake in Iran, 2021. [https://web-s-ebshost-com.hal.weber.edu/ehost/detail/detail?vid=12&sid=197c8d69-ad38-46a4-8836-](https://web-s-ebshost-com.hal.weber.edu/ehost/detail/detail?vid=12&sid=197c8d69-ad38-46a4-8836-33118d644c5b%40redis&bdata=jnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#AN=151880729&db=asn)

[33118d644c5b%40redis&bdata=jnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#AN=151880729&db=asn](https://web-s-ebshost-com.hal.weber.edu/ehost/detail/detail?vid=12&sid=197c8d69-ad38-46a4-8836-33118d644c5b%40redis&bdata=jnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#AN=151880729&db=asn)

Effective rhizoinoculation and biofilm formation by arsenic immobilizing halophilic plant growth promoting bacteria (PGPB) isolated from mangrove rhizosphere: A step towards arsenic rhizoremediation, 2021. <https://www.sciencedirect.com/science/article/pii/S0048969717319502>

Prospecting metal-resistant plant-growth promoting rhizobacteria for rhizoremediation of metal contaminated estuaries using *Spartina densiflora*, 2013.

<https://www.sciencedirect.com/science/article/pii/S0048969717319502>

Lake Bonneville History, 2020. <https://historytogo.utah.gov/lake-bonneville/>

Problem C: Wind Power

For both environmental and economic reasons, there is global interest in reducing use of fossil fuels. One way to do this is to increase power generated from the wind energy. Now, around the world, we have large scale wind power generation with turbines placed in oceans and areas with consistent winds. In smaller scale, some farmers and ranchers are diversifying their businesses by installing wind turbines in their fields and even some home owners are installing small and quiet wind turbines in their yards. Although the cost of energy production through wind turbines has decreased, the industry faces some growth challenges. For your individual project, research local, regional, and international research in this area. You should consider future power needs, possible mix of power generation, costs, including environmental costs, growth of wind power generation under different economic conditions.

For your group project, consider the following scenario. Suppose state of Utah sets up a public/private partnership called Wind Power Utah. Your job is to serve as advisors to Wind Power Utah.

Task 1: Explore the viability (costs, benefits, competitiveness, etc.) of wind energy production. Do include (health) cost of fossil fuel energy production. What are the possible obstacles: regulatory, environmental or community wise, both in rural and urban areas?

Task 2: Recommend a viable plan to increase wind energy production.

- (a) Determine whether we should develop large wind farms, smaller ones close to urban areas, encourage individual small turbines in private homes and businesses, or a combination of them.
- (b) Determine optimal locations (rural and urban areas) and number and type of wind turbines if the state of Utah could develop its wind energy potential instantaneously. Include how to incorporate/expand/modify existing wind energy production facilities. What are the key factors that shaped your proposal?
- (c) Based on projected growth rate, what is the timeline you propose for achieving the maximum wind energy potential in the state? To get started, you may wish to consider how long it will take to achieve 30%, 50%, or 70% of total potential? Propose ideas to accelerate the growth of wind energy, if you feel the current rate is too low.

Task 3: The technological world continues to change and the mix of energy production from fossil fuels, renewables (solar, wind), hydropower and nuclear energy will change. Comment on how these technologies might impact your analyses of the increasing wind power energy production.

State of Iowa is the leader in wind energy production.

<https://www.iaenvironment.org/webres/File/Wind%20Energy%20Fact%20Sheet%20-%202023.pdf>

Here is a paper on health costs of PM2.5.

[https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196\(24\)00098-6/fulltext](https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(24)00098-6/fulltext)

<https://www.power-technology.com/features/wind-energy-by-country/>

<https://wwindea.org/information-2/information/>

<https://energy.economictimes.indiatimes.com/news/renewable/worlds-top-10-countries-in-wind-energy-capacity/68465090>

<https://gwec.net/global-figures/wind-in-numbers/>

https://en.wikipedia.org/wiki/Wind_power_in_Utah

<http://energy.utah.gov/resource-areas/renewable-energy/resource-profile-wind-energy-utah/>

<https://windexchange.energy.gov/states/ut>

<https://utahcleanenergy.org/how-to/wind-energy>

<http://solarsimplified.org/find-a-contractor/solar-contractor-list>

https://digitalcommons.usu.edu/cgi/viewcontent.cgi?article=1318&context=extension_curall

<https://www.windpowerengineering.com/wind-project-map/>

Berry, J. (2009). Energy News: Utah's Renewable Energy Zone Assessment. Utah Geological Survey- Survey Notes, 41(2), 8–13. Retrieved November 30, 2022, from <https://geology.utah.gov/map-pub/survey-notes/energy-news/energy-news-utahs-renewable-energy-zone-assessment/#:~:text=Utah%E2%80%99s%20total%20solar%2C%20wind%2C%20and%20geothermal%20renewable%20energy,of%20each%20of%20the%20three%20resources%20is%20developed>

