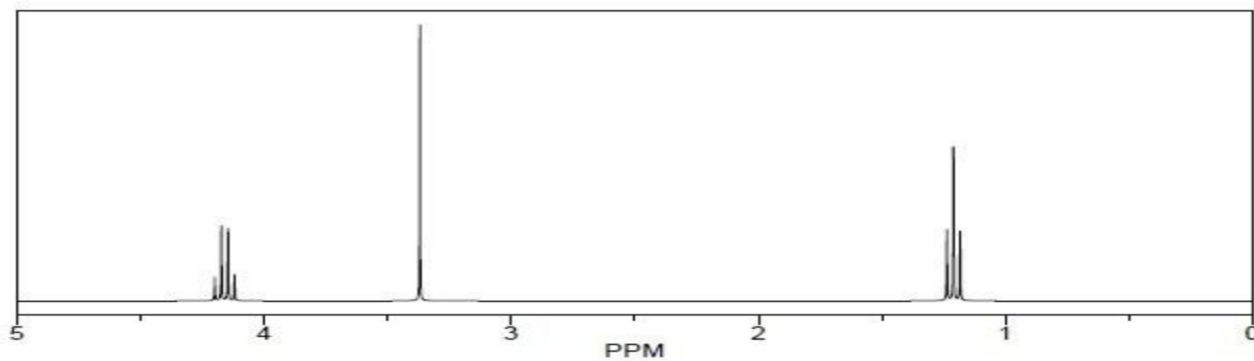




WASHINGTON COLLEGE CHIMICA ACTA



AN ALUMNI JOURNAL OF NEWS FROM AND ABOUT
THE CHEMISTRY COMMUNITY OF
WASHINGTON COLLEGE

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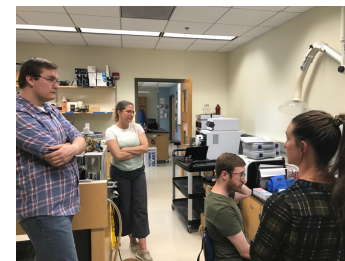
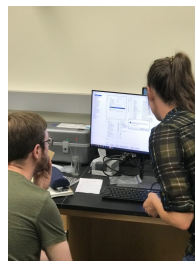
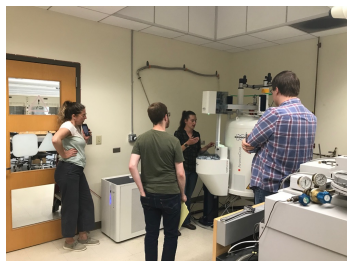
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About the Cover Photo: Newly Installed Bruker 400 MHz NMR Spectrometer; pmr spectrum of Compound X...C₇H₁₄O

Department Welcomes New 400 MHz NMR Spectrometer

Mid February saw the arrival of a new NMR spectrometer. Purchase of the Bruker 400 MHz instrument was made possible through the use of income from Chemistry Department-specific endowments. This new instrument, which replaces a defunct 400MHz unit purchased in 2006, is not only a vital component of lab-based courses and student-faculty research, but essential for the Department to maintain its American Chemical Society certification. The new unit was installed and became fully functional in late May 2023.



Bruker technician conducts training sessions for Chemistry Faculty

FACULTY NEWS: *Leslie A. Sherman, Ph.D.* *Promoted to Full Professor*

Leslie A. Sherman, Ph.D., who joined the faculty of Washington College in 2000 as *Assistant Professor*, with dual appointments in the *Department of Chemistry* and the *Program in Environmental Studies*, has been promoted to ***Full Professor***. Leslie holds a Ph.D. in Soil Science from the University of Wisconsin, Madison (1997), with specialization on Soil Chemistry; an M.S.C.E. in Environmental Engineering from the University of Minnesota (1988), with specialization in Water Chemistry; and a B.A. in Mathematics from Carleton College in 1985.



Leslie led the successful transformation of the *Environmental Studies Program* into a Department, of which she served as Chair (2012-2019), and the creation of a Major in Environmental Science and Studies. In 2007, Leslie became ***W. Alton Jones Associate Professor of Chemistry & Environmental Science***; in 2021 she was appointed Chair of the Department of Chemistry.

