One Hundred Eighty-Fourth Commencement

Saturday, May 14, 2022
Welcome, friends.

COMMENCEMENT EXERCISES

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ORDER OF EXERCISES

Processional
All who are able are requested to stand during the processional.

The Marshals
The Candidates for Degrees
Members of the Board of Managers
Members of the Haverford College Senior Staff
and Bryn Mawr College Cabinet
The Faculty
The Platform Party
  The Faculty Marshal
  The Hooding Marshal
  The Dean of the College
  The Opening Speaker
  The Faculty Speaker
  The Honorary Degree Presenter
  The Candidate for an Honorary Degree
  The Secretary of the Board of Managers
  The Provost
  The President of Bryn Mawr College
  The President of the College

Welcome From the President
Wendy E. Raymond

Opening Remarks
Charles Young, Dining Services

Remarks From the Class of 2022
Che Young Annette Lee

Remarks From Faculty
Lou Charkoudian ’03, Associate Professor of Chemistry

Greetings From Bryn Mawr College
Kimberly Wright Cassidy, President and Professor of Psychology

Remarks From the President
Wendy E. Raymond
Conferring of the Honorary Degree
Karen Korematsu, Civil Rights Advocate
Presented by Erin Schoneveld, Associate Professor of East Asian Languages and Cultures and Associate Professor of Visual Studies

Conferring of Degrees
Class presented by Linda Strong-Leek, Provost, Professor of African and Africana Studies, and Professor of Gender and Sexuality Studies
Candidates presented by John McKnight, Dean of the College

Closing Remarks From the President
Wendy E. Raymond

Recessional

Marshals
Christina Zwarg, Faculty Marshal and Professor of English
Suzanne Amador Kane, The John and Barbara Bush Professor in the Natural Sciences, Professor of Physics and Astronomy, and Coordinator of Biochemistry and Biophysics
Laura Been, Assistant Professor of Psychology
John Dougherty, Associate Professor of Computer Science
Andrew Friedman, Associate Professor and Chair of History
Rachel Hoang, Associate Professor of Biology
Kelly Gavin Zuckerman, Visiting Assistant Professor of Education
Nathan Zullinger, Hooding Marshal, Assistant Professor of Music, and Director of Choral and Vocal Studies

Music for Processional and Recessional
Brass Ensemble: Paul Futer, trumpet; Jon Fowler, tuba; Nozomi Imamura, trumpet; Justin Moore, trombone; Ben Mulholland, horn

Completion of graduation requirements may not be confirmed by this program, as the college transcript serves as the sole official student record. Furthermore, this program only includes those thesis titles submitted by students before the print deadline.
Each year at Commencement, Haverford awards one or multiple honorary degrees to people who have distinguished themselves in letters, the sciences, or the arts. Many recipients are noted for their contributions to the overall betterment of humankind and/or Haverford College. This year, at the 184th Commencement ceremony, the College is awarding an honorary degree to civil rights advocate Karen Korematsu.

Karen Korematsu
Karen Korematsu is the founder and executive director of the Fred T. Korematsu Institute, named for her late father, a civil rights icon who took his fight against WWII-era Japanese American incarceration all the way to the Supreme Court. Since her father’s 2005 death, Korematsu has carried on his legacy as a public speaker, educator, and education and civil rights advocate. She founded the Institute in 2009 to advance racial equity, social justice, and human rights for all, expanding from K–12 civic education to promoting public civic engagement and participation. The national education and advocacy organization has changed the way Japanese American incarceration has been taught in schools.

Korematsu’s work extends to advocating for civil liberties and social justice for all communities and addresses current issues that draw upon lessons of the past. As an Ambassador to California Education, she advised that state’s Department of Education on its Ethnic Studies Model Curriculum, designed to provide educators with the resources and guidance needed to integrate the histories and contributions of historically marginalized communities. She has given talks at schools and universities across the country, including presenting to Teachers College, Columbia University and the National Council for the Social Studies. She has signed on to amicus briefs in several cases opposing violations of constitutional rights that arose after 9/11, including Odah v. United States, Turkman v. Ashcroft, Hedges v. Obama, Hassan v. City of New York and, most recently, Hawaii v. Trump. And in 2015 she was the first non-lawyer to be inducted into the National Asian Pacific American Bar Association (NAPABA). She serves on the board of directors of Asian Americans Advancing Justice (AAJC) and NAPABA Law Foundation. She has been widely interviewed on issues of civil rights and education, and her op/eds have appeared in the New York Times and Washington Post. She is the recipient of many awards, including the ACLU-Chief Justice Earl Warren Civil Liberties Award, the Muslim Advocates-Voice of Freedom Award, the Community Leadership Award from the Asian Pacific American Institute for Congressional Studies, and an honorary Doctorate of Humane Letters from St. Michael’s College in Burlington, Vermont.
FELLOWSHIPS, PRIZES, AND AWARDS

African and Africana Studies
Presented by the Program of African and Africana Studies

The Valentin Y. Mudimbe Award for Excellence in African Studies
The award is given in honor of V.Y. Mudimbe, world-renowned scholar and former Haverford professor, and recognizes excellence in scholarship in African studies.

Lulu Marguerita Obaditch

Anthropology
Presented by the Department of Anthropology

The Wyatt MacGaffey Thesis Award in Anthropology
This award honors the professor emeritus of Haverford’s anthropology department and recognizes an outstanding senior thesis in anthropology.

Aliana Anuhea Ho

Arts
Presented by the Arts Program

The Kaye Prizes in Theater Arts
Established by Laurence Kaye 1983 and his parents, William Kaye 1954 and the late Cynthia Kaye. The prizes are awarded to the two students, regardless of class year, who have done the most to make theater arts an important part of the Bi-College community. One prize is given for performance-related work (e.g., acting, dancing, singing, conducting, directing); the other, for craft-based work in theater (e.g., set design, lighting, costuming, production management).

Acting: Eliza Waterman (Bryn Mawr College)
Direction/Production: Sydney Ethen (Bryn Mawr College)

Athletics
Presented by the Department of Athletics

The A. W. “Pop” Haddleton Award
Named in honor of the longtime track coach at Haverford, this award recognizes outstanding contributions to athletic teams by students who epitomize perseverance, dedication, and loyalty, and who have not received the recognition that, for example, regular starting players do.

Jacob Nathan Gaba, Moorea Morrison, and Will Vostrejs

The Gregory Kannerstein 1963 Award
Awarded to the individuals whose combination of outstanding athletic achievement and leadership has been a significant factor in a team’s competitive success, and whose levels of performance have brought distinction not only to the individuals and teams but also to the entire athletic program.

Caroline Keats Alexis and Dina Kosyagin

The Stephen G. Cary 1937 Award
Given in honor of Haverford alumnus Stephen G. Cary 1937. This award recognizes overall impact on the Haverford athletic program.

Isabel Renee Schwam

The Varsity Cup
Haverford’s highest athletic award, presented annually to the outstanding athlete in the senior class. The criteria used in selecting the Varsity Cup winner are athletic accomplishment, sportsmanship, and leadership throughout the student’s career.

Elizabeth Ravenel Davis
The William W. Ambler 1945 Award
Awarded to the graduating senior varsity athlete on the list of nominees who has the highest cumulative grade-point average through seven semesters of college work.

Sidney Hwang

The William Docherty Award for Sportsmanship in Intramural Basketball
Nominated by the referees, this prize winner has shown good sportsmanship and enthusiasm for basketball while completing both Intramural Basketball quarters.

Nile U Shaka Bayard

Biology
Presented by the Department of Biology

The Ariel G. Loewy Prize for Senior Research in Biology
Established in 2001 in memory of Ariel G. Loewy, professor of biology from 1953 to 2000. This prize is given to graduating seniors in biology whose efforts and accomplishments incorporate the rigor and diligence of experimental science.

Megan Coolahan and Jeremy Lavietes

The Irving Finger Prize in Biology
Established in 2003 by family, friends, and alumni in memory of Irving Finger, professor of biology from 1957 to 1994. It is awarded to a graduating senior in biology for outstanding growth and accomplishment in the major.

Junior Tommy Thành Hòa Nguyễn

The Marian E. Koshland Prize in Biology
Established in 1997 by biology faculty, College administrators, and Board members. The prize is awarded to graduating seniors who demonstrated outstanding performance in senior research.

Roy Chrismantika Simamora and Zakiyyah Angel Marie Winston

Center for Peace and Global Citizenship
Presented by the Center for Peace and Global Citizenship

Center for Peace and Global Citizenship Publicly Engaged Scholar Award
Established in 2019, this award recognizes knowledge production and dissemination that advances peace, social justice, and global citizenship. Preference is given to seniors who have demonstrated capacity to communicate concisely about their research to diverse audiences. Special consideration is given to research questions that emerge through relationships with organizations and networks advancing justice.

Lulu Marguerita Obaditch and Pelagia Maria Majoni

Chemistry
Presented by the Department of Chemistry

The American Chemical Society Prize for Scholastic Achievement
Given to the top-ranking senior major in chemistry.

Genevieve Chan Uy

The American Institute of Chemists Award
Given to an outstanding senior in chemistry in recognition of their demonstrated record of ability, leadership, and professional promise.

Callie E. W. Crawford

The Colin F. MacKay Prize
Endowed in honor of Professor MacKay by Garth R. Parker Jr. 1981 and the Rohm and Haas Company. This prize recognizes the members of the senior class majoring in chemistry who have shown the greatest intellectual growth over four years of work in the chemistry department.

Maia Carvalho and Yuval Luria
The George Peirce 1903 Prize in Chemistry
Named in honor of George Peirce 1903 by his parents, Harold and Charlotte C. Peirce.
Rebecca Sarah Koweek

The Lyman Beecher Hall Prize in Chemistry
Awarded to a graduating senior for outstanding accomplishment in the major coursework and in research.
Sidney Hwang

Classics
Presented by the Department of Classics
The Class of 1896 Prize in Latin for Sophomores
Awarded to the sophomore who has done the best work in the department.
Celeste Cubbage 2024

The Class of 1902 Prize in Latin for First-Years
Awarded to the first-years who have done the best work in the department.
Anthony Runfola 2025 and Sonia Singh 2025

The Daniel Gillis and Joseph Russo Prize
Awarded for the best essay in classical studies.
Joshua Lucas Bayona

The Howard Comfort Prize in Latin
Carter McCulloch Langen

The Mark L. Hepps 1979 Prize
Awarded in memory of Mark Larry Hepps 1979. This prize is awarded for diligence in the study of elementary Greek or Latin.
Sarah Lydon 2025

Society for Classical Studies Outstanding Student Award
Awarded annually to the Haverford student who made the most distinguished contribution to the study of classics at Haverford. This award is presented by the Haverford faculty under the auspices of the Society for Classical Studies.
Felix Haomeng Qin

The William W. Baker Prize in Greek
Margaret Jane Doubman

College Fellowships
Presented by the Faculty
The Augustus Taber Murray 1885 Research Fellowship
Named in honor of Augustus Taber Murray, a distinguished member of the Class of 1885. This fellowship is awarded to a student pursuing further study in English literature, the classics, or German literature.
Claire Cai 2021

The Clementine Cope Fellowship
Given in honor of Thomas P. Cope, a former member of the Board of Managers, these awards are to be used for graduate study at another institution.
Fellowship: Elom Tettey-Tamaklo 2019
Prizes: Seabrook Jeffcoat 2022, Sara Ozawa 2018, Roy Chrismantika Simamora 2022, and Zakiyyah Angel Marie Winston 2022
Communications
Presented by the Office of Communications

*The James Bready 1939 Prize for Journalistic Writing*
Established in 2004 by Richard Bready of the Class of 1967 to honor his father and longtime newspaper writer, James Bready. The prize is awarded annually to a Haverford student who has written the year’s best journalistic article.

