Weekly ESS Center Announcements
Week of May 17, 2022

Please share as you feel appropriate.
These weekly announcements are sent out on Tuesdays. If you would like us to include your information, please send it to yadeeh@unm.edu by Friday at 5 PM.

ESS HOTLINE: 505-277-4354 | E-mail: ess@unm.edu | Website: ess.unm.edu

SUMMARY
All of our events are FREE and you can... WIN a gift certificate. GAIN experience. BUILD your skill set. ENHANCE your resume.

- Upcoming Engineering Student Success Center Events and opportunities
  - This Week
    - Congrats to all of the SOE Graduates of May 2022!
  - New Announcements
    - New Faculty Highlight – Osman Anderoglu
  - Next Week
    - R&R
  - Coming Up
    - Summer Bridge Sessions (ALL are welcome)
    - Pre-Semester Prep sessions
  - Reminders
    - Be part of EPICS this Fall
    - ESS Resource Page
  - Other ESS Center/SOE News and Info

- Job/Research Opportunities/Scholarships
  - Join our Internship Programs

- Other UNM opportunities and news for STEM students
- Community news and opportunities

Stay informed via our app!: “engineering your succESS”
Congratulations to the School of Engineering Graduates of May 2022!
New Announcements:

- Faculty Highlights. See what our faculty study.

Read about other highlights on our webpage dedicated to just this.

This posting is for Osman Anderoglu within the Nuclear Engineering Department.

Next generation of fission and fusion reactors offer more economic, safer and proliferation resistant designs compared to current operating reactors. But, these reactors work at higher temperatures and are in contact with more corrosive coolants. Our research looks at advanced alloy development and testing for extreme environments for nuclear applications using advanced manufacturing and characterization techniques (e.g. radiation damage in materials). We have a hot cell where we can handle radioactive specimens remotely using manipulators, and established Lobo Lead Loop to test materials compatibility with molten lead up to 3 m/s at 700°C.

(a) Manipulators in hot cell, (b) Tensile test machine for miniature specimen testing (c) Tension test results on nanolayered Cu/ Nb composites compared to pure copper (d) Lobo Lead Loop. Inlet (computational fluid dynamic simulation) shows Pb flow velocity in the specimen holders and main pipe. (e) Transmission electron microscopy image of cross-section of nanolayered Cu/Nb composite. The layered structure is preserved with no indication of radiation damage.

Next Week:
Take some time to relax and enjoy your summer!

**COMING UP:**

- **Join us for our Engineering Your Bridge to Success: Summer Bridge Sessions** – this isn’t just for incoming students.
  Nervous about starting at a University setting in the Fall? Want to feel confident entering your University courses? Then this opportunity is for you.

The goal of these workshops are to provide students with foundational skills to better support them as they enter their first semester at UNM. Mastering these skills will equip students to handle challenges they may face upon entering the University setting.

- **What:** Summer Bridge Program
- **Partners/Presenters:** ESS Center’s very own Yadéeh Sawyer and Nada Abdelhack
- **Where:** Synchronous in-person (in the ESS suite - CENT 2080) and virtual via Zoom ([https://goto.unm.edu/esszoom](https://goto.unm.edu/esszoom)). All sessions start at 10 am MST and typically go until 11:15 am, with a few sessions lasting longer. See specific session at [https://ess.unm.edu/events > July & August or via our succESS app ([https://success.unm.edu](https://success.unm.edu)).
- **RSVP’s** coming soon. RSVP is preferred but not required. RSVP will get you week before and day before email reminders. RSVP for EACH desired session
- **Sessions offered:**
  - Engineering in the Real World & Spatial Reasoning (7/25)
  - Possible Career Pathways & the Scientific Method (7/26)
  - Scientist-Engineer Decision Toolkit (7/27)
  - Technical Reading and Writing, including citations (7/28)
  - Critical Thinking & Pop-Science (7/29)
  - Growth, Development, & Goals (8/1)
  - Time Management (8/2)
  - How to talk to Instructors (8/3)
  - Learning & Studying (8/4)
  - Tutoring, Teamwork & Study Groups (8/5)
  - Basic Excel (8/8)
  - Metrics & Scientific Notation (8/9)
  - How to get into a research lab & Ethics (8/10)
  - UNM Resources & Advisement (8/11)
  - Intro to MATLAB (8/12)
**Pre-Semester Prep Workshops** – These interactive workshops will review all foundational material leading up to the specified course so you are better equipped to hit the ground running.

