

2020-21

CHEMISTRY

AS-T CHEMISTRY

Pathways for Transfer

(IGETC) NAS769

REQUIRED COURSES (36 semester units) UNITS

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CHE-1A	General Chemistry I	5
CHE-1B	General Chemistry II	5
CHE-12A	Organic Chemistry I	5
CHE-12B	Organic Chemistry II	5
MAT-1A	Calculus I	4
MAT-1B	Calculus II	4
PHY-4A	Mechanics	4
PHY-4B	Electricity and Magnetism	4

This academic plan includes major coursework and recommended general education requirements for transfer. **Transfer requirements vary based on institution.** Please see a counselor to develop your personal educational plan and determine appropriate work/life/school balance.

TERM 1			
CSUSB/CPP		UCR	
COURSE	UNITS	COURSE	UNITS
ENG 1A	4	ENG 1A	4
MAT 1A	4	MAT 1A	4
CHE 1A	5	CHE 1A	5
POL 1	3	POL 1	3
Total Units	16	Total Units	16

TERM 2			
COURSE	UNITS	COURSE	UNITS
ENG 1B	4	ENG 1B	4
MAT 1B	4	MAT 1B	4
CHE 1B	5	CHE 1B	5
PHY 4A	4	PHY 4A	4
COM 1, 6 or 9	3	COM 1, 6 or 9	3
Total Units	20	Total Units	20

TERM 3			
COURSE	UNITS	COURSE	UNITS
CHE 12A	5	CHE 12A (B grade req)	5
PHY 4B	4	PHY 4B	4
ART 1, 13 or MUS 19	3	ART 1, 13 or MUS 19	3
HIS 7 or 34	3	HIS 1 or 2	3
Total Units	15	Total Units	15

TERM 4			
COURSE	UNITS	COURSE	UNITS
CHE 12B	5	CHE 12B (B grade req)	5
PHY 4C (CSUSB only?)	4	PHY 4C	4
GEG 2 or SOC 2	3	SOC 10	3
PHI 22, 33 or HUM 11	3	PHI 22, 33 or HUM 11	3
ARE 36 or ART 2	3	ARE 36 or ART 2	3
Total Units	18	Total Units	18

✓ First Term To-Do List	
	Submit official high school transcripts and AP/IB/CLEP exam scores
	Visit Engagement Center (ST 107)
	Meet with a counselor to personalize your EduNav plan and to determine if you have already met the IGETC foreign language requirement through high school coursework
	Register for ILA-800 each term to receive FREE tutoring

✓ Second Term To-Do List	
	Visit the Career Center (2nd floor of CSS)
	Meet with a Mustang Mentor
	Get involved in ASNC or other student organizations
	Look for internship, research or volunteer opportunities in your field (s) of interest

✓ Third Term To-Do List	
	Meet with a counselor to verify your transfer status
	Attend Transfer Fair , transfer workshops and meet with university reps
	Submit transfer applications (ask about UC TAG)
	Complete FAFSA before march 2nd (include all transfer institutions that you applied to)

✓ Fourth Term To-Do List	
	Submit Degree Applications via WebAdvisor
	Complete transfer application updates
	Finish strong and order final transcripts for your transfer institution along with IGETC certification

A **CHEMISTRY** degree introduces the concepts and principles upon which chemical knowledge is based, including chemical structures and nomenclature, stoichiometry and solving of chemical equations, the thermodynamics of chemical reactions, and theories of chemical bonding. Chemistry is essential to diverse fields of study such as toxicology, medicine, neurology, paleontology, pharmacology, biochemistry, biology, bioengineering, biomaterials, geology, physics, electronics, botany, space exploration, agriculture, meteorology, ecology, forensic science, engineering, metallurgy, energy, and archaeology among other endeavors, providing a wide array of career opportunities.

WHERE CAN I WORK?

- ◆ Agricultural Industry
- ◆ Center for Disease Control
- ◆ Cosmetic Companies
- ◆ Environmental Protection Agency
- ◆ Food & Drug Administration
- ◆ Forensics
- ◆ Hospitals & Healthcare Facilities
- ◆ K-12 Schools
- ◆ National Institutes of Health
- ◆ National Science Foundation
- ◆ Pharmaceutical Companies
- ◆ Universities & Colleges

HOW DO I GET STARTED?