**Zhao Gu Gammage 2025**

Comparative Literature
Presented by the Department of Comparative Literature

*The Laurie Ann Levin Prize*
Awarded to the senior major whose work merits recognition for intellectual achievement.

**Jillian Lunoe (Bryn Mawr College)**

East Asian Languages & Cultures
Presented by the Bi-College Department of East Asian Languages & Cultures

*The Hu Shih Prize (胡適)*
Established in 2020 and named for the 20th-century Chinese philosopher and educator Hu Shih (1891–1962), this prize is given annually to a graduating senior who has distinguished themselves in the study of the Chinese language.

**Nicola F. McHugh (Bryn Mawr College)**

**William Nolan Evans (2021 prizewinner)**

*The Margaret Mayeda Petersson Prize in Asian Studies*
Awarded to a senior major in recognition of achievement in the study of East Asia.

**Mali Isaelsa Gruber**

Economics
Presented by the Department of Economics

*The Holland Hunter 1943 Economics Department Thesis Prize*
Awarded to the senior whose thesis displays the most outstanding empirical and/or theoretical applications of economics.

**Karan Makkar**

*The Michael M. Weinstein Prize in Economics*
Established in 1986.

**Haya Ruth Goldblatt, Gabriel Sekeres, and Aaron Graybill**

English
Presented by the Department of English

*The Ian Walker 1950 Prize Fund in English*
Established by family, friends, and classmates of Ian Walker 1950. This prize is awarded to a junior or senior majoring in English.

**Jillian Lunoe (Bryn Mawr College)**

*The Newton Prize in English Literature*
Awarded on the basis of final honors in English.

**Amos Aaron Karlsen**

*The Terry M. Kreiger 1969 Memorial Prize*
Awarded to the senior demonstrating the greatest achievement in writing during the junior and senior years.

**Abigail Satenik Avedia Meeker**
The William Ellis Scull 1883 Prize
Awarded to the juniors and/or seniors who have shown the greatest achievement in voice and expression of the English language.

Elaina Sassine and Ryan Foster Totaro

Environmental Studies
Presented by the Department of Environmental Studies

Environmental Engagement Award
Awarded to the graduating senior who demonstrates outstanding dimensions of environmental engagement and interdisciplinarity, with particular emphasis on crossing or combining modes of inquiry; demonstrates boldness, braveness, and community engagement; and exemplifies love and commitment to working with people as well as with land, animals, plants, and other non-human life beyond campus boundaries.

Luigie Dion Alequín

History
Presented by the Department of History

The History Department Senior Thesis Prize
Awarded in recognition of the senior project that best exemplifies the passion, commitment, and professionalism of the historical enterprise.

Kathleen Emma Scully

The Samuel Parry Lippincott 1886 Prize in History

Collin M. Kawan-Hemler

The Senior History Prize
Awarded in recognition of achievement in the study of history.

Rafael Jovel

Latin American, Iberian, and Latinx Studies
Presented by the Department of Latin American, Iberian, and Latinx Studies

The Gridley McKim-Smith Senior Research Prize
The Gridley McKim-Smith Senior Research Prize is awarded by the Haverford, Bryn Mawr, and Swarthmore Programs in Latin American, Iberian, and Latinx Studies. It recognizes the achievements of students whose scholarship demonstrates the intellectual rigor and interdisciplinary breadth notable throughout Gridley McKim-Smith's illustrious career in the Bryn Mawr Art History Department.

Brandon Daniel Saucedo Pita

Linguistics
Presented by the Tri-Co Department of Linguistics

The Linguistics Prize in Application
Awarded to the senior whose thesis best addresses application issues in linguistics.

Nuria Inez Benitez

The Linguistics Prize in an Experimental Topic
Awarded to the senior whose thesis best addresses experimental issues in linguistics.

Yiying Jiang (Swarthmore College)

The Linguistics Prize in Linguistic Theory
Awarded to the senior whose thesis best addresses theoretical issues in linguistics.

Mia Limmer (Swarthmore College)
Marian E. Koshland Integrated Natural Sciences Center  
Presented by the Departments of Biology and Chemistry

*The Arnold and Mabel Beckman Foundation Award*  
Recognizes an outstanding undergraduate student in chemistry and biological sciences.  
**Megan Coolahan**

**Mathematics**  
Presented by the Department of Mathematics and Statistics

*The Albert Harris Wilson Award*  
Established in 1969 by members of the Class of 1919 at their 50th reunion, this prize recognizes the members of the first-year class in mathematics who have proved by their character, scholarship, and need to be those whom Dr. Wilson would have most enjoyed helping were he still with us and teaching mathematics at Haverford College.  
**Al Farabie Akanda 2025, Jennifer Contreras-Ortiz 2025, Iris Horn 2025, Brian Rettig 2025, and Leo Westrey 2025**

*Class of 1896 Prize in Mathematics*  
Awarded to the sophomores who have done the best work in the department.  
**Jiachen Kang 2024 and Guilherme Zeus Dantas e Moura 2024**

*The Department Prize in Mathematics for First-Year Students*  
Awarded to the first-year student who received the highest score on the annual math prize exam.  
**Rowan Shigeno 2025**

*The Mathematics and Statistics Senior Thesis Prize*  
Awarded in recognition of the senior projects that best exemplify commitment, independence, and clarity of mathematical or statistical exposition.  
**Tanassaluck Na Nakorn and Rahul Sanjay Palnitkar**

**Music**  
Presented by the director of the Chamber Music Program

*The Sylvia Glickman Chamber Music Prize*  
Awarded to the top graduating senior who was enrolled in the Bi-College Chamber Music Program throughout the duration of their tenure at Haverford College. This award honors the senior who has displayed leadership, commitment, innovation, and improvement during their tenure in the program.  
**Maria Yea Seong**

**Peace, Justice, and Human Rights**  
Presented by the Program of Peace, Justice, and Human Rights

*The PJHR Award for Engaged Scholarship*  
Awarded to the graduating senior whose justice-oriented work in the concentration has been academically rigorous while also attuned to the importance of communicating ideas to people with different views and forms of training. Recipients of this award have mastered both disciplinary and interdisciplinary forms of excellence.  
**Arshiya Bhayana**

*The PJHR Award for Ethical Action*  
Awarded to the graduating senior who has lived the values of peace, justice, and human rights both in the classroom and in the world beyond campus in an exemplary fashion. Recipients of this award have put their principles into action and made a positive impact in the larger world by engaging directly with communities impacted by injustice or inequality.  
**Noa Hannah Scheinfeld**
The Elizabeth P. Smith Prize
Established in 1915 by bequest from Elizabeth P. Smith, this prize honors the best essay on peace.
Valentina Moreno

The Elliston P. Morris 1848 Prize
Founded in 1906 by a gift of $1,000 from Elliston P. Morris 1848. This prize honors the best essay on the subject of arbitration and peace.
Hsiang-Yuan Stephanie Tseng (Bryn Mawr College)

Philosophy
Presented by the Department of Philosophy

The Charles Schwartz 1979 Memorial Prize in Philosophy
Awarded in recognition of Chuck Schwartz 1979. This prize is given to the student whose senior essay best exemplifies the care, precision, and creativity demonstrated by the senior project of Chuck Schwartz.
Zihui Ding

The Departmental Prize in Philosophy
Recognizes the student or students who have made the most significant contributions to the vitality of the philosophical community, both within the classroom and beyond, while majoring in philosophy at Haverford College.
Oliver Adam Bates

Physics and Astronomy
Presented by the Departments of Physics and Astronomy

The Louis B. Green Prize in Physics and Astronomy
Established by Charles Ufford, a former Haverford College parent.
James Tropp Garland, Turner Ellis Johnson, Frankie Silvers, and Autumn Winch (Bryn Mawr College)

Political Science
Presented by the Department of Political Science

The Emerson L. Darnell 1940 Prize
Presented in honor of Emerson Darnell, a Quaker alumnus who dedicated his life’s work to advocating peaceful social change and defending the civil rights of the individual. The prize is awarded annually to the students who present the best papers demonstrating an appreciation of the Bill of Rights as the foundation of American law and the very fabric of American society.
Rachel Bamberger (Bryn Mawr College) and Lulu Marguerita Obaditch

The Harold P. Kurzman 1958 Prize
Awarded to the senior who has performed the best and most creatively in political science coursework.
Christopher Conrad

The Harvey Glickman Prize
Presented in honor of Harvey Glickman, a professor of political science at Haverford for 43 years and an esteemed political theorist. Awarded to the graduating senior in political science whose senior thesis displays the greatest innovation in pushing the theoretical boundaries of the discipline and its subfields. Established by the Political Science Department in 2019.
Nicholas Conroy

The Herman M. Somers Prize in Political Science
Given in recognition of the research and teaching of Red Somers. Awarded to the graduating seniors who present the best senior projects that reflect the interest in policy, respect for evidence, and the humane concern for improving society that characterized Somers’ work.
Ian Michael D’Elia and Steven Puac
The Stephen H. Miller 1962 Memorial Award
Presented in honor of Stephen H. Miller 1962, who lost his life serving his country and his fellow man in South Vietnam while taking part in village development as a member of the United States Information Agency. This award is presented to the graduating senior in political science who best exemplifies the ideal of political involvement and social service expressed in Miller’s life and career.
Lulu Marguerita Obaditch

Psychology
Presented by the Department of Psychology

The David Olton 1964 Research Award
Created in memory of David Olton 1964, chair of the psychology department at Johns Hopkins University, who was an energetic and joyous contributor to the field of psychology. The award honors the seniors who have done exceptional work and show great promise in psychology.
Jianing Mu and Elizabeth Cannon Szanton

Registrar
Presented by the Registrar’s Office

The Scholarship Improvement Prize
Awarded to the seniors who have shown the most steady and marked improvement in scholarship during their time at Haverford.
Brandon L. Alonso and Michelle Allison Kaplan

Religion
Presented by the Department of Religion

The Religion Prize
Awarded to the senior religion major who presented the best thesis.
Riah Newfont

Spanish
Presented by the Department of Spanish

The Manuel J. and Elisa Pi Asensio Prize
Awarded for the best essay submitted by a senior majoring in Spanish or with a concentration in Latin American, Iberian, and Latinx Studies.
Aaron Ettinger Witkin

Students’ Council
Presented by Students’ Council

The Edmund J. Lee 1943 Memorial Award
Recognizes Edmund Jennings Lee, the sole member of the Class of 1943 to be killed during World War II. This award is given to the student organization that has contributed most toward the furtherance of academic pursuits, extracurricular activities, spiritual growth, or college spirit in individuals or in the College as a whole during the year.
Bi-Co Mutual Aid

The John G. Wallace 1957 Class Night Award
Presented to the student who has made the greatest contribution to on-campus performing arts.
Raveen Green
The Jonathan Mohrig 1986 Memorial Prize
Honors a Haverford sophomore who died in 1984. This prize is awarded to the student at Haverford who embodies Jonathan’s enthusiasm, warmth, humor, and quiet generosity to those around him, and who, like Jonathan, makes a special contribution to the quality of life at Haverford.

Theodore Bien

The Martin Foss Award
Given to the member of the Haverford College community whose life speaks directly to the lives of others by the powerful harmony of intellect, compassion, and courage.

Zakiyyah Angel Marie Winston

The Service Leadership Award
Presented to the graduating senior who will make outstanding contributions to social and/or environmental change through projects or programs of their initiation. The award is designed both to nurture graduating seniors as they begin to dedicate their lives to service action, as well as to develop a network of alumni doing model work in the field.

