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Cover Sheet for In-State Institutions
New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	Goucher College

Each action below requires a separate proposal and cover sheet.

- (●) New Academic Program
- ( ) New Area of Concentration
- ( ) New Degree Level Approval
- ( ) New Stand-Alone Certificate
- ( ) Off Campus Program
- ( ) Substantial Change to a Degree Program
- ( ) Substantial Change to an Area of Concentration
- ( ) Substantial Change to a Certificate Program
- ( ) Cooperative Degree Program
- ( ) Offer Program at Regional Higher Education Center

Payment Submitted:	Payment Type:	Payment Amount:	Date Submitted:
(●) Yes ( ) No	( ) R*STARS # 401003 (●) Check # 401003	$850	8/15/2023

Department Proposing Program	Environmental Studies and Sociology & Anthropology	
Degree Level and Degree Type	Bachelor of Arts	
Title of Proposed Program	Public Health	
Total Number of Credits	120	
Suggested Codes	HEGIS:	CIP: 512201.0000
Program Modality	(●) On-campus	( ) Distance Education (*fully online*)
Program Resources	(●) Using Existing Resources	( ) Requiring New Resources
Projected Implementation Date	(●) Fall ( ) Spring ( ) Summer	Year: 2024
Provide Link to Most Recent Academic Catalog	URL: https://catalog.goucher.edu/	
Preferred Contact for this Proposal	Name: Elaine Meyer-Lee	
	Title: Provost and Senior Vice President for Academic Affairs	
	Phone: (410) 337-6044	
	Email: Elaine.Meyer-Lee@goucher.edu	
President/Chief Executive	Type Name: Kent Devereaux	
	Signature: [signature] Date: 8/14/23	
	Date of Approval/Endorsement by Governing Board:	

Revised 1/2021

GOUCHER
college

August 25, 2023

Dr. Sanjay Rai, Ph.D.
Maryland Higher Education Commission
6 N. Liberty Street, 10th Floor
Baltimore, MD 21201

Dear Acting Secretary Rai:

Goucher College is submitting a proposal seeking approval for the development of a new *Bachelor of Arts in Public Health* program, a request that has been endorsed by Goucher faculty. The proposed program builds on the strengths of our Environmental Studies and Sociology & Anthropology programs, and it closely aligns with our commitment to provide an innovative liberal arts that "prepares students with a broad, humane perspective for a life of inquiry, creativity, and critical and analytical thinking."

A check for the review of this proposal is being sent via snail mail to the Commission, but please contact me at Elaine.Meyer-Lee@goucher.edu or at 410-337-6044 if you need additional information.

Sincerely,

Elaine Meyer-Lee

Dr. Elaine Meyer-Lee
Provost and Senior Vice President for Academic Affairs
Goucher College

Goucher College
Proposal for a New Academic Program

Bachelor of Arts in Public Health

A. Centrality to Institutional Mission and Planning Priorities:

1. Provide a description of the program, including each area of concentration (if applicable), and how it relates to the institution's approved mission.

Public health is an interdisciplinary academic program that aligns with Goucher's ethos of equity, diverse perspectives, social responsibility, global education, lifelong learning, collaboration, and complex problem-solving. For that reason, the Goucher faculty approved a Public Health (PH) major, which will be jointly offered by the Departments of Sociology & Anthropology (SOA) and Environmental Studies (ES). Building on a minor established in 2016, this new major is designed not only to leverage the strengths of SOA and ES but also to integrate other programs to provide students with a robust liberal arts education.

Besides developing synergies between existing programs in SOA and ES, the proposed program highlights Goucher's innovative pedagogies (such as Complex Problem Exploration courses), and lays groundwork for featuring unique existing interdisciplinary themes (such as climate change, environmental sustainability, and migration) that intersect with Goucher's commitment to study abroad. More importantly, the proposed program aligns with Goucher's mission of providing "an innovative liberal arts education that prepares students with a broad, humane perspective for a life of inquiry, creativity, and critical and analytical thinking."

The goals of the PH program include familiarizing students with the multidisciplinary nature of public health work and helping them find their own pathways within the field of opportunities available in public health. The multidisciplinary field of study associated with public health is evident in the work of their practitioners, spanning a wide range of activities including, but not limited to: increasing life expectancies, reducing infant and child mortality, eradicating or reducing many communicable diseases, improving safety in the workplace, insuring safer and healthier foods, and influencing health policy and management.

To familiarize students with this field, PH majors will complete a total of 44 credits comprised of six Core Courses (24 credits), three courses selected from Electives: Mechanisms and Contexts of Health (12 credits), one Professional Skills course (4 credits), and one course of Applied/Experiential Learning (4 credits or PH advisor-approved alternative). Within the Electives category, students must complete at least two courses (8 credits) at the 300-level or above.

The curriculum was also designed to help students prepare for master's programs in public health. Although graduate programs vary, students typically take courses in the following subfields: Epidemiology, Biostatistics, Environmental & Occupational Health, Behavioral, Social and Educational Health, Health Policy & Management, and Global Health. Given Goucher College's commitment to a global education, our PH major will highlight the last subfield by including a Global Health as a core course and by attending to global issues in the majority of PH courses. In the core curriculum, students will be introduced to the remaining subfields, and advisors will guide students toward electives that deepen their understanding of the subfield(s) that most appeal to them. Our offerings of electives in Environmental Health and in the Social & Behavioral Sciences are strong, and given the existing College curriculum, possibilities for quick growth exist in Health Policy & Management and in Data Science.

The major will be able to launch quickly, building on the existing minor and pre-existing courses that already advance Goucher's mission. Central curricular and extracurricular themes include:

- Scholarship and academic excellence in traditional disciplines in the Humanities, Social Sciences, Natural Sciences/Mathematics, and the Arts
- An interdisciplinary approach to important areas that cross or transcend the boundaries of traditional disciplines, including world peace, the environment, and the nature of knowledge
- An international outlook extending liberal arts education beyond Western cultures to encompass the perspectives and achievements of other members of the world community
- Commitment to experiential learning on and off campus as well as abroad, requiring students to apply and extend what has been learned in the classroom[1]

The proposed PH major supports the college's mission by preparing students to employ critical and analytical thinking to interpret data and develop creative solutions to public health challenges. By definition, public health is an interdisciplinary field that works to address challenges that transcend traditional disciplines, such as poverty, climate change, racism, or humanitarian emergencies. Public health efforts depend on collaboration between people from different cultures, countries and communities, and respect for different perspectives. Students will have opportunities to study abroad at institutions that offer public health courses, and will be encouraged to participate in applied/experiential learning activities.

2. Explain how the proposed program supports the institution's strategic goals and provide evidence that affirms it is an institutional priority.

One of the core goals of Goucher's Strategic Plan 2021-20252 is to "develop innovative, future-oriented educational programs that respond to the needs of today's students."[2] Some additional goals include:

[1] "Mission | Goucher College," accessed April 8, 2023, https://www.goucher.edu/explore/who-we-are/mission.
[2] "Goucher College Strategic Plan 2021-2025," accessed April 8, 2023, https://strategicplan.goucher.edu/.

- Enhance student success.
- Strengthen our position as a leader in global education.
- Develop innovative, future-oriented educational programs that respond to the needs of today's students.
- Enhance our reputation for delivering outstanding interdisciplinary education and experiential learning.
- Identify an authentic approach to integrating athletics into the college consistent with our mission and values.[3]

The proposed PH major addresses the first four of these goals in the following ways:

- To enhance student success, the major emphasizes hands-on, applied learning, and a flexible curriculum. Students can curate their own curriculum to match interests and abilities given the wide range of electives in a variety of other departments. Moreover, Goucher is committed to delivering programs that prepare students with a broad human perspective that leads to success in a globalized and fast-changing world. Support services include (but are not limited to): the Academic Center for Excellence; Center for Race, Equity, & Identity; Student Health Center; Student Counseling Center; Office of Residential Life; and Career Education Office. Starting in 2021, the College initiated a cohort-based, integrated, four-year program called LAUNCH Network, which is designed to collaborate with pre-existing offices and programs to offer integrated support for underrepresented students.
- A public health degree positions students for professional success as well as academic success. There is a shortage of public health workers in the United States, made worse by the Covid-19 pandemic. The U.S. Bureau of Labor Statistics predicts significant growth in a wide range of public health jobs.[4] The PH major at Goucher College will addresses all of the NACE Career Readiness Competencies: career & self-development, communication, critical thinking, equity & inclusion, leadership, professionalism, teamwork, and technology.[5]
- The PH major enhances Goucher College's already strong emphasis on global education throughout the curriculum by developing creative solutions to address complex global problems such as climate change, human trafficking, and pandemics, with an emphasis on cultural competency and community engagement. Students will be encouraged to study abroad at one of the eight International Student Exchange Program (ISEP) programs, on four different continents, that offer PH courses.[6] They also have the option to study abroad in Australia through the college's direct partnership with Wollongong University.

[3] "Goucher College Strategic Plan 2021-2025."
[4] "U.S. Bureau of Labor Statistics," accessed April 8, 2023, https://www.bls.gov/.
[5] "What Is Career Readiness?," accessed April 8, 2023, https://www.naceweb.org/career-readiness/competencies/career-readiness-defined/.
[6] "International Student Exchange Programs," International Student Exchange Programs, accessed April 8, 2023, https://www.isepstudyabroad.org/.

- Since the 2003 Institute of Medicine's call for all undergraduate students to have access to public health education,[7] the number of colleges offering a PH major has grown to nearly 400, driven largely by student demand.[8] The country is still far from reaching the goal of universal access to public health education, however. The two decades since the year 2000 have seen three epidemics (SARS, MERS and Ebola), followed by the Covid-19 pandemic. Even if the classic definition of public health—"the science and art of preventing disease, prolonging life, and promoting physical health"—isn't on every tongue, the world is talking about population health, and in the U.S., Dr. Anthony Fauci is a household name. Accordingly, applicants to both undergraduate and graduate PH programs have increased significantly. Between Spring 2020 and Spring 2021, colleges and universities experienced a 40% increase in applicants.[9] During the 2020-2021 academic year, there was a 6% increase in the number of undergraduate public health degrees awarded, and public health was the sixth most popular major.
- Undergraduate PH programs are well-positioned to address health inequities and the systems in which those inequities have evolved, and the number of bachelor's degrees awarded increased 11 times between 2000 and 2020. In 2020, 18,283 undergraduate PH degrees were awarded, surpassing master's degrees for the first time and reflecting a substitution effect in hiring, especially in the field of health education.[10] The text of a recent publication in *Inside Higher Ed* emphasizes "dire need" for an undergraduate workforce and answers "yes" to the titular question: "Could Undergrads Save the Public Health Workforce?"[11] At Goucher, with the exception of the pandemic year, interest in public health, as measured by growth in minors, appears to be strong.
- Public health is at its core an interdisciplinary field, drawing heavily on theory and methods from STEM and Social Science disciplines. In addition to a recommended 4-credit applied or experiential learning component (in the Professional and Applied Skills Options), the major will emphasize applied skills throughout the curriculum, including: data analysis and visualization, digital technologies, written and oral communication, and proposal writing, among others. In addition, the Electives include seven options from Goucher's innovative Complex Problem Exploration (CPE) curriculum.[12] These are interdisciplinary courses centered around contemporary issues and designed to "produce

