JOHNS HOPKINS
UNIVERSITY

September 15, 2025

Sanjay Rai, PhD
Secretary
Maryland Higher Education Commission
217 E. Redwood Street, Suite 2100,
Baltimore, MD 21202

Dear Secretary Rai,

On behalf of Provost Jayawardhana, I write to request your review and endorsement of the enclosed proposal. The university proposes a new **Doctor of Science in Rehabilitation Science.**

The Doctor of Science (DSc) in Rehabilitation Science at Johns Hopkins University School of Medicine (SOM) is designed to develop leaders in rehabilitation science through applied leadership, clinical research, and education. The program aligns with the education pillar of the Department of Physical Medicine and Rehabilitation's (PMR) strategic plan, as well as the broader strategic goals of Johns Hopkins Medicine (JHM) and the Maryland State Plan for Higher Education.

The proposed program is consistent with the Johns Hopkins mission and the State of Maryland's Plan for Postsecondary Education. The proposal is endorsed by The Johns Hopkins University.

Should you have any questions or need further information, please contact Westley Forsythe at (410) 516-0188 or wforsythe@jhu.edu.

Thank you for your support of Johns Hopkins University.

Sincerely,

Janet Simon Schreck, PhD
Senior Associate Vice Provost for Academic Affairs

cc: Dr. Ray Jayawardhana

Dr. Westley Forsythe

Enclosures

Office Use Only: PP#

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

Institution Submitting Proposal	The Johns Hopkins University

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: (●) Yes ( ) No

Payment Type: ( ) R*STARS # 12100833 (●) Check # 12100833

Payment Amount: $850

Date Submitted: 01/07/202

Department Proposing Program	School of Medicine	
Degree Level and Degree Type	Doctor of Science	
Title of Proposed Program	Rehabilitation Science	
Total Number of Credits	54	
Suggested Codes	HEGIS:	CIP: 51.2314
Program Modality	( ) On-campus ( ) Distance Education (*fully online*) (●) Both	
Program Resources	(●) Using Existing Resources ( ) Requiring New Resources	
Projected Implementation Date	( ) Fall ( ) Spring (●) Summer	Year: 2026
Provide Link to Most Recent Academic Catalog	URL: https://e-catalogue.jhu.edu/	
Preferred Contact for this Proposal	Name: Westley Forsythe	
	Title: Academic Compliance Officer	
	Phone: (410) 516-0188	
	Email: wforsythe@jhu.edu	
President/Chief Executive	Type Name: Ray Jayawardhana	
	Signature: Ray Jayawardhana	Date: 09/14/2025
	Date of Approval/Endorsement by Governing Board:	

Revised 1/2021

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.

The Doctor of Science (DSc) in Rehabilitation Science at Johns Hopkins University School of Medicine (SOM) is designed to develop global leaders in rehabilitation science through applied leadership, clinical research, and education. The program aligns with the Education pillar of the Department of Physical Medicine and Rehabilitation's (PMR) strategic plan, as well as the broader strategic goals of Johns Hopkins Medicine (JHM) and the Maryland State Plan for Higher Education.

Unlike traditional PhD programs, which emphasize basic science and discovery-based research, the JHU DSc program focuses on real-world, practice-oriented education. It is structured to meet the needs of working early- to mid-career professionals across rehabilitation disciplines, including orthotics/prosthetics (O&P), physical therapy (PT), occupational therapy (OT), speech-language pathology (SLP), and physiatry preparing them for leadership roles in academia, clinical practice, and healthcare systems.

Below we outline: (a) the definition and scope of "Rehabilitation Science," (b) the proposed DSc program, (c) relationship to other graduate programs in rehabilitation science, (d) practical application, (e) how it is related to the institution's mission, and (f) program expectations and long-term outcomes.

a) **Rehabilitation science:** *Rehabilitation science* is an interdisciplinary field dedicated to improving function, health outcomes, and quality of life for individuals with disabilities or chronic conditions. It encompasses applied research, clinical innovations, education, and leadership aimed at advancing rehabilitation practices. Rehabilitation scientists work at the intersection of health services, technology, and evidence-based interventions to enhance patient outcomes and healthcare system efficiency.

b) **Proposed Doctor of Science in Rehabilitation Science Program**: The JHU DSc program is structured to meet the needs of experienced rehabilitation professionals, including those in orthotics/prosthetics (O&P), physical therapy (PT), occupational therapy (OT), speech-language pathology (SLP), and physiatry. The curriculum integrates advanced coursework in leadership, healthcare systems, policy, and evidence-based practice. This interdisciplinary approach prepares graduates for roles in academia, healthcare administration, and applied clinical research. A key feature of the program is its *hybrid delivery model,* which allows working professionals to complete coursework through a combination of online learning and periodic in-person immersive experiences. This structure ensures accessibility for practicing clinicians while maintaining rigorous academic engagement. Additionally, the program includes *stackable credentials*, offering career development pathways that allow students to progressively build expertise. Graduates can enter the program at various stages, with some graduate and post-professional coursework counting toward the DSc degree, supporting career laddering and lifelong learning.

c) **Relationship to Other Graduate Programs in Rehabilitation Science**: The JHU DSc program is distinct from traditional PhD programs, which emphasize basic science and discovery-based research. Instead, this program is designed for mid-career professionals seeking to develop expertise in leadership, education, and clinical application of rehabilitation science. This

program is also distinct from clinical doctorate programs in rehabilitation science, such as the Master of Prosthetics-Orthotics (MPO), Doctor of Physical Therapy (DPT), Doctor of Occupational Therapy (OTD), Master of Occupational Therapy (MOT), Master of Science in Communication Sciences and Disorders (CSD), and Physiatry training (rehabilitation physicians). Clinical doctorates primarily focus on developing clinical competency and preparing graduates for direct patient care. In contrast, the DSc serves as an applied doctorate, emphasizing the development of expertise in research, education, and leadership within real-world clinical and academic settings. Graduates of the DSc program will be equipped to lead healthcare organizations, shape rehabilitation policies, educate future rehabilitation professionals, and contribute to the advancement of rehabilitation science through applied research and evidence-based decision-making. Additionally, the DSc in Rehabilitation Science is distinct from degrees such as the Doctor of Education (EdD) or a PhD in Education or Health Professions Education. While EdD and PhD programs in education focus on pedagogy, instructional design, and educational leadership, the DSc is specifically designed for rehabilitation professionals who seek to lead in clinical, academic, and health system environments. Unlike an EdD or PhD in education, which prepares scholars to study educational theory and teach educators, the DSc is centered on applied leadership in rehabilitation. It is designed for professionals who aim to integrate research, leadership, and education into clinical and academic environments to drive innovation, improve rehabilitation outcomes, and develop systems-level solutions to real-world healthcare challenges. The DSc is not simply an education-focused doctorate; it is an advanced, practice-based degree that directly addresses gaps in rehabilitation leadership, workforce development, and evidence-based clinical application.

d) **Practical Application of the Degree:** The JHU DSc program is not a traditional research doctorate; instead, it is designed for professionals aiming to apply advanced knowledge in real-world settings. Graduates will lead interdisciplinary teams, design and implement innovative rehabilitation programs, and contribute to policy development in rehabilitation healthcare. In addition to healthcare leadership and clinical innovation, graduates will be prepared for academic and faculty roles within rehabilitation science education programs. They will be equipped to develop curricula, mentor students, engage in applied research, and contribute to the evolution of rehabilitation education at the institutional and policy levels. The program supports individuals who aspire to train the next generation of rehabilitation professionals and influence educational models to better integrate evidence-based and competency-driven instruction. The required doctoral capstone project allows students to tackle complex challenges in their field, translating theory into impactful practice that benefits patients, organizations, and communities.

e) **Relation to the Institution's Approved Mission:** The vision of the JHU DSc program is to *develop global leaders who drive excellence and innovation in rehabilitation science, transforming healthcare and serving society*. The mission of the JHU DSc program is to *create and cultivate a diverse and collaborative learning community that advances innovative rehabilitation practice, research, and education*. This aligns with the broader mission of Johns Hopkins Medicine to *improve the health of the community and the world by setting the standard of excellence in medical education, research and clinical care.*

f) **Program Expectations and Long-Term Outcomes**: Graduates of the JHU DSc program will be equipped to lead interdisciplinary teams, improve rehabilitation education, and drive advancements in healthcare delivery. Through hybrid learning models, interdisciplinary collaboration, and applied research, the program ensures accessibility for working professionals

while addressing critical workforce gaps in rehabilitation leadership and clinical innovation. The long-term impact of the program will be a cadre of professionals who advance the field of rehabilitation science through leadership, policy influence, and educational excellence.

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

The proposed JHU DSc in Rehabilitation Science aligns with the Johns Hopkins University (JHU) and Johns Hopkins Medicine (JHM) strategic plans, particularly in education, research, and leadership development. One of the core priorities of the JHM Strategic Plan is to "lead the world in the education and training of healthcare professionals," which includes interprofessional education, research innovation, and healthcare transformation.

The DSc program directly supports these strategic priorities by:

- **Addressing Workforce Needs** – There is a growing demand for rehabilitation professionals with leadership, research, and educational expertise. The DSc program prepares professionals to lead innovation in clinical practice, academia, and healthcare systems.
- **Expanding Access to Graduate-Level Education** – The hybrid delivery model ensures accessibility for working professionals while maintaining the rigorous academic standards of the SOM.
- **Advancing Interprofessional Education & Research** – The program fosters collaboration across rehabilitation disciplines (PT, OT, SLP, O&P) and integrates clinical and academic expertise to prepare leaders for evidence-based practice and healthcare innovation.
- **Supporting Institutional Growth & Impact** – By establishing JHU as a leader in rehabilitation science education, the DSc program enhances the institution's global impact and contributes to the development of the next generation of healthcare leaders.

The DSc program is a key component of the SOM's educational strategy, ensuring that Johns Hopkins remains at the forefront of healthcare education and rehabilitation science leadership.

3. Provide a brief narrative of how the proposed program will be adequately funded for at least the first five years of program implementation.

The JHU DSc in Rehabilitation Science is designed to be a self-sustaining program, supported through tuition revenue and institutional investment. The initial funding strategy includes:

- **Institutional Support** – The JHU School of Medicine (SOM) and Department of Physical Medicine and Rehabilitation (PMR) are committed to providing initial funding for faculty hiring, program development, and administrative infrastructure.
- **Tuition-Based Revenue Model** – The program is designed to be tuition-funded, with projected self-sufficiency by Year 3. The anticipated steady enrollment of working professionals ensures financial stability and growth.
- **Donor-Funded Scholarships** – The Limb Loss Scholar Program, supported by a major philanthropic gift, will provide full funding for 1-2 students per year, strengthening the program's commitment to equity and workforce development.
- **Scalability and Program Expansion** – The hybrid model allows for future expansion to accommodate increased enrollment, supporting long-term financial sustainability. Additional

stackable credentials and certificates will provide multiple entry points for learners, expanding the revenue base.

With these measures, the program is expected to be financially viable and self-sustaining within the first three years of implementation.

