

Example Course Sequence

While each student's course sequence may be adapted to their personal goals and timeline, this recommended four-year sequence demonstrates one option. Any course labeled "General Education" is flexible for students to choose which general education requirement to include. Elective options are flexible and may be used for any other course of interest, as long as the prerequisites are met.

Bachelor of Science Degree – Forensic Chemistry Major (124 credit hours)

Year One: Fall (13 credit hours)			Year One: Spring (15 credit hours)		
CHE 1479	General Chemistry I	4 hours	CHE 1489	General Chemistry II	4 hours
KIN 1100	Principles of Personal Fitness and Wellness	1 hour		Kinesiology Activity	1 hour
ENG 1311	English Composition I	3 hours	ENG 1312	English Composition II	3 hours
MAT 2445	Accelerated Pre-calculus	4 hours	MAT 2451	Calculus I	4 hours
GEN 1101	University Seminar	1 hour	CIS 1339	Introduction to Information Technology	3 hours
Year Two: Fall (17 credit hours)			Year Two: Spring (15 credit hours)		
CHE 2331/2139	Organic Chemistry I	4 hours	CHE 2341/2149	Organic Chemistry II	4 hours
PHY 2439	University Physics I	4 hours	PHY 2449	University Physics II	4 hours
MAT 2343	Statistics	3 hours	MAT 2461	Calculus II	4 hours
ENG 23XX	Choose a Literature Course	3 hours	ENG 3306	Technical Writing	3 hours
COM 1310	Fundamentals of Human Communication	3 hours			
Year Three: Fall (17 credit hours)			Year Three: Spring (15 credit hours)		
CHE 3469	Quantitative Chemistry	4 hours	CHE 4469	Instrumental Analysis	4 hours
CHE 4439	Biochemistry I	4 hours	CHE 4449	Biochemistry II	4 hours
HIS 13XX	Choose a History Course	3 hours		Kinesiology Activity	1 hour
GOV 2311	American Government	3 hours		Choose a Social Science Course	3 hours
	Criminal Justice Elective	3 hours		Criminal Justice Elective	3 hours
Year Four: Fall (15 credit hours)			Year Three: Spring (17 credit hours)		
CHE 3311/3319	Physical Chemistry I	4 hours		Directed Forensics Elective	4 hours
SCI 4109	Chemistry Research Proposal	1 hour	SCI 4209	Research Problems in Chemistry	2 hours
	Fine Arts Appreciation Course	3 hours	GEN 4100	Senior Seminar	1 hour
BIB 1303	Introduction to Old Testament	3 hours	BIB 1304	Introduction to New Testament	3 hours
	Directed Forensics Elective	4 hours		Electives	7 hours



Scholarships

HPU has several endowed scholarships for students pursuing a degree in chemistry. These scholarships range in value and are offered to students who are academically sound and active on campus.

Facilities

Currently, the department contains all common analytical instruments that are found within industry. These include (but are not limited to) Fourier Transform Infrared Spectroscopy (FT-IR), Nuclear Magnetic Resonance (NMR), Ultra-Violet Visible Spectroscopy (UV-VIS), Gas Chromatography Mass Spectrometry (GC-MS), High Pressure Liquid Chromatography (HP-LC), and much more. Students completing a degree in Chemistry will spend countless hours with each instrument preparing them for usage post-graduation.