Pelagia Maria Majoni

The Stephen G. Cary 1937 Award
Given in honor of Stephen G. Cary 1937 and his contributions to the Haverford community. This award is presented to the senior who best exemplifies “honesty, integrity, a healthy combination of scholarly and extracurricular activities, and, most of all, a deep concern not only for those who are a part of the Haverford community, but also for those who are a part of our neighboring communities.” An award of $1,000 is given in the winner’s name to the College for the purpose of financial aid.

Maya Syndie Wernick

The Students’ Council Student Life Award
Presented to the senior who, through hard work, persistence, and concern for their peers, has made the greatest contribution to student life on campus.

Samuel Louis Aronson

Faculty and Staff Awards
Presented by Students’ Council

The Students’ Association Appreciation Award
Presented to a departing member of the Haverford faculty or staff who has given outstanding service to the Haverford community and who upholds the qualities intrinsic to a Haverford education.

Mark Stein, Organic Chemistry Instructor

The Students’ Association Award
Presented to Haverford faculty members who give outstanding service to the Haverford community and uphold the qualities intrinsic to a Haverford education.

Tarik Aougab, Assistant Professor of Mathematics and Statistics, and Talia Young, Visiting Assistant Professor of Environmental Studies
Chesick Scholars Program
The John P. Chesick Scholars Program includes students from backgrounds underrepresented in academia, who are especially interested in study and research in their areas of scholarly interest, as well as in working with faculty mentors and like-minded peers to build a supportive academic community. The sixth cohort of Chesick Scholars comprises the following graduating seniors:

Ali M. Al-Tamimi
Nameera Bajwa
Shayleah J. Jenkins
Faria Khan
Sharon Nwankpa
Daniel Alfredo Paredes
Ruanna Amara Small
Zakiyyah Angel Marie Winston

Horizons Leadership Institute
The Horizons Leadership Institute includes students from groups underrepresented in academia, who are especially interested in becoming agents of social and structural change on campus. The fourth cohort of Horizons participants comprises the following graduating seniors:

Luigie Dion Alequín
Brandon L. Alonso
Asia Maria Belt
Aishah A. Collison-Cofie
Edwin Garrett Crockett
Taiwo Fayemi
Raveen Green
Natalie Renae Kauffman
Erica Ruth Kaunang

Faria Khan
Che Young Annette Lee
David Ly
Junior Tommy Thành Hòa Nguyen
Giancarlo Rendon
Zarahy De La Caridad Rivas
Carmiya A. Solomon
Seth Bertrand Todd
Maria Yea Seong

As of August 2021, the Chesick Scholars Program and Horizons have combined to include all first-generation and/or low-income students on Haverford’s campus. Graduating seniors who have chosen to honor this identity will be wearing Chesick Scholar stoles over their commencement robes.
Founded in 1776, Phi Beta Kappa is the oldest undergraduate academic honor society in the United States. The Haverford College Chapter of the Phi Beta Kappa Society of America was chartered in 1898 as Zeta of Pennsylvania. The Haverford chapter is one of 286 nationwide, housed at colleges and universities with academic programs in liberal arts and sciences acknowledged as sufficiently rigorous and intellectually challenging by standards maintained by the national Phi Beta Kappa society.

Individual selection reflects excellence in the liberal arts and sciences and distinction in a broad array of undergraduate courses. At Haverford College, undergraduate members of good character are selected primarily on the basis of academic performance, as expressed in their course grades. The selection committee of alumni and faculty members of Phi Beta Kappa also considers, to the extent possible, the degree of originality, creativity, and imagination of thought; the range of depth of intellectual interests; and the precision and elegance of a student’s work. Normally no less than 10 percent and no more than 15 percent of a graduating class are selected.

The Phi Beta Kappa Society supports programs that significantly advance scholarship and academic excellence by awards, lectures, and outreach activities to schools. Membership now numbers more than 500,000 individuals.

The following members of the Classes of 2022 and 2023 have been elected to the Phi Beta Kappa Society.

Members of the Class of 2022 elected during the junior year:
Megan Coolahan
João Pedro Mello de Carvalho
Trevor Schweitzer Stern
Duc Minh Trinh

Members of the Class of 2022 elected during the senior year:
Joshua Lucas Bayona
Eric Beery
Nuria Inez Benitez
Blake Stephen Brinster
Rebecca Kai-Wei Chen
Christopher Conrad
Nicholas Conroy
Zihui Ding
Claire Marguerite DuBois
Anna Rosalee Fiscarelli-Mintz
Adam Thomas
Friedman-Brown
Haya Ruth Goldblatt
Haosong Huang
Sidney Hwang
Ellen Therese Kerns
Jiajie Ma
Karan Makkar
Katherine Matthews
Sophia Isabelle Mercado

Members of the Class of 2023 elected this year:
Mia A. Kussman
Christina Maye McBride
Carolena Muno
Nathan Wesley Rose
Ashley Schefler
Jianing Mu
Riah Newfont
Poppy Northing
Elizabeth Cannon Szanton
Harry Taussig
Ryan Foster Totaro
Genevieve Chan Uy
Diana Catherine Varenik
Sijing Zhao
Awarded by the Faculty of the College

**Summa Cum Laude**
Nuria Inez Benitez
João Pedro Mello de Carvalho
Megan Coolahan
Zihui Ding
Jiajie Ma
Karan Makkar
Jianing Mu
Kathleen Emma Scully
Roy Chrismantika Simamora
Harry Taussig
Ryan Foster Totaro
Diana Catherine Varenik

**Magna Cum Laude**
Luigie Dion Alequín
Joshua Lucas Bayona
Eric Beery
Blake Stephen Brinster
Ashley Nicole Chan
Matthew Chen
Rebecca Kai-Wei Chen
Aaron Cohen
Christopher Conrad
Nicholas Conroy
Ian Michael D’Elia
Justine Samantha Dell
Margaret Jane Doubman
Claire Marguerite DuBois
William Nolan Evans
Anna Rosalee Fiscarelli-Mintz
Adam Thomas Friedman-Brown
Haya Ruth Goldblatt
Aaron Graybill
William Jens Harris-Braun
Alexandra Horkavá
Haosong Huang
Sidney Hwang
Ellen Therese Kerns
Chengpei Li
Katherine Matthews
Sophia Isabelle Mercado
Valentina Moreno
Riah Newfont
Poppy Northing
Brandon Daniel Saucedo Pita
Luke Thomas Smith
Trevor Schweitzer Stern
Elizabeth Cannon Szanton
Duc Minh Trinh
Genevieve Chan Uy
Alissa Erin Vandenbark
Maya Sydnie Wernick
Maria Yea Seong
Sijing Zhao

**Cum Laude**
Elisabeth Ryann Atlasman
Calvin Penn Barrett
Nathan Birch Buchanan
Ellie Jayne Canty
Callie E. W. Crawford
Kara Simone D’Ascenzo
Dylan Richard Dixon
David Asher Edelman
Alexandra Anne Edwards
Sofia Kourakos Esner
Erica Naomi Fenton
Stephen Limb Flanders
Talia Bess Goerge-Karron
Jacob Solomon Gorenburg
Romana Maria Hladky
Sara Fay Hunsberger
Seabrook Jeffcoat
Claire Riley Johnson
Amos Aaron Karlsen
Hannah Brooke Lopez
Michael Lyons
Caspian Macky
Becca Matson
Phoebe Ann May
Abigail Satenik Avedia Meeker
Emma Marie Miller
Isabella Anne Miller
Lulu Marguerita Obaditch
Samantha Viridiana
Olivares-Mejia
Rahul Sanjay Palnitkar
Margaret Gleick Parham
Julie Katherine Post
Felix Haomeng Qin
Emma Sophia Regev
Nathaniel Constantine Ruhl
Elaina Sassine
Noah Harris Schwab
Shreya Singh
Ruanna Amara Small
Rachel Sprague White
Kian Daniel Williams
Abigail Grace Wolfenden
Çiçek Yavuz
Jiachen Yi
Jesse L. Zeldes
Jacob David Zimmerman
High Honors
Awarded by the Departments of the College

Ella Asiedu  
*Anthropology*

Simon Babb  
*Computer Science*

Joshua Lucas Bayona  
*Classical Languages*

Eric Beery  
*Physics*

Nuria Inez Benitez  
*Linguistics*

Theodore Bien  
*Physics*

Sarah Perlman Cahn  
*Political Science*

João Pedro Mello de Carvalho  
*Linguistics and Mathematics*

Ashley Nicole Chan  
*Economics*

Christopher Conrad  
*Political Science*

Nicholas Conroy  
*Political Science*

Callie E. W. Crawford  
*Chemistry*

Ian Michael D’Elia  
*Political Science*

Justine Samantha Dell  
*Mathematics*

Zihui Ding  
*Philosophy*

Margaret Jane Doubman  
*Physics*

Joshua Ari Engler  
*Chemistry*

James Tropp Garland  
*Astronomy and Physics*

Haya Ruth Goldblatt  
*Economics*

Aaron Graybill  
*Economics*

Haosong Huang  
*Mathematics*

Sidney Hwang  
*Chemistry*

Turner Ellis Johnson  
*Physics*

Scott Ira Kaiser  
*Chemistry*

Amos Aaron Karlsen  
*English*

Fariea Khan  
*Psychology*

Maria Klavdia Krieg  
*Chemistry*

Chengpei Li  
*Physics*

Michael Lyons  
*Chemistry*

Jiajie Ma  
*Computer Science and Mathematics*

Karan Makkar  
*Economics*

Becca Matson  
*History*

Katherine Matthews  
*Physics*

Sophia Isabelle Mercado  
*Psychology*

Isabella Anne Miller  
*Economics*

Valentina Moreno  
*Economics*

Jianing Mu  
*Psychology*

Riah Newfont  
*Religion*

Lulu Marguerita Obaditch  
*Political Science*

Maria Ann Penrice  
*Anthropology*

Nathaniel Constantine Ruhl  
*Physics*

Noah Harris Schwab  
*Physics*

Trevor Schweitzer Stern  
*History and Religion*

Elizabeth Cannon Szanton  
*Psychology*

Ryan Foster Totaro  
*English*

Duc Minh Trinh  
*Computer Science and Linguistics*

Genevieve Chan Uy  
*Chemistry*

Diana Catherine Varenik  
*English*

Aaron Ettinger Witkin  
*Spanish*
Honors
Awarded by the Departments of the College

