College of Engineering & Physical Sciences
Faculty Request To Search during AY 2026-2027

1. **Department:** Energy and Petroleum Engineering

2. Proposed faculty rank: Assistant Professor (Tenure Track) – Position/Priority 1

3. a. Proposed maximum salary: $93,435 (adjustable based on market conditions)

3. b. OSU Faculty Salary Survey salaries at the requested rank for these categories:

$ All Combined: $84,323 -$148,000
$ Tenure / Tenure Track: $93,204 -$148,000
$ Doctoral Universities – Very High Research: $84,323 -$148,000
$ Region 1: $84,323 -$93,435
$ Non-Tenure Track (if requesting a Fixed Term faculty line)

4. OSU Faculty Salary Survey CIP code and associated discipline:

14.2501 – Petroleum Engineering

5. Proposed job description: Tenure-track Assistant Professor in Energy and Petroleum Engineering with expertise in subsurface energy systems. Preferred areas include unconventional reservoirs, carbon storage, subsurface energy transition technologies, or data-driven/digital approaches (AI/ML, digital twins). Responsibilities include teaching undergraduate and graduate courses, developing a funded research program, mentoring students, and contributing to interdisciplinary initiatives across CEPS and SER.

6. Retirement/resignation history:

(a) One Professor of Practice retired (Dr. Brian Toelle) (loss of one Tier-1 faculty line)
(b) One Full Professor (Dr. Vamegh Rasouli) resigned from UW and moved to UT-Arlington (loss of one tenure-track faculty line).
(c) One Professor of Practice (Dr. Douglas Cuthbertson) transferred to UW Foundation then retired (loss of one Tier-1 faculty line)
(d) Two Full Professors (Dr. Maohong Fan and Dr. Hertanto Adidharma) transferred to the department of Chemical and Biomedical Engineering due to better alignment with teaching and research (loss of two tenure-track faculty lines)

7. Hiring history:

- One Professor of Practice (Dr. Hazim Abass) was hired to replace position (a)
- Ongoing faculty search to hire an Assistant professor as a replacement for position (b)

8. Estimated startup for this position: $300K–$500K (lab-dependent; aligned with experimental/digital hybrid research)

9. Special considerations: Potential for joint collaboration with SER and cross-college initiatives (AI, subsurface systems, energy transition). Position aligns with externally funded research growth.

Justification

The Department of Energy and Petroleum Engineering currently operates with a **lean faculty structure** of six tenure-track faculty and one professor of practice, despite sustained and growing programmatic demands. Over the past four years, the department has lost **three faculty positions** (two Full Professors and one Professor of Practice), along with additional line transfers to Chemical and Biomedical Engineering, creating a clear imbalance between faculty capacity and program needs.

At the same time, the department is undergoing **measured but clear growth**, particularly through:

- Creation and Expansion of the M.Eng. program, which is gaining strong momentum
- Positive undergraduate enrollment trends
- Sustained high graduate enrollment
- Increased activity in emerging energy areas

The department is currently ranked **#11 nationally** and is actively pursuing the **"Top 5 in 5" initiative**. Achieving this goal requires strategic investment in faculty to improve key metrics including research productivity, academic reputation, and student-to-faculty ratio. This position is essential to maintaining competitiveness at the R1 level.

Table 1. Petroleum engineering program benchmarking against peers, 2025/2026 (Source: PEDHA)

Institution	Undergraduate Enrollment	Graduate Enrollment	Total Faculty	Student/ Faculty	US News Rank
University of Wyoming	62	74	7	19.5	11
Louisiana State University	119	34	14	11	10
University of Tulsa	53	46	9	11	4
Pennsylvania State University	125	57	17	11	4
Colorado School of Mines	142	45	13	14	3

This position directly supports the **CEPS 2030 strategic priorities**, particularly (a) Growth in high-impact research areas: energy transition and subsurface innovation, (b) Expansion of interdisciplinary research (e.g., AI, digital subsurface, carbon management), (c) Strengthening workforce development in a field critical to Wyoming and national energy security

From a **state relevance perspective**, petroleum engineering remains foundational to Wyoming's economy. However, the field is evolving, requiring expertise that bridges traditional hydrocarbon systems with emerging energy technologies. This position ensures the department remains forward-looking while maintaining its core strengths.

From an **accreditation and instructional standpoint**, current faculty capacity is increasingly strained. The department:

- Delivers a full ABET-accredited undergraduate program
- Supports growing graduate enrollment
- Provides instruction beyond the unit (service teaching and interdisciplinary contributions)

Without additional hires, there is risk to:

- Maintaining **instructional quality and coverage**
- Supporting **student advising and mentoring loads**
- Sustaining **research productivity and competitiveness**

This hire will also enhance **collaboration across university and CEPS**, particularly with School of Computing (AI/ML applications), SER (subsurface and energy systems), Chemical and mechanical engineering (multiphysics and process integration), and Geology and geophysics (geothermal resources and critical minerals).

Table 2. EPE student Enrollment by year.

Year	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Undergraduate	49	47	40	44	62
Graduate	49	56	60	59	74

Overall, this position is not simply growth—it is a **necessary restoration and strategic investment** to (i) rebuild lost faculty capacity, (ii) sustain program growth, and (iii) align with future-facing energy research priorities.