HOWARD PAYNE UNIVERSITY CHEMISTRY

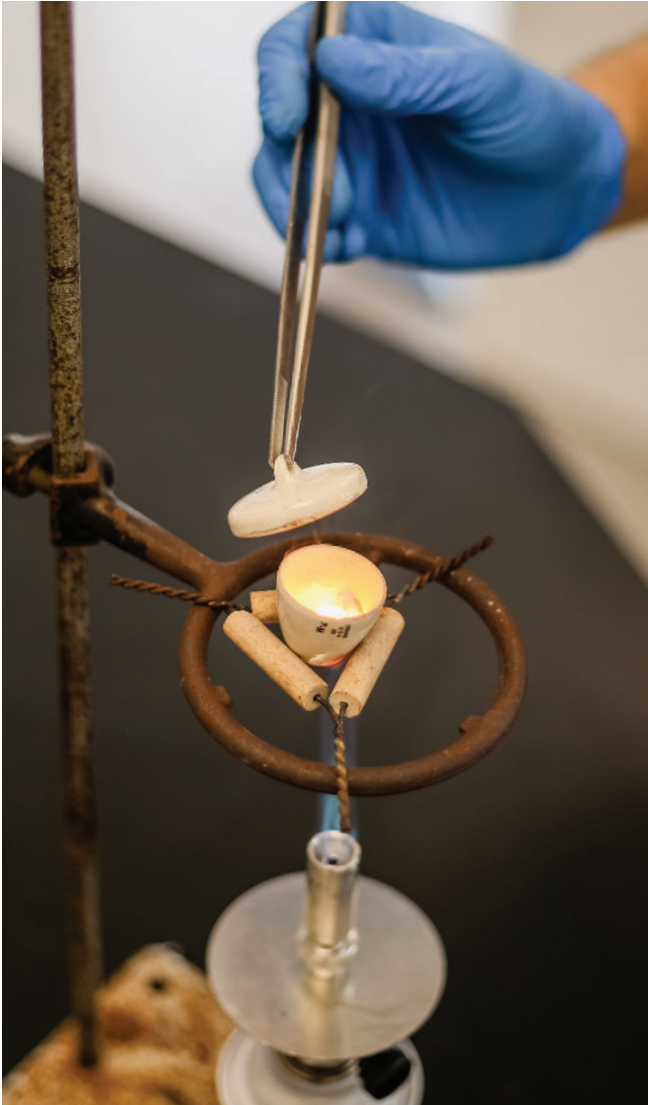
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HOWARD PAYNE UNIVERSITY CHEMISTRY

HPU offers challenging bachelor's degrees programs in three disciplines of Chemistry: Traditional Chemistry, Biochemistry, and Forensic Science. Our students develop knowledge and skills in these fields with HPU's distinctive Christian liberal arts framework.





The Chemistry major:

- Curriculum includes a broad set of courses in chemistry fields such as analytical and instrumental, bio-chemistry, organic chemistry and synthesis, and physical chemistry. These courses are all applied to the three Chemistry concentrations.
- Students completing this major will have a complete background in traditional disciplines as well as developed critical thinking skills to process different techniques.
- Upon entering their third year of study, students are encouraged to participate as a teaching assistant, stockroom coordinator, or a re-search assistant.

FAQs

What experiences are available for students outside of the classrooms?

Students are guided to pursue teaching or research assistantships after their second year of university. These are directed towards the career field of the student’s interest. Within the city of Brownwood there are several neighboring companies which provide paid and for credit internships.

What instrumentation does HPU have on site?

HPU offers usage of all of traditional analytical techniques required by the American Chemical Society. Upon graduation, students from HPU will have many hours of training with each instrument so that they are knowledgeable in their usage and data interpretation.

What have Chemistry majors done after graduating?

- Employment (industry and govern-ment jobs throughout the US as well as K-12 educators)
- Graduate School (master’s/Ph.D. in chemistry or related field)
- Health profession career (pursued a medical/pharmacy degree upon completion of biochemistry track)

Can I double major in chemistry and Honors Academy?

Yes, you can choose to major in both. The Honors Academy curriculum focuses on civic leadership and public policy while a chemistry degree focuses on traditional sciences. Please contact the director of the Honors Academy for in-formation on their requirements.

Example Course Sequences

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Bachelor of Science Degree – Chemistry Major (124 credit hours)

