As part of the West Virginia University Board of Governor’s Rule 2.2 Program Review process, the WVU Provost’s Office required that a single Program Review Self-Study Form be completed on behalf of all identified programs in the department or unit. This Program Review Self-Study Form was to be submitted to the Provost’s Office by end of day on August 1, 2023. The Provost’s Office reviewed the submitted Program Review Self-Study Forms in early August.

Self-Study content is unvetted by the Provost's Office. As such, the WVU Provost’s Office cannot attest to the accuracy of any data, analyses, or statements provided within. Also, redactions were made where warranted for the protection of individual identities around sensitive information.
Q1.1. BOG Program Review Self-Study Form

This is the self-study form that will be completed in support of the summer 2023 academic transformation program portfolio review.

Only one program review self-study is to be submitted per unit; all of the unit's programs will be covered by one self-study.

Q1.2. Select the appropriate academic unit under review.

<table>
<thead>
<tr>
<th>College</th>
<th>Health Sciences Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department or School</td>
<td>School of Public Health</td>
</tr>
</tbody>
</table>

Q1.3. List all of the unit's programs.

Example:

BA Biology
BS Biology
MS Biology
PhD Biology
Q1.4. Name and Email of the person completing the self-study

Name: Erik Carlton
Email Address: erik.carlton@hsc.wvu.edu

Q1.5. How were faculty given the opportunity to contribute to, review and provide feedback on this self-study?

Three programs were previously identified for review through discussions with the Provost's Office and the School of Public Health Dean's Office: MS Biostatistics, MS Industrial Hygiene, and PhD Occupational and Environmental Health. Self-studies for these individual programs were prepared separately and faculty were provided drafts of these self-studies. Discussions were also had in departmental faculty meetings, as led by program directors and the school's Director of Accreditation, Planning, and Evaluation. Once the BS Public Health and Master of Health Administration were also identified for review, additional self-study work was done on these individual programs. All of these self-studies were then merged into a single holistic review, in draft form, that was disseminated as a PDF by email to the entire school faculty. Feedback was received through individual and group communications and meetings. The self-study was then finalized using this feedback and faculty were sent the revised PDF by email for any final commentary.

Q2.1. Explain how the unit and its programs contributes to WVU's mission.

This response is limited to 7500 characters, approximately 2 single spaced pages.
The mission of the School of Public Health is to improve the quality of life for West Virginians and all who call Appalachia home. As the state’s only accredited School of Public Health, the School aligns closely with WVU’s commitments as a land-grant institution. We have a unique and special connection to WVU’s healthcare pillar through our comprehensive focus on the full range of factors that determine individual, community, and population health and well-being. Our school is committed to creating a diverse and inclusive culture guided by our values: community engagement, collaboration, equity, integrity, respect, and accountability. We are engaged in partnerships, in community engagement projects, and innovative research to solve critical health issues with local impact and global significance. Importantly, our faculty, staff, students, and alumni have been and are at the heart of the university and the state responses to the opioid epidemic, the COVID-19 pandemic, and countless other critical health issues plaguing our state. Our portfolio of carefully planned, integrated, and interdisciplinary programs includes training and emphases in the social determinants of health, illness and injury prevention, global health, environmental health, health policy, project management, healthcare administration, prevention science and behavioral interventions, occupational health and safety, and patient navigation among many others. Our students are trained in critical analytical skills in biostatistics and epidemiology. They learn critical public health and healthcare leadership skills. Perhaps more essential than all, they develop the capacity, the competencies, and the compassion to identify and ameliorate the many health issues we see in our state, region, country, and world. Our faculty, staff, students, and alumni directly and impactful improve healthcare and prosperity for the people and communities where they will live, learn, work, and play. The growing need to understand the fundamentals of public health has never been greater, especially in West Virginia, a state that ranks among the poorest health in every major category. Studies and analysis by the Centers for Disease Control and Prevention, the Kaiser Family Foundation, and Forbes Advisor found that among 21 core health metrics, West Virginia was far and away the unhealthiest state in the country.1 West Virginia has the highest prevalence of illness and death from chronic diseases and the second lowest life expectancy in the nation. As a state, we rank worst for cancer incidence and mortality rates, diabetes incidence and mortality rates, heart and kidney disease mortality rates, and chronic lower respiratory disease mortality rate (CLRD = COPD, emphysema, chronic bronchitis, and asthma). West Virginia has the highest rate of drug overdose deaths, the highest percentage of adults who smoke, and the second highest percentage of obese adults. Finally, our state ranked second worst for both healthy lifestyle habits and also health outlook. The need for a strong School of Public Health in West Virginia has never been greater. Many studies have shown that it is public health strategies, combining broad-based policies and programs such as vaccines and other pharmaceutical interventions, with prevention and behavioral change programs, which are responsible for 85% of the growth in life expectancy over the past century.2 Additionally, recent and on-going dialogue with state official confirms that over 40% of governmental public health jobs are currently vacant due to lack of qualified and trained workforce. This number does not include the significant number of other professional jobs that are available to be filled by graduates across the School of Public Health’s several programs. We teach students to serve others in West Virginia and beyond by supporting research that will improve the nation’s health. We promote curiosity into finding new biomedical discoveries and train respect by considering ethical and professional practices surrounding traditions, heritage, diverse points of view, and human rights. As members of interdisciplinary teams, we collaborate actively with researchers across medicine and health-related disciplines to develop innovative solutions to health problems. We support the P1 Mission of the university by providing methodological/statistical support for research, as well as training the next generation of graduate and doctoral students to support grant applications and research studies. Faculty are heavily research funded, providing abundant, real-world opportunities for students to participate in research. Among all WVU’s schools and programs, the School of Public Health and its select portfolio of programs may well be the most closely tied to the university’s land-grant mission and among the most well-positioned to have real and lasting impact on the health and well-being of West Virginians.  