Jeffrey Carl Allen
History

Kara Simone D’Ascenzo
Political Science

Gillian Gailey Guss
Psychology

Samuel Louis Aronson
Computer Science and Philosophy

Anna DiAntonio
Psychology

Benjamin Clark Haile
Philosophy

Nameera Bajwa
English at Bryn Mawr College

Matthew Donahue
Chemistry

Romana Maria Hladky
Physics

Kira Pilar Barnes
Psychology

David Asher Edelman
Political Science

Keegan Hoag
Psychology

Taryn Jenae Barrett
Anthropology

Sofia Kourakos Esner
Philosophy

Alexandra Horkavá
Economics

Nuria Inez Benitez
Anthropology

William Nolan Evans
Linguistics

Haosong Huang
Computer Science

Sarah Meike Blossom
Neuroscience

Anna Rosalee Fiscarelli-Mintz
Philosophy

Sara Fay Hunsberger
Mathematics

Blake Stephen Brinster
Economics

Stephen Limb Flanders
Political Science

John Marshall Jayasankar
Linguistics

Ellen Carlson
Physics

Adam Thomas Friedman-Brown
Mathematics

Seabrook Jeffcoat
Psychology

Maia Carvalho
Chemistry

Jacob Nathan Gaba
History

Shayleah J. Jenkins
English at Bryn Mawr College

Matthew Chen
Computer Science

Galebinge
German Studies

Claire Riley Johnson
Biology at Bryn Mawr College

Rebecca Kai-Wei Chen
English

Jacob Solomon
Gorenburg
Computer Science

Naomi Bilonda Kalombo
Linguistics

Katie Chung
Religion

Freddie Gould
Computer Science

Michelle Allison Kaplan
Psychology

Aaron Cohen
Psychology

Darius Graham
Anthropology

Erica Ruth Kaunang
Anthropology
Collin M. Kawan-Hemler  
*History*

Benjamin Klamka  
*Linguistics and Music*

Patrick Lee Kley  
*Chemistry*

Rebecca Sarah Koweek  
*Chemistry*

Che Young Annette Lee  
*Psychology*

Hannah Brooke Lopez  
*Economics*

Yuval Luria  
*Chemistry*

Caspian Macky  
*Mathematics*

Ester Maja  
*Economics*

Abigail Satenik Avedia Meeker  
*English*

Eli Melnick  
*Physics*

Poppy Northing  
*Biology at Bryn Mawr College*

Rahul Sanjay Palnitkar  
*Computer Science*

Karlie Brynn Pollock  
*Psychology*

Steven Puac  
*Spanish*

Felix Haomeng Qin  
*Classical Culture and Society*

Emma Sophia Regev  
*Religion*

Hannah Roth  
*Political Science*

Elaina Sassine  
*English*

Noa Schisterman  
*Psychology*

Gabriel Sekeres  
*Economics*

Katrina Eileen Severtson  
*Psychology*

Frankie Silvers  
*History at Bryn Mawr College*

Roy Chrsimantika Simamora  
*Psychology*

Luke Thomas Smith  
*Economics*

Harry Taussig  
*Computer Science*

Marcus Simon Thomas  
*Chemistry*

Anne L. Tobin  
*Psychology*

Nasanbayar Ulzii-Orshikh  
*Computer Science*

Jacob Valero  
*Computer Science*

Alissa Erin Vandenbark  
*Psychology*

Adrian Velonis  
*English at Bryn Mawr College*

Anthony Michael Walker II  
*Physics*

Kian Daniel Williams  
*Economics*

Abigail Grace Wolfenden  
*English*

Çiçek Yavuz  
*Philosophy*

Maria Yea Seong  
*Music*

Jiachen Yi  
*Mathematics*

Jesse L. Zeldes  
*Mathematics*

Anita Minghui Zhu  
*Psychology*

Jacob David Zimmerman  
*Computer Science*
The senior capstone project is an opportunity for Haverford students to apply the skills, methods, and concepts specific to their major field in the production of new knowledge, the original synthesis of existing knowledge, and/or creative artistic expression. The titles of these theses, performances, and/or fine arts portfolios appear below students’ names. Certain majors also include comprehensive exams, and for some majors offered through partner institutions, a senior capstone project may not be required.

Brandon Aguilar  
Philosophy: The Politics of Decreation

Luigie Dion Alequín  
Environmental Studies

Caroline Keats Alexis  
Economics: How Does the Emotional Support Context of the Home Contribute to Educational Outcomes in Elementary School?

Mohamed Ali  
Computer Science: Advances of Generative Adversarial Networks in Population Genetics with a Minor in Mathematics

Jeffrey Carl Allen  
English: “Understanding by Such Shallow Devices”: Satire, Epistolarity, and Orientalism in Peter Markoe’s The Algerine Spy in Pennsylvania  
History: Imagining Islam: Early Republican Literature and the Barbary Crisis

Brandon L. Alonso  
Psychology: The Impact of Postpartum Estrogen and Progesterone Withdrawal on Anxiety and OCD-Like Behaviors and ΔFosB Expression in the Nucleus Accumbens in Female Mice with Minors in Neuroscience and Philosophy

Ali M. Al-Tamimi  
Chemistry: The Synthesis and Characterization of a Novel Chiral Guanidine-Based Four-Coordinate Tripodal Ligand DPI3tren

Caroline Cecelia Andersen  
Psychology: How Risk Factors for Adolescent Substance Use Can Be Used to Prevent the Development of Substance Use Disorders with a Minor in Classical Culture and Society

Samuel Louis Aronson  
Computer Science: Understanding Functional and Equational Programming Techniques on Graph-Based Problems  
Philosophy: Translating the Machine: Rearticulating Intelligence and Cognition with a Minor in Mathematics

Ella Asiedu  
Anthropology with Minors in Health Studies and Psychology

Elisabeth Ryann Atlasman  
Biology: Plant-Pollinator Interactions: Investigating the Impact of Floral Scent and the Promising Role of 3D-Printing Technology with a Minor in Health Studies and Neuroscience

Gilad Avrahami  
Political Science: Government Solutions to Create a Sustainable Future for Air Conditioning in Nigeria with a Minor in French and Francophone Studies

Simon Babb  
Computer Science: The Role of Word Order in Machine Translation Models

Nameera Bajwa  
English at Bryn Mawr College: Reaching From Rupture: Tracing the Afterlives of Colonial Modernity and the Spatial Politics of Desire in South Asian Diasporic Storytelling with a Minor in Creative Writing at Bryn Mawr College

Jasper Barbash-Taylor  
Philosophy: Corpus Linguae

Kira Pilar Barnes  
Psychology: A Comparison of c-Fos Expression in the Perirhinal Cortex Across Object Recognition Tasks in Postnatal Day 28 Long-Evans Rats with a Minor in Spanish
Calvin Penn Barrett
Computer Science
with a Minor in Global Asia

Taryn Jenae Barrett
Anthropology: Who's Painted on That Wall?
An Exploration of Healing, Community, and Visibility
Through Philadelphia Murals
with a Minor in Health Studies

Oliver Adam Bates
Philosophy: I Am This World
with a Minor in Health Studies

Nile U Shaka Bayard
Biology: Elucidating the Protective Effects of
Prostaglandin E2 on Clostridioides difficile Infection

Jackson Martin Bayer
Political Science: The Great Suburban Showdown:
The Role of Diversification and Secondary Education
in America’s Emerging Political Battleground
with a Minor in International Studies at Bryn Mawr College

Joshua Lucas Bayona
Classical Languages: When the Emperor Wasn’t Divine:
Patient-Doctor Interactions in Tacitus’ Annals
with a Minor in Linguistics

Eric Beery
Physics: Rashba Splitting in Microcrystal MAPbBr3
with a Minor in Mathematics

Domenic Alexander Bellino
English: The Poetics of Food in M.F.K Fisher’s
Consider the Oyster

Asia Maria Belt
Computer Science: The Technology of Racism

Nuria Inez Benitez
Anthropology: Does “x” Mark the Spot?
Negotiating Filipinolax Identities Online in the Philippines and
the Diaspora
Linguistics

Samantha Kimball Bernstein
Anthropology: Facilitating Mavett Shalom:
Reform Judaism at the End of Life and After Death
in Westchester County, New York
with Minors in Health Studies and Psychology

Arshiya Bhayana
Political Science: India’s Tied Hands in Cyberspace:
Explaining India’s Restrained Response to Cyberattacks
From China
with a Minor in Psychology and a Concentration in
Peace, Justice, and Human Rights

Theodore Bien
Physics: Robotic Simulations as a Tool to Understand
Insect Self-Righting

Sarah Meike Blossom
Neuroscience: Mind Wandering: Effects on Mood
and Attention
with Minors in Psychology and Spanish

Blake Stephen Brinster
Economics: Analyzing the Effectiveness of Investment
Fund Strategies: Do Hedge and Mutual Funds
Generate Excess Returns?
with a Minor in German and German Studies

Macy Alexia Brooks
English: Electricity and the Evolution of Identity in
Ralph Ellison’s Invisible Man
Spanish: Trauma y memoria: El impacto de los narco-
tours en Medellín, Colombia

Daniel Sebastian Bruce
Political Science

Nathan Birch Buchanan
Political Science: “Advancing in Another Direction”:
Identifying Barriers to and Opportunities for the
Implementation of Managed Retreat in the American
Political Context
with Minors in Environmental Studies
and Psychology

Zachary Ellis Buck
Economics: How States’ Launching Online Sports
Betting Influences Interest in Sports Betting and the
Four Major Sports
Mathematics at Bryn Mawr College
with a Minor in Statistics

Sarah Perlman Cahn
Political Science: Infrastructure Jihad: Exploring the
Islamic State’s Waging of “Economic War”
with Minors in Economics and Arabic at
Swarthmore College
Ellie Jayne Canty
Biology: Examining the Relationship Between Wolbachia Localization and Microtubules in Drosophila Embryos and the Impact Pesticide Exposure Has on This Relationship with a Minor in Educational Studies and a Concentration in Biochemistry

Ellen Carlson
Growth and Structure of Cities at Bryn Mawr College: Cold, Rural, and Remote: Approaches to Achieving Energy Efficiency in Alaskan Communities

João Pedro Mello de Carvalho
Mathematics: Saturation in Polytopes Generated by Polynomials: A Littelmann Path Model Approach

Maia Carvalho
Chemistry: Synthesis and Characterization of a Bidentate Guanidine-Based Ligand (DIPI-PA) with a Minor in Italian and Italian Studies at Bryn Mawr College

Kevin Stephen Casey
Economics: Determining the Effects of Statcast on Injury Prediction for Major League Baseball Pitchers

Maya Teresa Casey
Biology: Exploring the Role of β-Methylamino-L-Alanine in Cyanobacteria and Parkinson's Disease with a Minor in History at Bryn Mawr College

Ashley Nicole Chan
Economics: The Cost of Being Sinful: An Analysis of the Market Valuation of Fossil Fuel Producers in the U.S.

Emma I. Chen
Biology: Investigating Shifts in the Plant Arabidopsis thaliana's Root-Associated Microbial Communities in Response to Community-Level Selection with a Minor in Environmental Studies

Matthew Chen
Computer Science: Fault Tolerance and Recovery Protocols in Distributed Computing Systems

Rebecca Kai-Wei Chen

Sophie Chochaeva
Comparative Literature with a Minor in Political Science at Bryn Mawr College

Katie Chung
Religion: The Gaze of Korean Women: Shaping the Identity of the Korean "New Woman" Through Fiction with a Minor in Health Studies

Gabrielle Francesca Cipriano
Political Science: There Is No Alternative: Austerity Ideology as Political Weaponry in the United States with Minors in Economics and International Studies at Bryn Mawr College

Aaron Cohen
Psychology: Examining Intersectionality in Children's Encoding of Social Categories with a Minor in Physics

Aishah A. Collison-Cofie
Sociology at Bryn Mawr College with a Minor in Health Studies

Matthew Paul Colonna
Mathematics: An Overview of the Theoretical Framework and Applications of the One-Sample t-Test with a Minor in Statistics

Christopher Conrad
Political Science: Why Goliath Sometimes Wins: Understanding the Outcomes of Extinction Rebellion with a Concentration in Peace, Justice, and Human Rights

Nicholas Conroy
Political Science: Symbolic Representation? The Effect of Congressional Class on Constituent Attitudes and Behavior with Minors in Classical Culture and Society and Philosophy

Nunnapat Cook
English: Creative thesis entitled Rai-ngan Prajum Pi 2562 with a Minor in Neuroscience and a Concentration in Creative Writing
Megan Coolahan  
Biology: Effects of the Bacterial Signaling Molecule 2-heptyl-4-quinolone (HHQ) on DNA Repair and Virus-Induced Mortality in the Marine Phytoplankton Emiliania huxleyi with Minors in Environmental Studies and Spanish