[7] Institute of Medicine (US) Committee on Educating Public Health Professionals for the 21st Century, *Who Will Keep the Public Healthy? Educating Public Health Professionals for the 21st Century*, ed. Kristine Gebbie, Linda Rosenstock, and Lyla M. Hernandez (Washington (DC): National Academies Press (US), 2003), http://www.ncbi.nlm.nih.gov/books/NBK221182/.
[8] Beth Resnick, Jonathon P Leider, and Richard Riegelman, "The Landscape of US Undergraduate Public Health Education.," *Public Health Reports* (Washington, D.C.: 1974) 133, no. 5 (October 9, 2018): 619–28, https://doi.org/10.1177/0033354918784911.
[9] Association of Schools and Programs of Public Health, "How Covid-19 Opened a New Chapter for Public Health," May 21, 2021, https://s3.amazonaws.com/ASPPH_Media_Files/Docs/Final+Enrollment+Trends+Press+Release.pdf.
[10] Jonathon P Leider, Beth Resnick, and Paul Erwin, "Educated Citizenry or Workforce Pipeline Development? Questions for the Future of Undergraduate Public Health in the United States.," *American Journal of Public Health* 112, no. 4 (April 2022): 582–85, https://doi.org/10.2105/AJPH.2022.306742.
[11] Johanna Alonso, "Could Undergrads Save the Public Health Workforce?," *Inside Higher Ed*, January 6, 2023, https://www.insidehighered.com/news/2023/01/06/public-health-majors-grow-more-1000-percent.
[12] "Program: Complex Problem Exploration Courses - Goucher College - Acalog ACMS™," accessed April 8, 2023, https://catalog.goucher.edu/preview_program.php?catoid=11&poid=1528.

graduates capable of solving complex problems as part of diverse teams" collaborating on high-impact, creative projects or research projects.

3. Provide a brief narrative of how the proposed program will be adequately funded for at least the first five years of program implementation. (Additional related information is required in section L.

The program will be jointly housed in the Departments of Environmental Studies (ES) and Sociology & Anthropology (SOA), within the Center for Social Sciences. Faculty and facilities for the PH major will be provided by the existing programs in ES and SOA, so there will be no significant additional costs to the college. Nonetheless, a new faculty member with an expertise in global health will be hired, and funds for this purpose, as well as those for marketing and promotion, have been allocated from Goucher's Strategic Plan.

4. Provide a description of the institution's a commitment to:

a) ongoing administrative, financial, and technical support of the proposed program

The proposed program will be housed at the Center for Social Sciences, where administrative and technical support currently exists within ES and SOA, which will be jointly offering the major. These departments will be responsible for planning, organizing, implementing, and overseeing the PH program.

b) continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

Goucher's Strategic Plan calls for the development of "innovative, future-oriented educational programs that respond to the needs of today's students,"[13] with public health being identified as one of the key programs. As a result, the PH major evolved from the Strategic Plan, and the college has allocated moneys for it. In addition, the College has a strong commitment to continuing academic programs to enable majors to finish their requirements, and, in particular, it has allocated funds to hire a new faculty member who will teach specialized PH courses.

B. Critical and Compelling Regional or Statewide Need as Identified in the State Plan:

1. **Demonstrate demand and need for the program in terms of meeting present and future needs of the region and the State in general based on one or more of the following:**
    a) **The need for the advancement and evolution of knowledge**
    b) **Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education**

[13] "Goucher College Strategic Plan 2021-2025."

There is an urgent need not only for a larger public health workforce, but also for the advancement of public health knowledge and the development of innovative solutions in the face of new and evolving public health challenges, as well as age-old ones. Some of the earliest formalized public health efforts focused primarily on infectious diseases, but now our public health workforce must find ways to respond simultaneously to the multiple burdens of infectious diseases, chronic diseases, addiction, violence, injuries, natural disasters, migration, climate change-related health problems, and new and emerging health challenges. The field of public health has expanded with growing attention to the underlying social, economic, and political factors that influence the distribution of disease in society. Public health professionals are now called upon to address the social determinants of health in their work (education, economic stability, healthcare, social and community context, neighborhood and built environment factors), in addition to traditional public health efforts like vaccination campaigns, sanitation, and health education. A holistic policy approach calls for us to intentionally examine the ways that all policies impact health. Education policy is health policy. Housing policy is health policy. Minimum wage policy is health policy. And so on. In the United States, the largest associations of public health, along with many cities and academic institutions, have all declared racism a public health emergency, given racism's strong impact on health and healthcare. It is essential to develop new knowledge and new approaches to address these complex challenges.

In addition, the field of public health must address new challenges and opportunities related to technology. The spread of the cell phones and the internet throughout the globe has created new opportunities to develop affordable and sustainable healthcare technologies. Social media and mobile phones have introduced new ways to disseminate health information. However, as we have seen recently in the context of the Covid-19 pandemic, social media also has the potential to rapidly amplify misinformation about health. Researchers are developing ways to use social media to identify disease outbreaks earlier, and to use machine learning to reduce time to diagnosis and reduce diagnostic errors. There is a need for creative young people to help develop strategies to address these challenges.

A public health workforce that more closely resembles the population of the United States is likely to be more effective in improving health equity for racial and ethnic minorities. Public health has proven to be a popular major among minority students, nationwide.[14] The proportion of students who identify as Asian/Pacific Islanders, Hispanic and non-Hispanic black is higher among public health majors than in the total population of students earning any undergraduate degree. From 2003 to 2016, the proportion of Asian/Pacific Islander undergraduates majoring in public health increased from 5% to 13%, and the proportion of Hispanic students increased from 6% to 14%. During this same time period, the proportion of non-Hispanic white students among all public health undergraduates decreased from 62% to 50% and of non-Hispanic black students decreased from 23% to 16%. However, the proportion of non-Hispanic black students majoring in public health was still higher than the total percentage of non-Hispanic black students earning

[14] Resnick, Leider, and Riegelman, "The Landscape of US Undergraduate Public Health Education."

any undergraduate degree in the United States. Of all students earning any undergraduate degree in 2014 in the United States, 68% were non-Hispanic white,10% were non-Hispanic black, 10% were Asian/Pacific Islander, and 9% were Hispanic. The proportion of women earning undergraduate degrees in public health is also higher than the proportion of women undergraduates generally. From 2003 to 2016, the proportion of female undergraduate public health majors increased from 73% to 78%, while in 2014 67% of all undergraduate students were women.[15]

c) The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs.

Not applicable

2. Provide evidence that the perceived need is consistent with the Mary land State Plan for Postsecondary Education.

Regarding the College's commitment to Access, Success, and Innovation – as articulated in the State Plan – all three are present in Goucher's Strategic Plan. Access is part of Goucher's history: "Goucher has expanded upon its tradition as a women's college and aspires to provide access to a high-quality education to those communities historically denied that opportunity."[16] Success, as detailed above, is fostered by way of support mechanisms ranging from the innovative LAUNCH Network, student health facilities, and athletics, to community-based learning opportunities, academic support through peer tutoring, and professional support. Innovation is key to Goucher's history and its future. Innovative interdisciplinary majors account for one of the reasons *U.S. News & World Report* names Goucher one of the "Most Innovative Colleges."

In particular, Goucher's PH program will address several of the strategies for education articulated in the Maryland State Plan as explained below.

Priority 5: Maintain the commitment to high-quality postsecondary education in Maryland. Ensuring high-quality postsecondary education in Maryland is a key commitment of Goucher College. Our mission to prepare students for "a life of inquiry, creativity, and critical and analytical thinking" is upheld through the use of universal design principles, which allow all students to achieve the same learning objectives through a flexible pedagogical design that accommodates individual preferences and abilities. Our faculty members, who are scholars and skilled teachers, participate in regular workshops at the Center for the Advancement of Scholarship & Teaching (CAST) to enhance their teaching and scholarly work. This ultimately aims to improve academic success, particularly those from historically underrepresented backgrounds, through the incorporation of evidence-based approaches. CAST instructional designers also work closely with faculty to ensure universal design principles are implemented in syllabi, assignments, and modules at all levels. Faculty regularly evaluate the quality of their courses through formative and summative assessment tools.

[15] Resnick, Leider, and Riegelman.
[16] "Goucher College Strategic Plan 2021-2025."

Priority 6: Improve systems that prevent timely completion of an academic program. Goucher College is committed to improving systems that may hinder timely completion of an academic program. Each student is assigned an individualized student Success Team who supports them and guides their self-discovery. The team includes a Success Advisor, who works with each student before their arrival on campus and who coach them academically, while also helping them identify their passions, goals, and interests. Once a student declares the major, a Faculty Advisor joins the team to provide discipline-specific guidance. Other Success Team members connect students to campus resources if faced with academic, financial, or personal challenges.

Priority 7: Enhance the ways postsecondary education is a platform for ongoing lifelong learning. Goucher College's focus on "a life of inquiry, creativity, and critical and analytical thinking" extends to the promotion of lifelong learning through our curriculum and class design. Our classes are intended to allow students to apply and reflect on the skills and knowledge gained, fostering the development of metacognitive skills and encouraging the pursuit of additional educational and professional goals.

C. Quantifiable and Reliable Evidence and Documentation of Market Supply and Demand in the Region and State:

1. Describe potential industry or industries, employment opportunities, and expected level of entry (*ex: mid-level management*) for graduates of the proposed program.

Given the breadth of the public health field, public health graduates have many industries to choose from when seeking employment. The main categories of employers that hire people with public health training and experiences include: federal agencies, state health departments, county and city health departments, think tanks, consulting companies, non-profits, foundations, pharmaceutical companies, tech companies, insurance companies, hospital systems, and companies with corporate social responsibility programs. A 2023 study of first placements for undergraduate public health majors indicates that these students go on to work in a wide variety of sectors, and in many different jobs within those sectors.[17] Among the 23,810 undergraduate public health students who graduated between 2015 and 2020 and reported their first destination after commencement, 7% sought employment, 31% enrolled in an additional program of study, and 62% reported already having secured employment, a fellowship or a volunteer position.[18] Among the 8,724 graduates who reported employment outcomes, 34% reported working within the for-profit sector (consulting, marketing, public relations, communications, pharmaceuticals, health insurance, and information technology). An additional 28% of graduates were employed by health care organizations (hospitals, health systems or managed care). Among the remaining graduates, 11% were employed in nonprofit organizations, 10% in academic institutions, 10% in government (federal, state, local and military), and 6% in "other." Unpublished data from Agnes

[17] Jonathon P Leider et al., "Trends in Degree Conferrals, Degree-Associated Debt, and Employment Outcomes Among Undergraduate Public Health Degree Graduates, 2001–2020.," *American Journal of Public Health* 113, no. 1 (January 2023): 115–23, https://doi.org/10.2105/AJPH.2022.307113.
[18] Leider et al.