Next-generation Wind Technology. U.S. Department of Energy - Energy.gov. (2022). Retrieved December 2, 2022, from <https://www.energy.gov/eere/wind/next-generation-wind-technology#:~:text=Since%201999%2C%20the%20average%20turbine%20generating%20capacity%20has,towers%2C%20more%20reliable%20drivetrains%2C%20and%20performance-optimizing%20control%20systems>

Siting Study - Interactive Energy Study Map - Utah Renewable Energy Web Map Application. (n.d.). *Utah Office of Energy Development - Utah.gov*. Interactive map. Retrieved October 30, 2022, from <https://www.energy.utah.gov/energy-information/siting-study/>

Teyabeen, A., Akkari, F., & Jwaid, A. (2019). Mathematical modeling of wind turbine power curve. *International Journal of Simulation: Systems, Science & Technology*. <https://doi.org/10.5013/ijssst.a.19.05.15>

U.S. Energy Information Administration. (2021, August 29). U.S. Energy Information Administration - EIA -independent statistics and analysis. Electricity Data Browser. Retrieved November 30, 2022, from <https://www.eia.gov/electricity/data/browser/> 20 WIND POWER IN UTAH

U.S. Installed and Potential Wind Power Capacity and Generation. (2022). *WindExchange* - U.S. Department of Energy - Energy.gov. Interactive map. Retrieved November 2, 2022, from <https://windexchange.energy.gov/maps-data/321>

U.S. Wind Turbine Database. (2022, October). *U.S. Geological Survey* - USGS.gov. Interactive map. Retrieved October 30, 2022, from <https://eerscmap.usgs.gov/uswtodb/viewer/#3/37.25/-96.25>

Wind energy in Utah. WINDEXchange - U.S. Department of Energy - Energy.gov. (2022). Retrieved December 4, 2022, from <https://windexchange.energy.gov/states/ut>

Wiser, R., Rand, J., Seel, J., Beiter, P., Baker, E., Lantz, E., & Gilman, P. (2021). Expert elicitation survey predicts 37% to 49% declines in wind energy costs by 2050. *Nature Energy*, 6(5), 555–565. <https://doi.org/10.1038/s41560-021-00810-z>

Group Project Publication Submission

Choose one of the following to submit your work for publication. However, you are not limited to this publication list. Your work has to be re-arranged and rewritten to meet the publication or presentation requirement. Please carefully read requirements for each one. Be sure to include me in all emails regarding your submission.

Ergo, <https://weber.edu/OUR/ergo-overview.html>.

Involve: A Journal of Mathematics, <https://msp.org/involve/about/cover/cover.html>
(Mathematical Science Publishers)

The Mathematics Exchange, <https://lib.bsu.edu/beneficencepress/mathexchange/> (Ball State University)

Minnesota Journal of Undergraduate Mathematics,
<https://mjum.math.umn.edu/index.php/mjum/index> (University of Minnesota)

The Rose-Hulman Undergraduate Math Journal, <https://scholar.rose-hulman.edu/rhumj/>
(Rose-Hulman Institute of Technology)

SIAM Undergraduate Research Online, <https://www.siam.org/publications/siuro> (Society for Industrial and Applied Mathematics)

Utah academy of Sciences, Arts & Letters, <http://www.utahacademy.org/academy-journal/>

Intermountain Sustainability Summit, <https://weber.edu/ISSummit/contact.html>, Student Posters

A list of Opportunities in Undergraduate Research in WSU is below.



FALL RESEARCH GRANT PROPOSAL DEADLINES

05
OCT

05
NOV



Complete the workshop and quiz at least 2 weeks prior to the submission deadline.

FALL RESEARCH & ENGAGEMENT SYMPOSIUM

07
NOV

Abstracts will be accepted from October 5 - November 7, 2025

03
DEC

Symposium will be held from 10 am - 4 pm in the Shepherd Union Building, 3rd floor

NATIONAL CONFERENCE ON UNDERGRADUATE RESEARCH 2026

07
NOV

Deadline for Travel Support from OUR

05
DEC

Abstract Deadline

13-15
APR

Conference

UTAH CONFERENCE ON UNDERGRADUATE RESEARCH 2026 HOSTED AT WEBER STATE UNIVERSITY

07
NOV

Abstract Deadline

23
JAN

Registration Deadline

27
FEB

Conference

FOR MORE INFO, VISIT US:

-  our@weber.edu
-  Stewart Library, room 318
-  <https://weber.edu/OUR/calendar>

ERGO

No Deadlines!
Submit your article when you are ready.