FACULTY NEWS: *Leslie A. Sherman, Ph.D.* *Promoted to Full Professor*

TEACHING: Leslie teaches courses in Chemistry (**Quantitative Chemical Analysis**, and **Junior Seminar**) and in Environmental Science (**Chemistry of the Environment** (for nonscience majors), and **Environmental Chemistry** (for majors)). In both Environment courses, the chemistry underlying current issues of water, soil, energy, and air pollution are studied.

In the laboratory portion of the classes, students investigate the water quality of local water bodies, including the Chester River, as well as analyze car exhaust from automobiles.



Students convert waste cooking oil from WC Dining Hall into diesel fuel.



Students take exhaust samples for analysis.

RESEARCH: In describing her research, Leslie says, " I am an environmental chemist whose primary research focus is the impact of land use on water quality and soil health. For over 15 years, I have been investigating soil chemical changes at a long-term grassland restoration site developed on low-production agricultural land at the **College's River and Field Campus** (<https://www.washcoll.edu/learn-by-doing/rafc/index.php>) The primary management practice is prescribed burning every 2 to 3 years. I have been monitoring soil organic matter, pH, extractable metals, and cation exchange capacity, all indicators of soil health.

I also study phosphorus cycling in nearby Urieville Lake, which suffers from extreme summer algal blooms. My primary focus is the sediments of the lake, which can bind phosphorus released into the lake from farm runoff, but which can release the phosphorus back into the lake under changing redox conditions and in response to physical disturbance."



2023 SENIOR AWARDS & PRIZES

Joseph H. McLain '37 Prize

Awarded to the graduating senior who, in the opinion of the Department of Chemistry, shows the greatest promise for making a future contribution to human understanding of chemistry. Endowed in 1982 by members of the American Pyrotechnics Association.

ROBERT EDWIN HOOT

*Magna Cum Laude; Departmental Honors in Chemistry
Gamma Sigma Epsilon Society, The Gamma Eta Chapter:
Fall 2023: Ph.D. Program in Chemistry at University of Texas-Dallas*



Robert with Lynn McLain, daughter of Joseph McLain, at May 19, 2023 Senior Awards Luncheon.

2023 SENIOR AWARDS & PRIZES



Elena with Aaron Lampman, Ph.D., *Dean of Student Achievement and Success*, at May 19, 2023 Senior Awards Luncheon.

James R. Miller '51 Award for Excellence in Chemistry

Given annually to an outstanding senior majoring in chemistry or a pre-medical student who has demonstrated special interest and high academic achievement in chemistry.

ELENA ASHLEIGH HILARIO

*Magna Cum Laude; Departmental Honors in Chemistry
Gamma Sigma Epsilon Society, The Gamma Eta Chapter;
Fall 2023: DMD Program in Dentistry at Rutgers University*

2023 SENIOR AWARDS & PRIZES



Max with President Sosulski at May 21, 2023 Commencement Ceremony.

Jane Huston Goodfellow Memorial Prize


To a graduating senior, majoring in science, who has an abiding appreciation of the arts and humanities and has shown academic excellence.

MAX REED TUCKER

Summa Cum Laude & First Honor Graduate; Phi Beta Kappa; Gamma Sigma Epsilon Society, The Gamma Eta Chapter; Departmental Honors in Chemistry ;

Fall 2023: Ph.D. Program in Chemistry at the University of Mississippi


2023 Chemistry, Biochemistry, & Molecular Biology, and Neuroscience Graduates


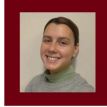

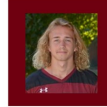

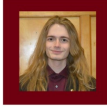

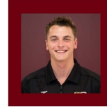




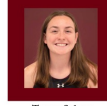
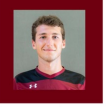

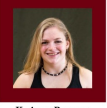
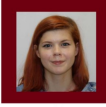
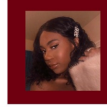