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

a. Ongoing administrative, financial, and technical support of the proposed program

Johns Hopkins University has a strong commitment to developing innovative, hybrid graduate programs. The DSc program will receive comprehensive institutional support, including:

- **Academic Oversight** – The SOM Department of Physical Medicine and Rehabilitation will oversee program administration, faculty recruitment, and curriculum development.
- **Financial Support** – As described above, the JHU School of Medicine and Department of Physical Medicine will provide initial funding for program development. The program is designed to be tuition-support. Program development and student scholarships will be further supported via a major philanthropic gift received by the department.
- **Technology & Online Learning Support** – The JHU Office of Online Education (OOE) provides instructional design, learning management system (LMS) support, and faculty training for hybrid programs.
- **Dedicated Faculty & Staff** – The DSc program will have a core faculty team and administrative staff to support students, coordinate online and in-person learning, and ensure program quality.
- **Interdisciplinary Collaboration** – The program will leverage existing expertise within Johns Hopkins Medicine to provide a high-quality, evidence-based curriculum.

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

The School of Medicine is committed to ensuring that all enrolled students complete the degree program. To ensure student success and program continuity:

- **Institutional Commitment to Graduate Completion** – The SOM guarantees that all enrolled students will be supported through program completion, even in the unlikely event of program suspension.
- **Teach-Out Plan** – Should the program be discontinued, JHU will implement a structured teach-out plan, ensuring that all current students complete their degrees on schedule.
- **Market Demand & Enrollment Stability** – Given the growing demand for rehabilitation science leaders, the DSc program is expected to maintain strong enrollment, ensuring long-term viability.

Johns Hopkins University's history of excellence in medical education, combined with its strategic investment in hybrid learning, positions the DSc in Rehabilitation Science as a sustainable, high-impact graduate program that will shape the future of rehabilitation leadership, education, and research.

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

The World Health Organization (WHO) Rehabilitation 2030 initiative has highlighted the global shortage of rehabilitation providers and the need for advanced training programs that produce leaders capable of improving rehabilitation service delivery, workforce capacity, and policy implementation.[1] According to the Bureau of Labor Statistics (BLS), the demand for rehabilitation professionals - including physical therapists (14% growth), occupational therapists (11% growth), speech-language pathologists (18% growth), and orthotists/prosthetists (15% growth) - is increasing at rates well above the national average.[2] However, workforce shortages remain a significant issue, particularly in faculty, clinical leadership, and health systems management.

Leadership roles in rehabilitation education and administration increasingly require an advanced doctoral degree beyond the clinical doctorate (e.g., DPT, OTD, etc.). For example, the Commission on Accreditation in Physical Therapy Education (CAPTE) requires that at least 50% of core faculty in Doctor of Physical Therapy (DPT) programs hold a terminal academic doctorate.[3] Additionally, many institutions offering clinical rehabilitation programs - which are almost exclusively graduate-level degrees - require faculty to hold an academic doctorate for hiring, promotion, and tenure purposes. Faculty in these programs are also expected to engage in scholarship, leadership, and professional service, reinforcing the need for doctoral-trained professionals who can contribute to advancing education, practice, and rehabilitation science.

The DSc in Rehabilitation Science at Johns Hopkins University is designed to:

- Fill a critical gap in Maryland by providing a doctoral-level pathway for rehabilitation professionals seeking leadership roles in healthcare, academia, and clinical administration.
- Prepare professionals to take on high-impact leadership roles, ensuring that Maryland remains at the forefront of healthcare innovation and workforce development.
- Expand the pool of qualified clinical leaders in rehabilitation settings, where healthcare administrators and policymakers increasingly seek candidates with advanced doctoral education.
- Prepare faculty members to teach in rehabilitation education programs, strengthening academic institutions struggling to recruit and retain qualified faculty.

---

[1] World Health Organization, Rehabilitation 2030 Initiative. https://www.who.int/initiatives/rehabilitation-2030.
[2] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh, visited April 7, 2025.
[3] Commission on Accreditation in Physical Therapy Education, Standards and Required Elements for Accreditation of Physical Therapist Education Programs (Adopted 10/31/23). https://www.capteonline.org/globalassets/capte-docs/2024-capte-pt-standards-required-elements.pdf.

- Support career advancement for rehabilitation professionals who aspire to faculty, program director, and leadership roles in academia, health systems, and research institutions.
- Expand the number of qualified faculty members in rehabilitation disciplines, addressing the faculty shortage crisis that threatens the capacity of professional education programs in O&P, PT, OT, SLP, and physiatry.

By equipping graduates with advanced leadership, clinical innovation, health systems, and academic expertise, this program directly supports the advancement of rehabilitation knowledge and workforce capacity, benefiting Maryland's healthcare infrastructure and improving rehabilitation access for underserved populations.

b. Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education

The DSc in Rehabilitation Science at Johns Hopkins University will provide expanded educational opportunities for educationally disadvantaged students by offering a flexible, hybrid learning model that reduces geographic and financial barriers to doctoral education. Traditional doctoral programs require relocation and full-time enrollment, which can be prohibitive for working professionals and those with financial or familial responsibilities. The DSc's hybrid format allows students to continue working while pursuing advanced education, increasing access for a more diverse student population.

Maryland's diverse population, including underrepresented groups in healthcare, will benefit from increased access to doctoral education that leads to leadership and faculty roles in rehabilitation. The DSc program will actively recruit students from all groups and provide structured mentorship and leadership development opportunities to support their success.

Additionally, many rehabilitation disciplines face workforce shortages in rural and underserved areas, where access to rehabilitation services remains limited. The DSc will prepare professionals with leadership and health systems knowledge to develop innovative solutions that improve access to care for historically marginalized populations. By training professionals who reflect the diversity of the communities they serve, the program will contribute to a more equitable and inclusive rehabilitation workforce in Maryland and beyond.

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

The DSc program presents a unique opportunity to collaborate with Historically Black Institutions (HBIs) in Maryland and the region. Many of these institutions offer graduate rehabilitation programs, including physical therapy, occupational therapy, and speech-language pathology, yet face challenges in recruiting and retaining faculty with terminal academic doctorates. We anticipate that the program will attract applications from graduates of Maryland's HBIs, including Morgan State University, Coppin State University, Bowie State University, and the University of Maryland Eastern Shore. Additionally, collaborative faculty development initiatives could help build capacity at these institutions, strengthening their ability to offer high-quality educational experiences for their students. This program will also serve as a pipeline for faculty development and leadership training for these institutions, expanding

opportunities for minority-serving institutions to advance the preparation of faculty and future leaders in rehabilitation science.

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

The DSc in Rehabilitation Science aligns directly with the 2022 Maryland State Plan for Higher Education, which emphasizes student access, success, and innovation. The hybrid, competency-based structure of the DSc program supports flexible access to postsecondary education while meeting workforce demands in healthcare, education, and leadership.

- **Student Access**: The DSc provides a unique doctoral pathway for Maryland's rehabilitation professionals, reducing barriers to career advancement while supporting workforce diversity. This hybrid program allows part-time enrollment and expected completion in three years. Hybrid, part-time enrollment enables students to continue working in their own communities, improving affordability for students already carrying the burden of student loads from undergraduate and entry-level professional education.
- **Student Success**: The program's emphasis on practical application, leadership development, and faculty preparation ensures graduates will be well-positioned for career advancement. Furthermore, this program was designed with flexibility in mind, allowing students to accelerate and decelerate their education as needed to accommodate life events and ensure successful completion. Johns Hopkins University has existing academic, technological, and advisory support to ensure student success.
- **Innovation**: The DSc is the first *applied* doctoral program in rehabilitation science in Maryland, directly addressing faculty shortages, leadership gaps, and workforce development challenges.

By addressing these priorities, the DSc in Rehabilitation Science at Johns Hopkins University supports Maryland's commitment to expanding high-quality graduate education, improving workforce readiness, and promoting equity in healthcare leadership.

C. Quantifiable & Reliable Evidence & Documentation of Market Supply & 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.

The Doctor of Science (DSc) in Rehabilitation Science at Johns Hopkins University is designed for mid-career rehabilitation professionals seeking advancement in academia, clinical research, healthcare leadership, and industry settings. Graduates will be prepared for roles that leverage their expertise in education, leadership, and applied clinical research.

Targeted Industries

Graduates will be well-positioned for high-demand roles in several high-growth sectors, including:

- **Higher Education & Academic Institutions** – Faculty, program directors, and administrators in rehabilitation science programs (Orthotics & Prosthetics, Physical Therapy, Occupational Therapy, Speech-Language Pathology, Rehabilitation Psychology, and Physiatry).
- **Healthcare Systems & Rehabilitation Centers** – Clinical administrators, research directors, and policy leaders overseeing rehabilitation services and advancing evidence-based care.
- **Government & Public Health Organizations** – Policy and program specialists focused on disability, rehabilitation access, and healthcare system innovations.
- **Medical & Rehabilitation Research Institutes** – Research scientists and principal investigators leading applied clinical research initiatives in rehabilitation science.
- **Health Technology & Industry** – Product development, clinical trials, and regulatory affairs roles in medical device companies, rehabilitation technology firms, and digital health startups.

Employment Opportunities & Growth Projections

The Doctor of Science (DSc) in Rehabilitation Science at Johns Hopkins University aligns with growing workforce needs in (a) rehabilitation education, (b) healthcare leadership, and (c) clinical research.

a.) **Academic & Faculty Roles**: With a 19% projected job growth for postsecondary health specialties teachers over the next decade,[4] the demand for doctoral-trained rehabilitation educators continues to rise. Faculty shortages persist across Physical Therapy (PT), Occupational Therapy (OT), and Speech-Language Pathology (SLP) programs, with:

- 182 open PT faculty positions in 2024, up from 165 positions in 2023. In 2023, 40% of DPT programs reporting at least one vacancy. [5,6]
- A steady increase in OT faculty positions, driven by the expansion of entry-level Occupational Therapy Doctorate (OTD) programs. As of fall 2024, there were 51 OTD

[4] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://data.bls.gov/projections/nationalMatrix?queryParams=25-1071&ioType=o, visited April 7, 2025.
[5] 2024 Physical Therapist Education Programs Fact Sheet. https://www.capteonline.org/globalassets/capte-docs/aggregate-data/2024-pt-aggregate-program-data-fact-sheet.pdf, visited April 16, 2025.
[6] 2024 Physical Therapist Education Programs Fact Sheet.https://www.capteonline.org/globalassets/capte-docs/aggregate-data/capte-2023-pt-fact-sheet.pdf.

applicant programs and 65 OTD programs in candidate status; 16 Occupational Therapy Masters (OTM) applicant programs and 14 OTM programs in candidate status.[7]

- 277 vacancies for faculty with research doctorates in Communication Sciences programs in 2023-24. 80 searches were unfilled.[8]

b.) **Healthcare Leadership & Administration:** As rehabilitation services expand, the need for leaders in hospital systems, rehabilitation centers, and long-term care facilities is growing. Medical & Health Services Managers are projected to grow by 29% between 2023 and 2033, with a median annual wage of $110,680.[9] This demand is fueled by the increasing complexity of rehabilitation care and the need for administrators trained in clinical practice and healthcare management.

c.) **Clinical Research & Innovation:** Graduates pursuing research careers will be competitive for roles in academic medical centers, rehabilitation research institutes, and healthcare innovation firms. Medical Scientists, including rehabilitation researchers, are expected to see 11% job growth by 2033, with a median annual wage of $100,890.[10] As evidence-based practice and translational research continue to shape rehabilitation, demand for professionals who can bridge clinical care and scientific discovery is increasing.

With faculty shortages, increasing leadership opportunities in healthcare, and strong job growth in rehabilitation research, the Johns Hopkins DSc in Rehabilitation Science provides a direct pathway for professionals to advance their careers in high-impact roles.