Scott College suggest that liberal arts public health graduates may be more likely to secure employment within higher education and non-profits than the national averages among public health majors.[19]

The expected level of entry for undergraduate public health majors varies depending on the job sector, and on the number and type of internships students participate in prior to graduation. Most bachelor-level jobs with traditional public health employers (county and state health departments, for example) and at research centers will be entry-level jobs. Students with specialized software expertise (R, SAS, Stata, ArcGIS, Python, etc.) are sometimes able to secure Master's level jobs with a B.A. degree. Common job titles for new PH major graduates from Agnes Scott College (a small liberal arts college in Georgia) include: research assistant, consultant, administrative assistant, program analyst, development assistant, health specialist, program coordinator, data analyst, public health educator, case investigator/contact tracer, elementary school teacher, community organizer, and assistant manager.[20] Many graduates also serve in Americorps or the Peace Corps, or pursue public health fellowships with organizations such as the NIH or the CDC.

2. Present data and analysis projecting market demand and the availability of openings in a job market to be served by the new program.

There is a growing public health workforce shortage at the local, state and federal levels. This shortage leaves the nation vulnerable to public health crises like the Covid-19 pandemic, or environmental disasters. One of the factors that influences this shortage is an insufficient supply of trained workers. A 2008 report by the Association of School and Programs in Public Health predicted a 250,000 shortfall of public health workers.[21] The current reality, following the Covid-19 pandemic, is even worse. At least 80,000 public health workers are required to maintain the most basic services at the state and local levels alone.[22] Compared to pre-Covid job postings, there has been a significant increase in job postings by insurance carriers and by pharmaceutical and medicine manufacturing companies, and in job postings for epidemiologists, statisticians, medical and health services managers (including research managers), biologists, compliance officers, and community health workers.[23]

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[19] Personal communication with Dr. Amy Patterson, Chair of the Public Health Department at Agnes Scott College, Decatur, Georgia.
[20] Personal communication with Dr. Amy Patterson, Chair of the Public Health Department at Agnes Scott College, Decatur, Georgia.
[21] Linda Rosenstock et al., "On Linkages: Confronting the Public Health Workforce Crisis: Asph Statement on the Public Health Workforce," January 1, 2008, https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=edsair&AN=edsair.doi.dedup.....1297e03837049ee12a7370546511b030&site=eds-live&scope=site&custid=asc1.
[22] Jonathon P Leider et al., "Staffing Up and Sustaining the Public Health Workforce," *Journal of Public Health Management & Practice* 29, no. 3 (n.d.): E100-107, https://doi.org/doi:10.1097/PHH.0000000000001614.
[23] Heather Krasna and Linda Fried, "Generation Public Health: Fixing the Broken Bridge Between Public Health Education and the Governmental Workforce.," *American Journal of Public Health* 111, no. 8 (August 2021): 1413–17, https://doi.org/10.2105/AJPH.2021.306317.

Bureau of Labor and Statistics Data for Relevant Occupations (Bachelor Level)[24]

Occupation	Projected Number of New Jobs	Projected Growth Rate	2021 Median Pay
Biological Technicians	12,200	Faster than the average	$48,140
Data scientist	10,000-49,999	Much faster than average	$80,000 or more
Environmental Scientists and Specialists (including Health)	1,000-4,999	As fast as average	$60,000-$79,000
Fundraisers	10,000-49,999	Much faster than average	$60,000-$79,000
Health Education Specialists	1,000-4,999	Faster than average	$60,000-$79,000
Medical and Health Services Managers	50,000 or more	Much faster than average	$80,000 or more
Social and Community Service Managers	10,000-49,999	Much faster than average	$60,000-$79,000
Social Science Research Assistants	1,000-4,999	Much faster than average	$40,000-$59,000

U.S. Bureau of Labor Statistics Occupational Outlook Handbook, https://www.bls.gov/ooh/
*Not all public health jobs are listed in the Bureau of Labor and Statistics database.

The workforce demand is equally high for graduates with a master's degree in PH or related degrees. Additionally, as more and more employers catch up to the trends in undergraduate public health education, it is expected that more jobs currently listed at the master-level will be opened to undergraduate public health majors.

Bureau of Labor and Statistics Data for Relevant Occupations (Master Level)

Occupation	Projected Number of New Jobs	Projected Growth Rate	2021 Median Pay
Epidemiologists	1,000-4,999	Much faster than average	$60,000-$79,999
Statisticians	10,000-49,999	Much faster than average	$80,000 or more
Survey Researchers	0-999	As fast as average	$60,000-$79,000
Medical Scientists	10,000-49,999	Much faster than average	$80,000 or more

U.S. Bureau of Labor Statistics Occupational Outlook Handbook, https://www.bls.gov/ooh/

[24] "Home : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics," accessed April 10, 2023, https://www.bls.gov/ooh/.

3. Discuss and provide evidence of market surveys that clearly provide quantifiable and reliable data on the educational and training needs and the anticipated number of vacancies expected over the next 5 years.

PH graduates go on to a wide variety of different careers, not all of which are represented in national and state labor projections.[25] However, some of the most common career paths are represented and included in the table below, which shows the growing market demand for graduates trained in public health in Maryland, where Goucher College is located.[26]

Maryland Long Term Occupational Projections (2020-2030)

Occupation	2020	2030	Change	Percent Change
Data Scientists and Mathematical Science Occupations, all other	2,334	3,045	711	30.46
Database Administrators and Architects	5,117	5,615	498	9.73
Environmental Scientists and Specialists, Including Health	2,612	2,867	355	9.76
Health and Safety Engineers	687	723	36	5.24
Health Educators	2,813	3,082	269	9.56
Medical and Health Services Managers	13,196	16,800	3,604	27.31
Occupational Health and Safety Specialists	1,512	1,653	141	9.33

[25] See, for instance: Jarek Rutz, "What You Can Do with a Public Health Degree," *US News & World Report*, April 27, 2023,
https://www.usnews.com/education/articles/what-you-can-do-with-a-public-health-degree

[26] "Maryland Long Term Occupational Projections," Tableau Software, accessed April 10, 2023,
https://public.tableau.com/views/MarylandLongTermOccupationalProjections/LongTermOccupationalProjections?:embed=y&:showVizHome=no&:host_url=https://public.tableau.com/&:tabs=no&:toolbar=yes&:animate_transition=yes&:display_static_image=no&:display_spinner=no&:display_overlay=yes&:display_count=yes&:showTabs=y&:loadOrderID=0.

Social Science Research Assistants	761	830	69	9.07
Statistical Assistants	191	211	20	10.47

https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml

4. Provide data showing the current and projected supply of prospective graduates.

The two decades since the year 2000 have seen three epidemics (SARS, MERS and Ebola), followed by the Covid-19 pandemic. Even if the classic definition of public health—"the science and art of preventing disease, prolonging life, and promoting physical health"—isn't on every tongue, the world is talking about population health, and in the U.S., Dr. Anthony Fauci is a household name. Accordingly, applicants to both undergraduate and graduate PH programs have increased significantly. Between Spring 2020 and Spring 2021, colleges and universities experienced a 40% increase in applicants.[27] During the 2020-2021 academic year, there was a 6% increase in the number of undergraduate public health degrees awarded, and public health was the sixth most popular major. This increase is particularly noteworthy given that undergraduate public health education has only expanded to undergraduate programs following the 2003 Institution of Medicine Report that called for all undergraduate students to have access to public health education.

The number of bachelor's degrees awarded increased 11 times between 2000 and 2020. In 2020, 18,283 undergraduate public health degrees were awarded, surpassing master's degrees in public health for the first time and reflecting a substitution effect in hiring, especially in the field of health education.[28] Undergraduate PH programs are one of the fastest growing degrees in the nation. Nationwide, undergraduate PH majors are extremely diverse, with more than 80% identifying as women, and 55% coming from communities of color.[29] The text of a recent publication in Inside Higher Ed emphasizes "dire need" for an undergraduate workforce and answers "yes" to the titular question: "Could Undergrads Save the Public Health Workforce?"[30] At Goucher, with the exception of the pandemic year, interest in public health, as measured by growth in minors, appears to be strong.

Year	Number of Public Health Minors, Goucher College
2016	4
2017	7
2018	16

[27] Association of Schools and Programs of Public Health, "How Covid-19 Opened a New Chapter for Public Health."
[28] Leider et al., "Trends in Degree Conferrals, Degree-Associated Debt, and Employment Outcomes Among Undergraduate Public Health Degree Graduates, 2001–2020."
[29] Leider et al.
[30] Alonso, "Could Undergrads Save the Public Health Workforce?"

2019	10
2020	7
2021	6
2022	18

D. Reasonableness of Program Duplication:

1. Identify similar programs in the State and/or same geographical area. Discuss similarities and differences between the proposed program and others in the same degree to be awarded.

Given the rapid expansion of undergraduate PH programs since the early 2000s, there are a number of schools in Maryland offering PH or related majors. However, Goucher's proposed PH major stands out from these others in that it: places a greater emphasis on Global Health than other programs, is the only program with a study abroad requirement, is designed to facilitate a rich and diverse liberal arts experience, and is uniquely positioned within a school whose general education curriculum emphasizes environmental sustainability and race, power & perspective, two areas of increasing urgency and importance within the field of public health.

As a small liberal arts college, Goucher is already quite different from the large universities that offer related majors. However, there are some key similarities between the proposed PH major and the set of majors at other institutions: most related majors require some form of applied experience or capstone, most require an introductory PH course and an Epidemiology course, and most include at least one Biology course. While many are much more narrowly focused than Goucher's proposed major, there are some other schools that offer a more generalist degree.

There are only a few other liberal arts institutions (or, in Salisbury's case, a school of liberal arts) in Maryland that offer PH majors.

- The major at Hood College differs from that proposed at Goucher College. Housed in the Nursing School, the major is more of a pre-professional degree, with a larger number of required core PH courses, and fewer electives. While Global Health is offered as an elective, it is not a core requirement nor an emphasis of the curriculum, and students are not required to study abroad.
- Salisbury University's PH major is a professional program, housed in the College of Health and Human Services. Students must formally apply to the major after completing a series of prerequisite courses, and all students take the same set of major courses as a cohort, with no electives. The Health and Humanities minor at Salisbury University takes more of a liberal arts approach to studying health, but there is no major in this area.
- The Johns Hopkins University BA in PH Studies is a highly multidisciplinary program, but Johns Hopkins is a much larger institution and draws a very different applicant pool. The major takes a generalist approach to public health. Global Health is not required, nor

is study abroad. All students at Johns Hopkins take at least 10 graduate-level credits at the Bloomberg School of Public Health.

Several large universities in Maryland offer PH or related majors, but these institutions are very different from Goucher College with respect to size, curriculum, and institutional priorities.