Washington College

Chemistry, Biochemistry & Molecular Biology, and Neuroscience Majors

Class of 2023



 Zeeta Abubakar Majors: Biochemistry & Molecular Biology and Computer Science SCE Title: "The Neurotoxicity of General Anesthesia in the Developing Brain"	 Jillian Brejuk Majors: Chemistry and Environmental Science SCE Title: "The effect of butylated hydroxyanisole and butylated hydroxytoluene in cosmetic products on growth of green algae with an evaluation of greener alternatives"	 Kayla Cash Major: Chemistry Minors: Biology and Public Health SCE Title: "The Effect of Methyl Methacrylate on Planarian Worm Generation"	 Tommy Hance Major: Biochemistry & Molecular Biology SCE Title: "A Biochemical Approach to Understanding Neurodegenerative Diseases Through Actin and Cofilin"	
 Elena Hilario Major: Chemistry Minor: Biology SCE Title: "Survey of Remineralization Techniques and Implications of Artificial Tooth Enamel for Future Treatments"	 Bob Hoot Major: Chemistry Minor: German Studies SCE Title: "Synthesis and Substrate Chromism of Small Molecule Building Blocks Towards a Phosphoquinolone FRET Dye"	 Emma Macturk Majors: Chemistry & Environmental Science Minor: Chesapeake Regional Studies SCE Title: "Assessing Phosphorus Transport through Natural Lands Project Riparian Buffers in Queen Anne's County, MD"	 Gage Mandrell Major: Neuroscience SCE Title: "Metformin as a Curing Agent in Chemotherapy-Induced Cognitive Impairment"	
 Savanna Pollard Major: Chemistry Minor: Economics SCE Title: "Comparing Phosphorus Levels in Urieville Lake to Surrounding Soil"	 Andrea Prestianne Major: Chemistry SCE Title: "Macrolide Antibiotic Glycosylation Inactivates Erythromycin but Inhibits E. coli"	 Kaelyn James Major: Chemistry Minor: Secondary Education SCE Title: "Incorporating Biomimicry Into the 8th Grade Curriculum: A Journey Towards the Sustainable Development Goals"	 Ella Sarvee Major: Biochemistry & Molecular Biology Minor: Public Health SCE Title: "From Genes to Therapy: Harnessing Molecular Insights to Manage Bronchopulmonary Dysplasia"	 Tatum Schatt Major: Biochemistry & Molecular Biology SCE Title: "The Use of PI3K/mTOR Dual Inhibitors in Targeting Chemoresistant Ovarian Cancer"
 Jackson Sopa Major: Biochemistry & Molecular Biology Minor: Public Health SCE Title: "Stem Cell Repair and Rejuvenation of Organs and Muscle Tissue"	 Max Tucker Majors: Chemistry and Mathematics Minor: German Studies SCE Title: "A Computational of the Room Temperature Ionic Liquid 1-Ethyl-3-Methyl Imidazolium Acetate"	 Kathryn Ruppert Majors: Biochemistry & Molecular Biology and Hispanic Studies SCE Title: "The Development and Current Therapeutic Potential of CRISPR-based Base Editing Technology"	 Emily Turfit Major: Biochemistry & Molecular Biology Minor: Theatre SCE Title: "The Study of Sanfilippo Syndrome and Current Treatment Options"	 Asia Webb Major: Chemistry SCE Title: "Investigating the Bioactive Compounds of Snail Mucus and their role in Human Skincare"

