

Chemical Engineer

Turn raw materials into fuel, medicine, food and plastics at industrial scale. Best paid in Alberta, and tied to the oil price.

TYPICAL PAY

\$108,000

a year, full time

PAY RANGE

\$57k to \$160k

starting to experienced

TIME TO QUALIFY

4 to 8 years

after high school

DEMAND

Moderate

job outlook

LICENCE NEEDED

Yes

regulated job

WHERE YOU WORK

**Refineries, chemical plants,
pharma, food and pulp mills**

How you get there

- 1 High school** Grades 11 and 12
Advanced Functions, Calculus, Chemistry and Physics are required. Marks in the high 80s or above at most schools.
- 2 Accredited chemical engineering degree** 4 to 5 years with co-op
A four-year Bachelor of Engineering or Applied Science at a school accredited by the Canadian Engineering Accreditation Board. Expect thermodynamics, reactor design and a lot of process calculations.
- 3 Engineer-in-training** About 4 years
Register with your provincial regulator and work under a licensed engineer. Log your experience.
- 4 Professional practice exam** During your EIT (engineer-in-training) years
A law and ethics exam, taken during your training years.
- 5 P.Eng (professional engineer) licence** After 4 years
Apply with your experience record and references. Now you can sign off on process designs and take legal responsibility for them.

Pros and cons

- + The highest starting pay in Canadian engineering, in Alberta
- + Your work makes fuel, medicine and food at real scale
- + Skills transfer between oil, pharma, food, mining and water
- Oil and gas jobs boom and bust with the oil price
- Plants are in remote or industrial towns, not big cities
- Shift work and 12-hour days at plant sites

Good to know

Chemical Valley

Sarnia, Ontario, has one of the largest clusters of petrochemical plants in Canada, sitting right beside the St. Clair River. Chemical engineers there make polyethylene, synthetic rubber and refined fuels.

Canada is a top-four oil producer

Canada produces more oil than any country except the US, Saudi Arabia and Russia, most of it from the Alberta oil sands. Separating bitumen from sand at that scale is a chemical engineering problem.

Optional boosts

Process safety. Process control. Project Management Professional (PMP). A master's or PhD.

Where these numbers come from

Job Bank: Chemical engineers, wages (updated Nov 2025)
Engineers Canada: Overview of the licensing process
APEGA (Alberta regulator): member dues (2026)
Professional Engineers Ontario: fee schedule (PDF, Nov 2022)

Numbers checked September 2026. Pay figures are typical full-time annual amounts in Canadian dollars, based on Government of Canada Job Bank wage data and published salary grids. They vary by province, employer and experience. Tuition is for domestic students. Sources, links and the click-through version: <https://career.help/ca/careers/chemical-engineer>



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