Jaclyn E. Corbin  
Neuroscience: The Impact of Progesterone and Estrogen Withdrawal via a Hormone-Simulated Pseudopregnancy Model on ΔFosB Expression in the Nucleus Accumbens and Anxiety- and Compulsive-Like Behavior in Female Mice with Minors in Health Studies and Biology at Bryn Mawr College

Natalia Elizabeth Cordon  
Political Science: All Cops Bad Cops? The Role of BIPOC Police Officers in Police Reform Spanish: Maras y mitos: La contribución de rap y tatuajes para cambiar los estereotipos de La Mara Salvatrucha con relación al nacionalismo

Callie E. W. Crawford  
Chemistry: Investigation of the Link Between Chain Sequestration and Binding Affinity in Type II Polyketide Synthase Acyl Carrier Proteins with a Concentration Biochemistry and a Concentration in Peace, Justice, and Human Rights

Edwin Garrett Crockett  
Economics: Giving and Receiving: Theories of Iroquois Gift Exchange with Minors in Mathematics and Arabic Studies at Swarthmore College

Genevieve Christine Dallmeyer-Drennen  
Biology: Investigating the Physiological Effects of a Bacterial-Signaling Molecule, 2-heptyl-4-quinolone, on Viral Infection in Emiliania huxleyi with a Minor in Environmental Studies

Kara Simone D’Ascenzo  
Political Science: The Power of Elites: Making and Unmaking the Rule of Law in Guatemala with Minors in Environmental Studies and History at Bryn Mawr College, and a Concentration in Latin American, Iberian, and Latinx Studies

Elizabeth Ravenel Davis  
Psychology: Analyzing Whether Children’s Automatic Encoding of Social Categories Is Intersectional with a Minor in Neuroscience

Ian Michael D’Elia  
Political Science: Imagined Communities, Reimagined From Beyond the West: Towards a Theoretical Formulation of the Ideological Structure of Nationalisms with a Minor in Linguistics

Justine Samantha Dell  
Mathematics: The Shape of the Quadratic Gauss Sum with a Minor in Linguistics

Shantanu Dew  
Growth and Structure of Cities at Bryn Mawr College with a Minor in Environmental Studies

Anna DiAntonio  
Psychology: The Relationship Between Mood and the Intentionality and Content of Mind-Wandering with a Minor in Neuroscience

Zihui Ding  
Philosophy: Conceptuality of Experience and Objectivity of Thoughts Mathematics at Bryn Mawr College

Matthew Niles Dodds  
Philosophy: Selfhood as Storytelling: Nehamas, Nietzsche, and Ricoeur

George Doehne  
Political Science: The Hazard Within: The Motivations and Downsides of Militarized Disaster Risk Management in Guatemala Growth and Structure of Cities at Bryn Mawr College: Burning Questions: Reconceptualizing Land and Rehabilitating Fire, in California as Abroad

Matthew Donahue  
Chemistry: Investigating the Risks of U.S. Coastal Flooding and Nonpoint Source Pollution Growth and Structure of Cities at Bryn Mawr College: The Historical Impact of Cape Cod’s Economy and Identity on Modern-Day Wastewater Management

Margaret Jane Doubman  
Physics: The Relative Humidity Dependence of Photoconductivity in Bare and APTES-Modified Silicon Substrates With an Oxide Layer with a Minor in Greek
Claire Marguerite DuBois
Environmental Studies: Closed-Loop Composting at Haverford College: A Proposal and Implementation Plan
with a Minor in Spanish

Robert Duncan
Chemistry: Synthesis of a Functional Polymer for Developing Metal Catalysts
with a Minor in Health Studies and a Concentration in Biochemistry

Gabriel C. Durso
Chemistry: The Synthesis of a Non-Peptide Peptidomimetic Met-Enkephalin Agonist
with a Minor in Health Studies and a Concentration in Biochemistry

David Asher Edelman
Political Science: What It Takes to Get on Track: Exploring State-Level Policy Change in Public Transit Funding
with a Minor in French and Francophone Studies

Alexandra Anne Edwards
Environmental Studies: Closed-Loop Composting at Haverford College: A Proposal and Implementation Plan
with a Minor in Growth and Structure of Cities at Bryn Mawr College

Noha El Toukhy
Psychology: The Consequences of Palsies and Scars for Dehumanization and Perceptions of Facial Warmth and Competence
with a Minor in Political Science at Bryn Mawr College and a Concentration in Middle Eastern and Islamic Studies

Maxwell Hynes Elliott
Biology: Assessing YBX3 Protein Stability and Synthesis in the Mouse Skeletal Muscle System with a Concentration in Biochemistry

Joshua Ari Engler
Chemistry: Success and Failure in Exploratory Solid State Chemistry
with a Minor in Classical Culture and Society

Sophia Kourakos Esner
Philosophy: The Dough That Kneads the Kneader: An Exploration of the Self and the Viscous
with a Minor in Religion

William Nolan Evans
East Asian Languages and Cultures: From Roadside to Centerfold: A Study of the Development of Vernacular Literature in Late Medieval and Early Modern China
Linguistics: Keeping It Classy: Sinitic Classifiers and Their History in Literature with Minors in Chinese and Japanese Language

Taiwo Fayemi
Sociology at Bryn Mawr College with a Minor in Health Studies

Wyatt Feinberg
Political Science: Why Trump and Not Buchanan? Understanding Republican Party Control in the Modern Era of Politics
with a Minor in Economics

Erica Naomi Fenton
Sociology at Bryn Mawr College with a Minor in Psychology and a Concentration in Peace, Justice, and Human Rights

Elle Ferreira
Political Science: “Women’s Sports Just Aren’t That Exciting to Watch”. Neoliberal Feminism and the Girlbossification of Women’s Sports
with a Minor in Linguistics

Madeline Rose Figueredo
Biology: Using Animal Tracking Software to Analyze and Quantify Anxiety-Related Behavior in Larval Zebrafish
with a Minor in Environmental Studies

Elena Katherine Filograna
Economics: It Pays to Be a Team Player: An Examination of Effects of Team vs. Individual Varsity Intercollegiate Sports Participation on Income
with a Minor in Health Studies

Anna Rosalee Fiscarelli-Mintz
Philosophy: Is Beauty Truth and Truth Beauty? Beauty, Style, and Felt Knowledge in Philosophical Writing

Stephen Limb Flanders
Political Science: The Next Frontier of Interstate Conflict? Cyber Operations and the Risk of Escalation

Fiona Dorothy Flynn
Anthropology: Mothering the Patriarchy: An Auto-Ethnography of Three Generations of Women with a Minor in Health Studies
Jackson Charles Foyle
Political Science: The Road to Radicalization: Examining the Effects of Authoritarianism, Perception of Threats, and Motivated Reasoning on Americans’ Radicalization
with a Minor in Psychology

Zoe Isabella Frazer-Klotz
Psychology: Follow the Leader: Does Third-Party Prejudice Increase Children’s Discrimination Against Gender Non-Conforming Peers?
with Minors in Global Asia and Neuroscience

Adam Thomas Friedman-Brown
Mathematics: Constructing Minimal Origamis and Minimal Origami Pairs

Hannah S. Friedrich
Psychology: Does It Pay to Play? Returns to High School Sports Participation for Non-College Attendees
with a Minor in Health Studies and a Concentration in Peace, Justice, and Human Rights

Naomi Juliet Fukuda
Biology: A Bacterial Signal Protects Phytoplankton From Viral Mortality: Direct Targeting of the Virus or a Result of Triggering of Physiological Cascade?
with a Minor in Environmental Studies

Jacob Nathan Gaba
History: Guiding Timid Reason: The Politics of Revolution and the Public Sphere in Late 18th-Century America

Ethan Gandra
Biology: Characterizing the Effects of Histone Variant H3f3b on the Pathophysiology of Neonatal Hypoxic Ischemic Encephalopathy
with a Minors in Chemistry and Environmental Studies

Galebinge
German Studies: Participation or Rejection? A Study of Overseas Military Operations Decisions in Post-Cold War Germany
Political Science

James Tropp Garland
Astronomy and Physics: The Interplay of Tides, Bars, and Star Formation in Disk Galaxies

Golda Glasser
Political Science: Where Is the Community in Community Schools? The Philadelphia Community Schools Initiative in the Age of COVID-19
Mathematics at Bryn Mawr College

Talia Bess Goerge-Karron
Politics and Conflict Studies at Swarthmore College: The Politics of Memory and Historical Narratives: How the Resurgence of the Political Far-Right in Hungary, Poland, and Germany Connects to the Holocaust
with a Minor in Political Science from Bryn Mawr College

Jacob Rubin Gold
Psychology: Mindfulness Interventions in Children With Mental Health Difficulties
with a Minor in Neuroscience

Miranda Schirch Goldberg
Psychology: The “Well” Sibling’s Experiences: The Protective Buffer of Family Variables on the Negative Personal Impacts of Having a Sibling With Serious Mental Illness
with a Concentration in Peace, Justice, and Human Rights

Haya Ruth Goldblatt
Economics: Mitigating Procrastination Problems Through a System of Planning and Reminders?
with Minors in Philosophy and Mathematics at Bryn Mawr College

Jacob Solomon Gorenburg
Computer Science
Political Science

Freddie Gould
Computer Science: An Iterative Graph Cut Approach to Image Segmentation
with a Minor in Economics

Darius Graham
Anthropology: Addressing Health Inequities Through Structural Competency
with a Minor in Health Studies

Aaron Graybill
Economics: Exposure Doesn’t Pay the Bills: Artistic Production on Streaming Platforms Under Algorithmically Induced Audience Uncertainty
Mathematics at Bryn Mawr College
with a Minor in Statistics

Amanda Kate Grebas
Biology: Genetic Mapping of a Candidate Genetic Mutation for Efficient Oligonucleotide-Directed Mutagenesis in Chlamydomonas reinhardtii
with a Minor in Health Studies

Raveen Green
English: The Black Female Gaze of Horror Literature
Hank Greenberg
Political Science: *The Resilient Power of the Center: Impacts of Moderate Public Opinion and Direct Democracy in States With Republican Governors* with a Minor in Environmental Studies

Eleanor Esperon Greene
Biology with a Minor in Environmental Studies

Mali Isaela Gruber
East Asian Languages and Cultures: *Ethnic Tourism and the Commodification of Dai Culture* with a Minor in Chinese

Peter Kentaro Gullace
Political Science: *Democratic Success in an Undemocratic Environment: Creating and Maintaining Democracy in Ghana’s Fourth Republic*

Gillian Gailey Guss
Psychology: *Older Adulthood and Intellectual Disability: A Novel Intervention for Empowerment and Self-Determination* with a Minor in English at Bryn Mawr College

Benjamin Clark Haile

John Reed Haines Jr.
History: *The Third Rome Besieged: The Persecution, Division, and Revival of the Russian Orthodox Church From 1917 to 1943* with a Minor in Religion

Conor George Harris
History: “We Drive Tanks, Why Not Trolleys?": Technology, Civil Rights, and Spatial Systems in Philadelphia’s 1944 Transit Strike

William Jens Harris-Braun
Computer Science: *Augmenting Neural Machine Translation Training Data for Low-Resource Languages With Morphological Transducers* with a Minor in Linguistics

Jack Henry Hendon
English: *Ishmael’s Impossible History: A Survivor’s Narration of a Trauma in Herman Melville’s Moby-Dick (1851)* with a Minor in Psychology