2023 Senior Capstone Experiences (Theses)

Senior	Major(s)	Title of Senior Capstone Experience	Thesis Adviser
Abubakar, Zeeta	BMB; CSI	The Neurotoxicity of General Anesthesia in the Developing Brain	<i>Mindy Reynolds</i>
Brejnik, Jillian	CHE; ENV	The Effect of Butylated Hydroxyanisole and Butylated Hydroxytoluene in Cosmetic Products on Growth of Green Algae with an Evaluation of Greener Alternatives	<i>Anne Marteel-Parrish & Leslie Sherman</i>
Cash, Kayla	CHE	The Effect of Methyl Methacrylate on Planarian Worm Generation	<i>Leslie Sherman</i>
Hilario, Elena	CHE	Survey of Remineralization Techniques and Implications of Artificial Tooth Enamel for Future Treatments	<i>Anne Marteel-Parrish</i>
Hoot, Bob	CHE	Synthesis and Solvatochromism of Small Molecule Building Blocks Towards a Phosphaquinolinone FRET Dye	<i>Jeremy Bard</i>
James, Kaelyn	CHE	Incorporating Biomimicry Into the 8th Grade Curriculum: A Journey Towards the Sustainable Development Goals	<i>Anne Marteel-Parrish</i>
Macturk, Emma	CHE; ENV	Assessing Phosphorus Transport through Natural Lands Project Riparian Buffers in Queen Anne's County, MD	<i>Leslie Sherman</i>
Pollard, Savanna	CHE	Comparing Phosphorus Levels in Urieville Lake to Surrounding Soil	<i>Leslie Sherman</i>
Prestianne, Andrea	CHE	Macrolide Antibiotic Glycosylation Inactivates Erythromycin but Inhibits E. coli	<i>Daniel May</i>
Sanvee, Ella	BMB	From Genes to Therapy: Harnessing Molecular Insights to Manage Bronchopulmonary Dysplasia	<i>Daniel May</i>
Tucker, Max	CHE; MAT	A Computational of the Room Temperature Ionic Liquid 1-Ethyl-3-Methyl Imidazolium Acetate	<i>Sarah Arradondo & Emerald Stacy</i>
Turfitt, Emily	BMB	The Study of Sanfilippo Syndrome and Current Treatment Options	<i>Kathleen Verville</i>
Webb, Asia	CHE	Investigating the Bioactive Compounds of Snail Mucus and their Role in Human Skincare	<i>Leslie Sherman</i>
Hance, Tommy	BMB	A Biochemical Approach to Understanding Neurodegenerative Diseases Through Actin and Cofilin	<i>Daniel May</i>
Schatt, Tatum	BMB	The Use of PI3K/mTOR Dual Inhibitors in Targeting Chemo-resistant Ovarian Cancer	<i>Mindy Reynolds</i>
Sopa, Jackson	BMB	Stem Cell Repair and Rejuvenation of Organs and Muscle Tissue	<i>Jennifer Wanat</i>
Ruppert, Kathryn	BMB; HPS	The Development and Current Therapeutic Potential of CRISPR-based Base Editing Technology	<i>Jennifer Wanat</i>
Mandrell, Gage	NEU	Metformin as a Curing Agent in Chemotherapy-Induced Cognitive Impairment.	<i>Aaron Krochmal</i>



Gamma Sigma Epsilon Chemistry Honor Society

The Gamma Eta Chapter at Washington College



The Gamma Eta Chapter of Gamma Sigma Epsilon National Honor Society in Chemistry, installed April 6, 2011, recognizes students demonstrating exceptional ability and interest in the field of chemistry.

~April 18, 2023 Induction Ceremony~



Seventeen students were inducted into the **Gamma Eta** Chapter at an outdoor ceremony held in the **Washington College Campus Garden**, a site selected to highlight **Earth Day 2023**. Following the induction, **Shane Brill**, *Campus Garden Director*, gave a walking tour of the facility, sharing his knowledge of the College's Composting program, the College Apiary and its **Bee Campus USA** status (the first in Maryland), and wild food foraging.



Shane Brill begins Garden Tour.



Professor Anne Marteel-Parrish congratulates senior inductee Thaliya O. Goslee.

April 18, 2023 Inductees~

Zeeta A. Abubakar	Jillian G. Brejnik	Jay N. Dadhanian
Ashley N. Devlin	David J. Estes	Jack R. Goemmel
Thaliya O. Goslee	Abigail E. Laubach	Kayleigh L. Maimone
Olivia J-M Payne	Kathryn N. Ruppert	Tatum N. Schatt
Francesca C. Schofer	Morgan E. Sutherland	Grant M. Thomas
Emily V. Turfitt		Alyssa M. Vieira



2022-2023 Gamma Eta Officers Jackson Sopa, Max Tucker, Julia Totis listen to Chapter Adviser Dr. Anne Marteel-Parrish describe the history of the Society.