Q3.1. Resources, Revenue, and Expenses

The purpose of this section is to ensure the accessibility and adequacy of the unit’s infrastructure and resources and its financial viability.

Responses in this section are limited to 7500 characters or approximately 2 single spaced pages.

Q3.2. Has the unit experienced significant issues with any of the following during the past five years?

By “significant,” we mean issues that interfere with either the unit’s ability to deliver its programs to its students or the students’ ability to complete those programs in a timely manner.

| Ability to schedule required classrooms | Yes | No |
| Access to adequate technological infrastructure | | |

---
### Q3.3. Describe the issues the program has faced in the area(s) identified above.

*This question was not displayed to the respondent.*

### Q3.4. Data have been provided on the unit's last three years of tuition revenue, expenses, and net revenue. Address any negative net revenue or any significant changes (positive or negative) to unit's net position.

Revenue by department is the actual tuition revenue, net of any discounting, paid by students taking courses in course subject codes affiliated with the department.

Expense by department is the actual unrestricted, operating expenditures by department within the functions of instruction and academic support.

Net revenue is the revenue minus the expense.
The School’s net tuition revenue is relatively flat, seeing a less than 1% growth since 2020. This is mainly the result of growth in SCH production (largely driven by graduate program growth, particularly the Master of Health Administration) combined with the negative tuition impact of waivers provided to the school’s increased number of doctoral students (up 65% from 2018 and nearly 20% since 2020). Additionally, operational expenses have increased, predominantly because of increased faculty costs. These increases are due to several factors, including faculty promotions, hiring more senior faculty to fill positions vacated by departing junior faculty, and efforts to recruit and retain highly-qualified faculty and academic leaders by meeting national median (50th percentile) salary benchmarks for schools of public health. Based on the data provided by the university and verified by the School, it is unfortunately clear that until the school fully actualizes the strategic program enrollment growth it is experiencing through new and revised programs (discussed in response to Q6.2 and Q6.3), additional faculty reductions and other restructuring for FY’25 will need to accompany other reductions to non-tenure track faculty, staff, and operational expenses made for FY’24. These and other reductions are discussed in response to Q4.2 and Q6.2, below. We expect these changes to greatly reduce the school’s budget deficit (revenue net expenses) and eventually lead to a net positive position.

Q4.1.
Faculty Composition and Productivity

Responses should be concise but also specific and supported by evidence. Responses in this section are limited to 7500 characters or approximately 2 single spaced pages.

Specific data definitions for these metrics are available on the Academic Transformation webpage.

Q4.2. Data have been provided on the unit's faculty full-time equivalency (FTE) to the median of all majors for fall 18 to fall 22.