- University of Maryland College Park has three related majors: a BS in PH Science, a BS in Community Health, and a Medical Anthropology and Global Health option for Anthropology majors. All of these are more narrowly focused than the proposed major at Goucher College. The Medical Anthropology and Global Health program is the only other program in Maryland with a strong focus on Global Health, but it is not a stand-alone major, and is not a PH program. Students are not required to take courses in the core disciplines of public health, such as Epidemiology and Biostatistics. The BS in PH Science is designed more for students who envision bench science and research careers in public health, and for those who envision a career in clinical health professionals. The BS in Community Health has a strong focus on social and behavioral sciences, as well as community health. None of the University of Maryland College Park majors require an internship or applied experience.
- The University of Maryland, Shady Grove offers a PH Science major, which is very similar to that at the University of Maryland College Park. Students in this program at Shady Grove must complete their first two years at another institution and transfer in for the remaining two years.
- Towson University (College of Health Professions) offers two relevant majors: PH and Health Care Management. The PH major is housed in the College of Health Professions, and is more of a pre-professional program than a liberal arts major. A much larger university, Towson is able to offer a wider variety of public health methods and topics courses, but given the large size of the major footprint, students have fewer opportunities to take courses outside of their major (39/120 credits). The major places a strong emphasis on community health, health education, and health communication. International Health is an elective course, rather than a requirement. The Health Care Management major is a pre-professional program designed for those who want to pursue careers in healthcare administration and management, and thus is more narrowly focused on Business, Law, Policy and Health Systems courses. A Business minor is required for the Health Care Management major.
- Morgan State University (an HBU) offers a BS in Health Education, housed in the School of Community Health and Policy, and a BS in Interdisciplinary Health and Human Sciences, housed in the College of Interdisciplinary and Continuing Studies. Students in the Health Education major must complete one of four different concentrations, in addition to completing core major requirements: generalist, community health, environmental health, and health administration. While the core major requirements for the proposed major at Goucher College emphasize global health, the core requirements at Morgan State focus on community health, social determinants of health, and health education. Global Public Health is a requirement for three of the four concentrations. Depending on the concentration, students may take courses from Math, Biology,

Economics, Psychology or History – but the program draws on fewer traditional liberal arts disciplines than the Goucher major will. Like the proposed Goucher program, students complete a required field experience/internship and a capstone course. The Interdisciplinary Health and Human Sciences program does not include any required PH courses (though there are some elective options) and is designed more for students working in the healthcare industry, athletics, community services, education, and business.

- The Frostburg State University BS in Health and Wellness Education is primarily designed to prepare people to teach health in educational and community settings. It differs significantly from the proposed Goucher College major which is designed to prepare students for a wide variety of careers and graduate programs in public health.
- The University of Maryland, Baltimore County Sociology, Anthropology and Public Health Department offers a PH major. This is a broad multidisciplinary program, with a strong focus on health communications, ethics, and research methods. Students may choose from three different tracks: Health Policy, Health Services Administration, or Population Health. This differs from the proposed Goucher' PH major which will focus more on Global Health. Unlike the proposed Goucher College major, there is no required internship or other applied experience.
- The University of Baltimore, Stevenson University and Bowie State University all offer programs in health management or administration that are much more narrowly focused than the broad liberal arts public health major proposed by Goucher College. These programs focus on the law, business, and ethics of healthcare.
- Coppin State University, McDaniel College and Mount St. Mary's University offer health sciences majors, rather than public health majors. These are more pre-medical degrees designed for students interested in medicine, nursing or related clinical fields.

Additionally, some community colleges in the area offer Associate Degrees or B.A. degrees in PH. Some students from these programs could transfer into the Goucher College PH major.

- Carroll County https://www.carrollcc.edu/programs/degrees-credit-certificates/public-health-concentration-a-a/
- Anne Arundel Co. https://www.aacc.edu/programs-and-courses/credit-and-degree-seekers/public-health/
- Howard County Transfer program https://www.howardcc.edu/programs-courses/programs/public-health/

2. Provide justification for the proposed program.

Goucher's mission includes a commitment to the traditional liberal arts, an interdisciplinary approach to the curriculum, an education that extends beyond Western culture, and experiential learning. Together, these commitments differentiate Goucher's proposed program from those described in the previous section. Other Maryland institutions offering PH majors tend to be large, public universities. Hood College and Johns Hopkins University are the exceptions.

Compared to Hood College, Goucher has a commitment to a residential undergraduate experience, and it is located near Baltimore, home to the oldest continuously operating health department in the U.S. Goucher's commitment to experiential learning and its existing partners in Baltimore City provide rich opportunities for students to explore fields of interest, build skills, and meet professionals. For students interested in Global Health, internships abroad offer additional opportunities for skill-building and career exploration.

Goucher's position to launch a unique program with broad appeal and intrinsic interconnections with our existing curriculum and vision is another strength. Social responsibility, environmental justice, culturally appropriate action and partnership, personal and professional ethics, and experiential learning are as key in public health as they are to Goucher's vision of education. In addition, the Goucher Commons Curriculum emphasizes problem-centered learning, environmental sustainability, and justice and social responsibility. This Curriculum, too, includes high-impact teaching practices.[31] For example, Goucher's study abroad knits public health with Global Health, ensuring that students have the opportunity to gain experience in health settings and health systems beyond the U.S. On a smaller scale, the number of existing courses in climate change (BIO 240, ES 415) and human migration (CPEB 202, PSY 224, WGS 337) intersect neatly with important public health challenges and could lead to future tracks within the major. A PH major reflects and advances Goucher's aims and principles.

E. Relevance to High-demand Programs at Historically Black Institutions (HBIs)

1. Discuss the program's potential impact on the implementation or maintenance of high-demand programs at HBI's.

As mentioned earlier, Goucher's proposed program has some overlap with Morgan State University's program. However, this overlap is minimal, and we do not anticipate any negative impact as a result. Additionally, Goucher's program will not be in direct competition with any high-demand program at a nearby HBI. Due to its emphasis on liberal arts and global health perspectives, Goucher's proposed program will feature a distinct and unique aspect that sets it apart, including from the program at Morgan State University.

F. Relevance to the identity of Historically Black Institutions (HBIs)

1. Discuss the program's potential impact on the uniqueness and institutional identities and missions of HBIs.

The PH major has no impact on the uniqueness and institutional identities and missions of any of the HBIs in the State. Goucher's proposed program overlaps only with Morgan State University's, but this curricular overlap is minimal. In addition, due to its liberal arts mission, Goucher's PH program would not have any effect on Morgan State University.

[31] AAC&U. (2022). *High-impact practices.* https://www.aacu.org/trending-topics/high-impact

G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes (as outlined in COMAR 13B.02.03.10):

1. Describe how the proposed program was established, and also describe the faculty who will oversee the program.

The proposed PH program builds upon the existing minor, which was established in 2016. Goucher faculty involved in the minor developed the proposed PH major. For example, Dr. Jennifer Bess and Dr. Janet Shope, both involved in the founding of the minor, will support the new major. Dr. Bess, Associate Professor of Peace Studies and current director of the PH minor, has taught courses at the intersection of social justice and public health since 2008. Her courses focus on the school-to-prison pipeline and the socio-economic impacts of global HIV/AIDS, which have included community-based learning components that offer students applied learning opportunities. Dr. Bess will chair the new PH major, teach courses for it, and serve as an academic advisor. Dr. Janet Shope, Associate Vice President for Institutional Effectiveness and Professor of Sociology, will support the major by teaching and/or overseeing the methods course (SOA 217) and participating in program assessments. Her research on violence against women in rural South Africa and her leadership in Goucher's Title IX Campus Climate Survey stand to contribute to the major's development.

While Drs. Bess and Shope will provide the primary support for the new major, it is worth noting that Patricia Greenberg, lecturer since 2007 in Sociology & Anthropology and, more recently, in Public Health, will continue to teach PH 101 and co-teach PH 497. Her effectiveness as a teacher and mentor to students has enabled the growth of the minor. In addition, Dr. Germán Mora, Associate Provost for Curriculum and Professor of Environmental Studies, and Dr. Carolyn Schwarz, Associate Professor of Sociology and Anthropology, will offer administrative support to the new program. Dr. Schwarz's courses covering such topics as medicine and healing, cultural ideas of wellbeing and personhood, alternative food movements, the human life course, and health care delivery also will serve the new major.

2. Describe educational objectives and learning outcomes appropriate to the rigor, breadth, and (modality) of the program.

Major Learning Outcomes:

1. Students are able to discuss the socioeconomic, behavioral, and environmental factors that impact health and contribute to health disparities. (Introduced in the Introduction to Public Health course, and reinforced in upper-level courses)
2. Students are able to interpret measures that describe the distribution and determinants of disease in populations. (Introduced in the Epidemiology course, and reinforced in other courses)
3. Students can compare and contrast global health trends and organizational structures of health care systems around the world (Addressed primarily in the Global Health course)

4. Students are able to design and execute a research project and effectively communicate findings. (Addressed in the Capstone course)

3. Explain how the institution will:

a) provide for assessment of student achievement of learning outcomes in the program

b) document student achievement of learning outcomes in the program

Goucher College has a comprehensive and sustained process for assessing student learning outcomes in all courses and programs. Each year academic programs submit annual assessment reports to the Assessment Committee for review. These reports include assessment of specific learning outcomes and a discussion of the findings and action steps, if appropriate. These assessment reports are revisited during the academic program review process that includes an internal review during the fourth year and an external review during the eighth year. Both reviews include an evaluation of the assessment plan, an analysis of student learning outcomes, and a discussion of program responses.

For each of the four PH Learning Outcomes, faculty will evaluate student work using appropriate rubrics and artifacts including exams, papers, and researched presentations. Currently (in the minor), Learning Outcomes 1 and 2 are assessed by way of exams, while a final research presentation project is assessed in the Capstone for Learning Outcome 4. Rubrics will be re-visited each year as part of the College's annual assessment cycle. The assessments made by PH faculty will then be evaluated by the Assessment Committee, which provides additional recommendations.

4. Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements

PH majors will complete a total of 44 credits comprised of six Core Courses (24 credits), three courses selected from Electives: Mechanisms and Contexts of Health (12 credits), and two Professional and Applied Skills courses (8 credits). Within the Electives category, students must complete at least two courses (8 credits) at the 300-level or above.

Program Requirements Public Health Major

CORE COURSES	**# of Credits**
PH 101 Introduction to Public Health*	4
BIO 101, 102, or ES 100	4
PH 2XX Epidemiology* (prerequisite: DMC 101, 102, 105, or 106)**	4
PH 310 Global Health	4
SOA 217 Methods of Social Research (SOA prerequisites waived)	4
PH 497 Public Health Capstone*	4

ELECTIVES	
At least three courses in the Mechanisms and Contexts of Health category, two of which must be at the 300-level or above	12
At least two courses in the Professional and Applied Skills category	8
TOTAL	44 credits

* PH classes changing from 2 credits to 4 credits
** Prerequisite for Epidemiology. Although we want to keep options open, we will encourage students to take DMC 106 in pre-major advising settings and information sources and in major advising.

Course Descriptions for Core Requirements:

Three of these courses (Introduction to PH, Epidemiology, and Global Health) align with AAC&U recommendations for undergraduate PH programs.[32] The introductory BIO and ES courses supply students with an introduction to the scientific method. PH 2XX and SOA 217 add further instruction in methods appropriate to public health fields. A senior capstone experience is part of Goucher's commitment to high-impact practices.

PH 101: Introduction to Public Health (4 credits)
The goal of public health is to optimize the well-being of populations. We will learn about historical and contemporary research, policy, and practice aimed at preventing and eradicating contagious and chronic disease and limiting injuries, thus extending healthy life expectancy. The class will also introduce the basic measures and methods of the discipline with a focus on both U.S. and global issues.

BIO 101 or BIO 102 or ES 100

> BIO 101: Explorations in Biology: The Research Process (4 credits)
> Through an emphasis on scientific inquiry, students will investigate the foundations of cellular and molecular biology, including DNA, RNA, genes, and proteins. In the laboratory, students will actively develop hypotheses and design experiments to test them. Students will also read primary literature, develop quantitative skills to examine their data, and present their research findings. Three hours classroom, three hours laboratory.
>
> BIO 102: Explorations in Biology: Life in Context (4 credits)

[32] Richard K. Riegelman and Susan Albertine, "Recommendations for Undergraduate Public Health Education," accessed April 19, 2023, https://www.ccas.net/files/public/Undergrad_Public_Health_Recommendations%5B1%5D.pdf.