Expected Level of Entry

Graduates of the Johns Hopkins DSc in Rehabilitation Science will be qualified for mid-to-senior level leadership positions in their respective fields. Given the program's focus on applied research, leadership, and education, graduates will typically enter the workforce at the following levels:

Industry	Example Job Titles	Entry Level
Higher Education & Academia	Assistant/Associate Professor, Program Director	Mid-Senior Level
Healthcare & Rehabilitation	Director of Rehabilitation, Clinical Manager	Mid-Senior Level
Government & Public Health	Health Policy Analyst, Rehab Program Director	Mid-Level
Research Institutes	Principal Investigator, Clinical Research Director	Mid-Senior Level
Health Technology & Industry	Clinical Affairs Director, Product Development Lead	Mid-Level

[7] Accreditation Council for Occupational Therapy Education. Academic Leadership Council: September 2024 Meeting, ACOTE Update https://www.aota.org/-/media/corporate/files/educationcareers/alc-2024-fall/acote-updatealc-92024-4.pdf, accessed April 8, 2025.
[8] American Speech-Language-Hearing Association, Communication Sciences and Disorders (CSD) Education Survey National Aggregate Data Report, 2023-2024 Academic Year. https://www.asha.org/siteassets/surveys/csd-education-survey-national-aggregate-data-report.pdf, accessed April 8, 2025.
[9] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh/management/medical-and-health-services-managers.htm, visited April 7, 2025.
[10] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm, visited April 7, 2025.

Graduates will be positioned to lead academic programs, direct clinical research, manage rehabilitation teams, and contribute to policy and innovation in the rehabilitation sciences.

The Johns Hopkins DSc in Rehabilitation Science aligns with critical workforce needs, preparing professionals for leadership in academic, clinical, and industry settings. Given the projected job growth, faculty shortages, and increasing demand for rehabilitation leadership, this program offers a unique and timely solution to workforce gaps in the rehabilitation sciences.

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

The Doctor of Science (DSc) in Rehabilitation Science at Johns Hopkins University is designed to meet critical workforce needs in rehabilitation science education, healthcare leadership, and clinical research. National labor data and industry trends demonstrate strong demand and persistent faculty shortages, with job opportunities increasing across academic institutions, healthcare systems, and research organizations. With projected job growth exceeding 11-29% in key fields and ongoing faculty shortages in rehabilitation sciences, this program will directly supply a highly qualified workforce to fill essential academic, leadership, and research positions[11,12,13].

The 2020-2024 Maryland WIOA State Plan[14] healthcare practitioner roles remain the leading occupational cluster for projected employment growth, with a 20.1% increase expected through 2028. Healthcare and related skills consistently top lists of in-demand occupations, advertised positions, and required certifications in the Maryland State Plan.

The absence of a Doctor of Science (DSc) in Rehabilitation Science in Maryland represents a critical gap in the state's workforce development strategy. Unlike traditional research-based PhD programs, which primarily prepare graduates for research roles, the DSc is an applied, practice-oriented doctorate designed to produce leaders who drive innovation in rehabilitation practice, healthcare leadership, and professional education.

[11] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://data.bls.gov/projections/nationalMatrix?queryParams=25-1071&ioType=o, visited April 7, 2025.
[12] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh/management/medical-and-health-services-managers.htm, visited April 7, 2025.
[13] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm, visited April 7, 2025.
[14] 2020-2024 Maryland WIOA State Plan. https://labor.maryland.gov/wdplan/wdstateplan.pdf, accessed April 16, 2025.

The U.S. Bureau of Labor Statistics (BLS)[15] projects significant growth in key job categories relevant to DSc graduates:

Occupation	Projected Job Growth (2023-2033)	Median Annual Wage (2023)	Relevance to DSc Graduates
Postsecondary Health Specialties Teachers	18% (Much faster than average)	$100,300	Faculty roles in rehabilitation science (PT, OT, SLP, and related disciplines)
Medical & Health Services Managers	29% (Much faster than average)	$104,830	Leadership roles in rehabilitation hospitals, academic medical centers, and healthcare administration
Medical Scientists (Clinical Research)	11% (Faster than average)	$99,930	Applied research in rehabilitation, translational science, and evidence-based practice innovation

These data confirm a strong and expanding job market for doctoral-trained professionals in rehabilitation science, especially in academia, healthcare leadership, and research innovation.

Faculty Shortages in Rehabilitation Sciences

As described in the previous section, there is an urgent need for doctoral-trained faculty in PT, OT, and SLP programs, creating immediate job openings for DSc graduates.

Physical Therapy (PT) Faculty Vacancies

- 292 accredited DPT programs + 25 developing programs. [16]
- 191 open full-time faculty positions in 2024.[16]
- 38.5% of programs report at least one vacancy.[17]
- 19.4% of programs have had unfilled faculty positions for more than 6 months.[18]

Occupational Therapy (OT) Faculty Vacancies

OTD programs are rapidly expanding:

- 2019-2020: 2,621 full-time faculty in master's and doctoral OT programs.[19]
- 2020-2021: 2,813 full-time faculty.[20]
- 2021-2022: 3,021 full time faculty. [21]
- 2022-2023: 3,244 full-time faculty, reflecting a growing demand for OT educators. [22]

[15] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh, visited April 16, 2025.
[16] American Physical Therapy Association, Aggregate Program Data. 2025 Physical Therapist Education Programs Fact Sheet. 2024-pt-aggregate-program-data-fact-sheet.pdf, accessed May 12, 2025
[17] Institutional Profile Survey for the American Council of Academic Physical Therapy (ACAPT), January 2024.
[18] Institutional Profile Survey for the American Council of Academic Physical Therapy (ACAPT), January 2024.
[19] American Occupational Therapy Association Academic Programs Annual Data Report, Academic Year 2019-2020.2019-2020-annual-data-report.pdf, accessed April 8, 2025.
[20] American Occupational Therapy Association Academic Programs Annual Data Report, Academic Year 2020-2021. 2020-2021-annual-data-report.pdf, accessed April 8, 2025.
[21] American Occupational Therapy Association Academic Programs Annual Data Report, Academic Year 2021-2022. 2021-2022-annual-data-report.pdf, accessed April 8, 2025.
[22] American Occupational Therapy Association Academic Programs Annual Data Report, Academic Year 2022-2023. 2022-2023-annual-data-report.pdf, accessed April 8, 2025.

Speech-Language Pathology (SLP) Faculty Vacancies

- Faculty positions filled averaged 71.5% over the past 12 years in Communication Science and Disorders programs.[23]
- 198 full-time faculty openings in 2023-24 for Speech Language Pathologists, 58 searches went unfilled in 23-24.[24]

These faculty shortages represent a substantial market gap, ensuring that DSc graduates will have ample opportunities to enter academia and train the next generation of rehabilitation professionals.

Industry and Healthcare Leadership Demand

Beyond academia, DSc graduates will be competitive for leadership roles in clinical practice, rehabilitation administration, and healthcare innovation including:

Medical & Health Services Managers[25]:

- 28% projected job growth (much faster than average).
- Driven by increased demand for rehabilitation and disability services in hospitals, rehab centers, and outpatient clinics.

Clinical Research and Rehabilitation Innovation[26]:

- Medical scientists (including rehabilitation researchers) are projected to grow 10% by 2033.
- Hospitals, universities, and private industry are seeking leaders in clinical research to improve patient outcomes and advance evidence-based rehabilitation practices.

The Johns Hopkins DSc in Rehabilitation Science will provide graduates with a distinct advantage in the job market by combining academic prestige, interdisciplinary training, and a unique position within Maryland's higher education landscape. As part of a globally recognized institution, graduates will be among the most highly qualified candidates for academic and leadership roles, benefiting from Johns Hopkins' research excellence and expansive professional network. Additionally, with no existing DSc in Rehabilitation Science in Maryland, this program will give its graduates a competitive edge in both regional and national hiring, filling a critical gap in doctoral-level rehabilitation education.

Unlike traditional PhD or DHSc programs, which often focus on either research or healthcare administration, the Johns Hopkins DSc is designed to provide leadership training across multiple disciplines, including Orthotics & Prosthetics, Physical Therapy (PT), Occupational Therapy (OT), Speech-Language Pathology (SLP), Rehabilitation Psychology, and Physiatry. This interdisciplinary approach broadens career pathways and ensures that graduates are well-prepared for faculty, research, and administrative roles across healthcare, academia, and industry.

---

[23] CSD Education Survey: Communication Science and Disorders Education Trend Data. CSD Education Survey: Communication Sciences and Disorders Education Trend Data, accessed April 8, 2025.
[24] American Speech-Language-Hearing Association, Communication Sciences and Disorders (CSD) Education Survey National Aggregate Data Report, 2023-2024 Academic Year. https://www.asha.org/siteassets/surveys/csd-education-survey-national-aggregate-data-report.pdf, accessed April 8, 2025.
[25] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh/management/medical-and-health-services-managers.htm, visited April 7, 2025.
[26] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm, visited April 7, 2025.

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.

The Doctor of Science (DSc) in Rehabilitation Science at Johns Hopkins University directly responds to growing workforce shortages in rehabilitation education, research, and healthcare leadership. National workforce data and multiple industry surveys confirm a high demand for doctoral-trained rehabilitation professionals, particularly in faculty roles, healthcare administration, and clinical research. Over the next five years, vacancies in these areas will continue to rise, necessitating a specialized program that prepares professionals to fill these critical positions.

Faculty Shortages in Rehabilitation Sciences

Data from the Commission on Accreditation in Physical Therapy Education (CAPTE), the American Occupational Therapy Association (AOTA), and the American Speech-Language-Hearing Association (ASHA) provide reliable projections on the increasing need for rehabilitation science faculty:

- Physical Therapy (PT) Education: 191[27] faculty vacancies in 2024, with 250+ projected by 2028 due to faculty retirements and new program expansion. More than 40% of programs report at least one open faculty position.[28]
- Occupational Therapy (OT) Education: Faculty shortages continue to grow as entry-level Doctor of Occupational Therapy (OTD) programs expand nationwide. Over 130 new OTD programs are in development, requiring hundreds of new faculty hires.[29]
- Speech-Language Pathology (SLP) Education: Faculty vacancies increased by 30% over the last decade, with 198 full-time openings reported in 2023-24 and demand continuing to rise.[30]

American Council of Academic Physical Therapy (ACAPT) reports that over 20% of PT programs have long-term faculty vacancies exceeding six months[31], demonstrating an urgent need for doctoral-prepared educators. These faculty shortages confirm that DSc graduates will be well-positioned for careers in academia, filling gaps in PT, OT, and SLP education.

Healthcare Leadership & Administration Needs

Beyond academia, demand for rehabilitation-focused healthcare leaders is growing rapidly, as shown by projections from the Bureau of Labor Statistics (BLS):

- Medical & Health Services Managers (Rehabilitation Leadership): Expected to grow 28% from 2023 to 2028, with 45,000+ job openings projected nationwide.[32]

---

[27] American Physical Therapy Association, Aggregate Program Data. 2025 Physical Therapist Education Programs Fact Sheet. 2024-pt-aggregate-program-data-fact-sheet.pdf, accessed May 12, 2025.
[28] American Council of Academic Physical Therapy (ACAPT), Institutional Profile Survey, January 2024.
[29] Accreditation Council for Occupational Therapy Education. Academic Leadership Council: September 2024 Meeting, ACOTE Update https://www.aota.org/-/media/corporate/files/educationcareers/alc-2024-fall/acote-updatealc-92024-4.pdf, accessed April 8, 2025.
[30] American Speech-Language-Hearing Association, Communication Sciences and Disorders (CSD) Education Survey National Aggregate Data Report, 2023-2024 Academic Year. https://www.asha.org/siteassets/surveys/csd-education-survey-national-aggregate-data-report.pdf , accessed April 8, 2025.
[31] Institutional Profile Survey for the American Council of Academic Physical Therapy (ACAPT), January 2024.
[32] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh/management/medical-and-health-services-managers.htm, visited April 7, 2025.