Address any differences in the unit's student to FTE ratio and the institution's student-to-faculty ratio of 18-to-1 per IPEDS reporting for academic year 2021-2022.
Currently, the School of Public Health has a roughly 7-to-1 student to faculty ratio. This is based on a current total enrollment Fall 2023 of 290 students (unduplicated new and continuing) across all SPH programs. To meet the institution’s ratio of 18-to-1 based on current student enrollment would require a reduction of 23 faculty (from 39 to 16). This would cause the school to lose its accreditation from the Council on Education for Public Health and leave the school entirely unable to deliver even its core programs, let alone support the university’s other programs as we do through courses that serve multiple academic units (see section 7.1 and attached supplemental information [sections 7.2-7.4] for additional information pertaining to the school’s minimum accreditation criteria). Over the past five years, the SPH has been highly active in its own internal academic transformation initiatives. The school has already strategically and intentionally created extensive academic efficiencies within and across its programs and is continuing to refine its curriculum to provide even greater efficiencies. Not only do SPH faculty teach across the school’s several programs and degree levels, but many courses also serve multiple degree programs, minors, and certificates. To maintain its accreditation and deliver the more refined set of academic programs outlined in section 6.2, the SPH requires a minimum of 26 full-time instructional faculty members (non-clinical, non-research-only). This would constitute a 33% reduction from the current faculty workforce and would result in the School’s approximate faculty-to-student ratio increasing from 1:7 (currently) to 1:11. The school’s recommendation for how it might achieve this reduction while maintaining its core academic programs, delivering on its mission, and continuing to serve its growing and successful student population, are outlined in section 6.2. We feel it important to note in this discussion that a purely internal student-to-faculty ratio does not capture current and increasing enrollment in SPH courses from programs external to the school that have been and will continue to increase SCH production within the existing and/or optimized faculty complement. Further, the data provided on faculty FTE do not seem to reflect the significant funded research productivity of SPH faculty, as well as the substantial graduate and doctoral student mentoring provided by SPH faculty to students across the university, owing to their unique skillsets and expertise. Many SPH faculty are very highly funded, which reduces the amount of effort they can devote to teaching. With all this in mind, any recommended reductions to faculty must be done within the frame of our minimum accreditation standards, as well as lost F&A recovery that would necessarily accompany the reduction of faculty.

Q4.3. This question is optional and required only if a unit’s doctoral programs are under review.

Data have been provided on the unit’s tenure-track / tenured FTE to doctoral student headcount ratio across all of the unit’s doctoral programs.

Address any differences in the unit’s doctoral student to tenure-track and tenured faculty FTE ratio to the institutional expectation of 2-to-1.
The overall faculty FTE to doctoral student headcount ratio within the PhD in Public Health Sciences as of Fall 2022 is 2.5 students per faculty member. However, this differs by major within the program: Epidemiology (2.8), Occupational and Environmental Health Sciences (1.6), and Social and Behavioral Sciences (2.7). The OEHS major is the only one below the university’s expectation of 2-to-1. However, it should be noted that all of the PhD majors in the School of Public Health experienced strong growth and enrollment for Fall 2023. Assuming all committed students matriculate into the program/majors as planned, the overall faculty FTE to doctoral student headcount ratio within the PhD in Public Health Sciences as of Fall 2023 will be 3.2 students per faculty member. Again, this differs by major within the program: Epidemiology (3.3), Occupational and Environmental Health Sciences (2.7), and Social and Behavioral Sciences (3.4).

Q4.4. Data have been provided that show the changes to the unit’s total number of faculty over the review period. Data have also been provided that show the total student headcount enrolled in all of the unit’s programs over the same period of time as well as a three-year trend in student credit hour (SCH) production. Explain the relationship between the change in the number of faculty in the unit and the change in the unit’s total headcount enrollment and SCH production trends.
Through a combination of retirements and elective departures, as well as new hires/replacements during the review period, total faculty FTE has decreased by three (3). The lower total faculty FTE reflects a conscious and intentional effort already undertaken by the school to optimize the overall faculty complement and instructional workload. The afore mentioned growth in student credit hour production (SCH) despite the decrease in total faculty FTE indicates a strong positive trend in efficiency and workload optimization. From 2020-2022, the total SCH production per faculty FTE rose from 142 SCH/FTE to 198 SCH/FTE, an increase of 39.4%.