Life in Context explores the diversity of living organisms, the evolutionary relatedness of all organisms, and interconnected associations between organisms. Particular emphasis is placed on the importance of biological diversity to ecosystem health and on issues of human relevance. The fundamental concepts and principles of biology are emphasized throughout the course. Three hours classroom and three hours laboratory.

ES 100: Introduction to Environmental Sciences (4 credits)
This course explores current environmental issues with the goal of evaluating how the integration of biological, chemical, geological, and physical principles is vital for identifying and understanding environmental problems and for shaping policies for effective solutions. The laboratory centers on the application of scientific principles and protocols to investigate both natural and urban environments. Discussions will focus on global environmental issues, including global warming, water and air quality, urbanization, biodiversity, human population growth, and food production. This course involves required field trips. Four hours lecture/laboratory.

PH 2XX: Epidemiology (4 credits)
This course introduces students to the study of patterns and determinants of disease in different populations and the application of methods used to improve health outcomes. Epidemiology provides the main science of public health, and students will engage with methods of measurement and study design as they explore biological, behavioral, social and environmental factors associated with health and disease. Prerequisite: DMC 101, 102, 105 or 106.

PH 310: Global Health (4 credits)
In this course, students will explore the health of communities in an interconnected world. Case studies involve market forces, global north/south disease burden, agriculture, environment, and political structures as they impact and respond to health issues around the world. Readings will also engage students in interdisciplinary perspectives. Prerequisites: PH 101 and one additional course in PH, ES, or SOA.

SOA 217: Methods of Social Research (4 credits)
Concepts and methods of quantitative social science research. Research methods, research design, and statistical analysis of data. Ethics in social research. Training in the selection of appropriate research designs for a variety of sociological problems. Major data sources and methods of data collection. Use of statistics in analyzing and presenting data. Exercises in design, data collection, and statistical analysis. Required of all program majors. Open to other students by permission of the instructor. Prerequisite: SOA 100 and one 200-level SOA course; or PH 101.

PH 497: Public Health Capstone (4 credits)
The course will be team-taught by faculty focusing on approaches to research in Public Health and asking students to apply research skills, including data analysis, in the development and writing of a project proposal on a topic of their choosing. Our approach reflects the

multidisciplinary nature of Public Health, and it will help students identify and understand the role of the skills, methodologies, and theoretical paradigms they bring from their majors as they develop new abilities applicable to fields in the sciences and social sciences and to graduate study in Public Health. Prerequisites: Open to juniors and seniors participating in the Public Health minor or major. Additional prerequisites: at least two 200- or 300-level courses from the PH core courses or the Electives: Mechanisms and Contexts of Health.

Electives: Mechanisms and Contexts of Health. (At least 3 classes, 12 credits, with at least 2 of them at the 300-level or above)

BIO 101: Explorations in Biology: The Research Process (4 credits)
Through an emphasis on scientific inquiry, students will investigate the foundations of cellular and molecular biology, including DNA, RNA, genes, and proteins. In the laboratory, students will actively develop hypotheses and design experiments to test them. Students will also read primary literature, develop quantitative skills to examine their data, and present their research findings. Three hours classroom, three hours laboratory.
Counts as an elective if not taken to satisfy the core requirements.

BIO 102: Explorations in Biology: Life in Context (4 credits)
Life in Context explores the diversity of living organisms, the evolutionary relatedness of all organisms, and interconnected associations between organisms. Particular emphasis is placed on the importance of biological diversity to ecosystem health and on issues of human relevance. The fundamental concepts and principles of biology are emphasized throughout the course. Three hours classroom and three hours laboratory.
Counts as an elective if not taken to satisfy the core requirements.

BIO 107 Nutrition or BIO 109 Nutrition (lecture only)

BIO 107: Nutrition (4 credits)
Introduction to the chemical and biological aspects of nutrition, the basic nutrients and their effects on our health and on the environment. Topics such as the energy needs of athletes, weight control, diet fads, supplements and herbs, food safety, and food and drug interactions will be discussed in class, and their understanding will be enhanced through laboratory experiments and fields trips. Three hours classroom and three hours laboratory.

BIO 109: Nutrition - lecture only (4 credits)
Introduction to the chemical and biological aspects of nutrition, the basic nutrients and their effects on our health and on the environment. Topics such as the energy needs of athletes, weight control, diet fads, supplements and herbs, food safety, and food and drug interactions will be discussed in class. Four hours classroom.

BIO 220 Principles of Genetics (4 credits)
Concepts of heredity and their application in a wide variety of organisms from bacteria to humans. Includes classical transmission genetics, chromosomal structure, DNA structure and replication, protein synthesis, gene regulation in prokaryotes and eukaryotes, extra-nuclear heredity, and introduction to molecular analysis of genes and chromosomes. Four hours lecture. Prerequisites: BIO 101, CHE 151 (C- or better).

BIO 240 Ecology & Evolution (4 credits)
The distinctive features of diverse terrestrial and aquatic habitats are examined to discover how they affect individual, population, and community processes. Ecological and evolutionary theory is used to explore the relationships between structure and function in ecosystems, and current models are used to probe the nature of population growth and its regulation. Special emphasis will be placed on environmental sustainability and how climate changes and other human induced activities may impact the ecology of organisms. The mechanisms of evolution are illustrated using examples from population genetics, speciation, and co-evolution. Four hours classroom. Prerequisite: BIO 102 ,BIO 220.

BIO 261 Human Anatomy (4 credits)
An introductory human anatomy course that emphasizes the relationship between form and structure. A combined approach of lecture, laboratory and interactive learning technologies will be employed to demonstrate normal function and clinical variation. A systems approach including musculoskeletal, digestive, cardiovascular, respiratory, urinary, endocrine, reproductive, and integumentary systems will be used. Organization at the cellular, tissue and anatomical region levels will be integrated into the systems approach. Students will acquire the fundamentals of human anatomy relevant for clinical application. Students will be required to work with preserved bones, organs and specimens for dissection. Three hours classroom, three hours laboratory. Pre-requisite: BIO 102 (C- or better)

BIO 360 Principles of Physiology (4 credits)
Systems approach to the physiological processes of the body, emphasizing humans, including nerve, muscle, circulation, respiration, immune system, endocrine, renal function, and metabolism. Laboratory work introduces standard methods used in physiological investigations and emphasizes data interpretation with regard to known physiological mechanisms. Three hours classroom, three hours laboratory. Prerequisites: BIO 220, BIO 224, one additional 200-level or higher Biology course, and CHE 230)

CPEB 202 Migration and Refugees in a Global World (4 credits)
The current debates over migration and refugees inform the stories about ourselves as a community and the evolution of identities such as U.S. citizens, citizens of other countries, and/or global citizens. In this course, we will work collaboratively to explore the myriad facets of immigrants' experiences. We will study historical and contemporary perspectives and dialogues on immigration to the United States, the meaning of citizenship and land of residence, and the rights and experiences of non-citizens. We will compare the U.S. immigration

experiences and citizenship approaches to other regions of the world. During the course of the semester, you will work in groups and collaborate on projects that seek to transform and offer resources to your community about immigration. Additional group projects will include dialogues on citizenry and the relationship between identity, immigration, and civil rights. The current discussions over immigration, both in the United States and in other nations with similar immigration reflections, provides the primary content for this CPE. Our dialogue entails active and respectful reception of diverse voices, different agendas, and conflicting policies. We will be guided by a series of questions and problems in our search for answers and solutions and consider multidisciplinary approaches. This CPE combines the disciplines of social sciences (e.g., political science or psychology), media studies, cultural sustainability, and history to study immigration. The source materials on immigration are rich, diverse, inclusive, and varied and we may take advantage of myriad books, films, archives, documents, photographs, and/or on-line exhibits. Students are limited to one CPE course per semester.

CPEB 205 Disease and Discrimination, Sociology Focus (4 credits)
What role does discrimination play in the development of disease? How has stigma affected the experience of disease as well as the resources allocated to address it? In this course we examine the intersecting inequalities (race, class, sex, sexuality, and others) that contribute to mortality and morbidity. We will study the determinants and sequelae of both infectious and non-infectious diseases as well as how they have been framed in political discourse. Working individually and in cooperative groups, students will embark on explorations of a health concern of their choice. Students may NOT take this course if they have completed the CPED 202 course with similar content/title. Students are limited to one CPE course per semester.

CPEB 206 Getting Healthcare (4 credits)
The United States spends more on healthcare than any other wealthy democratic nation. And yet in global healthcare rankings, the United States consistently performs poorly overall compared with its peers. In this course, we will bring together medical anthropology and healthcare policy perspectives to examine this conundrum of the healthcare system in the United States, with particular attention to key historical developments and to how healthcare is actually experienced by people today, for example by patients, providers, or healthcare advocates. We will work individually and collaboratively to address the complexities of "getting healthcare," both in terms of everyday healthcare-seeking and in terms of gaining a clear understanding of what has gone into the makings of a unique and highly complex system for healthcare coverage and delivery. (Restricted to first-year and sophomore students, and others with instructor permission.) Students are limited to one CPE course per semester.

CPED 207 The Addicted Brain (4 credits)
The opioid crisis is one of the deadliest drug epidemics in U.S. history. "Opioids" include illegal recreational drugs (such as heroin), but also powerful pain relievers often prescribed for patients with chronic medical conditions. In this course, we will dive into the neurobiology of opioid drugs, the effects they have on the brain, and how this contributes to the development of an addiction. We will also examine the many intersecting factors (education, class, race, cultural

background, genetic predisposition, psychological health, and others) that influence who becomes addicted to opioids, and what help they receive. Students will then conduct collaborative investigations of a drug of their choice in a specific local or national setting (for example, methamphetamine abuse in the rural Midwest, or Ritalin abuse by urban teens), working to understand the factors influencing the abuse of this drug from social and biological perspectives. Students are limited to one CPE course per semester.

CPED 208 Designer Genes (4 credits)
Life has evolved during the earth's history through the process of natural selection sculpting organisms' genomes to suit the environment. For millennia, humans have influenced evolution through the use of animal and plant husbandry, but recently a new biotechnology called CRISPR has led to an unprecedented ability to make specific, rapid and deliberate changes to our own genomes and those of other organisms. This course will examine how CRISPR works and its many possible applications, and will consider the ethical implications of this technology and how it might be regulated to ensure its use for the betterment, rather than the detriment of global society. Students are limited to one CPE course per semester.

CPED 210 The 23 in Me (4 credits)
Over 25 million individuals have taken commercially available genetic tests, and millions more have taken similar tests administered by their physicians. Historians and Anthropologists are incorporating genetic testing into their disciplines, and public policy makers are considering how genetic testing should be incorporated into immigration, insurance and law enforcement policy. Many individuals are simply curious about their ancestry or traits that have been passed from their parents. Others have serious concerns about inherited medical conditions, and genetic testing results are routinely used to make medical and family planning decisions. Test results are used to solve crimes and to determine what individuals belong to particular ethnic groups. We will learn the science behind genetic testing, examine the benefits and limitations of genetic testing, discuss examples of genetic testing that fall outside of traditional medical diagnostics, and explore the public policy implications of genetic testing, all through course readings and assignments. We will also incorporate psychological and philosophical perspectives to consider the ethical implications of genetic testing for individuals, their families, and society. Students are limited to one CPE course per semester.