The Chemistry Curricula at Washington College: The Major in Chemistry

Chemistry Major

With an organic-first curriculum accredited by the American Chemical Society and Maryland Higher Education Commission, we introduce our students to fundamental concepts in chemistry through the lens of organic and biochemistry. This approach allows us to introduce material more thematically, which gives students the foundation they need for advanced study in STEM fields, and better reflects modern chemistry as an interdisciplinary science.

The Chemistry Department offers two programs leading to the Bachelor of Science (B.S.) degree in Chemistry: American Chemical Society (ACS) Certified Degree in Chemistry and Non-ACS Certified Degree in Chemistry. While both programs provide a comprehensive foundation in chemistry, the ACS-certified major is carefully regulated by the ACS, has more stringent requirements, and is recognized nationally and internationally as the gold standard in undergraduate chemistry education. The non-ACS certified degree in chemistry has more flexibility and is an excellent option for students with more interdisciplinary interests, especially those interested in double majors working to complete requirements for multiple programs.

Table 1. Suggested Schedule for ACS Certified Chemistry Major.

	Fall Semester	Spring Semester
First Year	Chemical Principles of Organic Molecules Differential Calculus First-Year Seminar Distribution	Reactions of Organic Molecules Integral Calculus Distribution Distribution
Second Year	Quantitative Chemical Analysis General Physics I Language Course Distribution	Chemistry of the Elements General Physics II Language Course Distribution
Third Year	Synthesis of Organic Molecules Biochemistry (Opt. 1) Distribution Elective	Quantum Chemistry & Spectroscopy Chemistry of Biological Compounds (Opt. 2) Junior Seminar Elective
Fourth Year	Chemical Thermodynamics & Kinetics Elective	Senior Capstone Experience Elective

Sample Electives • CHE 210 Environmental Chemistry • CHE 310 Greener & Sustainable Chemistry • CHE 320 Intro Medicinal Chemistry • CHE 405 Biophysical Methods • CHE 410 Fundamentals of Materials Science & Engineering • CHE 394, 494 Approved Special Topics in Chemistry • One of the in-depth chemistry electives may be a credit-bearing chemistry research or internship experience.

THE ORGANIC FIRST CURRICULUM

The new curriculum was introduced in 2018. The four-year program, for both the ACS-certified and non-certified degrees, were fully revamped.

Freshman Chemistry (*General Chemistry I, II*) and Sophomore Chemistry (*Organic Chemistry I, II*) were, as shown in Table 1 in the left panel, replaced with a new sequence, *Chemical Principles of Organic Molecules; Reactions of Organic Molecules; Quantitative Chemical Analysis; and Chemistry of the Elements*.

In their Junior -Senior years students take *Organic Chemistry; Quantum Chemistry; Thermodynamics; Advanced Courses, Electives, Junior Seminar, and Senior Capstone Experience*, allowing them to specialize in **Four Areas**, as described at the bottom of the panel on the right.

Table 2. Suggested Schedule for Non-ACS Certified Chemistry Major.

	Fall Semester	Spring Semester
First Year	Chemical Principles of Organic Molecules Differential Calculus First-Year Seminar Distribution	Reactions of Organic Molecules Integral Calculus Distribution Distribution
Second Year	Quantitative Chemical Analysis General or College Physics I Language Course Distribution	Chemistry of the Elements General or College Physics II Language Course Distribution
Third Year	Synthesis of Organic Molecules Distribution Elective	Quantum Chemistry & Spectroscopy (Opt. 1) Junior Seminar Elective
Fourth Year	Chemical Thermodynamics & Kinetics (Opt. 2) Elective	Senior Capstone Experience Elective

Sample Electives • CHE 210 Environmental Chemistry • CHE 303 Chemistry of Biological Compounds • CHE 309/BIO 409 Biochemistry • CHE 310 Greener & Sustainable Chemistry • CHE 320 Intro Medicinal Chemistry • CHE 405 Biophysical Methods • CHE 410 Fundamentals of Materials Science & Engineering • CHE 394, 494 Approved Special Topics in Chemistry • Approved upper-level courses in biology, physics, environmental science, or mathematics may also be utilized to fulfill one of the three required electives, provided that these courses are not counted towards completion of a second major. • One of the in-depth chemistry electives may be a credit-bearing chemistry research or internship experience.