- Clinical Research & Rehabilitation Science Leaders: Anticipated 10% job growth, with 5,000+ new research roles emerging in rehabilitation medicine.[33]

These figures highlight a strong need for advanced training in leadership, management, and clinical research, all of which are core competencies of the DSc in Rehabilitation Science. As healthcare systems expand and prioritize evidence-based rehabilitation, the demand for doctoral-prepared professionals who can integrate research, leadership, and education will continue to rise.

Projected Job Openings & Demand Over the Next Five Years

In summary demand in rehabilitation science careers is projected to increase as follows:

- Faculty positions in PT, OT, and SLP programs will exceed 500 vacancies by 2028 due to program expansion and retirements.
- Healthcare administration roles in rehabilitation will generate over 45,000 job openings, driven by rising demand for rehabilitation services.
- Clinical research leadership in rehabilitation medicine will expand, creating more than 5,000 new doctoral-level research roles.

The market clearly supports the need for a DSc in Rehabilitation Science at Johns Hopkins University. Faculty shortages, strong job growth in rehabilitation leadership, and an increasing demand for flexible, applied doctoral programs position this program as an essential addition to Maryland's higher education landscape. By providing a sustainable pipeline of doctoral-trained leaders, this program will directly address critical workforce gaps in academia, healthcare leadership, and clinical research.

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

There is no other Doctor of Science in Rehabilitation Science program in Maryland. Comparable programs are the University of Maryland Baltimore's PhD in Physical Rehabilitation Science and PhD in Health Professions Education. The PhD in Physical Rehabilitation Science (CIP 512312) had 0 graduates in 2020, 2021, and 2022; 2 graduates in 2023; and 0 graduates in 2024. The University of Maryland Baltimore PhD in Health Professions Education (CIP 131327) was approved in 2019 and reported its first 6 graduates in 2024.[34]

Nationally, there are approximately 50 PhD Programs in Rehabilitation Science, Health Science, Health Professions Education, Physical Therapy, Communication Sciences, and other rehabilitation-related areas found through internet search. As stated previously, these programs emphasize basic science and discovery-based research, preparing graduates for research positions at academic and other institutions. A few prepare graduates to be faculty in entry level practitioner and related programs. There are approximately 20 DSc and DHSc programs in Health Science, Rehabilitation Science, Movement Science, Physical Therapy, and Health Professions Education and similar fields according to an internet search for these titles.

[33] Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook. https://www.bls.gov/ooh/life-physical-and-social-science/medical-scientists.htm, visited April 7, 2025.
[34] Maryland Higher Education Commission Trends in Degrees and Certificates by Program, Maryland Higher Education Institutions, 2015-2024. https://mhec.maryland.gov/publications/Documents/Research/TRENDS%20IN%20DEGREES%20AND%20AWARDS%20BY%20PROGRAM%202024%20-%20External.pdf, visited May 20, 2025.

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.

The Maryland Higher Education Commission's program database does not list any Doctor of Science (DSc) in Rehabilitation Science programs at an academic medical center in the state. However, two related PhD programs exist at the University of Maryland, Baltimore (UMB):

1. **PhD in Physical Rehabilitation Science (UMB)**
    - **Focus**: Basic science research and discovery in rehabilitation.
    - **Target Audience**: Students pursuing academic and research-intensive careers.
    - **Limitations**: Does not emphasize applied leadership, clinical education, or interdisciplinary rehabilitation science.
2. **PhD in Health Professions Education (UMB)**
    - **Focus**: Theoretical pedagogy and research in health professions education.
    - **Target Audience**: Health professions educators preparing for careers in academic settings.
    - **Limitations**: Lacks clinical and applied rehabilitation science focus, making it less relevant for mid-career rehabilitation professionals seeking leadership roles.

The Johns Hopkins DSc uniquely addresses gaps not covered by the existing UMB programs:

- **Applied Doctorate**: Unlike the research-intensive PhD at UMB, the DSc is designed for mid-career professionals in PT, OT, SLP, and rehabilitation leadership.
- **Focus on Clinical Leadership & Education**: The DSc prepares faculty and healthcare administrators, filling a critical workforce need for doctoral-trained rehabilitation educators.
- **Hybrid Learning Model**: Provides a flexible, online-first format with in-person engagement, making it more accessible to working professionals.

While UMB offers two PhD programs related to rehabilitation and health professions education, their primary goal is not to prepare professionals for interdisciplinary leadership roles in rehabilitation science education and administration. The Johns Hopkins DSc fills this gap by providing a career-focused, clinically integrated, and leadership-oriented doctoral pathway.

2. Provide justification for the proposed program.

There are no Doctor of Science (DSc) in Rehabilitation Science programs currently offered in Maryland. While the University of Maryland, Baltimore (UMB) offers PhD programs in Physical Rehabilitation Science and Health Professions Education, these programs focus on basic science research and theoretical pedagogy, rather than applied leadership and clinical education in rehabilitation science.

With growing faculty shortages and increasing demand for rehabilitation leaders in education, research, and healthcare administration, this program will provide a critical pathway for mid-career professionals to fill these workforce gaps in Maryland and beyond.

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.

   The proposed program will not affect high-demand programs at HBIs

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.

   No impact on HBIs' missions and institutional identities is anticipated.

G. Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes

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

The Doctor of Science (DSc) in Rehabilitation Science at the Johns Hopkins University School of Medicine (SOM) was developed in response to the growing need for advanced, applied doctoral education for rehabilitation professionals across disciplines. The program is housed within the Department of Physical Medicine and Rehabilitation (PMR) and aligns with the strategic goals of Johns Hopkins Medicine to advance interdisciplinary education, leadership, and research in rehabilitation sciences.

The development of the DSc program was faculty-driven, leveraging expertise from across rehabilitation disciplines - including orthotics/prosthetics (O&P), physical therapy (PT), occupational therapy (OT), speech-language pathology (SLP), athletic training (AT), rehabilitation psychology, and physiatry - to create a curriculum that prioritizes leadership, education, and clinical research in rehabilitation science. Faculty designed the program to be modular, stackable, and competency-driven, ensuring flexibility for working professionals while maintaining the rigor expected of a Johns Hopkins doctoral degree.

The program director is Dr. Kendra Gagnon, PT, PhD, who is faculty in the SOM, serving as Director of Rehabilitation Science Education and an Associate Professor in the Department of PMR. Dr. Gagnon holds a Master of Physical Therapy (MPT) from the University of Missouri-Columbia and a PhD in Rehabilitation Science from the University of Kansas Medical Center. She is a 2020 graduate of the American Physical Therapy Association Fellowship in Higher Education Leadership and has extensive experience developing hybrid and interprofessional education programs in rehabilitation sciences.

Under Dr. Gagnon's leadership, the DSc program will be supported by faculty from across SOM rehabilitation disciplines, including PT, OT, SLP, O&P and physiatry. These faculty members bring diverse expertise in clinical practice, health professions education, leadership, health systems, data analytics, and clinical research. The program will also leverage the expertise of faculty from JHU's Bloomberg School of Public Health (BSPH) for select coursework in statistical analyses.

The program will maintain a low student-to-faculty ratio to facilitate mentorship and support applied learning. Additional faculty will be engaged to support specialized coursework and capstone projects aligned with the students' professional interests.

This interdisciplinary and competency-driven approach ensures that the DSc program at Johns Hopkins University fills a critical gap in rehabilitation education by providing a rigorous, applied doctoral pathway that prepares graduates for leadership roles in academia, clinical research, health systems, and professional practice.

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

The educational objectives of the DSc program are designed to provide graduates with advanced expertise in rehabilitation science, leadership, education, and clinical research. The program prepares professionals across rehabilitation disciplines to integrate scientific knowledge with applied skills to advance healthcare practice, education, and policy.

Graduates of the program will be able to:

- Apply interdisciplinary rehabilitation science principles to enhance patient care, healthcare systems, and research initiatives.
- Develop and implement evidence-based strategies to address complex rehabilitation challenges.
- Lead and manage healthcare teams and organizations through informed decision-making and innovation.
- Educate and mentor future healthcare professionals, leveraging best practices in learning science and curriculum design.
- Conduct rigorous clinical research and translate findings into meaningful improvements in rehabilitation practice.
- Advocate for advancements in rehabilitation policy and systems-based practice to improve patient outcomes.

The curriculum is structured to ensure a balance of foundational knowledge, applied practice, and scholarly inquiry. The program integrates online coursework, intensive in-person sessions, and individualized mentorship to support learning outcomes tailored to professional goals. Learning assessments will include written assignments, case studies, research projects, competency evaluations, and a capstone project that aligns with the student's chosen specialization.

This competency-driven approach ensures that graduates are equipped with both theoretical knowledge and practical skills, allowing them to immediately contribute to the field of rehabilitation science upon completion of the program.

3. Explain how the institution will:

a. Provide for assessment of student achievement of learning outcomes in the program

Student progress will be assessed through both formative and summative assessments, ensuring that learning outcomes are achieved throughout the program. Assessments will include:

- Course grades determined by written assignments, case studies, research projects, and presentations.
- Formative learning opportunities such as knowledge checks, online discussions, reflective writing, and peer reviews to support ongoing skill development.
- Faculty feedback via rubrics, written and verbal commentary, and individual mentoring.
- Summative evaluations through competency-based assessments, project-based assignments, and case analyses.

- A doctoral capstone project that integrates leadership, education, and research skills into an applied rehabilitation science initiative.

The School of Medicine (SOM) Office of Assessment and Evaluation (OAE) will support assessment efforts by providing best practices in student assessment, evaluation tool selection, and data analysis. At least once per semester, the DSc Curriculum Committee will review course evaluations and student performance data to recommend and implement curricular improvements as needed. Annual faculty meetings will ensure continuous assessment of student and program outcomes.

b. Document student achievement of learning outcomes in the program

Student achievement will be documented through multiple mechanisms to ensure comprehensive tracking of progress and success in the program. Each student will be assigned a faculty advisor and a capstone committee, who will monitor academic progress and provide structured feedback. Documentation of student achievement will include:

- Grades submitted to the Johns Hopkins School of Medicine Registrar, based on clear grading criteria, including rubrics aligned with learning outcomes and competencies.
- Regular progress reports completed by faculty advisors and reviewed by the capstone committee to track the student's development in coursework, leadership competencies, and research activities.
- The capstone project, which will serve as a culminating demonstration of the student's ability to apply knowledge and skills in rehabilitation science leadership, education, or research.
- Oral presentations and written reports of the capstone project, evaluated by the capstone committee for scholarly rigor, originality, and impact.
- Research dissemination activities, such as conference presentations, publications, or leadership initiatives in rehabilitation science, which will be documented in the student's academic portfolio.

All documentation of student achievement will be maintained within institutional records to ensure transparency, accountability, and alignment with program learning objectives.

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

A full course listing with course titles and descriptions is provided in Appendix A.

Students must be licensed rehabilitation professionals who have completed a first professional degree, at minimum a bachelor's degree, in a rehabilitation science or related field (e.g., prosthetics and orthotics, physical therapy, occupational therapy, speech-language pathology, rehabilitation psychology, and physiatry).

