

Online Post-Baccalaureate Certificate In LNG Engineering

McNeese State University has partnered with GTI Energy (www.gti.energy) to collaboratively develop the curriculum for a distinguished online Post-Baccalaureate Certificate (PBC) in LNG Engineering (<https://lngpbc.mcneese.edu>), exclusively available to working industry professionals.

Curriculum

Under the authority of the Louisiana Board of Regents and the University of Louisiana System, the PBC curriculum includes 5 courses, for a total of 15 McNeese State University credit hours offered in 1 credit hour, four-week sessions (15 sessions).

1. **Fundamentals of LNG Processing (4 credits)** → Overview of the LNG Industry, field operations, compression, gas treating, gas dehydration, heavy hydrocarbon recovery, liquefaction, refrigeration, loading, boil off gas, transportation and regasification.
2. **Pipeline Design, Storage and Transportation of LNG (4 credits)** → Introduction to hydraulics (pumps, fluid flow, pressure loss, etc.), pipeline design and construction, standards and codes. Design and operation of LNG cryogenic storage tanks (onshore and floating), LNG transportation by ships and trucks (containment systems), loading and unloading procedures, boil-off gas management, and the associated safety measures, ASME pressure vessel code, boiler and other fired heaters, gas turbines.
3. **LNG Regulations and Hazard Management (3 credits)** → Introduction to relevant industry standards and regulations, such as 49 CFR Part 193 by PHMSA (Pipeline and Hazardous Materials Safety Administration) and FERC (Federal Energy Regulatory Commission), IMO (International Maritime Organization), hazards associated with LNG (flammability, cryogenic burns, etc.), LNG facility safety systems, procedures, standards, regulations (NFPA 59A, ISO 16903, ISO 28460, etc.), emergency response and firefighting protocols, risk assessment.
4. **LNG Supply Chain Management (2 credits)** → Introduction to the different stages of the LNG supply chain from production (wellhead) to delivery (market).
5. **LNG Environmental and Regulatory Aspects (2 credits)** → Introduction to environmental impacts, noise, emission, mitigation measures, key regulations and standards by region, environmental review and permitting, future trends and evolving standards.



Delivery Method → Flexible, asynchronous, online, self-paced

- Each course will be divided into multiple one credit hour sessions
- Each 1-credit hour session will be independent and offered for 4 weeks
- Participants will have 9 opportunities in one academic year to enroll, and complete a session

- Enrollment in 1-credit hour sessions does not have to be consecutive
- Participants may enroll in courses based on interest without seeking the certificate

Target Audience → Working professionals in the LNG or other related industries

- Bachelors in Chemical and Mechanical Engineering degree holders seeking additional knowledge or professional advancement
- STEM 4-year degree holders with minimum 2 years of industry relevant experience
- Baccalaureate degree holders seeking individual non-technical knowledge (3, 4, and 5 courses), will not enroll in the certificate program and should apply as non-degree seeking visiting student

Anticipated Start Date →

- Fundamentals of LNG Processing – October 5, 2026
- Pipeline Design, Storage and Transportation of LNG – March 15, 2027
- LNG Regulations and Hazard Management – August 30, 2027
- LNG Supply Chain Management – January 3, 2028
- LNG Environmental and Regulatory Aspects – March 13, 2028

Current Situation on Obtaining LNG Talent

- There is no formal education in LNG Engineering leading to university credit
- New LNG hires come from:
 - Other LNG companies (people with experience)
 - Other related companies (people with process experience but no LNG experience)
 - University programs (new graduates with no LNG experience)
- Many LNG hires acquire LNG knowledge while on the job
- Opportunities to attend LNG courses offered by private companies exist but they are expensive and do not lead to any university credit
- Limited courses are available covering LNG related topics such as supply chain management, regulations, codes, hazard management, and environmental issues

Tiered Sponsorship Model to Support Curriculum Development



Several sponsorship opportunities exist within the LNG Center of Excellence. Depending on the sponsorship level, the donor will receive benefits such as: naming rights to spaces within the LNG Center of Excellence, recognition on the online delivery of the Post Baccalaureate curriculum and promotional certificate materials with company logo placement, promotion opportunity through a Virtual Reality experience, placement of company art/message on walls, press releases, case study naming, digital newsletters, etc. For a detailed list of the tiered sponsorship levels and their benefits, request the sponsorship opportunities flyer.

For Information Contact

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Scan for the Program Webpage