Q4.5. Data have been provided that shows the unit's research expenditures per the Higher Education Research and Development Survey (HERD).

Does this data capture all of the unit's research expenditures? If not, explain the difference here and provide evidence of additional research expenditures below.
After thorough review of the HERD data provided by the university, we feel this may not fully reflect the external support and activity of School of Public Health. Our internal data used for annual reporting is attached below for reference. This has been provided by the School of Public Health business office. The HERD data indicate total external research expenditures for FY’22 to be $4,616,061. However, our internal records show total research expenditures of $4,662,270 (a minor difference of +$46,209). However, the School also had external training/student support grant/contract expenditures totaling $604,874 and external service grant/contract expenditures of $1,467,820. Thus, the School’s total expenditures on external grants and contracts totals $6,734,964. Importantly, these external grants and contracts brought $1,361,808 in indirect F&A revenue to the university/school. External grant/contract expenditures just one metric of faculty research productivity. Over the past five years (2018-2022), SPH faculty have been exceptionally productive in terms of peer-reviewed publications, books and book chapters. They have also brought in and/or support tens of millions of dollars in grants and contracts, bringing millions in F&A return to the university/school. Detail of this research productivity can be provided as needed/requested.

Q4.6. Upload evidence of research expenditures here.

FY22 CLS Sponsored Award File FINAL.pdf
128.3KB
application/pdf

Q5.1.
Student Enrollment and Graduation History

Responses in this section are limited to 7500 characters (approximately 1.5 single spaced pages). Responses should be concise but also specific and supported by evidence.

Specific data definitions for these metrics are available on the Academic Transformation webpage.

Q5.2. Data have been provided on all of the unit’s program’s student enrollment trends.

That data includes:

4-year median fall enrollment (fall 18 through fall 21);
Fall 2022 change from 4-year median (in headcount and in percentage).
Q5.3. Data have been provided on the unit's three-year trend in student credit hour (SCH) production.

Units should address any programs with a negative trend in SCH production.
The School of Public Health has seen a strong positive trend in SCH production across the school, increasing by 13% over the review period (2020-2022). However, we feel this is an area we can and will continue to see significant growth. We traditionally receive strong demand for undergraduate, masters, doctoral and professional students to take our courses as required and elective components of their plans of study. The SPH has faculty with highly unique skillsets at the university which can contribute at an even higher level across the university now that the university's financial model positions the school to offer these courses more broadly. One example of this is our BIOS 601 – Applied Biostatistics 1 course, which will have double the enrollment this Fall due to high demand from multiple academic units across the university (Statler, Eberly, HSC, and others). Another is PUBH 540 – Health Systems Leadership, which not only fills requirements for all SPH academic programs, but also regularly sees strong enrollment from other academic units’ programs. Such academic efficiencies, especially in collaboration with and service to our colleagues in other colleges and schools, are a growing strength for the school. Effective Fall 2023, we have launched two new public health minors (Public Health; Health Policy and Healthcare Navigation), two accelerated bachelors-to-masters programs (BS Public Health – Master of Public Health; BS Health Services Management and Leadership – Master of Health Administration), and have had two of our core undergraduate public health courses approved for the General Education Foundations requirements: PUBH 101 – Introduction to Public Health and PUBH 201 – Global Perspectives in Public Health. Even before GEF approvals came through, enrollment in PUBH 101 and 201 increased by 34% and 50%, respectively, from Fall 2022 to Fall 2023. Further, we intend to be a model for collaborative program delivery and academic efficiency. Strong demand from undergraduate students has encouraged us to begin offering select, high-interest/high-enrollment public health undergraduate courses in the downtown campus in the coming academic year. We have also received many requests from our peer academic units to open our courses to fill critical curricular needs where they may not have faculty capacity and/or expertise. Consequently, we are preparing to remove degree restrictions on several if not most of our 200-level courses, as well as many other undergraduate and graduate courses that can serve programs across the campus. Finally, though certainly not lastly, in response to stakeholder demand (state agencies, local and state public health departments, hospitals and hospital systems, etc.) in the state and across the region, we have prepared a portfolio of graduate and undergraduate certificate programs, and micro-credentials (badges) in highly marketable skills and fields and, importantly, entirely leveraging existing courses. Priority areas, based on national trends and local demand include: physician leadership, clinical operations management, patient navigation, global health, health data analytics, geospatial epidemiology, long-term care administration, Total Worker Health®, addiction prevention and intervention, and others. These will be routed through university approval processes in coming months with expected launch beginning Fall 2024. Consequently to these many factors, we expect a significant and rapid increase in SCH production within our current offerings and our refined faculty complement.