Students with post-master's graduate credit in related educational content—such as a clinical doctoral degree (e.g., DPT, OTD)—may petition to transfer up to nine (9) credits toward Foundations of Rehabilitation Science coursework, pending review and approval by the DSc program director.

Students with post-doctoral graduate training—such as the completion of an accredited residency or fellowship program—may petition to transfer up to nine (9) additional credits toward Advanced Rehabilitation Science coursework, with appropriate documentation and approval.

As a result, students will complete between 36 and 54 credits of doctoral-level coursework at Johns Hopkins University, depending on prior education and training. The program includes the following required coursework components:

Foundations of Rehabilitation Science - 9 Credits (Transfer Eligible)
Students may petition to transfer up to nine credits for foundational for doctoral or post-master's coursework.

- Professionalism and Ethical Practice in Health Care (3)
- Evidence-Based Decision Making in Rehabilitation Science (3)
- Foundations of Systems-Based Practice (3)

Core Curriculum - 15 Credits (Required for All Students)
All students complete foundational courses in interprofessional rehabilitation science competencies.

- Personal Leadership Development (3)
- Communication and Collaboration for Healthcare Leaders (3)
- Foundations of Learning Science: Evidence-Based Strategies for Healthcare Professionals (3)
- Data Analysis: Quantitative, Qualitative, or Mixed Methods (minimum of 2 courses/6 credits, taken in collaboration with BSPH)

Advanced Rehabilitation Science: Area(s) of Interest & Electives – 21 Credits (9 Credits Transfer Eligible)
Students select courses based on professional goals and interests. Students may petition to transfer up to nine credits for post-doctoral coursework and/or training.

Education Track
- Educating Tomorrow's Health Care Leaders (3)
- Principles of Health Professions Education (3)
- Designing Effective Clinical Education Programs (3)
- Managing Health Professions Education Programs (3)

Leadership Track
- Leadership in Healthcare: Driving Innovation (3)
- Health Systems, Policy, and Management (3)
- Strategic Leadership in Healthcare Education and Practice (3)
- Quality Improvement in Healthcare Systems (3)

Clinical Research Track
- Introduction to Clinical Research for Healthcare Providers (3)
- Conducting Research in Clinical Settings (3)
- Using Research to Improve Clinical Practice (3)
- Next-Generation Rehabilitation Science (3)

Advanced Practice (aligned with existing JHM rehab residency & fellowship specialty areas)
- Advanced Acute Care Rehabilitation Science (3)
- Advanced Pediatric Rehabilitation Science (3)

- Advanced Neurological Rehabilitation Science (3)
- Advanced Critical Care Rehabilitation Science (3)
- Advanced Sports Rehabilitation Science (3)
- Advanced Orthopaedic Rehabilitation Science (3)
- Advanced Women's Health Rehabilitation Science (3)
- Advanced Geriatric Rehabilitation Science (3)
- Advanced Mental Health Rehabilitation Science (3)
- Advanced Pain Science in Rehabilitation (3)
- Advanced Rehabilitation for Performing Artists (3)
- Advanced Rehabilitation for Limb Loss (3)
- Advanced Rehabilitation for Wound Care (3)
- Advanced Hand Therapy Rehabilitation Science (3)

Doctoral Capstone (9 Credits – Required for All Students)
Students complete a doctoral dissertation or capstone project tailored to their area of interest. Examples include but aren't limited to: (1) **Education Focus**: Create and implement a program assessment plan for an innovative health professions education curriculum. (2) **Leadership Focus:** Create and execute a strategic plan for healthcare innovation or leadership. (3) **Clinical Research Focus**: Conduct and publish original research addressing a clinical question or challenge.

- Doctoral Capstone I (3)
- Doctoral Capstone II (3)
- Doctoral Capstone III (3)

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

Not applicable.

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.

A full description of the program, including its purpose and expected outcomes, admission requirements, course and degree requirements, tuition and fees, with links to general medical school and university websites with more information on academic support and financial aid support services will be provided on our website.

Organization & Governance

Johns Hopkins School of Medicine is made up of 30 Departments & Divisions. The Johns Hopkins Institute for Basic Biomedical Sciences includes nine basic science departments.

All of the graduate programs fall under the Vice Dean of Education in the School of Medicine. The Office oversees all the educational programs including the medical students, residents & clinical fellows, graduate students, postdoctoral research fellows, plus other learners in the School of Medicine. Offices supporting graduate education in the School of Medicine include the following:

- Office of Academic Computing
- Office of Assessment and Evaluation
- Office of Financial Affairs (Business Office)
- Office of Financial Aid
- Office of Graduate Student Affairs
- Office of Information Technology
- Office of the Registrar
- Professional Development and Career Office

Johns Hopkins School of Medicine is committed to investing in graduate education. Academic support websites include:

- Course catalog & course registration
- New Innovations
- Learning Management System
- Student Information System (SIS)
- SIS Course search
- Support: Office of Academic Computing
- Technology support
- Welch Library access
- Welch Informationists

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.

The description of the program on our website (once endorsement is received) will be listed as follows:

Doctor of Science (DSc) in Rehabilitation Science

The DSc in Rehabilitation Science will prepare experienced rehabilitation professionals for leadership roles in academia, clinical research, healthcare systems, and professional practice. The program integrates advanced coursework in rehabilitation science, education, leadership, and research methodology. Graduates will be equipped to advance the field through interdisciplinary collaboration, innovation, and scholarship.

Program
The program is designed for working rehabilitation professionals. The curriculum consists of core coursework, track-specific electives, and a capstone project. The DSc is structured to be completed in three to five years, with a flexible, hybrid format incorporating both online and in-person components.

Admission Requirements
- A minimum of a bachelor's degree in orthotics/prosthetics, physical therapy, occupational therapy, speech-language pathology, or a related discipline.
- A minimum of three years of clinical or professional experience.
- A personal statement outlining professional goals and interest in the program.
- Two letters of recommendation.

Tuition and Fees
$1,387/credit

Contact Information
For more information, prospective students can contact [name] at [email address] or [phone number].

H. Adequacy of Articulation

a. If applicable, discuss how the program supports articulation with programs at partner institutions. Provide all relevant articulation agreements.

Not applicable.

I. Adequacy of Faculty Resources

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 faulty member will teach in the proposed program.

The proposed Doctor of Science (DSc) in Rehabilitation Science will be housed within the Department of Physical Medicine and Rehabilitation (PMR) and will leverage a robust interprofessional network of distinguished faculty to deliver high-quality education, mentorship, and research opportunities.

Program Leadership
The program will be led by Dr. Kendra Gagnon, PhD, PT, who will serve as the Program Director and core faculty member. Dr. Gagnon is the Director of Rehabilitation Science Education and an Associate Professor in PMR at Johns Hopkins School of Medicine. She has extensive experience in rehabilitation science education, academic leadership curriculum development, and hybrid learning and has played a pivotal role in shaping innovative education models in health professions.

In addition to Dr. Gagnon, the program will have a core faculty team responsible for program administration, curriculum oversight, and research mentorship. Core faculty will be drawn from across the Johns Hopkins PMR department and will include individuals with terminal degrees in their

respective fields, advanced credentials (e.g. MBA), and/or doctoral preparation (PhD, EdD, DSc, or equivalent). All faculty will have expertise in rehabilitation education and a strong record of scholarly contributions. The program will also engage adjunct faculty and advisors from relevant disciplines to support specialized content areas.

Faculty Expertise and Interprofessional Collaboration
The Johns Hopkins PMR department is home to approximately 140 faculty members spanning multiple rehabilitation disciplines, including:

- Physiatry (physicians specializing in rehabilitation medicine)
- Rehabilitation psychology
- Physical therapy (PT)
- Occupational therapy (OT)
- Speech-language pathology (SLP)
- Orthotics and prosthetics (O&P)

These faculty members bring expertise across a broad range of rehabilitation subspecialties, including:

- Neurologic, orthopedic, sports, acute care, and pediatric rehabilitation
- Pain management, limb loss care, wound care, ICU rehabilitation, cardiovascular rehabilitation, and performing arts medicine
- Geriatrics, women's health, mental health, and brain injury rehabilitation
- Health policy, quality improvement, rehabilitation management, academic leadership, and faculty development
- Post-professional residency and fellowship training

The DSc in Rehabilitation Science will leverage these faculty experts and affiliated residency and fellowship programs to deliver high-quality, interprofessional education and research training.

Faculty Oversight and Governance
The program will have multiple layers of faculty governance, ensuring rigorous oversight and continuous quality improvement:

- Core Faculty Team – Responsible for program administration, curriculum delivery, and student advising.
- Interprofessional Advisory Committee – Comprised of faculty from multiple disciplines, this committee will oversee program development, interdisciplinary collaboration, and annual program evaluation.
- Affiliated Faculty – Engaged as needed to provide content expertise and student advisement in specialized areas of rehabilitation science.

Faculty Plan

The table below provides a summary of faculty who will have teaching roles in the DSc program.

Faculty	Highest degree	Discipline/field	Specialty & focus	Title/rank	Status
Kendra Gagnon					
	PhD	Physical Therapy & Rehabilitation Science	Academic leadership, entry-level and post-professional education, pediatric practice	Associate Professor	Full
	Courses	• Professionalism and Ethical Practice in Healthcare • Educating Tomorrow's Healthcare Leaders Managing Health Professions Education Programs • Strategic Leadership in Healthcare Education and Practice			
Mary Austin					
	DPT	Physical Therapy	Women's health physical therapy, residency education, clinical research, entrepreneurship	Assistant Professor	Full
	Courses	• Evidence-Based Decision Making in Rehabilitation Science • Personal Leadership Development • Principles of Health Professions Education • Capstone co-director (Capstone 1, 2, & 3)			
Eric Stewart					
	DPT	Physical Therapy	Acute care, entry-level and post-professional education, clinical education	Assistant Professor	Full
	Courses	• Foundations of Systems-Based Practice • Foundations of Learning Science: Evidence-Based Strategies for Healthcare Professionals • Designing Effective Clinical Education Programs • Capstone co-director (Capstone 1, 2, & 3)			
Ryan Cummings					
	DPT	Physical Therapy	Orthopaedic practice	Instructor	Part
	Courses	• Advanced Practice Coordinator: Ortho, Sports, Pediatrics, Women's Health, Geriatric, Pain Science, Performing Arts, Hand Therapy			
Kelly Daley					
	PT, MBA	Physical Therapy, Health Informatics	Clinical informatics	Assistant	Part
	Courses	• Quality Improvement in Healthcare Systems			

Faculty	Highest degree	Discipline/field	Specialty & focus	Title/rank	Status
Mark Hopkins					
	PT, MBA	Physical Therapy, CPO	Prosthetics & orthotics, business management, healthcare leadership	Instructor	Part
	Courses	• Leadership in Healthcare: Driving Innovation • Advanced Rehabilitation for Limb Loss			
Sowmya Kumble					
	MPT	Physical Therapy	Neurologic practice	Assistant	Part
	Courses	• Advanced Practice Coordinator: Acute, Neuro, Critical Care, Mental Health, Wound Care			
Annette Lavezza					
	OTR/L	Occupational Therapy	Acute care, healthcare management	Assistant	Part
	Courses	• Health Systems, Policy, and Management			
Kevin McLaughlin					
	DPT	Physical Therapy	Orthopedic practice, manual therapy, clinical research	Assistant	Part
	Courses	• Conducting Research in Clinical Settings			
Rajani Sebastian					
	PhD	SLP	Research (poststroke aphasia, brain imaging, & language processing)	Assistant	Full
	Courses	• Introduction to Clinical Research for Healthcare Providers			
Preeti Raghavan					
	MBBS	Physiatry	Research (stroke rehabilitation)	Associate	Full
	Courses	• Using Research to Improve Clinical Practice			
Ryan Roemmich					
	PhD	Human movement scientist	Engineering, clinical gait analysis, neuroscience	Associate	Full
	Courses	• Next Generation Rehabilitation			
Nicole Schechter					
	PsyD	Rehab psychology	Provider-patient communication	Associate	Full
	Courses	• Communication and Collaboration for Healthcare Leaders			