- **What:** Pre-Semester Prep Series
- **Partners/Presenters:** ESS Center and CAPS
- **Where:** Synchronous in-person (in the ESS suite - CENT 2080) and virtual via Zoom (https://goto.unm.edu/esszoom)
- **RSVP:** coming soon. RSVP is preferred but not required. RSVP will get you week before and day before email reminders. RSVP for EACH desired session

**Sessions offered:**
- College Algebra Review (Trigonometry & Pre-Calculus Prep)
- Pre-Calc/Trig Review (Calculus 1 Prep)
- Calculus 1 Review (Calculus 2 Prep)
- Calculus 2 Review (Calculus 3 Prep)
- Physics 1 Prep
- Chemistry 1 Prep
Be part of EPICS this Fall semester!

Fall registration is coming up soon. We hope you consider being part of the EPICS program for 3 credit hours.

Do you want to GIVE BACK to the community, EARN CREDIT, and GAIN RESEARCH EXPERIENCE all at the same time?!

If you said “YES,” then join EPICS @ UNM Course/Program for Spring 2022.

This opportunity is available to students in ANY MAJOR who are fully admitted into their degree program (no-pre-majors), but all projects have an Engineering and Computing focus.

Check out our website for more information. https://goto.unm.edu/epics. And, feel free to email (epics@unm.edu) or call (505-277-9151) me with any questions. I hope you consider joining.
Check out our ESS Resource pages!
https://ess.unm.edu/resources/index.html
These include everything from academic support and career development, to behavioral health and getting into research and goal setting.

**OTHER ESS CENTER/SOE NEWS AND INFORMATION:**

*Check back next week*

**JOB/RESEARCH OPPORTUNITIES/SCHOLARSHIPS**
(Graduate Students – see our page dedicated to additional funding and job opportunities for you: https://ess.unm.edu/programs/current-students/for-graduate-students.html)
(See Previous Announcements below for additional opportunities)

**SCHOLARSHIPS**

- Please visit ESS Scholarships for a full list – many are available to all, regardless of citizenship status:
  - Internal: https://ess.unm.edu/programs/current-students/scholarships/internal.html
  - External: https://ess.unm.edu/programs/current-students/scholarships/external.html
- **Become an NSF Scholar**
  Deadline: July 1.
  Apply at [https://goto.unm.edu/nsfscholarship](https://goto.unm.edu/nsfscholarship).

This program was recently funded through a grant from the National Science Foundation. The goal of this program is to provide necessary financial and academic assistance to undergraduate students enrolled full time in the School of Engineering who are pursuing a bachelor of science degree in computer science or any of the following engineering fields: chemical, civil, computer, construction, electrical, mechanical or nuclear.

**Eligibility Requirements**
- Demonstrate financial need through a FAFSA application
- Be a junior or senior with at least 60 credit hours toward a School of Engineering degree program
- Maintain a minimum 3.0 GPA

**QUESTIONS?** Contact us at nsfstem@unm.edu or (505) 277-5064

[https://goto.unm.edu/nsfscholarship](https://goto.unm.edu/nsfscholarship)
• **Need help with a Resume or Cover Letter?** We’ve got you covered. Please reach out to our very own Nada Abdelhack, our Job and Internship Placement Coordinator. Email: esscareers@unm.edu. Phone: 505-277-1403.

• Please visit ESS Internships and Jobs for a full list – some are available to all, regardless of citizenship status

This includes our SPSP Internship Program. Are you a Junior, Senior, or Graduate student in an Engineering or Computing field? Learn more at [goto.unm.edu/internships]goto.unm.edu/internships. Students are required to participate 12 weeks, 15 hours per week and will receive a stipend. Questions about the SPSP Internship Program? Contact Nada Abdelhack at esscareers@unm.edu, 505-277-1403

• **Bayotech**, an Albuquerque company in the Hydrogen industry is looking for an intern for the summer
The contact point is Dr. Subramani (Velu.Subramani@bayotech.us) and the deadline is asap.

We are looking for passionate individuals who want to learn the new skills around hydrogen production and help shape the energy transition to affordable hydrogen. The primary responsibility of the intern is to closely work with Scientists and Engineers in the team to run an R&D scale SMR catalytic test bed reactor and a close-to commercial scale (250 kg/day H2 production) pilot plant, perform Gas Chromatograph (GC) analysis, upload the data on a shared drive and discuss the results in the team. The intern will be provided with adequate training to operate the reactor and the pilot plant safely.

**ESSENTIAL SKILLS AND EXPERIENCE:**
• Solid understanding of basic chemical engineering processes including mass balances.
• Strong organizational skills with high attention to detail.
• Maintain a high sense of urgency and speed in executing the experimental work and delivering the results on-time
• Demonstrate a sense of ownership for the assigned reactor / pilot plant assets and strong teamwork with co-workers
• Self-Starter, proactive, able to work independently with minimal direction.
• Ability to quickly identify and prioritize issues, create solutions, and meet deadlines.
Good verbal and written communication skills along with strong PC skills are required.