While all chemistry majors earn a B.S. degree from Washington College, you have the option to specialize your chemistry degree in one of four areas of emphasis. This allows you to personalize your education in the area of chemistry that you are most passionate about and earn an additional transcript notation that can be helpful when applying to jobs and/or graduate programs in the future.

Organic & Medicinal Chemistry

Greener Materials Science

Physical & Instrumental Chemistry

Biophysics & Biological Chemistry

The Chemistry Curricula at Washington College: The Major in Biochemistry and Molecular Biology & The Major in Neuroscience

Biochemistry & Molecular Biology Major

Originally a subfield in biology and chemistry, biochemistry has become its own discipline. The Biochemistry and Molecular Biology major gives students a foundation in the concepts and techniques essential to success in the interface between chemistry and biology.

Biochemistry and Molecular Biology majors are prepared for a variety of career opportunities, including biomedical research, health professions, and post-graduate education. A graduating Biochemistry and Molecular Biology major will be able to think like a scientist, have extensive knowledge of biochemistry, and be well-versed in biochemical techniques and technologies.

Table 1. Suggested Schedule for Biochemistry and Molecular Biology Major.

	Fall Semester	Spring Semester
First Year	General Biology I Chemical Principles of Organic Molecules First-Year Seminar Distribution	General Biology II Reactivity of Organic Molecules Distribution Distribution
Second Year	Genetics Quantitative Chemical Analysis Differential Calculus Language Course	Chemistry of Biological Compounds Integral Calculus Language Course Distribution
Third Year	Biochemistry General or College Physics I Distribution Elective	BIO Elective from Category II General or College Physics II Distribution Elective
Fourth Year	BIO Elective from Category II CHE 305 OR CHE Elective Elective Elective	CHE 306 OR CHE Elective Senior Capstone Experience Elective Elective

Additional Required Courses • Biology Junior Seminar • Chemistry Junior Seminar
Sample Category II Biology Electives • BIO 203 Microbiology • BIO 205 Cell Biology • BIO 302 Developmental Biology • BIO 314 Biotech & Molecular Bio • BIO 404 Immunology • BIO 394, 494 Approved Special Topics in Biology
Sample Chemistry Electives • CHE 320 Intro Medicinal Chemistry • CHE 340 Organic Mechanisms and Synthesis • CHE 405 Biophysical Methods • CHE 394, 494 Approved Special Topics in Chemistry.

BIOCHEMISTRY & MOLECULAR BIOLOGY

The interdisciplinary major in **Biochemistry & Molecular Biology** at Washington College, approved by the Maryland Higher Education Commission in 2018, culminates in a Bachelor of Science (B.S.) degree that provides a comprehensive education at the interface between biology and chemistry

NEUROSCIENCE

The **Neuroscience** major at Washington College, approved by the Maryland Higher Education Commission in 2022, reflects the interdisciplinary nature of the field of neuroscience by integrating the fields of biology, chemistry and psychology to promote a deeper understanding of the brain and its emergent properties.

Neuroscience Program



Cindy Gibson, Associate Professor of Psychology & Director of Neuroscience Program | cgibson2@washcoll.edu | 800-422-1782, ext. 7829 | washcoll.edu/neuroscience

Interdisciplinary by Nature

Neuroscience encourages collaboration across disciplines to advance our understanding of functions and dysfunctions of the nervous system across the lifespan and across disciplines.

The Neuroscience major at Washington College reflects the interdisciplinary nature of the field of neuroscience by integrating the fields of biology, chemistry and psychology to promote a deeper understanding of the brain and its emergent properties. Students will explore the brain at the level of molecules and electrical signals and will extend that knowledge to the networks that create behaviors, memories, and consciousness. They will also apply their knowledge through hands-on laboratory activities in most courses for the major.