Additional faculty with rehabilitation backgrounds who may contribute to the program via guest lectures, student advisement, etc.:

- Nicole Frost (SLP)
- Michael Friedman (PT)
- Kelly Casey (OT)
- Therese Cole (SLP)
- Andrea Lasner (PT)
- Brian Ebel (ATC – Orthopedics)
- Jennifer Millar (PT)
- Paul Ricard (PT)
- Gabrielle Steinhorn (PT)
- Donna Tippett (SLP)
- Robert Walsh (OT)
- Jennifer Zanni (PT)
- Marlis Gonzalez Fernandez, MD, PhD (Physiatry)

Faculty who have expressed interest in serving on the program's interprofessional advisory committee include:

- Kendra Gagnon (PT, Chair)
- Steve Wegener (Rehab Psychology)
- Tracy Friedlander (Medicine)
- Brian Ebel (ATC)
- Annette Lavezza (OT)
- Mark Hopkins (O&P)
- Rajani Sebastian (SLP)

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

Johns Hopkins University provides comprehensive faculty development programs to ensure excellence in teaching and student engagement. Faculty in the DSc program will receive ongoing pedagogy training through:

- The Office of Online Education, the Office of Assessment and Evaluation, and the Office of Information Technology, which provide instructional technology training, course design support, and pedagogical best practices for online instruction.
- Dedicated instructional designers who collaborate with faculty to develop high-quality, evidence-based courses that align with program objectives and best practices in student learning.
- The Institute for Excellence in Education, which offers training on improving teaching, fostering research and scholarship in education, and recognizing excellence in education.
- Mentor training provided by the Office of Faculty Development, ensuring that all faculty supervising graduate students are well-prepared for effective mentorship and academic oversight.

Faculty performance will be regularly assessed through student evaluations, peer reviews, and department oversight to ensure adherence to best practices in pedagogy and student engagement.

b. The learning management system

Johns Hopkins University utilizes Canvas as its Learning Management System (LMS). Faculty have multiple opportunities to receive training in Canvas and online pedagogy through institutional resources and structured support mechanisms.

Faculty developing and delivering courses in the DSc program will:

- Receive training in Canvas through a series of workshops, self-paced online resources, and live webinars.
- Work directly with an instructional designer to structure courses in Canvas, ensuring alignment with best practices in online and hybrid education.
- Receive ongoing support in using integrated learning technologies within Canvas, including discussion boards, assignments, quizzes, and interactive multimedia tools.
- Engage in faculty development programs that focus on student engagement, motivation, and community-building strategies in a hybrid graduate learning environment.

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

Johns Hopkins University is committed to providing faculty with the resources and training necessary to ensure excellence in distance education. Faculty in the DSc program will receive ongoing training in evidence-based best practices for online and hybrid teaching through:

- Classroom instruction on teaching online, an assigned instructional designer, and access to dedicated technical support.
- Structured learning opportunities through the Institute for Excellence in Education (IEE), which offers online courses, educational Grand Rounds, in-person workshops, and a Summer Teaching Camp.
- One-on-one instructional design support to guide faculty through course development, ensuring alignment with evidence-based distance education methodologies.
- Training on distinguishing between classroom, hybrid, and fully online instruction, with a focus on designing engaging and effective learning experiences in the online environment.
- Access to additional professional development opportunities, including the Coursera course, “Excellence in Online Teaching”, developed by Johns Hopkins, which faculty can enroll in at no cost to enhance their expertise in online pedagogy.

By integrating these best practices into faculty development, Johns Hopkins ensures that faculty are well-prepared to deliver high-quality, engaging, and research-based instruction in online and hybrid formats.

J. Adequacy of Library Resources

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

The Welch Medical Library (http://welch.jhmi.edu/) serves the faculty, students, and staff of the SOM, the School of Nursing, the Bloomberg School of Public Health, and the Johns Hopkins Health System and its hospitals. The Welch Service Center provides in-person circulation and document retrieval, reference and searching assistance, and reserves services. Informationists offer a variety of professional tailored services, including individual and group consultations, searching-from general reference and evidence-based precision to full-scale systematic review participation citation management; curriculum, classroom, and online instruction; and collaborations on grants and research projects from beginning to end, as they evolve. Informationists are experts at navigating the publishing landscape to respond to complex requests related to research impact, scholarly output, and dissemination.

The library collects current scholarly information that supports the research, clinical, administrative, and educational needs of the Johns Hopkins School of Medicine, School of Nursing, School of Public Health, and Health System. Because the library's emphasis is on providing materials at the point of need, the collection is primarily in electronic format. It covers health, the practice of medicine and related biomedical and allied health care disciplines, public health and related disciplines, nursing, research literature, methodological literature, reviews or state-of-the-art reports, and in-depth, authoritative analyses of areas influencing biomedicine and health care. The Welch online collection includes more than 7,200 electronic journals, over 400 databases, more than 13,000 e-books, and more than 2,500 videos.

The collections accessible to students and faculty are not only those licensed directly by the Welch Medical Library, but also licensed by all the libraries at Johns Hopkins including the university library (the Sheridan Libraries). Students and faculty have access to both the print and online collections of the collective Johns Hopkins libraries including over 150,000 journals and just under a million e-books. Consortia agreements and a robust network of medical and other libraries allows for access to additional content through interlibrary loan and document delivery services. As part of the course design process, instructional designers from the Office of Online Education coordinate with Welch Library Informationists and faculty to make reading materials accessible in Canvas via e-reserves. This ensures that students have access to course readings directly within their Canvas course site.

K. Adequacy of Physical Facilities, Infrastructure, and Instructional Equipment

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.

The DSc in Rehabilitation Science is a hybrid program with limited in-person components. Didactic coursework will be delivered online, utilizing Canvas and Zoom for synchronous and asynchronous learning.

Onsite experiences will take place at Johns Hopkins School of Medicine (SOM). These will include:

- In-person professional development sessions
- Research presentations and workshops
- Interdisciplinary networking opportunities

Faculty and student support services, including faculty offices, administrative support, and library access, are fully available through the existing resources of Johns Hopkins University.

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

Students enrolled in this program will have access to all central information technology (IT) resources available to on-campus students. This includes a Microsoft 365 account, including email capabilities, online storage, and other tools for collaboration. The email account is accessible from a variety of browsers on both Mac and PC. Central IT already supports remote access for faculty, staff, and students, and provides other resources for connectivity from offsite locations. Students in the School of Medicine are assigned an individual email account with an "@jhu.edu" address before their first day of class begins. Furthermore, this email account can be integrated with the Outlook mobile app on Android and iPhone mobile devices so students can access their email via their phone, if they prefer.

b. A learning management system that provides the necessary technological support for distance education

The School of Medicine (and all of Johns Hopkins University apart from the School of Public Health) uses Canvas for their learning management system (LMS). An LMS is used by students and instructors to create, distribute, and access course materials, submit assignments, and interact with others involved in the course. According to Instructure:

> *Canvas LMS is an open and reliable web-based software that allows institutions to manage digital learning, educators to create and present online learning materials and assess student learning, and students to engage in courses and receive feedback about skill development and learning achievement.*

Used by 34% of institutions nationwide, Canvas is the leading LMS provider in higher education today. Canvas boasts an uptime of 99.9%, ensuring a reliable and consistently accessible experience for students. Canvas includes a web-based platform, as well as mobile access via several applications.

Various learning technologies are integrated with SOM's instance of Canvas to provide a richer learning experience. For example, the Ally Course Accessibility report guides instructors in building a more inclusive learning environment by identifying course content that does not meet accessibility standards and suggesting steps to fix known issues. Zoom video conferencing, used to facilitate synchronous online sessions between faculty and students, also integrates with Canvas and is supported by the Office of Information Technology. These systems provide password-protected online course sites that enable ongoing collaborative exchange and provide convenient channels for synchronous and asynchronous learning.

Canvas' course sites serve as the primary hub for course content, eliminating the need for students to search for or log in to multiple systems to locate or access their materials. Within a course site, students and faculty have access to all the tools necessary for meaningful distance education, including Panopto, a lecture/presentation recording application, Zoom videoconferencing, library materials via Ares e-reserves, and Microsoft OneDrive via Canvas Collaborations.

Students and faculty have access to multiple channels of support for using Canvas and its integrated technologies. Johns Hopkins Central IT provides a collection of video and text resources for students and faculty, via canvas.jhu.edu. A robust "Help" menu is also available once students and faculty are logged into Canvas, including options to view JHU Canvas Help Documentation, "Search the Canvas Guides", "Report a Problem", and "Ask Your Instructor a Question", among others. Students and faculty may submit requests for help to the SOM's Office of Information Technology (OIT) via email; these requests are triaged via OIT's Jira Service Management system, which allows issues to be quickly identified and assigned to the appropriate office/person for support. Moreover, instructions for accessing course support from OIT are posted on the front/welcome page of all Canvas course sites, making them easily visible to all students and faculty.

This program will be supported by the Office of Online Education (OOE), which includes a director, four instructional designers with remote learning expertise, an instructional technologist, and a multimedia specialist. The instructional designers provide expertise and support in rapidly recording, editing, and facilitating content development and ensure all materials meet requirements for accessibility. The OOE operates a professional-quality green screen studio to produce high quality pre-recorded lectures to facilitate online curriculum and has a second flexible studio space available, as well as the ability to conduct on-site recordings.

The OOE team is responsible for providing support to departments for their programs and for the Canvas LMS. The team works closely with faculty and staff on new and existing programs, centralizing information about online education and providing learning opportunities for instructors. Over the nine years the OOE has been in place, it has expanded from a single member supporting a few courses to supporting the entire School of Medicine in addition to its continuing education offerings. Through this experience, the team have been able to implement new software, technologies, workflows, infrastructure, and standards to all the courses.

L. Adequacy of Financial Resources with Documentation

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 Annual Enrollment					
Term	**August 2026**	**August 2027**	**August 2028**	**August 2029**	**August 2030**
Total	15	20	25	25	25

Projected Graduates					
Term	**May 2029**	**May 2030**	**May 2031**	**May 2032**	**May 2033**
Total	12	17	21	21	21

Table 1: Resources					
	Year 1 2026-2027	**Year 2 2027-2028**	**Year 3 2028-2029**	**Year 4 2029-2030**	**Year 5 2030-2031**
Allocated funds	$0	$0	$0	$0	$0
Tuition Revenue	$321,437	$706,305	$1,227,646	$1,475,221	$1,615,953
Students	15	32	54	63	67
Tuition	$1,387/credit	$1,428/credit	$1,471/credit	$1,515/credit	$1,561/credit
Fees	$11,100	$14,800	$18,500	$18,500	$18,500
Other sources	$250,129	$80,976	$0	$0	$0
Total	$582,666	$802,081	$1,246,146	$1,493,721	$1,634,453

Allocated funds: No reallocation of funds is necessary for this proposed program.