VALUED BUT NOT REQUIRED:
- Prior, related internship or co-op experience is preferred.
- An understanding of the practical application of chemical engineering and technology, including applying systems, principles, techniques, and procedures to a project design.
- Knowledge of any of the following programs: ASPEN, CFD or similar process modeling software, Microsoft applications

UNM Events/News

- **Two BioBlog topics for you this week**
  *Hidden Magic of the Animal Kingdom* by undergraduate student Holly Hutchison. She discusses the real-life magic of biofluorescent critters. Give it a read here!

  *Fibonacci Numbers: the Beauty of Math in Nature and Art* by Ph.D. Candidate Zoë Rossman. She writes about the Fibonacci sequence and all the places it can be found in both the natural and built environment. Give it a read here!

- **UNM Women in Technology (WIT) group is starting a speaker series** … that kicks off next Friday 5/20/22 at 3:30 pm. Here is a link to register for the event: https://wit.unm.edu/events/index.html.

Community Events/Opportunities

- **NM Black "Thought" Expo: Criminalization of Black Youth**
  Join the NM Black Leadership Council and the NM Office of African American Affairs next Tuesday, May 17, 2022 for an important conversation on the disturbing trend of turning normal adolescent behavior into criminal acts for Black youth, and Criminalization of Black Youth. The virtual event has multiple workshops featuring New Mexico experts, community members, and youth. The evening will feature a keynote by Kristin Henning, author and legal scholar, who wrote, "Rage of
PREVIOUS ANNOUNCEMENTS

OTHER OPPORTUNITIES AND NEWS FOR STEM STUDENTS:

SOE & STEM STUDENT ORG MEETINGS AND CAMPUS EVENTS

Check back next week

JOB/RESEARCH OPPORTUNITIES/SCHOLARSHIPS

Check out the ESS website pages dedicated to jobs, internships, and scholarships for more.

- Call for Nominees for Faculty Mentored Research Award, due May 20th

The Office of the Vice President for Research (OVPR) and the Undergraduate Research, Arts & Design Network (URAD) are pleased to announce the newly created Faculty-Mentored Research Award, which will be an award of $2500 (as honorarium or contribution to research index) to the faculty mentor and $1500 (cash prize) to the undergraduate student. This award will recognize a strong research collaboration between a UNM faculty and undergraduate student; nominations are due May 20, 2022.

Please distribute to your student networks (they must have been a full-time student in either Fall 2021 or Spring 2022).

Visit here for further details on eligibility and nominations:

https://urad.unm.edu/students/faculty-mentored-research-award.html

- El Puente Application Open
UNM EVENTS/NEWS
Listed in Chronological Order
(Repeat/Continuous opportunities are listed below Jobs/Research Opportunities/Scholarships)

Check back next week

COMMUNITY EVENTS/OCCUPPUNITIES

- **2023 Collegiate Wind Competition (Undergraduates)**
  Students from a range of disciplines to represent their schools as they design, build, and test a prototype wind turbine; develop a site plan and cost-of-energy analysis for a wind farm; and conduct outreach with the wind energy industry, their local communities, and local media outlets.
  Deadline: June 20. [More Info]

We hope to see you around.

In Solidarity,

**Yadéeh E. Sawyer, Ph.D. (she/her/ella)**

Retention Program Specialist (UNM Alumni; Staff Council Grade 12 Rep)
Safe, Green, and Dream Zone Certified
UNM - Engineering Student Success Center - Room 2095
yadeeh@unm.edu
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Stay informed through our app: **succESS**

ESS Webpage: [ess.unm.edu](http://ess.unm.edu)
Tutoring | Scholarships | Mentoring | Undergraduate Research | EPICS | Internships and Co-Ops | Engineering Ambassador | Academic Success Workshops & Special Events for Engineering and Computer Science Students

ESS social media @UNMESSCenter

Events and Workshops: [ess.unm.edu/events](http://ess.unm.edu/events)

Semester Long Programs:

- **Mentoring:**
  - Get a Mentor who is a STEM Professional
  - Be a Peer-Mentor

- **Research:**
  - [Student Research Experience Program](http://unm.edu)
  - EPICS (Engineering Projects in Community Service) @ UNM
Want to know about other STEM related opportunities? Join our listserv: UNM_STEM-L

ESS is located on the 2nd floor of the Centennial Engineering Center #2080
MSC01 1145; Building 112 (UNM Campus Map)