Q6.1. Assessment of Learning and Program Improvement

The Provost's Office will review the self-studies from the most recent Board of Governor's five-year program reviews for this section.

Units may provide updated information below if they so choose.

Q6.2. Provide the unit's plans or ideas to make significant changes to its operations, structure, offerings, or personnel in order to reduce its costs or improve its efficiency.

Provide any significant changes to the department's program curricula, its assessment of learning practices, or any other improvements that have been made since the department's programs completed their most recent Board of Governor's five-year review.
Q6.3. The program may provide additional evidence of program improvement here.

Q7.1. The unit may provide any additional context or information about the unit's programs here.
The health sector is one of the fastest-growing employment sectors in the U.S: about two million new positions (a 13% increase) are projected by 2031 (U.S. Bureau of Labor Statistics). Many of the jobs are and will be in fields directly served by the School of Public Health. Combined with the health disparities and population-level health problems faced by West Virginians, and as evidenced by our tremendous impact on the university and state COVID-19 responses, the school's mission and its programs have never been more essential. The WVU School of Public Health is one of only sixty-seven (67) schools of public health accredited by the Council on Education for Public Health (CEPH) and the only such school in West Virginia. To operate as a CEPH-accredited school, the school must: 1. Operate at the same level as other primary academic units (colleges/school), with the same level of independence as similar professional schools (medicine, nursing, etc.). The school's leader (dean) must report at the same level as all other deans of the university's primary academic units 2. Offer, at minimum, a Master of Public Health (MPH) degree with at least three (3) areas of emphasis and a doctoral degree (PhD or DrPH) with at least two (2) areas of emphasis. 3. Have adequate faculty to deliver its stated mission and goals and its offered programs. CEPH requires the school must have at least 21 primary instructional faculty, with additional faculty needed depending on levels of degree offered by area of emphasis/concentration and/or additional programs offered, especially if such programs have supplemental primary instructional faculty requirements (e.g. MHA requires additional dedicated faculty for CAHME accreditation purposes). Based on the proposed complement of programs for the school moving forward, the school would need a minimum of 26 full-time faculty (non-clinical, non-research-only), not accounting for the significant research productivity and funding levels WVU SPH faculty have long-demonstrated and which result in teaching buy-outs and need for additional instructional faculty. While all programs under the school becomes “CEPH-accredited,” certain programs have or are in candidacy for program-level accreditations. The School has tailored its program portfolio to these needs and within the recommendations outlined above will be able to continue delivering on that mission while greatly reducing expenses. Importantly, the school's undergraduate programs serve as primary feeders to its graduate programs. Thus, the need to reinforce and refine rather than reduce our undergraduate programs is paramount. Having proactively identified changing enrollment trends and an evolving career marketplace, the School is also well into several strategic changes, outlined above, that capitalize on academic efficiencies and optimized faculty workload while reducing expenses and growing enrollment. The next phase of growth and innovation in the school will come through a deep dive into our core strengths and areas of unique expertise, as well as developing a full portfolio of certificate, micro-credential, and continuing and professional education offerings. Many of these will be available fully online to greatly expand the potential reach and marketability of the programs. All will leverage existing faculty resources and courses.

Q7.2. You may use this section to provide any additional evidence referenced in the program review.

SPH Accreditation Information.pdf
1.1MB
application/pdf

Q7.3. You may use this section to provide any additional evidence referenced in the program review.

Program and HR Data Tables.pdf
43.1KB
application/pdf

Q7.4. You may use this section to provide any additional evidence referenced in the program review.
Q8.1.
Thank you for completing your self-study for the West Virginia University Board of Governors program review. You may now submit the survey and your self-study will be passed on to the Provost's Office for review.

<table>
<thead>
<tr>
<th>Location Data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location:</strong> [redacted]</td>
</tr>
<tr>
<td><strong>Source:</strong> GeoIP Estimation</td>
</tr>
</tbody>
</table>

![Map of Iowa with a marker indicating the location.](image)