Tuition: The tuition rate for this program for year 1 is $1,387/credit hour, projected to increase 3% annually. The table above was constructed assuming students will have an average course load of 15 credits per year and complete an average of 45 credits at the SOM.

Fees: Matriculation fees are $740 per student, paid one time at the time of entry into the program. There are no additional fees associated with the DSc program. Students enrolled in online-only courses are not eligible for the JHU Student Health Insurance Plan.

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.

Table 2: Expenditures					
	Year 1 2026-2027	**Year 2 2027-2028**	**Year 3 2028-2029**	**Year 4 2029-2030**	**Year 5 2030-2031**
1. Faculty (b+c below)	$304,334	$362,510	$395,239	$418,352	$430,902
a. Number of FTE	1.7	2.0	2.0	2.0	2.0
b. Total Salary	$227,115	$270,530	$294,955	$312,203	$321,569
c. Total Benefits	$77,219	$91,980	$100,285	$106,149	$109,333
2. Admin Staff (b+c below)	$131,119	$138,607	$142,765	$147,048	$151,459
a. Number of FTE	1.00	1.25	1.25	1.25	1.25
b. Total Salary	$97,850	$103,438	$106,541	$109,737	$113,029
c. Total Benefits	$33,269	$35,169	$36,224	$37,311	$38,430
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/lab supplies	$13,905	$14,322	$14,752	$15,650	$16,120
5. Library	$0	$0	$0	$0	$0
6. New or Renovated Space	$0	$0	$0	$0	$0
7. Other Expenses	$161,118	$315,287	$411,788	$452,862	$460,183
Total (Add 1-7)	**$582,666**	**$802,081**	**$935,041**	**$1,003,067**	**$1,026,894**

1. Faculty: 1.7 FTE faculty at program launch, increasing to 2.0 FTE at full implementation. 3% estimated annual increase on base salary. Annual fringe estimated at 34%.
2. Admin support: 1.25 FTE administrative staff. 2% estimated annual merit increase on base salary. Annual fringe estimated at 34%.
3. Support staff: No additional support staff. All administrative support is captured in item 2.
4. Technical support: Includes program equipment and supplies and technology including program computers and AV equipment.
5. Library: Existing library facilities are sufficient to meet the needs of the program.
6. New or renovated spaces: Existing JHU facilities are sufficient to meet the needs of the program.
7. Other expenses: Includes adjunct faculty pay, program marketing, and travel costs.

M. Adequacy of Provisions for Evaluation of Program

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

Students will complete an evaluation for each course, including evaluation of the faculty teaching each course, at the end of each term. At the program level, the DSc program will administer an anonymous program evaluation survey to students annually and at program exit to assess student satisfaction and provide an opportunity for feedback related to program leadership, student support, admissions, curriculum, facilities, and learning environment (including the online experience/ component of the program). The program will consult with the Office of Assessment and Evaluation for the development, delivery, and analysis of all student surveys used to evaluate the program.

A Program Advisory Committee will assist the program director in periodically reviewing appropriate goals and learning domains, monitoring needs and expectations, and ensuring program responsiveness to change. The Advisory Committee may include representatives from each of the following communities of interest: students, graduates, faculty, administration, employers, and the public.

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.

Faculty will review the entire program annually to evaluate how the curriculum meets program objectives, and to consider modifications based on student course and program evaluations, and faculty recommendations.

Outcomes of the annual faculty curriculum review meeting and of student evaluations will be discussed with the program Advisory Committee. Student retention, satisfaction of students and faculty, and cost-effectiveness of the program also will be discussed.

N. Consistency with the State's Minority Student Achievement Goals

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

The community of Johns Hopkins is dedicated to promoting diversity and inclusion to allow everyone to achieve and maintain excellence. We firmly believe we can best foster excellence by recruiting and retaining a diverse student body, staff, and faculty through a respectful and supportive climate. This climate for cultural diversity and excellence is critical to attaining the best research, scholarship, teaching, health care, and other strategic goals of the Health System and the University. Taken together, these values are recognized and supported fully by the Johns Hopkins Institutions leadership at all levels. Further, we recognize that the responsibility for excellence, diversity, and inclusion lies within all of us at the Institutions: leadership, administration, faculty, staff, and students. Any students meeting the admissions requirements can apply to the program, which will work to help all accepted students reach their professional goals, an aim consistent with the State's minority student achievement goals. Financially disadvantaged or underrepresented candidates will be encouraged to apply and matriculate. They can request a waiver of the application fee.

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

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

The institution is approved by its institutional accreditor to offer distance education programs. Please see Statement of Accreditation Status at https://www.msche.org/institution/0168/.

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

JHSOM and the Johns Hopkins University comply with C-RAC guidelines for the Evaluation of Distance Education (on-line Learning). Johns Hopkins is a member of the State Authorization Reciprocity Agreement (SARA) and has received approval for delivering online education in all 50 states.

The School of Medicine *Master's and PhD Committee* provides internal oversight of the DSc program, ensuring programmatic alignment with the School's mission to "educate medical students, graduate students, and postdoctoral fellows in accordance with the highest professional standards; to prepare clinicians to practice patient-centered medicine of the highest standard; and to identify and answer fundamental questions in the mechanisms, prevention, and treatment of disease in health care delivery and in the basic sciences."

The SOM uses the Canvas learning management system. Each course has its own course site, and course coordination is provided by the program staff. The Office of Online Education (OOE) provides expertise on pedagogy, instructional design, and multimedia production, working with faculty and staff to transition in-person courses to an online format, with a focus on utilizing Canvas more effectively. Blackboard Ally has been implemented within Canvas to create a learning environment that is more inclusive and accessible. Additional expertise is available through Office of Assessment and Evaluation, which can provide expertise on evidence-based practices to use when evaluating programs and assessing learning outcomes.

Appendix A. Course List and Descriptions

Foundations of Rehabilitation Science

This series of courses provides foundational knowledge for rehabilitation science, addressing professionalism, evidence-based practice, and systems-based healthcare.

- **ME.716.nnn – Professionalism and Ethical Practice in Health Care (3 credits)**
  This course introduces the principles of professionalism, ethics, and integrity in healthcare. Students will explore ethical dilemmas, legal responsibilities, and professional standards. The course also focuses on how professionalism manifests in day-to-day healthcare practice and how healthcare providers can balance patient care with ethical decision-making.
- **ME.716.nnn – Evidence-Based Decision Making in Rehabilitation Science (3 credits)**
  This course focuses on integrating evidence-based practices into clinical decision-making. Students will learn how to evaluate research, apply it in clinical practice, and use clinical reasoning to justify decisions. The course emphasizes continuous learning and staying current with emerging research.
- **ME.716.nnn – Foundations of Systems-Based Practice (3 credits)**
  This course introduces students to the basic structure and function of healthcare systems. It provides a foundational understanding of how healthcare systems operate, how care is delivered and financed, and the roles that different healthcare professionals play within these systems. The course also covers the fundamentals of navigating healthcare systems to improve patient outcomes and address system inefficiencies.

Core Curriculum

These courses provide foundational competencies in rehabilitation science, leadership, and education.

- **ME.716.nnn – Personal Leadership Development (3 credits)**
  This course focuses on personal and professional leadership development. Students will conduct self-assessments to evaluate strengths, areas for growth, and leadership potential. The course culminates in the development of a professional development plan that aligns with long-term career and leadership goals.
- **ME.716.nnn – Communication and Collaboration for Healthcare Leaders (3 credits)**
  This course covers communication strategies for healthcare leaders, focusing on therapeutic communication, conflict resolution, and effective team communication. Students will learn to build rapport with patients and team members, foster open communication, and resolve conflicts in high-stress healthcare environments.
- **ME.716.nnn – Foundations of Learning Science: Evidence-Based Strategies for Healthcare Professionals (3 credits)**
  This course provides students with evidence-based strategies drawn from learning science that they can apply both to their own professional development and to teaching others. The focus is on using proven learning techniques to enhance personal study habits, educate patients, and mentor colleagues or students in clinical settings.
- **Data Analysis: Quantitative, Qualitative, or Mixed Methods (minimum of 2 courses/6 credits, taken at Johns Hopkins Bloomberg School of Public Health)**

Advanced Rehabilitation Science: Areas of Interest & Electives

Students select courses based on professional goals and interests. Up to 9 credits may be transferred for post-doctoral coursework and/or training.

Education Track

- **ME.716.nnn – Educating Tomorrow's Health Care Leaders (3 credits)**
  This course provides an overview of higher education systems and the skills required to navigate academic roles, from faculty to institutional leadership. Students will gain insights into the roles and responsibilities involved in educational leadership and how to advance within academic settings.
- **ME.716.nnn – Principles of Health Professions Education (3 credits)**
  This course introduces students to the principles of health professions education, focusing on curriculum development, assessment, and evaluation. Students will learn how to design, develop, and implement educational programs that meet accreditation standards and foster student success.
- **ME.716.nnn – Designing Effective Clinical Education Programs (3 credits)**
  This course covers the design and administration of clinical education programs, with an emphasis on experiential learning and student mentorship. Students will learn how to design clinical education programs that meet accreditation requirements and provide meaningful learning experiences for students.
- **ME.716.nnn – Managing Health Professions Education Programs (3 credits)**
  This course focuses on the administration of health professions education programs, including accreditation, faculty development, and student affairs. Students will learn strategies for managing educational programs, navigating institutional policies, and ensuring program quality.

Leadership Track

- **ME.716.nnn – Leadership in Healthcare: Driving Innovation (3 credits)**
  This course focuses on leadership theory and strategies for fostering innovation in healthcare. Students will learn how to lead change initiatives, foster a culture of innovation within their teams, and navigate complex leadership challenges in dynamic healthcare environments.
- **ME.716.nnn – Health Systems, Policy, and Management (3 credits)**
  This course explores healthcare policy and systems management, providing students with the tools to navigate and improve healthcare systems. Students will learn how health policies affect clinical practice, how to advocate for policy changes, and how to manage healthcare resources effectively.
- **ME.716.nnn – Strategic Leadership in Healthcare Education and Practice (3 credits)**
  This course focuses on strategic leadership in healthcare and education, preparing students to develop and implement long-term strategies for success.
- **ME.716.nnn – Quality Improvement in Healthcare Systems (3 credits)**
  This course focuses on implementing quality improvement initiatives in healthcare settings. Students will learn how to assess key drivers of healthcare quality, implement quality improvement methodologies, and evaluate the impact of improvement efforts.

Clinical Research Track

- **ME.716.nnn – Introduction to Clinical Research for Healthcare Providers (3 credits)**
  This course provides an introduction to clinical research, focusing on research design, methodologies, and ethical considerations. It is designed for clinicians who want to engage in research as part of their practice.
- **ME.716.nnn – Conducting Research in Clinical Settings (3 credits)**
  This course covers the logistics of conducting research in clinical environments. Participants will learn how to manage patient recruitment, collect and analyze data, and ensure compliance with research regulations while maintaining high standards of patient care.
- **ME.716.nnn – Using Research to Improve Clinical Practice (3 credits)**
  This course focuses on applying research findings to clinical practice. Participants will learn how to critically evaluate research, present findings to colleagues, and integrate evidence-based research into their clinical decision-making processes.
- **ME.716.nnn – Next Generation Rehabilitation Science (3 credits)**
  This course explores cutting-edge trends, technologies, and scientific advancements in rehabilitation science. Topics include wearable technologies, robotics, artificial intelligence, regenerative medicine, virtual reality, and precision rehabilitation. Students will learn how to integrate these innovations into clinical practice to enhance patient outcomes and advance the field.