CPED 215 Nature or Nurture? (4 credits)
This course will provide students an opportunity to examine and discuss the scientific principles that help us understand human disease, its development, treatment, and prevention. Emphasis will be given to introducing students to scientific inquiry through hands-on experiences that highlight human health and disease at different levels—from the molecular level to organ systems in the body, as well as the body's interaction with the environment.

EC 111 Essentials of Economics I (4 credits)
You think like an economist. You just don't realize it yet. This course will introduce you to basic concepts of economics and to give you a sense of what the field of economics is (and isn't). Both

directly and indirectly, economic theory influences your daily life; therefore, we will discuss a variety of microeconomic and macroeconomic concepts both in theory and through real world applications throughout the course. By the end of the class you will be able to apply basic economic concepts to a variety of contemporary economic issues. This course is the first sequence in a two-course exposure to the fundamentals of microeconomics and macroeconomics.

EC 325 Economics of Global Food Production (2 credits)
This course will explore the interdependence of agriculture, aquaculture and fisheries with regard to the global production of food. Topics to be discussed include: Global agriculture production; global hunger and malnutrition; sustainable food production; global fisheries production; global aquaculture production; the role of technology in food production; genetically modified foods; eco-labeling; and the local food movement. Prerequisite: EC 225.

ES 100 Introduction to Environmental Sciences (4 credits)
This course explores current environmental issues with the goal of evaluating how the integration of biological, chemical, geological, and physical principles is vital for identifying and understanding environmental problems and for shaping policies for effective solutions. The laboratory centers on the application of scientific principles and protocols to investigate both natural and urban environments. Discussions will focus on global environmental issues, including global warming, water and air quality, urbanization, biodiversity, human population growth, and food production. This course involves required field trips. Four hours lecture/laboratory.
Counts as an elective if not taken to satisfy the core requirements.

ES 140 Introduction to Environmental Studies (4 credits)
There is no relationship more important to society than the one we have with our natural environment. From the extraction of resources necessary for everyday life to where we put our waste products, from where we get our food to where we go on vacation, our dependence on and perceptions of the environment are fundamental to every aspect of our lives. Resource use and environmental management, in addition to being scientific and technological problems, are also inseparable from our political, economic, and cultural systems. Resource use practices and efforts to control nature are closely tied to power at every scale: local, national, and global. This course focuses on the social aspects of resource management across the globe. We begin by reading about and discussing some conceptual issues that are central to our understanding of environmental management. These include political economy, social construction of nature, and environmental economics. We then examine the interaction of these processes and problems through in-depth study of several issues, including energy use, agriculture and food, and conservation.

ES 415 Climate Change (4 credits)
This course critically examines the science of climate change, the predicted effects of this change on the planet, and the proposed approaches to address it. This examination also involves an analysis of both domestic and international policy debates and an evaluation of the ecological,

social, and economic costs and benefits of the leading solutions that have been proposed to mitigate or to adapt to climate change. Prerequisites: ES 100 or ES 200, and junior standing, or permission of instructor.

ES 430 Urban Sustainability (4 credits)
With over half of the world's population living in cities and with an increasing trend toward urbanization to continue for the foreseeable future, it is imperative that we evaluate different approaches to make cities sustainable. This course examines the economic, social, and environmental dimensions of urban sustainability in an effort to examine resource consumption in cities and to assess critically the urban policies designed to reduce environmental damage and improve quality of life. Emphasis will be placed on the use of ecological principles on both the biophysical environment of a city and its societal dimensions to provide a novel context to the functioning and structure of cities and to create a useful framework upon which different policies can be evaluated. Prerequisites: Junior standing, ES 100, and ES 140.

PCE 251 Human Rights (4 credits)
Human rights laws comprise humanity's best effort to constrain state power leveled at or withheld from citizens. This course examines the fundamental ideas of human rights, their origins in various cultural and political traditions, their failures and ultimate triumphs over colonialism, their articulation as a body of laws and their evolving ability to influence the conduct of states, corporations and other state-like powers. Prerequisite: PCE 110, one course in political science or history, or sophomore standing.

PSY 224 International Psychology (4 credits)
This course is an introduction to the psychosocial factors of salience to international communities, with an emphasis on refugees, immigrants, international students, and foreign citizens. This course applies social and human science conceptual paradigms, methods of knowledge production, theory, and intervention to learn, critique, and apply branches of international psychology. This course will cover three primary branches of international psychology: cross-cultural psychology, global mental health perspectives, and immigration psychology. Utilizing a constructivistic de-colonizing approach, this course first offers a cross-cultural understanding of international communities and of the various power, privilege, and oppressive structures in their life experiences. The course also introduces various perspectives on global mental health from an ethical, culture-centered, and critical manner. Students will dialogue about how culture, identity, citizenry, and intersectionality affect global mental health at the individual, community, and system level. Finally, students will critically examine immigration in the U.S., particularly the reasoning behind and process by which individuals migrate to the U.S., the consequences of such migration, and/or the resources to navigate such migration. Prerequisite: PSY 105.

PSY 238 Psychological Distress and Disorder (4 credits)
This course presents different approaches to understanding and conceptualizing psychological distress and disorder. The major psychological disorders will be examined in cultural context.

Different theoretical perspectives will be considered, as well as the ways in which psychological disorders have been and are currently treated. Prerequisite: PSY 105.

PSY 244 Lifespan Developmental Psychology (4 credits)
A lifespan approach tracing human development from conception through the life cycle until death. Important theoretical contributors are highlighted, including Freud, Erikson, Bowlby, Piaget, Chomsky, Kohlberg, and Kubler-Ross. Topics will include prenatal development, language acquisition, the formation of emotional bonds in relationships, personality and identity development, changes in family and work roles, and the experience of facing one's mortality. Prerequisite: PSY 105 .

PSY 337 Neuroscience (4 credits)
This course is an introduction to the relationships between the brain, cognition, emotion, and behavior. Topics include the structure, function, and development of the human nervous system, and the neural bases of sensory and motor systems, learning, stress, atypical development, psychological disorders, and neurodegenerative diseases. Prerequisite: PSY 105.

PSY 338 Health Psychology (4 credits)
Selected topics relevant to the ways in which the mind, body, and behavior interact in health and disease, including health behaviors and behavior change, coping with illness, self-management approaches to physical illness, the impact of stress and coping on disease and on immune function, and the relationship between psychopathology and physical health. Course involves a community-based learning component. Prerequisite: PSY 105.

PSY 430 Seminar in Social Psychology (4 credits)
Selected topics in social psychology with emphasis on current research. Topics are selected from close relationships, group behavior, attitudes, and social influence. May be repeated for credit with different topics. Prerequisites: PSY 230; and PSY 302 or PSY 305; or permission of the instructor.

PSY 437 Seminar in Neuroscience (4 credits)
This seminar focuses on one or more specific topics relevant to neuroscience and physiological psychology, such as brain imaging, educational neuroscience, psychopharmacology, neuropsychological case studies, or other aspects of brain/behavior relationships. May be repeated for credit with different topics. Prerequisites: PSY 337 and PSY 302 or PSY 305 or permission of the instructor.

PSY 424 Seminar in International Psychology (4 credits)
The seminar in international psychology will offer a constructivistic post-colonial psychological understanding of topics in international psychology (e.g. immigration psychology, study abroad in psychology, immigrant health disparities, acculturation, specific immigrant or refugee communities, etc.). The review of critical topics in international psychology may include key definitions, historical underpinnings, cultural identity-related factors, life span perspectives,

social activism, and ethical considerations. The course will also examine the emotional, cognitive, and behavioral processes of salience to international communities. This course may be repeated for credit with different topics. Prerequisites: PSY 224 or PSY 219, or PSY 227; PSY 230, or PSY 312; AND PSY 302 or PSY 305.

SOA 211 Culture and Healing (4 credits)
This course looks at cultural dimensions of healing and illness. How is health understood in different cultures? How do people heal? Material will be explored from a broad range of cultural settings, and will include such topics as indigenous medicine, narrative and the cultural construction of illness, subjectivity, the ethics of biomedicine, and social suffering.

SOA 265 Health and Illness (4 credits)
Examination of illness, health, and the organization of medical care from a sociological perspective, focusing on the medical system as a social institution and the history of public health and medicine. Specific topics include the reciprocal roles of patient, practitioner, and ancillary health care personnel and the social and cultural factors affecting etiology, diagnosis, and treatment.

SOA 389 Seminar: Sociology of Mental Health (4 credits)
This course examines the way people define mental health, the causes and consequences of mental health problems, and how institutions respond to mental illness. Specific issues explored include the social construction of mental disorder, depression, medicalization of life problems, and the social consequences of mental health problems. Prerequisites: Junior standing and one of the following courses: SOA 200, SOA 201, or SOA 217.

SOA 482 Seminar: Life & Death (4 credits)
How do cultures around the world explain and cope with death? How do beliefs about mating, reproduction, and child rearing compare from one cultural context to another? What kinds of cultural rituals do the events of birth and death involve? This course takes an anthropological perspective to the beginnings and ends of human life, with a focus on reproduction, birth, childhood, and death. We will draw from a wide range of studies in anthropological subfields, such as medical anthropology, the anthropology of religion, archaeology, and forensic anthropology, to try and understand how these major periods of the human life course, and just beyond it, are
conceptualized and experienced, both in historical and contemporary cultures. Some of the topics we will consider are: reproductive technologies, birthing, child rearing, mortuary ceremonies, body farms, and zombification and vampirism. Prerequisites: Junior standing and one of the following courses: SOA 200, SOA 201, or SOA 217.

WGS 210 Introduction to Disability Studies (4 credits)
This course is an introductory survey to the field of disability studies. We will read materials across a wide variety of disciplines to understand the histories, politics, and cultures of disabled communities. We'll consider different models for how to understand disability, including the

medical and social models of disability. A primary focus of the class will be understanding how disability intersects with other aspects of social identity and systems of power such as race, gender, sexuality, and class. Given how white histories and depictions of disability often are, we'll give special attention to how racism and ableism are co-constituted, particularly within the United States.

WGS 335 Gender Identity, Expression, and the Body (4 credits)
This course will examine the social constructions of sex and gender, and will explore gender identity and expression, non-conforming gendered bodies, variance, ambiguity, performance, and embodiments. This course will employ an intersectional approach that evaluates the science of biological sex, race, class, sexual orientation, and other dimensions of identity using methods of inquiry from feminist studies, LGBT studies, queer theory, performance studies, and popular culture discourses. Prerequisite: WGS 100, WGS 150, or permission of the instructor.

WGS 337 Gender and Migration (4 credits)
This course on gender and migration focuses on recurrent and recognizable patterns of migration that takes into account gender, politics, war, race, ethnicity, class and sexuality. It considers how economic factors, geopolitics, empire-building, neoliberal principles of national security and fighting terrorism affect the contemporary lived experience of migration. It will also address the human dimension of migration, of resisting, of border zones, statelessness, of identity, and dignity, survival and personal security. Prerequisite: WGS 150, or a 100-level PCE course, or FYS 100, or AFR 100, or permission of the instructor.

