Career Opportunities

Approximately 54% of chemists work in research; yet many research chemists spend a good deal of time in non-laboratory work environments. About 10% of all chemists are in production. The remainder of chemists is employed in education, marketing, sales, computer programming, law, and libraries.

- NONTRADITIONAL CAREERS – Patent lawyers, science writers, editors, information specialists, investment bankers, business owners, technical librarians, consultants, personal recruiters, and art conservators.
- THE CHEMICAL INDUSTRY – Electronics, biotechnology, paints, pharmaceuticals, foods, flavors, fragrances, detergents, and cosmetics.
- ACADEMIC INSTITUTIONS – Traditional teaching roles in K-8 and high schools, teaching and conducting research at four-year colleges and universities.
- GOVERNMENT –
  - *Food & Drug Administration* - Medicinal, analytical, biomedical chemists
  - *Dept. of Justice* – Forensic and analytical chemists
  - *Dept. of Agriculture* – Agricultural, environmental, biomedical chemists
  - *Environmental Protection Agency* – Physical, environmental, inorganic, and organic chemists
  - *Patent Office* – Patent researchers
  - *National Science Foundation* – Writers, editors, and administrators
  - *Department of Energy* – Industrial and engineering, materials, and environmental chemists
  - *National Oceanic & Atmospheric Administration* – Geochemists and environmental chemists.

The **Cañada College** mission is to ensure that students from diverse backgrounds have the opportunity to achieve their educational goals by providing quality instruction in general, transfer, career, and basic skills education. The staff is ready to assist you by providing a variety of student services and special programs.

To apply to Cañada College go to:
http://websmart.smccd.edu or complete the Application for Admission located in the center insert of the class schedule available on campus.

Counseling Center: The counseling department's aim is to help students be successful in accomplishing their educational and career goals.
Call (650) 306-3452

Financial Aid: There are a variety of financial aid programs offered; Grant/Fee Waivers, Federal Work-Study, Loans, and Textbook Loans. For more information on these programs go to http://canadacollege.edu/financialaid or contact:
Financial Aid Office located in Bldg 9, Rm 109

The Learning Center provides a wide range of individualized courses in study skills, vocabulary, grammar, spelling, writing, and more. incorporated within the Center are:

- **Computer Center** – housing 145 PC and MAC computers with Microsoft Suite.
- **Tutorial Center** – provides individual and small group tutorial assistance.
- **Writing Center** – additional instruction and skill reinforcement in reading and writing.
- **Math Lab** – drop-in assistance in math.
- **MESA Center** (Math Engineering Science Achievement) – provides workshops, mentoring, field trips and counseling in math, science, and engineering.
- **TRIO Student Support Services** – provides counseling, mentors, and tutors.
- **Alternative Media Center** – Provides instructional materials in alternate formats for students with disabilities.

The Learning Center is located in Bldg. 9, Rm 210 or call (650) 306-3348.

AS in Chemical Laboratory Technology

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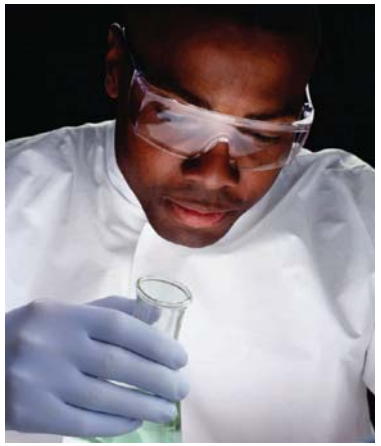
Chemical Lab Technology Certificate Program



Cañada College

4200 Farm Hill Blvd
Redwood City, CA 94061-1099

Cañada College

For more information contact:
Jeri Eznekier, Assistant Project Director
Phone: (650) 306-3304
Email: Canada.NSFGrant@smccd.edu
Website: www.canadacollege.edu/nsfgrant

Created with funding by NSF-ATE Award DUE-0703188

Course Requirements

AS in Chemical Laboratory Technology and Chemical Lab Technology Certificate

Required Curriculum

Course Title (CORE)	AS Units	CLT Units
Introduction to Chemical Laboratory Technology, CHMT 310	4	4
General Chemistry I, CHEM 210	5	5
General Chemistry II, CHEM 220	5	5
Organic Chemistry I, CHEM 234	3	3
Organic Chemistry Lab I, CHEM 237	2	2
Organic Chemistry II, CHEM 235	3	
Organic Chemistry Lab II, CHEM 238	2	
Introduction to Chemical Laboratory Instrumentation, CHMT 340	5	5
Cooperative Education, Internship, CHMT 672	2	2
TOTAL UNITS REQUIRED	31	26

Additional Course Requirements	AS Units	CLT Units
General Education	21	0
Selectives	8	4
TOTAL UNITS REQUIRED	60	30

With funding received through the National Science Foundation Grant, *Chemistry: A Pipeline to 21st Century Careers*-(ATE #0703188), the faculty at Cañada College is developing a Chemical Lab Technology Certification program which we hope to launch by Fall 2009. The program is comprised of a series of short courses and workshops taught by college instructors and local industry professionals to familiarize students with instruments manufactured by or widely used in their companies. In addition, general laboratory techniques, basic safety procedures, and proper experiment documentation will be taught

What do Chemical Laboratory Technicians do?

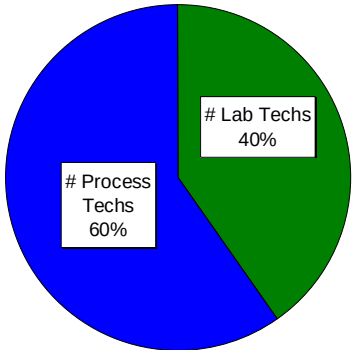
Chemical laboratory technicians work together with scientists in the laboratory to study and develop new chemical processes and materials to meet society's changing needs. They operate laboratory equipment, set up chemical reactions, conduct experiments, handle materials, isolate and characterize products, and conduct analyses that evaluate product quality and consistency. Much of their work involves measuring properties of materials produced in chemical reactions. In addition, they record and report experimental results; write technical reports; and make sure that processes are carried out safely, cost-effectively, and according to the highest professional standards.

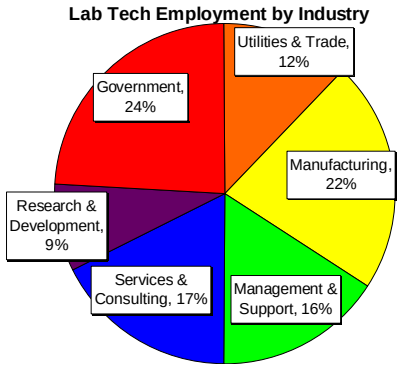
Laboratory Technicians

Manufacturing Includes	Number	Percent
Basic Chemical Manufacturing	6,970	20.1
Polymers and Coatings	6,950	20.1
Pharmaceutical Manufacturing	5,990	17.3
Inorganic Materials	4,770	3.8
Other Chemical Products	3,260	9.4
Personal and Household Care	2,880	8.3
Food and Agricultural Chemicals	2,020	5.8
Petroleum and Coal Products	1,780	5.1

Employment Stats:

Chemistry-Based Technicians Employed in U.S.





Information provided by American Chemical Society Educational Division

What skills do companies expect Chemical Lab Technicians to have?

Employers seek skills such as sampling and handling chemical materials, measuring physical properties, performing chemical and instrumental analysis, designing and conducting experiments, and synthesizing and characterizing compounds. In addition to technical knowledge, employers look for individuals who can think analytically, pay attention to details, solve problems, work as part of a team, and demonstrate a high level of communication and organizational skills.