Arielle Farrah Herman
Psychology and Neuroscience: *Dopamine Deficiency Predicts Pain: Toward a Novel Framework for the Neuropsychological Classification and Treatment of Chronic Pain*

Mark Peter Heydorn Gorski
Sociology: *The American Militia Movement: The Reassertion of Traditional-Hierarchical Values in the Face of Egalitarianism*

Romana Maria Hladky
Physics: *Designing a Deep Space Mission With Autonomous X-Ray Navigation* with a Minor in Astronomy

Aliana Anuhea Ho
Anthropology: *Aloha ‘Āina: Pathways to Healing with Minors in Health Studies and Visual Studies*

Keegan Hoag
Psychology: *The Effect of Ovarian Hormone Withdrawal on Anxiety- and Compulsive-Like Behavior and ΔFosB Expression in the Nucleus Accumbens* with a Minor in Economics

Alexandra Horkavá
Political Science Economics with a Minor in Mathematics

Zarin Tashnia Hossain
Psychology

Lauren Maria Howard
Psychology: *Consumer Use of Nutrition Labels: An Examination of Label Effectiveness and Dual-Process Theories* with a Minor in Health Studies

Haosong Huang
Computer Science: *An Introduction to Ray Tracing and Its Optimization Methods With a Focus on Denoising Through Filters* Mathematics: *Introduction to Fluid Dynamics, Navier-Stokes Equations and a Simulation Method*

Katie Hughes
Political Science: *Bloated: Our Collective Waistline or the Government’s Response? An Analysis of the Appropriateness of Paternalistic Legislation to Combat Obesity* with Minors in Economics and Educational Studies
Sara Fay Hunsberger
Mathematics: Discrete Variable Representation: Theory and Applications in Quantum Chemistry with Minors in Chemistry and Spanish

Sidney Hwang
Chemistry: Using Site-Specific Unnatural Amino Acid Raman Spectroscopy Probes to Study Acyl Carrier Protein Sequestration Dynamics with a Minor in Health Studies and a Concentration in Biochemistry

John Marshall Jayasankar
Economics: Does It Pay to Be Insured? Investigating the Effects of the Affordable Care Act’s Dependent Coverage Mandate on Young Adult Wages and Higher Education Completion

Seabrook Jeffcoat
Psychology: Impacts of Neonatal Injury and Infection on Affective Pain Processing: Analysis of c-Fos Expression in the ACC of Adult Rats with a Minor in Health Studies

Shayleah J. Jenkins
English at Bryn Mawr College: Liberate You, Confiscate You, I Want to Be Your Man: Springsteen and the Landscape of American Masculinity

George Jiang
Chemistry: Exploratory Work With Vanadium Antimonates and Vanadium Arsenates

Claire Riley Johnson
Computer Science: Comparison of Identity by Descent Detection Algorithms and Their Implementation With Pedigrees
Biology at Bryn Mawr College: T. H. Morgan, Nettie M. Stevens, and the Trouble With Aphids

Isabelle Hollis Bingham Johnson
Biology: Identifying Complexes That Assemble on an RNA-Binding Protein’s Target with a Concentration in Biochemistry

Turner Ellis Johnson
Physics: Comparing Data From a Novel Ocean Drifter With a Coastal Dynamics Model of Casco Bay, Maine with a Minor in Environmental Studies

Rafael Jovel
History: “Hamburgers Over pupusas … Never!”. Tracing Personal Rebukes of American Imperial Intervention in the Salvadoran Civil War with a Minor in Mathematics

Scott Ira Kaiser
Chemistry: Distinct Spectroscopic Observables in Polarizable Simulations of Imidazolium-Based Ionic Liquids with a Concentration in Scientific Computing

Naomi Bilonda Kalombo
Linguistics: An Investigation Into the Relationship Between Gender and Women’s Language Using Emails Sent by College Students to Professors in 2021

Michelle Allison Kaplan
Psychology: Who Is the Better Investor? Analyzing Gender Differences in Financial Investment Behavior From a Psychological Androgyny Perspective with a Minor in Health Studies

Aaron Karlsen
English: Stories Beyond Words: Free Indirect Discourse and the Raw Material of Narrative in Daisy Miller with a Minor in Spanish

Matthew Katz
Fine Arts: An exhibition entitled (Re)Building Connections Growth and Structure of Cities at Bryn Mawr College with a Minor in Mathematics

Natalie Renae Kauffman
Anthropology: The Negotiation Between Healthcare Approaches: An Analysis of Pennsylvania’s Amish Community
English: The (In)visibility of Lucy Snowe: Hiding in Plain Sight

Griffin Ann Armstrong Kaulbach
Environmental Studies: Creation of the Resource Access Tool: A Living Website Tool to Share and Learn Location and Bi-College-Based Knowledge Biology at Bryn Mawr: Silica Bioaccumulation in Conifer Tree Species

Erica Ruth Kaunang
Anthropology: All That We Are We Carry With Us: Stories and Possibilities of Southeast Asian Organizing with Minors in English and Film Studies, both at Bryn Mawr College
Joseph Leslie Kawamura  
Computer Science: Abstraction Levels in Introductory Computer Science Courses

Collin M. Kawan-Hemler  
History: From Orphan to Citizen to Transnational Adoptee: The Origins of the U.S.-Colombian Adoption Industry and the Emergence of Adoptee Counternarratives with a Minor in Health Studies

Ellen Therese Kerns  
Environmental Studies: Closed-Loop Composting at Haverford College: A Proposal and Implementation Plan  
Anthropogenic Contamination in U.S. Nearshore Waters: An Analysis of Coastal Flooding Concerns and Non-Point Pollution Risk Factors with Minors in Fine Arts and Statistics

Fariea Khan  
Psychology: The Implications of Abortion Denial: Contextual Risk Factors and Its Psychological, Socioeconomic, and Health Consequences

Iryna Khovryak  
Computer Science: Improving Retinal Image Segmentation Using U-Net Convolutional Networks With Graph Neural Networks

Suyun Catherine Kim  
Biology: The Mighty Phragmites: First Steps Toward Uncovering Bacterial and Archaeal Contributions to Competitive Ability with a Minor in Fine Arts

Benjamin Klamka  
Linguistics: “Creating Fun”: Humor and Storytelling in Communicative Foreign Language Teaching

Music: Original choral composition entitled Three Songs of Shattering with a Minor in Educational Studies

Patrick Lee Kley  
Chemistry: Steps Towards the Synthesis of a Model Morphine Structure Using the [3+2] Nitrene Cycloaddition Reaction with a Concentration in Biochemistry

Youngmin Ko  
Mathematics: Confidence Interval From the Bootstrap Method and Its Application to Financial Data

Eric Kopczynski  
Psychology: An Examination of the Effects of Childhood Trauma on Cognitive Performance with a Minor in Sociology

Dina Kosyagin  
Biology: Understanding Intracellular Interactions of Endosymbiotic Bacteria Within Its Insect Host: A Comparative Study of Embryonic Localization and Distribution Patterns of Wolbachia and Mitochondria in Drosophila melanogaster with a Minor in Fine Arts

Rebecca Sarah Kowee  
Chemistry: Investigating Non-Actinobacterial Type II Polyketide Biosynthesis: The Phosphopantetheinyl Transferase and Bioprospecting for Novel Type II Polyketide Synthases with a Concentration in Biochemistry

Anastasia Kozitskaia  
Sociology: Gender Equality in an Authoritarian State: Russia, 1917–2016 with Minors in Anthropology and International Studies at Bryn Mawr College

Maria Klavdia Krieg  
Chemistry: Using Site-Specific Vibrational Spectroscopy to Investigate the Effects of Tyrosine Nitration on Alpha-Synuclein Membrane Binding Behavior with a Minor in Health Studies and a Concentration in Biochemistry

Carter McCulloch Langen  
Computer Science: Analyzing The Aeneid and Its Translations With Topic Models and Word Embeddings Latin

Jeremy Lavietes  
Biology: Characterization of YBX3-Directed Translational Repression of JAK1 with a Minor in Psychology

William Nathaniel Lawrence  
Computer Science at Bryn Mawr College: The Automatic Placement of Cultural Objects in a Simulated Archeological Environment

Che Young Annette Lee  
Biology: Investigating the Effects of Neuronal and Glial Expression of α-Synuclein in Drosophila melanogaster

Psychology: Exploring Ethnic Asian and Asian American Parenting: How Do Ga-jung-kyo-yuk and Jiao Xun Compare?

Chengpei Li  
Environmental Studies: Mapping Sidewalks: A Resource for Bi-Co Students

Physics: Three-Dimensional Modeling Aids the Understanding of Spotted Lanternfly Biomechanics
Hannah Brooke Lopez  
Economics: The Impact of Technology-Enhanced Learning on Student Mathematics Achievement: A Meta-Analysis  
with a Minor in Psychology

Yuval Luria  
Chemistry: Studies Towards the Synthesis of (-)-Mesembrine  
with a Minor in Religion and a Concentration in Biochemistry

David Ly  
Mathematics: The Discrete Logarithm Problem: A Dive Into RSA and Elliptic Curve Cryptography  
with Minors in Classical Culture and Society and Economics

Michael Lyons  
Chemistry

Jiajie Ma  
Computer Science: Information Access Representation of Social Networks: A Theoretical Analysis  
Mathematics: SL(2, Z)-Action on Origamis Associated to Minimally Intersecting Filling Pairs

Caspian Macky  
Mathematics: Brouwer, Kakutani, and Nash: Game Theory Applications of Fixed-Point Theorems  
with a Minor in Computer Science at Bryn Mawr College

Ester Maja  
Economics: Depression During Adolescence and Its Effects on Adult Employment and Earnings  
with a Minor in French and Francophone Studies

Pelagia Maria Majoni  
Computer Science: Beginners' Understanding of Object-Oriented Programming

Karan Makkar  
Economics: Political Defectors and Local Economic Growth: Evidence from India  
Mathematics at Bryn Mawr College

Nina Victoria Nahson Mandel  
Psychology: Understanding Overconsumption Through the Lens of Environmentalism: A Multivariate Model Minors in Environmental Studies and Economics at Bryn Mawr College

Andre Louis Martin  
Environmental Studies

Keeton Leonard Martin  
Computer Science: Data Science for Education: Deep Learning for Estimating Item Response Theory Parameters  
with Minors in Neuroscience and Statistics

Becca Matson  
with a Minor in Visual Studies and a Concentration in Gender and Sexuality Studies

Martin Matsumura  
Economics

Katherine Matthews  
Physics: Determining the Binding Mechanisms of Histamine and Histidine to Gold  
with a Minor in Astronomy

Phoebe Ann May  
Sociology: An Apple a Day: An Exploration of Primary Care Physicians' Definitions of Health  
with a Minor in Neuroscience

Delia Rose McHale  
Chemistry

Abigail Satenik Avedia Meeker  
English: The Sultan's Garden  
with a Minor in French and Francophone Studies and a Concentration in Creative Writing

Eli Melnick  
Physics: Fuzzy Dark Matter, Patchy Reionization, and the CMB  
with a Minor in Mathematics

Jacob C. Melnick  
Biology: Improving Nuclear Gene-Editing Efficiency in Chlamydomonas reinhardtii Using Temperature-Sensitive Cell Cycle Mutants

Sophia Isabelle Mercado  
Psychology: The Effects of Postpartum Estrogen and Progesterone Withdrawal on ∆FosB Expression in the Nucleus Accumbens and Anxiety- and OCD-Like Behaviors in Mice  
with a Minor in Neuroscience