Professional and Applied Skills Options. (At least 2 classes/8 credits)

Skills-oriented courses and Applied/Experiential learning will help students explore the wide range of possible careers in Public Health and enrich their understanding of the challenges and complexities inherent to local and global efforts to prevent disease, enhance well-being, and advance health initiatives within dynamic settings shaped by behavior, culture, politics, and economies. Advising will play an important role in helping students examine the relationship between skills and career pathways and in encouraging experiential learning.

BIO 254 Microbiology (4 credits)
An introduction to the cell structure, physiology, genetics, ecology, diversity, and evolution of viruses, prokaryotic and eukaryotic microorganisms. Relevance in the environment and human health will be discussed in detail. Pre-requisites: BIO 220 or (BIO 102 and ES 238) (C- or better).

BIO 278 Developmental Biology (4 credits)
The cellular and organism-level processes that occur during typical development of plants and animals will be explored in this course. The central dogma, cell signaling, mitosis, and evolutionary change will be considered in addition to how typical development may be disrupted by the environment. Connections between developmental biology and social issues will be

discussed. Three hours classroom, three hours laboratory. Pre-requisites: BIO 102 , BIO 224 (C- or better)

COM 232 Writing for the Media (4 credits)
This course introduces students to various forms of writing for digital media. The course will cover the basic principles and practices of news writing for television, writing for the Web, dramatic script writing, and public relations. The course functions as a course in the Writing-Enriched Curriculum. Prerequisite: completed CWP or WRT 181 or FYS 100W, and completion of COM 105 and sophomore status by the beginning of the course; or completion of WRT 181H and COM 105 by the beginning of the course.

CS 116 Introduction to Computer Science (4 credits)
Introduction to the discipline of computer science and algorithmic thinking through the study of a programming language. Students will master writing small computer programs to solve computational problems. Object oriented programming is introduced.

DMC 172 Calculus (4 credits)
This course provides an introduction to topics in single and multivariable calculus, and focuses on using calculus to address questions in the natural and social sciences. Students will learn to use the tools of calculus to process, analyze, and interpret data, and to communicate meaningful results, using scientific computing and mathematical modeling. Topics include functions as models of data, differential and integral calculus of functions of one and several variables, differential equations, and estimation techniques.

DMC 240 Probability and Statistics (MA 172 or MA 241, and completion of DA-F) (4 credits)
A calculus-based introduction to single variable methods in probability and statistics. Topics will include probability in sample spaces; discrete and continuous random variable; normal, binomial, geometric, Poisson, exponential and gamma distributions; expected value and variance; the Central Limit Theorem; hypothesis testing in various scenarios.
Prerequisite: A minimum grade of C- in MA 172 or MA 241, and completion of GCR - Data Analytics Foundational level.

EC 206 Economics and Business Statistics (4 credits)
An introduction to the use and interpretations of statistics in economics and business. Topics include descriptive statistics, probability, discrete and continuous probability distributions, sampling, interval estimation, hypothesis testing, and regression analysis. Prerequisite: EC 111.

ES 319 Qualitative Environmental Research (4 credits)
The research process encompasses a wide continuum, from the articulation of a research theme or question to the determination of how to collect data to considerations about what to “count” as evidence. This class focuses on the process of knowledge production within human-environment interactions through an in-depth engagement with qualitative research methods. We will examine the epistemological, methodological, and political implications of specific methods as well as

learn and practice the techniques for conducting qualitative social-science research. Prerequisite: ES 140 or sophomore standing, and completion of GCR Data Analytics Foundational Level.

PHL/BIO 202 Bioethics (4 credits)
In this class we will analyze the central tenets of bioethics in conversation with race, disability, and gender. In particular, we will consider how the four principles of autonomy, beneficence, justice and non-maleficence function in the historical and contemporary practice of medicine. Our focus will be on considering the differential application of these principles to different populations in healthcare practices and policies in order to ask better informed questions about how to promote justice in medical practice, research, and policy. This will also allow us to think through what kinds of assumptions and norms are bult into our understanding of heath and healthcare and reflect critically on how we might transform them.
Prerequisites: None.

PH 2XX History of Public Health (4 credits)
This course explores the history of global public health from 1850 to the present with a special emphasis on the colonial, political, and economic contexts of public health initiatives and the global burdens of disease today. By examining contexts and initiatives through time and across the globe, students will engage with the push and pull between a medicalized approach to public health and a more ecological model that includes social determinants. Special focal points include disease eradication programs, reproductive health, health care, HIV/AIDS, and contemporary approaches to gun violence and Reparations as public health issues. Public Health majors and minors will encounter case studies that deepen their understanding of the major specializations: Environmental Health, Community Health and Education, Epidemiology, Global Health, and Health Policy and Management. Prerequisites: Sophomore standing and WRT 181.

PH 290 Internship in Public Health (0-4 credits)
Experience in public health settings either locally or abroad. Prerequisites: permission of the Public health faculty and completion of appropriate coursework. Internship can be graded or taken pass/no pass, appropriate to the experience. Variable credit.

PH/PCE 316 Collaboration for Justice (4 credits)
Students in this course will examine the intersections among health, racial and geographic equity, and opportunity factors in relation to the jobs movement called Turnaround Tuesday and a Baltimore City elementary school. Students will examine the school-to-prison pipeline through their scholarship and their off-campus projects. Specifically, the course blends theory and practice as students collaborate with Baltimoreans involved in community-building and livability-enhancing activities such as improving access to employment, supporting leadership opportunities for returning citizens, and implementing restorative practice circles with school children. Course content will provide contextualizing information on trauma-informed spaces and interventions. Note that off-campus activities are a required component of this course. Prerequisite: Junior standing or PCE 124, PCE 148, or PH 101.

SOA 201 Writing and Interpreting Social Life (4 credits)
This course provides a foundation in writing and qualitative research design in the disciplines of sociology and anthropology. The course is team-taught and divided into two main segments. During one part of the course, the focus is on qualitative methods of inquiry, including: in-depth interviewing, focus groups, participant observation, and narrative research. Course readings will allow students to explore the link between theory and methods and examine ethical issues in research as well. The second part of the course will focus on qualitative data analysis and interpretation, as well as developing skills for writing in the disciplines. This writing component of the course includes, (but not limited to) learning how to: develop and support an argument, select and incorporate relevant sources, communicate ideas clearly, find one's voice in writing, and use appropriate citation styles. An assignment in this course is used to evaluate Writing in the Discipline (WID) for majors in the program. Prerequisite: SOA 100 or permission of instructor.

WRT 311 Medical and Healthcare Rhetoric (4 credits)
What role does writing play in the world of medical science and mental health? This course seeks to investigate the role of language in practices and structures of health and medicine. Defining rhetoric broadly as the persuasive element in human interaction, we will explore how meaning is created, analyzed and criticized in the communication of healthcare, and how messages are delivered and structured in medical and healthcare-related contexts. Topics of interest may include career-related writing, the rhetoric of mental health, patient narratives, health literacy, patient-professional communication, disability studies and the rhetoric of alternative medicines and practices. We'll also explore communicative acts involved in public health issues such as HIPAA, the role of patients in decision-making, AIDs, heredity, end of life decisions through multiple lenses: patients, clients, healthcare professionals, and advocates. Prerequisite: WRT 181.

WRT 314 Grants, Policies, and Persuasion (4 credits)
This course teaches students to write effective grants and clear policies, while examining the rhetoric of persuasion. Prerequisites: WRT 181 and WRT 206, or permission of the instructor.

5. Discuss how general education requirements will be met, if applicable.

All students in the program will be required and able to complete Goucher's general education requirements (Goucher Commons) in order to satisfy Goucher's graduation requirements for a Bachelor of Arts degree (120 credits).[33] A comprehensive advising program before they declare a major ensures that students enroll in appropriate general education requirement courses (roughly

[33] "The Goucher Commons Curriculum," Goucher College, accessed April 10, 2023, https://www.goucher.edu/learn/curriculum/index.html.

44 credits) and that they are on pace to complete such requirements. Advising is taken over by program faculty after the major has been declared, and students continue to be tracked for progress in their overall graduation requirements.

The Goucher Commons are innovative and flexible. Students take two Complex Problem Exploration (CPE) courses in two different areas. Students at Goucher must also demonstrate proficiency in Writing, Data Analytics, and Foreign Language & Culture, and complete requirements in two Common Inquiry Areas: Race, Power, & Perspective and Environmental Sustainability. Further education in cultural and social diversity is a goal of the study abroad requirement, in which all students participate in either a semester program or a 3-week Intensive Course Abroad.

Attention has also been paid to the Goucher Commons Curriculum where it intersects with the PH major. Students will be able to complete their required proficiencies in Writing and Data Analytics through PH courses (i.e., PH 2XX History of Public Health and PH 310 Global Health. For Data Analytics proficiency, majors will be advised to complete SOA 217 and one of its prerequisites: DMC 101, 102, 105, or 106. Majors also may complete the two Common Inquiry requirements by fulfilling their Environmental Sustainability requirement in ES 100 Introduction to Environmental Sciences and their Race, Power & Privilege requirement in PH 2XX History of Public Health.

6. Identify any specialized accreditation or graduate certification requirements for this program and its students.

Not applicable

7. If contracting with another institution or non-collegiate organization, provide a copy of the written contract.

Not applicable

8. Provide assurance and any appropriate evidence that the proposed program will provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.

Students receive relevant guidance materials before arriving at Goucher, during orientation, and in the online Catalog. After acceptance, students may register and pay for courses, access their registration and financial aid information, access their faculty and key staff, seek advice and answers to academic and administrative questions, and access technology support online or in person. All course materials and information can be obtained online through the Canvas learning

management system. Catalogs and college policy and requirements are all accessible online through the Goucher College website.

Full-time program faculty serve as advisors to undergraduate students when they declare the major and are available to minors and other students, as well. Advisors help students navigate all of the systems at Goucher, both curricular and co-curricular. Goucher has also launched an innovative advising support service aimed at ensuring student success. The Success Team begins with a Success Advisor in the first year.[34]

9. Provide assurance and any appropriate evidence that advertising, recruiting, and admissions materials will clearly and accurately represent the proposed program and the services available.

Faculty in the proposed program will work with the Admissions and Communications offices of the college to ensure all advertising, recruiting, and admissions materials that have been specifically designed for this program will clearly and accurately represent it. Furthermore, faculty in the program will keep program webpages up to date. Faculty often meet with prospective students on campus, during individual visits and group events, to discuss the curriculum and campus resources.

H. Adequacy of Articulation (as outlined in COMAR 13B.02.03.19)

1. If applicable, discuss how the program supports articulation with programs at partner institutions. Provide all relevant articulation agreements. More information for Articulation Agreements may be found here .

Not applicable

I. Adequacy of Faculty Resources (as outlined in COMAR 13B.02.03.11).

1. Provide a brief narrative demonstrating the quality of program faculty. Include a summary list of faculty with appointment type, terminal degree title and field, academic title/rank, status (full-time, part-time, adjunct) and the course(s) each faculty member will teach in the proposed program.