Neuroscience Pathways

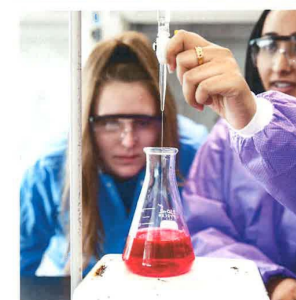
Because of the field's interdisciplinary nature, a degree in neuroscience can take a graduate in many directions. Two broad career possibilities are in biomedical research and healthcare professions, but there are many other possibilities.

Academic Requirements

The neuroscience major is designed to offer a breadth of courses that are divided into two categories. Learning about the physical properties of the nervous system provides an appreciation for the cellular and molecular mechanisms at play. Exploring the emergent properties of the nervous system helps one to understand how the system's physical properties combine to allow for incredible feats such as learning, memory, consciousness, and other behaviors. As a neuroscience major, you will take courses in both categories. Courses include subjects in biology, chemistry, psychology, and mathematics.

Set for Success

The Neuroscience program will prepare you for life beyond Washington College from your first day of class with foundational courses and a first-year seminar. Over your second year you will work with your academic advisor to pursue your interests through advanced courses, completing distribution and maybe picking up another major or some minors along the way. Your third year will include the Neuroscience Junior Seminar, a class designed to prepare you for applications to graduate programs, post-graduate jobs, and set the stage for your Senior Capstone Experience (SCE). During your final year with Washington College you will complete an SCE for your Neuroscience major. Majors have the option to complete a library research or laboratory research project with guidance from a faculty advisor.



The Chemistry Department's Arsenal of Instrumentation Essential for Course-Based Teaching and Student-Faculty Research

The College is open to and appreciative of future donations to a Chemistry Department Instrument Endowment Fund, designed to support the purchase (and replacement) of teaching and research-grade instrumentation.



**Bruker 400MHz
Nuclear Magnetic
Resonance Spectrometer**
Required by ACS;
Used in course work and in
student-faculty research.
Purchased 2023



**Agilent
Gas Chromatograph –
Mass Spectrometer**
Required by ACS;
Used in course work and in
student-faculty research
Purchased 2004

**NO LONGER
OPERATIONAL**
REPLACEMENT: \$104,000.00



**Agilent
Liquid Chromatograph –
Mass Spectrometer**
Required by ACS;
Used in course work and in
student-faculty research
Purchased 2018



Agilent Gas Chromatograph
Required by ACS;
Used in course work and in
student-faculty research
Purchased 2007

CANNOT BE SERVICED
REPLACEMENT: \$43,000.00

The Chemistry Department's Arsenal of Instrumentation Essential for Course-Based Teaching and Student-Faculty Research

The College is open to and appreciative of future donations to a Chemistry Department Instrument Endowment Fund, designed to support the purchase (and replacement) of teaching and research-grade instrumentation.



Perkin-Elmer Atomic Absorption Spectrometer

Required by ACS;

Used in course work, both
CHE and ENV, and in
student-faculty research.

Purchased 2000



Cary Fourier Transform- Infrared Spectrometer

Required by ACS;

Used in course work and in
student-faculty research.

Purchased 2016



Edinburgh Fluorimeter

Used in course work and in
student-faculty research.

Purchased 2023



CEM Microwave Reactor
Used in *Synthesis of Organic
Molecules* and in student-
faculty research.

Purchased 2010

The Chemistry Department's Arsenal of
Instrumentation Essential for Course-Based Teaching and Student-Faculty Research
The College is open to and appreciative of future donations to a Chemistry Department Instrument Endowment Fund, designed to support the purchase (and replacement) of teaching and research-grade instrumentation.



**THERMO Evolution 201
UV-Visible Spectrophotometer**
Required by ACS;
Used in upper-level Chemistry
courses and in student-faculty research.

Purchased 2015



HACH DR/4000USpectrophotometer
Used in courses in Environmental Chemistry
and in student-faculty research.

Purchased 2003

What is the name? and what is the structure for
Compound X, $C_7H_{14}O$, for which the pmr spectrum
is shown on the title page of this issue of
Washington College Chimica Acta?