- ⇒ Visit the **CAREER CENTER** to learn about opportunities in the field and help determining if it is a good fit for your preferred values, strengths, skills, and interests. CSS 2nd floor.
- ⇒ Attend annual **TRANSFER FAIR** and **TRANSFER CENTER WORKSHOPS** to determine which university is the best fit for you as well as application requirements and transfer process.
- ⇒ Build **LABORATORY** and **RESEARCH SKILLS** (experimental design, data interpretation, and **PROBLEM SOLVING**) through coursework and research with professors.
- ⇒ **JOB SHADOW** and **NETWORK WITH PROFESSIONALS** in positions you wish to obtain.
- ⇒ Participate in STEM Club to gain **TEAMWORK** and **LEADERSHIP SKILLS**.
- ⇒ Develop advanced instrumentation, **COMPUTER SKILLS**, statistics knowledge.
- ⇒ Maintain awareness of current **ENVIRONMENTAL ISSUES** including policy, conservation, and industry trends.
- ⇒ Gain experience through **RESEARCH/INTERNSHIP OPPORTUNITIES** such as UCR's CNAS Paid Summer Internship or a [National Science Foundation REU](#).
- ⇒ Join **PROFESSIONAL ASSOCIATION** such as the American Chemical Society or the American Institute of Chemical Engineers to network and maintain current knowledge of opportunities in the field.

WHAT SKILLS DO I NEED?

- ⇒ **Science** — using scientific rules and methods to solve problems.
- ⇒ **Mathematics** — using mathematics to solve problems.
- ⇒ **Critical Thinking** — using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- ⇒ **Reading Comprehension** — understanding written sentences and paragraphs in work related documents.
- ⇒ **Active Listening** — giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.

PREFERRED WORK STYLES INCLUDE:

- ⇒ **Attention to Detail** — being careful about detail and thorough in completing work tasks.
- ⇒ **Analytical Thinking** — analyzing information and using logic to address work-related issues and problems.
- ⇒ **Integrity** — being honest and ethical.
- ⇒ **Dependability** — being reliable, responsible, and dependable, and fulfilling obligations.
- ⇒ **Adaptability/Flexibility** — being open to change (positive or negative) and to considerable variety in the workplace.

WHAT CAN I DO WITH THIS ASSOCIATE DEGREE?

Position Title	CA Annual Openings	CA Median Salary	In Riverside County Wages will Support
Biofuel Processing Technician	100	\$69,080	1 adult, 2 children
Chemical Equipment Operator	260	\$49,990	1 adult, 1 child
Chemical Technician	720	\$47,170	1 adult, 1 child
Food Science Technician	390	\$43,260	1 adult
Laboratory Technician	1,000	\$58,120	1 adult, 1 child
Nuclear Monitoring Technician	900	\$108,550	2 adults, 4 children
Teachers Assistant	17,710	\$35,380	1 adult

WHAT CAN I DO WITH MORE EDUCATION AND TRAINING?

Position Title	CA Annual Openings	CA Median Salary	In Riverside County Wages will Support
Atmospheric Scientists	1,100	\$123,669	2 adults, 4 children
Biofuels Production Manager	1,450	\$112,340	2 adults, 4 children
Chemical Engineer	190	\$101,620	2 adults, 3 children
Chemist	1,220	\$79,210	1 adult, 2 children
Chemistry Professor	160	\$111,280	2 adults, 4 children
Food Scientist	330	\$71,960	1 adult, 2 children
Forensic Science Technician	280	\$82,070	1 adult, 2 children
Natural Science Manager	750	\$166,520	2 adults, 6 children
Pharmacist	1,530	\$148,270	2 adults, 6 children

ESTIMATED COST TO OBTAIN ASSOCIATE DEGREE

60 Units x \$46 per unit (CA residents) = \$2,760	Health, ASNC, Parking Fees (x 4 terms) = \$360
Books & Supplies = \$3,944	Total Cost = \$7,064

For more information about careers, education and training requirements, salary data, and job outlooks visit www.onetonline.org, www.bls.gov or www.labormarketinfo.edd.ca.gov/OccGuides.