Year One: Fall (13 credit hours)			Year One: Spring (15 credit hours)		
CHE 1479	General Chemistry I	4 hours	CHE 1489	General Chemistry II	4 hours
KIN 1100	Principles of Personal Fitness and Wellness	1 hour		Kinesiology Activity	1 hour
ENG 1311	English Composition I	3 hours	ENG 1312	English Composition II	3 hours
MAT 2445	Accelerated Pre-calculus	4 hours	MAT 2451	Calculus I	4 hours
GEN 1101	University Seminar	1 hour	CIS 1339	Introduction to Information Technology	3 hours
Year Two: Fall (17 credit hours)			Year Two: Spring (15 credit hours)		
CHE 2331/2139	Organic Chemistry I	4 hours	CHE 2341/2149	Organic Chemistry II	4 hours
PHY 2439	University Physics I	4 hours	PHY 2449	University Physics II	4 hours
MAT 3302	Matrix and Linear Algebra	3 hours	MAT 2461	Calculus II	4 hours
ENG 23XX	Choose a Literature Course	3 hours	ENG 3306	Technical Writing	3 hours
COM 1310	Fundamentals of Human Communication	3 hours			
Year Three: Fall (17 credit hours)			Year Three: Spring (15 credit hours)		
CHE 3469	Quantitative Chemistry	4 hours	CHE 4469	Instrumental Analysis	4 hours
CHE 4439	Biochemistry I	4 hours	CHE 4449	Biochemistry II	4 hours
HIS 13XX	Choose a History Course	3 hours		Kinesiology Activity	1 hour
GOV 2311	American Government	3 hours		Choose a Social Science Course	3 hours
	Elective	3 hours		Elective	3 hours
Year Four: Fall (15 credit hours)			Year Three: Spring (17 credit hours)		
CHE 3311/3319	Physical Chemistry I	4 hours	CHE 3321/3129	Physical Chemistry II	4 hours
SCI 4109	Chemistry Research Proposal	1 hour	SCI 4209	Research Problems in Chemistry	2 hours
	Fine Arts Appreciation Course	3 hours	GEN 4100	Senior Seminar	1 hour
BIB 1303	Introduction to Old Testament	3 hours	BIB 1304	Introduction to New Testament	3 hours
	Elective	4 hours		Elective	7 hours

Bachelor of Science Degree – Biochemistry Major (126 credit hours)

Year One: Fall (14 credit hours)			Year One: Spring (16 credit hours)		
CHE 1479	General Chemistry I	4 hours	CHE 1489	General Chemistry II	4 hours
KIN 1100	Principles of Personal Fitness and Wellness	1 hour		Kinesiology Activity	1 hour
BIO 1359	Biology I	4 hours	BIO 1369	Biology II	4 hours
MAT 2445	Accelerated Pre-calculus	4 hours	MAT 2451	Calculus I	4 hours
GEN 1101	University Seminar	1 hour	CIS 1339	Introduction to Information Technology	3 hours
Year Two: Fall (18 credit hours)			Year Two: Spring (18 credit hours)		
CHE 2331/2139	Organic Chemistry I	4 hours	CHE 2341/2149	Organic Chemistry II	4 hours
PHY 2439	University Physics I	4 hours	PHY 2449	University Physics II	4 hours
	Biochemistry Core Elective	4 hours	MAT 2461	Calculus II	4 hours
ENG 1311	English Composition I	3 hours	ENG 1312	English Composition II	3 hours
COM 1310	Fundamentals of Human Communication	3 hours		Elective	3 hours
Year Three: Fall (17 credit hours)			Year Three: Spring (15 credit hours)		
CHE 3469	Quantitative Chemistry	4 hours		Biochemistry Core Elective	4 hours
CHE 4439	Biochemistry I	4 hours	CHE 4449	Biochemistry II	4 hours
HIS 13XX	Choose a History Course	3 hours		Kinesiology Activity	1 hour
GOV 2311	American Government	3 hours		Choose a Social Science Course	3 hours
ENG 23XX	Choose a Literature Course	3 hours	ENG 3306	Technical Writing	3 hours
Year Four: Fall (15 credit hours)			Year Three: Spring (13 credit hours)		
CHE 3311/3319	Physical Chemistry I	4 hours	CHE 3321/3129	Physical Chemistry II	4 hours
SCI 4109	Chemistry Research Proposal	1 hour	SCI 4209	Research Problems in Chemistry	2 hours
	Fine Arts Appreciation Course	3 hours	GEN 4100	Senior Seminar	1 hour
BIB 1303	Introduction to Old Testament	3 hours	BIB 1304	Introduction to New Testament	3 hours
	Elective	4 hours		Electives	7 hours