Clara Merrill  
Psychology: The Causal Relationship Between Peripartum Estrogen Fluctuations and Chronic Sleep Disturbances in Pregnant and Postpartum Women  
with a Minor in Neuroscience
Emma Marie Miller  
Biology: System Optimization to Examine Community-Level Selection of the Arabidopsis thaliana Microbiome

Isabella Anne Miller  
Economics: The Effects of Personal Records and Age-Adjusted Personal Records on Race Performance: An Assessment of Reference Points

Valentina Moreno  
Economics: The Precarious Pursuit of an Elusive Peace: Assessing the Impact of Violence on Ex-Combatant Completion of the Colombian Reintegration Program with Minors in Health Studies and Mathematics at Bryn Mawr College

Moorea Morrison  
Anthropology: “This Is What We Sign Up For”: Questioning the Student-Athlete Experience at Haverford College with a Minor in Psychology

Sean Mowatt-Larssen  
English: The Limits of Rational Knowledge: New Materialism as an Ontological Reframing in The Intuitionist with a Minor in Economics

Jianing Mu  
Psychology: Negative Mood Impairs Attention and Performance: Investigating the Roles of Mind-Wandering and Executive Control with Minors in Neuroscience and Statistics

Betelhem Aklilu Muno  
Environmental Studies with a Minor in Health Studies

Tanassaluck Na Nakorn  
Mathematics with a Minor in Statistics

Riah Newfont  
Religion: Turning in Circles: A Celebration of Marvelous Moves and Galvanizing Grooves

Junior Tommy Thành Hòa Nguyen  
Biology: Editing the Chlamydomonas reinhardtii Mitochondrial Genome Through Oligonucleotide-Directed Mutagenesis with a Minor in Biology at Bryn Mawr College

Sofia Nicolayevsky  
Psychology: Long-Term Effects of Perinatal Affective Pain on c-Fos and N2RA: N2RB Expression in the rACC of Adult Rats with a Minor in Biology at Bryn Mawr College

Poppy Northing  
Environmental Studies: ENVS Capstone Project on Mapping and Sharing Resources on Campus (RATNET) Biology at Bryn Mawr: Acclimation to Drought and Cold Stress in Holly (Ilex): Evergreen Tolerance and Deciduous Escape

Sharon Nwankpa  
Biology: Improving Nuclear Oligo-Directed Mutagenesis (ODM) Editing Efficiency: Using Supraoptimal Temperature as a Physical Inhibitor to Synchronize the Chlamydomonas reinhardtii Cell Cycle with a Minor in Health Studies

Ryan Samuel O’Donnell  
Biology: Barcoding the Deep Ocean: A Genetic Approach to Identifying the Species Associated With Deep-Sea Corals with a Minor in Environmental Studies

Peter Justin O’Mara  
Political Science: Sports Stadium Financing and How to Fix It

Lulu Marguerita Obaditch  
Political Science: Political Isolation: Long-Term Solitary Confinement and State Repression of Black Radical Dissent with a Concentration in African and Africana Studies

Samantha Viridiana Olivares-Mejia  
Environmental Studies: Spatially Explicit Disturbance Histories of Forested Sites Within the National Ecological Observatory Network with a Minor in Biology at Bryn Mawr College

Riley Outen  
Biology: Oligonucleotide-Directed Mutagenesis of the Chloroplast Genome of Chlamydomonas reinhardtii with a Minor in Neuroscience

Max Pabilonia  
Biology: Investigating the Effect of DNA-Mismatch Repair on the Efficiency of Oligonucleotide-Directed Mutagenesis in the Microalgae Chlamydomonas reinhardtii

Rahul Sanjay Palnitkar  
Computer Science: Image Segmentations via Graph Cuts Mathematics: An Analysis of Deterministic Systems of Infection Spread, With Applications to COVID-19 Models
Daniel Alfredo Paredes

Margaret Gleick Parham
History of Art at Bryn Mawr College: Reclamation and Revelation: Photography and Its Relation to White Supremacy and Black Personhood with a Minor in Environmental Studies

Maria Ann Penrice
Anthropology: Against Virtuosity: A Political Framework for Music Education as Care, Possibility, and Curiosity

James Eugene Perry IV
Psychology: The Psychology of Vaccination Behavior With a Focus on COVID-19

Angelina Maximovna Petrichenko
Biology: Plant Probiotics: Designing and Testing a System to Measure How Community Interaction Modifies the Impact of Single Phyllosphere Microbial Species on Arabidopsis thaliana Growth and Development with a Minor in Environmental Studies

Brandon Daniel Saucedo Pita
Sociology at Bryn Mawr College: “Mexicans Gotta Support More Mexicans”: Pride, Representation, and Community Care in Mexican Chicago’s Hip-Hop Underground with Minors in Growth and Structure of Cities and Latin American, Iberian, and Latina/o Studies, both at Bryn Mawr College

Karlie Brynn Pollock
Psychology: Mind-Wandering: The Relationship Between Affect, Performance, Content, and Neural Correlates with Minors in Health Studies and Neuroscience

Matthew Gray Pollock
Political Science: The Impact of Political Violence on Democratic Nationalist Organizational Competition: A Spanish Case Study with a Minor in Economics

Julie Katherine Post
Anthropology: Grin and Bear It: Constructions of Toughness, Community, and Choice in White Women’s Childbearing with a Minor in Health Studies

Steven Puac
Political Science: Exemplary Citizens: Undocumented Immigrants and Adherence to the American Identity Spanish: Sacrificio y afllicción: Un viaje por el desarraigo

Felix Haomeng Qin
Classical Culture and Society: “Do Not Go Gentle Into That Good Bath”: Classical Reception and Reverse Reception in Yamazaki Mari’s Thermae Romae with Minors in Japanese Language and Linguistics

Ivan Evelio Quezada Taveras
Economics at Bryn Mawr College: Wage Disparities Among and Between Afro-Latinxs and Non-Black Latinxs with a Minor in Africana Studies at Bryn Mawr College

David Williamson Raymond
Mathematics: Applications of Markov Decision Processes and Monte Carlo Simulations for Property Management with a Minor in Philosophy at Bryn Mawr College

Julie Rehb
Biology: The Genetic Basis and Ecological Impact of Color Shift in Mimulus verbenaceus with a Minor in Environmental Studies

Jasmine Michele Reed

Minor Keilhauer Reedich
Computer Science: Chatbots for Use in Treating Mental Illness: An Examination of Conversational Interface Accessibility with Minors in Spanish and Data Science at Bryn Mawr College

Emma Sophia Regev
Religion: From Liminality to Belonging and Back: An Account of Queer Rites of Passage

Emily Ray Reinstadtler
International Studies at Bryn Mawr College: Why Don’t They Care? The Difference in Responses to Missing Indigenous Women and Missing White Women with Minors in Economics and Health Studies
Giancarlo Rendon  
Biology: Confirming the Potential for Experimentally Evolving T4 Bacterial Viruses in the Presence of Healthy and Starving Bacteria to Elicit Changes in the Viral Life Cycle with a Minor in Neuroscience

Mia Casey Reyes  
Environmental Studies with a Minor in Health Studies

Alexander Leonard Rittler  
Computer Science: The Usage and Computation of Quasi-Polynomials in Optimization Techniques with a Minor in Philosophy

Zarahy De La Caridad Rivas  
Film and Media Studies at Swarthmore College

José E. Rodríguez Quintero  
Neuroscience: An Ontogenetic Profile of Object Recognition Tasks in the Rodent Brain with a Minor in Psychology

Benjamin Huy Hoang Pham Roodman  

Hannah Roth  
Political Science: An Investigation Into Philadelphia’s Opioid Crisis with a Minor in Economics

Nathaniel Constantine Ruhl  
Physics: Autonomous Space Navigation Using X-Ray Horizon Crossings with a Minor in French and Francophone Studies

Ken Kimutai Ruto  
Computer Science: Early Detection of Parkinson’s Disease Using Wearables and Machine Learning

Keishla Marie Sanchez  
Psychology: Do Not Click the Button: The Effects of Early Childhood Adversity on Inhibitory Control

Kevin Jiyan Sang  
Physics: Using an Optically Levitated Dielectric Sphere for Detecting Chameleon-Gravity Coupling with a Minor in Astronomy and a Concentration in Scientific Computing

Elaina Sassine  
English: Dickinson’s Edges: The Queer Excess of Emily Dickinson’s Material Poetics

Noa Hannah Scheinfeld  
Psychology: When Will No Be Enough: An Exploration of College Rape and Sexual Assault and Proposed Alterations to the Title IX Process with a Minor in German and German Studies and a Concentration in Peace, Justice, and Human Rights

Noa Schisterman  
Psychology: Experiences of Stigmatized Identity Concealment with Minors in Neuroscience, Philosophy, and Data Science at Bryn Mawr College

Sophie Schleifer  
Economics: The Impact of Privatizing Public Housing on Homelessness and Other Outcomes in London: The Right to Buy 2012 Discount Cap Change

Noah Harris Schwab  
Physics: Simulating Horizon-Crossing Events for Satellite Navigation with a Minor in Philosophy at Bryn Mawr College and a Concentration in Scientific Computing

Isabel Renee Schwam  
Political Science: Gender Quotas and Representation in Government in Rwanda and France with a Minor in Spanish

Kathleen Emma Scully  
History: A Contradictory Subject: Reform, Resistance, and Holy Women in Early Modern Spain with Minors in Educational Studies and Health Studies

Taylor Whitney Seid  
Biology: Investigating the Role of Phosphodiesterases in Crithidia fasciculata Adherence to Mosquito Hindgut: Providing Insight for Preventative Treatments for Understudied Tropical Diseases with Minors in Economics and Health Studies

Gabriel Sekeres  
Economics: The Effects of Communication on a Middle Equilibrium in Prisoner’s Dilemma Mathematics at Bryn Mawr College

Katrina Eileen Severtson  
Psychology: Executive Functioning: The Impact of Early Adversity and Stress

Jacob Henry Shiff  
Political Science: The Wind and Solar Takeover: An Analysis of Wind and Solar Generation to Increase RE Usage in the Northeastern United States with a Minor in Environmental Studies
Gulesh Shukla
Computer Science: Recursion: Difficulties and Possible Solutions
with Minors in Economics and Mathematics at Bryn Mawr College

Frankie Silvers
Physics: Neutrino Flavors and the Beam: Microwave Background Cosmology
with a Minor in Astronomy

Roy Chrimantika Simamora
Biology: Modulation of Acoustic Prepulse Inhibition by Ap2s1 in Larval Zebrafish
Psychology: Modulation of Compulsive-Like Behavior and Nucleus Accumbens FosB Expression by Ovarian Hormone Withdrawal Following Hormone-Simulated Pseudopregnancy in Adult Female Mice
with a Minor in Linguistics

Shreya Singh
Fine Arts: An exhibition entitled An Alternative Perspective
Growth and Structure of Cities at Bryn Mawr College: Redefining Boundaries: A Design Proposal for a Migrant Worker Communal Housing Plan in Al Quoz, Dubai, UAE

William Pipping Skipper
Biology: Defining the Roles of the YBX3 Domains in Post-Transcriptional Control

Ruanna Amara Small
Biology: Determining the Role of Ap2s1 in the Acoustic Startle Circuit During Habituation in Larval Zebrafish

Luke Thomas Smith
Economics: Market Experience, Tenure, Job Security, and the Willingness to Deviate From Conventional Wisdom: Evidence From the National Football League with a Minor in Psychology

Carmiya A. Solomon
Neuroscience: Understanding the Relationship Between the Calcium Sensing Receptor and Epilepsy in Zebrafish Larvae