Name	Appointment Type	Terminal Degree Title and Field	Academic Title/Rank	Status	Courses Taught
Dr. Janet Shope	Tenure Track	PhD in Sociology	Associate Vice President for	Full-time	SOA 217

[34] "Student Success Teams," Goucher College, accessed April 10, 2023, https://www.goucher.edu/learn/academic-support-and-resources/student-success-teams/index.html.

			Institutional Research and Effectiveness and Professor of Sociology		
Dr. Jennifer Bess	Tenure Track	PhD in English Literature	Associate Professor of Peace Studies	Full-time	PH/PCE 316 Collaboration for Justice; PH 2XX History of Public Health
Patricia Greenberg	Non-Tenure Track	MA in Sociology	Lecturer in Sociology & Anthropology and Public Health	Adjunct	PH 101
New Hire	Tenure Track	PhD in Public Health or Related Field	Assistant Professor	Full-time	PH 2XX Epidemiology, PH 310 Global Health, PH 497, two 300-level electives
Dr. Natalie van Breukelen; Dr. Mark Hiller	Non-Tenure Track; Tenure-Track	PhD in Integrative Biology; PhD in Biological Sciences	Assistant Professor of Practice; Associate Professor Biological Sciences	Full-time; Full-time	BIO 101
Dr. Jenny Lenkowski; Dr. Akana Noto	Tenure Track; Tenure Track	PhD in Biology; PhD in Biology	Associate Professor; Assistant Professor Biological Sciences	Full-time; Full-time	BIO 102
Dr. Germán Mora	Tenure Track	PhD in Biochemistry	Associate Provost for Curriculum, Professor of	Full-time	ES 100

			Environmental Studies		
Dr. Carolyn Schwarz	Tenure Track	PhD in Anthropology	Associate Professor of Anthropology	Full-time	CPEB 206 Getting Healthcare; SOA 482 Seminar: Life & Death

2. Demonstrate how the institution will provide ongoing pedagogy training for faculty in evidenced-based best practices, including training in:

a) Pedagogy that meets the needs of the students

Goucher's Center for the Advancement of Scholarship and Teaching (CAST) regularly hosts faculty development workshops, trainings, and symposia.[35] Each semester, CAST hosts speakers and workshops as part of pre-semester faculty development days. During the semester, it offers shorter workshops on topics ranging from inclusive syllabus construction to technology in the classroom. CAST prioritizes teaching faculty evidence-based approaches that improve the performance and engagement of all students. These approaches include: active learning; problem-based learning; retrieving, predicting, and interleaving; inclusive teaching; and metacognition. High-Impact practices (HIPs) learning assignments are modelled and reviewed.[36] Faculty are free to share ideas and strategies before implementing them or reflect together on successes and failures.

b) The learning management system

Goucher uses Canvas LMS by Instructure. New faculty receive training as part of their introduction to the College, and regular updates and trainings are offered. All faculty post syllabi on Canvas while many also utilize other features such as rubrics, modules, quizzes, and analytics.

c) Evidenced-based best practices for distance education, if distance education is offered.

Not applicable.

J. Adequacy of Library Resources (as outlined in COMAR 13B.02.03.12)**.**

[35] "Center for the Advancement of Scholarship & Teaching (CAST)," Goucher College, accessed April 10, 2023, https://www.goucher.edu/learn/academic-support-and-resources/cast/index.html.
[36] AAC&U, "High-Impact Practices," AAC&U, 2022, https://www.aacu.org/trending-topics/high-impact.

1. Describe the library resources available and/or the measures to be taken to ensure resources are adequate to support the proposed program.

The Goucher College Library's mission is to provide comprehensive resources and services in support of the research, teaching, and learning needs of the Goucher College community. The library is the anchor of the award-winning, LEED Gold-certified Goucher Athenaeum, which opened in 2009. The library's resources include 96,000 electronic journals; 59,000 media materials and streaming files; 140 research databases; 199,000 print titles; and 240,000 eBooks. Additional resources include the Digital Library and eScholarship@goucher, the college's institutional repository, which together have a combined total of over 10,000 digital items. Onsite holdings are supplemented by interlibrary loan and the college's membership in the Baltimore Area Library Consortium. Goucher College is prepared to support this new program with its existing library resources and partnerships.

Many public health journals are often open access, and the library already subscribes to databases (ScienceDirect, Academic Search Complete, PubMed SocIndex) that include fundamental resources such as: *Public Health, Global Public Health, Frontiers in Public Health, American Journal of Public Health, International Journal of Environmental Research and Public Health, International Journal of Public Health, The Lancet Public Health, Ethics, Medicine and Public Health,* and *Public Health Ethics.* Journals focused on regions or on the Public Health specializations are also well-represented.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment (as outlined in COMAR13B.02.03.13)

1. Provide an assurance that physical facilities, infrastructure and instruction equipment are adequate to initiate the program, particularly as related to spaces for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences.

Office space is available in the Van Meter/Julia Rogers building with SOA. Suitable classrooms equipped with AV equipment are available in these buildings as well as in the Hoffberger Science building. No additional infrastructure is required.

2. Provide assurance and any appropriate evidence that the institution will ensure students enrolled in and faculty teaching in distance education will have adequate access to:
a) An institutional electronic mailing system, and
b) A learning management system that provides the necessary technological support for distance education

Not applicable.

L. Adequacy of Financial Resources with Documentation (as outlined in COMAR 13B.02.03.14)

1. **Complete Table 1: Resources and Narrative Rationale. Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each resource category. If resources have been or will be reallocated to support the proposed program, briefly discuss the sources of those funds.**

   Projected enrollments are based on market research, and tuition rate assumes a 70% discount rate. Other Sources is made up of additional fees as well as room and board costs.

TABLE 1: PROGRAM RESOURCES					
Resource Categories	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
1. Reallocated Funds	0	0	0	0	0
2. Tuition/Fee Revenue (c + g below)	$113,040	$141,300	$197,820	$240,210	$268,470
a. Number of F/T Students	8	10	14	17	19
b. Annual Tuition/Fee Rate	$14,130	$14,130	$14,130	$14,130	$14,130
c. Total F/T Revenue (a x b)	$113,040	$141,300	$197,820	$240,210	$268,470
d. Number of P/T Students	0	0	0	0	0
e. Credit Hour Rate	0	0	0	0	0
f. Annual Credit Hour Rate	0	0	0	0	0
g. Total P/T Revenue (d x e x f)	0	0	0	0	0
3. Grants, Contracts & Other External Sources	0	0	0	0	0
4. Other Sources	$116,440	$145,550	$203,770	$247,435	$276,545
TOTAL (Add 1 – 4)	$229,480	$286,850	$401,590	$487,645	$545,015

2. **Complete Table 2: Program Expenditures and Narrative Rationale . Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each expenditure category.**

   Existing full-time faculty will offer courses for this proposed program, and their pro-rated salaries as well as those of adjunct faculty are included in 1.b. In addition, a new full-time

faculty member will be hired, and their salary and benefits are included in 1.b and 1.c, respectively. Further, the proposed program does not require any new administrative or support staff, nor does it anticipate the need for additional technical support or space for its operation. However, there are expenses associated with the operation costs of the program and its marketing and recruitment.

TABLE 2: PROGRAM EXPENDITURES

Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	$136,965	$136,965	$136,965	$136,965	$136,965
a. Number of FTE	1.5	1.5	1.5	1.5	1.5
b. Total Salary	$118,875	$118,875	$118,875	$118,875	$118,875
c. Total Benefits	$18,090	$18,090	$18,090	$18,090	$18,090
2. Admin. Staff (b + c below)	0	0	0	0	0
a. Number of FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
3. Support Staff (b + c below)	0	0	0	0	0
a. Number of FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
4. Technical Support and Equipment	0	0	0	0	0
5. Library	0	0	0	0	0
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	$45,856	$82,927	$112,670	$136,911	$152,504
TOTAL (Add 1 – 7)	$182,821	$219,892	$249,635	$273,876	$289,469

M. Adequacy of Provisions for Evaluation of Program (as outlined in COMAR 13B.02.03.15).

1. Discuss procedures for evaluating courses, faculty and student learning outcomes.

Goucher College has a systematic and sustainable system to assess teaching and learning at all levels and within all units of the institution, in compliance with MSCHE standards for assessment. Learning outcomes will be assessed in this program using evidence-based rubrics applied to individual and group projects, portfolios, and papers.

Students perform course evaluations for each course, and all faculty will be observed in class annually by department administrators and/or peers. Data collected through assessment and evaluations processes on an annual basis are used to identify opportunities for program improvements and areas where additional resources are needed. The program will conduct internal reviews and be reviewed on a prescribed schedule by outside evaluators.

2. Explain how the institution will evaluate the proposed program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

The program will make use of the statistics gathered by the college's Office of Institutional Effectiveness and the Provost's office to analyze results and trends in enrollment and student success.

N. Consistency with the State's Minority Student Achievement Goals (as outlined in COMAR 13B.02.03.05).

1. Discuss how the proposed program addresses minority student access & success, and the institution's cultural diversity goals and initiatives.

The proposed program shares Goucher's commitment to promoting diversity in recruitment, admission, and retention efforts of students, as well as in faculty hiring. These efforts have been successful, with 41% of students identifying as non-white in 2021, from 27% in 2014. Among students who identify as Black or African-American, there were 247 full-time undergraduate students enrolled during the 2021-2022 academic year comprising 23% of the student body, with another 8% of undergraduate students identifying as Hispanic/Latinx, and 5% as Asian-American. Among the incoming class of 2023, 38% identify as persons of color, and 27% identify as first-generation college students.

The College established a Center for Race, Equity and Identity to support all traditionally underrepresented students with a special focus on providing ongoing programming for students of color, first-generation, socioeconomically disadvantaged, LGBTQ+, and other historically marginalized groups.

Goucher's Strategic Plan includes a commitment to attracting and retaining a highly qualified, diverse faculty and staff and specifies the connection between staffing and minority student satisfaction with its commitment to: "Obtain baseline data and monitor diversity of applicant pools; employ best practices in hiring, retention, and employee satisfaction to achieve an employee population more representative of our student body."[37] The College has made efforts in educating its faculty around racial issues through a variety of workshops and seminars. Faculty will be recruited and hired for the program with an emphasis on diverse candidates, a practice that will continue during implementation and program delivery, to attract and retain qualified faculty from diverse racial, socioeconomic, and geographical backgrounds.

In the classroom, the Common Core's Race, Power, & Perspective requirement "integrates Goucher College's values of diversity, social justice, and global citizenship by asking students not only to recognize difference but to explore the power structures behind those differences."[38]

O. Relationship to Low Productivity Programs Identified by the Commission:

1. If the proposed program is directly related to an identified low productivity program, discuss how the fiscal resources (including faculty, administration, library resources and general operating expenses) may be redistributed to this program.

Not applicable

P. Adequacy of Distance Education Programs (as outlined in COMAR 13B.02.03.22)

1. Provide affirmation and any appropriate evidence that the institution is eligible to provide Distance Education.

Not applicable

2. Provide assurance and any appropriate evidence that the institution complies with the C-RAC guidelines, particularly as it relates to the proposed program.

Not applicable

[37] "Goucher College Strategic Plan 2021-2025."
[38] "Race, Power, and Perspective," Goucher College, accessed April 10, 2023, https://www.goucher.edu/learn/curriculum/race-power-perspective.html.