Trevor Schweitzer Stern
History: Etched in Metal and Stone: The Local Contexts of Holocaust Remembrance at Three Memorials
Religion: Walking in the Footprints of the Past: Embodied Experience at the Jewish Museum Berlin with a Minor in Global Asia and a Concentration in Middle Eastern Studies at Bryn Mawr College

Kai-Ling McEvoy Su
Philosophy: Song of Wisdom’s and Self’s Love: Philosophical Systems of Gender and Transness, and the Journey to Genderqueer Worlds

Elizabeth Cannon Szanton
Psychology: Who Belongs at the Birthday Party? Third-Party Prejudice and Children’s Intersectional Evaluations of Gender Nonconformity with a Minor in Sociology and a Concentration in Gender and Sexuality Studies

Lauren Elizabeth Tanel
Environmental Studies: Haverford College’s Need-Based Volunteer Board with a Minor in Health Studies

Harry Taussig
Computer Science: Preference Inference and Value-Alignment in Machine Learning

Brian Thai
Psychology: Children and Video Games: An Extensive Look at Health and Nutrition Interventions with a Minor in Health Studies

Marcus Simon Thomas
Chemistry: Synthetic Studies Toward Lonazolac: A (3+2) Cycloaddition Approach

Anne L. Tobin
Psychology: Invisible Physical Disabilities: The Effects on Psychology and Treatment Techniques with a Minor in Neuroscience

Seth Bertrand Todd
Sociology: Education in Post-Colonial Tanzania

Ryan Foster Totaro
English: “To Ye, Me Beauty”: Unraveling Non-Normative Desire in The Lighthouse with Minors in Psychology and Film Studies at Bryn Mawr College
Jackson Smith Trevor
Political Science: Planet-Warming But Economically Essential: An Analysis of Alternatives to Reduce the Climate Impacts of Heavy Trucks
with a Minor in Psychology

Duc Minh Trinh
Computer Science and Linguistics: Negation Learning in Transformer-Based Neural Machine Translation Models
with a Minor in Statistics

Nasanbayar Ulzii-Orshikh
Computer Science: Community-Based Fairness in Networks
Philosophy: A New Inquiry Into Race via the Instance-Kind Relation

Genevieve Chan Uy
Chemistry: Gaining Progress on Amyotrophic Lateral Sclerosis Research: The Effects of poly-GA and poly-PR C9orf72 Dipeptide Repeats on Sleep Patterns in Drosophila melanogaster
with a Minor in Psychology and a Concentration in Biochemistry

Jacob Valero
Computer Science: Step-by-Step or Skip a Few: A Review of Program Visualizers and Recommendations for Future Work
with a Minor in Psychology

Alissa Erin Vandenbark
Psychology: Does Status Identity Influence Social Dominance? An Exploration in Children
with Minors in Spanish and Political Science at Bryn Mawr College

Diana Catherine Varenik
English: Generating Destruction: Queer Ecology, Eroticism, and Colonial Wreckage in Michelle Cliff’s No Telephone to Heaven
with a Minor in Growth and Structure of Cities at Bryn Mawr College

Adrian Velonis
Computer Science: Topic Modeling, Named-Entity Recognition, and Network Analysis of Literary Corpora
English at Bryn Mawr College: Post-Human Automata, Ontology, and Agency in Moby-Dick

Will Vostrejs
Biology: YBX3-Mediated Post-Transcriptional Control in the Mouse Skeletal Muscle System
with a Minor in Psychology

Anthony Michael Walker II
Physics: Supermassive Black Hole Binaries, the Horizon Run 5 Cosmological Simulation, and Gravitational Waves

Ziyao Wang
Computer Science: Artistic Hair Modeling
Fine Arts: An exhibition entitled 16 Hours

Urgyen Wangmo
Biology: Investigating the Role of Ap2s1 on Retinal Morphology in Larval Zebrafish
with a Minor in Health Studies

Kwass
Biology: Developing an In Vitro Approach to Evaluate the Influence of Plant Extracts on Polyglutamine Aggregation in Huntington’s Disease
with Minors in Psychology and Neuroscience

Maya Sydnie Wernick
Sociology: 1, 2, 3, All Eyes On Me! The Impact of Threatening, Restrictive, Inflexible, and Controlling Pedagogy on Intrinsic Motivation for Students With Disabilities
with Minors in Educational Studies and Child and Family Studies at Bryn Mawr College

Rachel Sprague White
Biology: RNAscope Development in Hamster Brain Tissue and Translating the Technique to Drosophila Embryos
with a Minor in Psychology

Kian Daniel Williams
Economics: Does Reservation Policy Drive Institutional Trust? Understanding How Group Identity and Policy Affect Confidence in Indian Public Institutions
with Minors in Mathematics and Political Science, both at Bryn Mawr College, and a Concentration in Mathematical Economics

Zakiyyah Angel Marie Winston
Biology: Investigating Acer rubrum Extracts as a Potential Anti-Ab Therapeutic for Alzheimer’s Disease Within the Transgenic Caenorhabditis elegans Model
with a Minor in Health Studies

Aaron Ettinger Witkin
Spanish: La memoria traumática en el cine de horror en España: Los niños como monstruos
with a Minor in Linguistics
Abigail Grace Wolfenden  
English: *Dominican History Reimagined: Fukú and History From Below in The Brief Wondrous Life of Oscar Wao*  
with a Minor in Spanish

Hannah Wolfer  
Religion: *The Plight of the Agunah in America: An Examination of Orthodox Jewish Marriage and Its Repercussions*

Iris Xu  
Philosophy: *A Unified Solution to Make Knowledge Possible: McDowell and Bergson Overcoming Idealism*  
Mathematics at Bryn Mawr College

Leye Xu  
Psychology: *The Career-Identity Development of College Students: An Investigation of Factors Influencing Career-Identity Trajectories*  
with a Minor in Japanese Language

Karma Montserrat Yang  
Biology  
with a Minor in Spanish

Çiçek Yavuz  
Philosophy: *The Emergence of Dialectic in Plato’s Symposium*  
with a Minor in German and German Studies

Maria Yea Seong  
Music: An original composition for viola, piano, and vibraphone entitled *Dreamlike*  
Biology: *Identifying Floral Traits Important in Early Divergence in Mimulus: A Focus on Epidermal Cell Shape*  
with a Minor in Spanish and a Concentration in Peace, Justice, and Human Rights

Hannah Marie Nofziger Yeakey  
Political Science: *School Climate and Disability Inclusion: An Exploration of Determinants of School Climate and Its Impact on Best Practices*  
with a Minor in Spanish and a Concentration in Peace, Justice, and Human Rights

Jiachen Yi  
Computer Science: *Phone Apps’ Navigation Designs for Aging Populations: A Human-Computer Interaction Perspective*  
Mathematics: *The Breslow-Day Test and Its Application in a Law Case*  
with a Minor in Statistics and a Concentration in Mathematical Economics

Amra Endenat Zegeye  
Biology: *Investigating the Role of Glycoprotein 63 (GI/63) in the Adhesion Mechanism of Crithidia fasciculata: A Model Organism for Understudied Diseases and Parasites*  
with Minors in Health Studies and Africana Studies at Bryn Mawr College

Jesse L. Zeldes  
Mathematics: *Combinatorial Approaches in Total Nonnegativity*  
with Minors in Astronomy and Physics

Zhang Chujia  
Psychology  
with a Minor in Japanese Language

Sijing Zhao  
Biology: *Investigating the Antibacterial Mechanism of a Marine-Bacterially Derived Fatty Acid*  
with a Minor in Health Studies

Jiaqi Lucas Zhu  
Biology: *Investigating the Interaction Between Communication Systems in the Bacteria Streptococcus pneumoniae*  
with a Minor in Music

Jacob David Zimmerman  
Computer Science: *Unsupervised Deep Learning Solutions for Computer Vision*

Mateo Antonio Zules  
Political Science  
Film and Media Studies at Swarthmore College

Completion of graduation requirements may not be confirmed by this program, as the college transcript serves as the sole official student record. Furthermore, this program only includes those thesis titles submitted by students before the print deadline.
On ceremonial occasions, scholars wear academic gowns indicating the level of their degree and hoods indicating the field of the degree and the institution granting it. The origins of academic regalia date back to the 12th century, when gowns and hoods provided a layer of warmth in cold stone buildings. While observers may not be able to easily decipher each aspect of the regalia, they can readily appreciate the gowns, caps, and hoods as an expression of homage to more than 800 years of academic tradition.

**Gowns**
- At U.S. colleges and universities, the bachelor's gown is simply cut, with open, pointed sleeves.
- The master's gown is fuller, with oblong, square-cut sleeves and two horizontal bars on the sleeve.
- The doctor's gown is long, full-cut, with bell-shaped sleeves. It has velvet panels down the front and three horizontal bars on the sleeve, which are typically black, but occasionally feature the color indicating the field of learning. Some panels feature the seal of the institution. British doctoral regalia often feature an open front and no bars on the sleeves.
- The college or university president's gown is distinguished by four horizontal bars on the sleeve.
- Doctoral gowns are often black, but sometimes are a distinctive color representing the degree-granting institution, for example: Harvard's crimson; North Carolina's, Michigan's, Berkeley's, and Columbia's various shades of blue; Princeton's black and orange; Oxford's and Pennsylvania's red and blue; or Chicago's maroon.

**Caps**
All academic degree holders wear the mortarboard cap or the softer tam, which often feature tassels, though some universities abroad distinguish their degree holders with more unusual headgear.

**Hoods**
- The inner lining of the hood carries the color or colors of the institution that granted the degree, with multiple colors divided in chevrons.
- The color of the velvet border indicates the field of learning in which the degree was earned. Dark blue indicates philosophy; white, arts, letters, and humanities; golden yellow, science; scarlet, theology; purple, law; brown, fine arts and architecture; pink, music; green, medicine; copper, economics; lemon, library science; salmon, public health; light blue, education; and drab, business. Those who have attained a Doctor of Philosophy (Ph.D.) wear the dark blue of philosophy, even when their specific focus is not philosophy. For those individuals, the edging color of their hoods or the color of their gown panels may reflect the field of learning.

**Haverford Examples**
- President Wendy Raymond's robes are Haverford's red and black, with four bars, befitting her role as president. As her Doctor of Philosophy (Ph.D.) is from Harvard, her hood is bordered in dark blue, and features Harvard's crimson in the hood liner.
- Provost Linda Strong-Leek's Doctor of Philosophy (Ph.D.) is from Michigan State University, whose robes are Spartan Green. Her gown's three bars indicate her doctoral degree; her hood's blue border represents her Ph.D., the green signifies the granting institution (Michigan State), and its white satin edging signifies her field, English.
SENIOR CLASS GIFT

The Senior Class Gift is an opportunity for graduating students to sustain the Haverford experience for future classes through charitable giving. With emphasis on participation and collective action, a peer-led committee encourages seniors to make a gift in any amount. This year, the senior class designated their gift toward three important programs at Haverford: The Nest, a food pantry for low-income students off the meal plan or staying on campus during breaks, The Student Health and Learning Resources Fund, which provides financial assistance for students to access specialized mental health and accessibility resources, and Financial Aid.

Senior Class Gift Co-Chairs
Caroline Elizabeth Channell
Noa Hannah Scheinfeld

Thank you to the Class of 2022 seniors and parents who helped make this effort a success.

Thank you to our
Senior Commencement Committee Representatives
Ellen Carlson
Maya Sydnie Wernick
Class of 2022 tree, *Prunus* x ‘Okame’ (Okame cherry). This tree, part of the Leeds Okame allée, was planted by the graduating class between Leeds Hall and Lutnick Library during Customs Week in 2018. *Photo by Patrick Montero.*