Advanced Practice

- **ME.716.nnn – Advanced Acute Care Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in acute care rehabilitation. Students will learn evidence-based approaches and current best practices in treating patients in acute care settings.
- **ME.716.nnn – Advanced Pediatric Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in pediatric rehabilitation. Students will learn evidence-based approaches and current best practices in treating pediatric populations.
- **ME.716.nnn – Advanced Neurological Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in neurological rehabilitation. Students will learn evidence-based approaches and current best practices in treating individuals with neurological disorders.
- **ME.716.nnn – Advanced Critical Care Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in critical care rehabilitation. Students will learn evidence-based approaches and best practices in treating patients in intensive care settings.
- **ME.716.nnn – Advanced Sports Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in sports rehabilitation. Students will learn evidence-based approaches and current best practices in treating athletic injuries and optimizing performance.

- **ME.716.nnn – Advanced Orthopaedic Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in orthopaedic rehabilitation. Students will learn evidence-based approaches and current best practices in treating musculoskeletal conditions.
- **ME.716.nnn – Advanced Women's Health Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in women's health rehabilitation. Students will learn evidence-based approaches and current best practices in addressing pelvic health, pregnancy, and postpartum conditions.
- **ME.716.nnn – Advanced Geriatric Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in geriatric rehabilitation. Students will learn evidence-based approaches and current best practices in addressing age-related mobility and functional limitations.
- **ME.716.nnn – Advanced Mental Health Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in mental health rehabilitation. Students will learn evidence-based approaches and current best practices in integrating psychological and physical rehabilitation.
- **ME.716.nnn – Advanced Pain Science in Rehabilitation (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in pain science rehabilitation. Students will learn evidence-based approaches and current best practices in assessing and managing complex pain conditions.
- **ME.716.nnn – Advanced Rehabilitation for Performing Artists (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in rehabilitation for performing artists. Students will learn evidence-based approaches and current best practices in treating movement and performance-related injuries.
- **ME.716.nnn – Advanced Rehabilitation for Limb Loss (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in rehabilitation for limb loss. Students will learn evidence-based approaches and current best practices in optimizing mobility and function for individuals with amputations.
- **ME.716.nnn – Advanced Rehabilitation for Wound Care (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in wound care rehabilitation. Students will learn evidence-based approaches and current best practices in the treatment and prevention of complex wounds.
- **ME.716.nnn – Advanced Hand Therapy Rehabilitation Science (3 credits)**
  This course presents key competencies and foundational knowledge for advanced practice in hand therapy rehabilitation. Students will learn evidence-based approaches and current best practices in treating upper extremity conditions.

Capstone Project

The capstone sequence provides students with the opportunity to apply their knowledge and skills to a scholarly project relevant to rehabilitation science.

- **ME.716.nnn – Doctoral Capstone I: Proposal Development (3 credits)**
  Students will identify a research question, conduct a literature review, and develop a project proposal under faculty mentorship.
- **ME.716.nnn – Doctoral Capstone II: Project Implementation (3 credits)**
  In this course, students will collect and analyze data, applying research principles to address a real-world rehabilitation problem.
- **ME.716.nnn – Doctoral Capstone III: Dissemination and Impact (3 credits)**
  Students will complete their capstone project and present their findings through written and oral formats, contributing to the field of rehabilitation science.

Appendix B. Evidence of Compliance with the Principles of Good Practice (as outlined in COMAR 13B02.03.22C)

1. Curriculum and Instruction

a. A distance education program shall be established and overseen by qualified faculty.

The Doctor of Science (DSc) in Rehabilitation Science at Johns Hopkins University School of Medicine (JHUSOM) is established and overseen by highly qualified faculty with expertise in rehabilitation science, interprofessional education, and hybrid learning. Faculty members hold the terminal degree in their respective fields and/or advanced degrees or credentials (e.g., PhD, EdD, DSc, MBA, or clinical doctorates) aligned with their teaching responsibilities.

To ensure excellence in distance education, faculty oversight and governance are maintained through the following mechanisms:

- **Faculty qualifications and expertise**: Faculty are selected based on their academic background, research expertise, and professional leadership within rehabilitation sciences. Each faculty member possesses advanced clinical, academic, or leadership experience directly related to their instructional role.
- **Interdisciplinary collaboration**: The program includes faculty from physical therapy, occupational therapy, speech-language pathology, and other rehabilitation disciplines, fostering a multidisciplinary and interprofessional learning environment.
- **Training in hybrid and online education**: Faculty participate in ongoing professional development to ensure competency in distance education best practices. This includes training in pedagogical strategies, student engagement techniques, and technology-enhanced learning tools through the Johns Hopkins School of Medicine's Office of Online Education (OOE) and Johns Hopkins Center for Educational Resources (CER).
- **Curriculum oversight and program governance**: Faculty play an active role in program assessment, curriculum development, and course design to ensure alignment with national competency frameworks, best practices in hybrid education, and evolving professional standards.
- **Mentorship and student support**: Faculty serve as research advisors and professional mentors, guiding students through research projects, applied scholarship, and leadership development in rehabilitation science.

Through these measures, the DSc in Rehabilitation Science ensures faculty oversight that upholds academic excellence, innovation, and continuous quality improvement in distance education. The program is designed to maintain rigorous academic and professional standards, ensuring that students are prepared to advance the field of rehabilitation science through research, leadership, and practice.

b. A program's curriculum shall be coherent, cohesive, and comparable in academic rigor to programs offered in traditional instructional formats.

The curriculum of the Doctor of Science (DSc) in Rehabilitation Science program is designed to be comprehensive, integrated, and aligned with national standards in rehabilitation sciences education. The curriculum follows a competency-based model, ensuring graduates are well-prepared for leadership, research, and advanced practice roles across diverse rehabilitation disciplines.

To maintain the highest academic standards and rigor, the program is structured around key educational principles:

- **Curriculum design and alignment**: The program is designed using evidence-based instructional models, drawing from competency frameworks across rehabilitation professions. The curriculum includes didactic coursework, applied research experiences, and professional development modules that integrate across the domains of leadership, research, and interprofessional collaboration.
- **Hybrid learning model**: The DSc program utilizes a blended approach that incorporates asynchronous online coursework, synchronous virtual sessions, and in-person intensive experiences to create a flexible yet rigorous learning environment. This model ensures that students engage in active, experiential, and applied learning comparable to traditional doctoral programs.
- **Coherence and progression**: Courses are carefully sequenced to build upon foundational knowledge while reinforcing advanced competencies in rehabilitation science. The program follows a spiral curriculum structure, where key concepts are introduced, reinforced, and mastered through multiple learning modalities.
- **Comparability to traditional programs**: The academic rigor of the DSc program is ensured through the following mechanisms:
    - Course objectives and learning outcomes are aligned with standards set by national and international organizations in rehabilitation sciences.
    - Student performance expectations are comparable to traditional doctoral programs, with assessments that evaluate both theoretical knowledge and applied research skills.
    - Faculty expertise and engagement ensure high-quality instruction and mentorship throughout the program.
    - Security and integrity in assessment are maintained through a combination of exams, competency-based evaluations, and scholarly project defenses.
    - Student support services, including academic advising, library resources, and technology assistance, are available to all students, mirroring the resources provided to traditional in-person programs.

The curriculum is developed and regularly reviewed by faculty, industry experts, and educational specialists to ensure that it remains current, cohesive, and aligned with best practices in distance education and rehabilitation sciences.

c. A program shall result in learning outcomes appropriate to the rigor and breadth of the program.

The Doctor of Science (DSc) in Rehabilitation Science program is designed to produce graduates with advanced competencies in research, leadership, and interprofessional collaboration in rehabilitation sciences. The program's learning outcomes are structured to ensure students achieve a high level of expertise across multiple domains, including scientific inquiry, critical thinking, and evidence-based practice.

The learning outcomes for the DSc program are developed based on national and international competency frameworks and are mapped to course objectives to ensure progression from foundational to advanced levels of mastery. The program emphasizes three core areas of learning:

- Scientific and research competencies, including advanced knowledge of rehabilitation science, study design, and data analysis.
- Leadership and professional competencies, ensuring graduates are prepared to lead teams, contribute to policy, and advance rehabilitation practice.
- Interprofessional collaboration and systems-based practice, equipping students with skills to work effectively across healthcare disciplines.

Program faculty, who have expertise in rehabilitation sciences, education, and research, develop course objectives and learning outcomes in consultation with key stakeholders, including rehabilitation professionals, educators, and clinical mentors. This ensures alignment with current professional standards and workforce needs.

d. A program shall provide for appropriate real-time or delayed interaction between faculty and students.

The Johns Hopkins DSc program will be housed and delivered within Canvas, JHU's learning management system. All students and faculty will also have full access to Zoom and the Microsoft 365 suite of online productivity tools, including Outlook email and Microsoft Teams. These platforms support both synchronous and asynchronous interaction text- and video-based interaction between and among faculty and students.

e. Faculty members in appropriate disciplines in collaboration with other institutional personnel shall participate in the design of courses offered through a distance education program.

The development of all courses in the Doctor of Science (DSc) in Rehabilitation Science program is a collaborative effort between faculty and institutional personnel to ensure high-quality course design and delivery. Course development is overseen by faculty members with expertise in rehabilitation science, education, and research, along with instructional designers and technology specialists.

Each course is led by one or more faculty members who hold the terminal degree in their field and/or advanced degrees or credentials relevant to their teaching responsibilities. These faculty members are responsible for designing course content, assessments, and instructional activities that align with program learning outcomes.

Faculty work in collaboration with:

- **Instructional design experts** from the School of Medicine's Office of Online Education, who provide guidance on best practices in online and hybrid education, including accessibility, engagement, and assessment strategies.
- **Technology support personnel** who assist with implementing digital tools, ensuring course functionality within the university's learning management system (LMS), and troubleshooting any technical challenges.
- **Interprofessional education faculty** who contribute expertise from various rehabilitation disciplines to ensure the curriculum reflects contemporary, evidence-based, and interdisciplinary approaches to rehabilitation science.

Faculty members also participate in required training on online course development and best practices in digital pedagogy. This training, facilitated by the Office of Online Education, covers instructional strategies for engaging students in virtual environments, designing competency-based assessments, and utilizing technology to enhance learning.

Through this structured and collaborative approach, the DSc in Rehabilitation Science ensures that all courses are developed using evidence-based instructional design principles and meet the highest standards of academic rigor, accessibility, and student engagement in a distance education format.

2. Role and Mission

a. A distance education program shall be consistent with the institution's mission.

Refer to Section A.1 in the main body of the proposal.

b. Review and approval processes shall ensure the appropriateness of the technology being used to meet a program's objectives.

The development and delivery of online courses in the DSc in Rehabilitation Science program are supported by the School of Medicine's Office of Online Education (OOE), which provides faculty with resources for instructional design, educational technology, and online course development.

Each online course follows a structured review and approval process to ensure that learning technologies align with program objectives and enhance student engagement. The key components of this process include:

- **Instructional design support**: Each course is assigned an instructional designer who collaborates with faculty to integrate best practices in online teaching, active learning strategies, and technology-enhanced instruction.
- **Course design review**: Courses undergo multiple review cycles by instructional designers and program leadership to ensure that the technology and instructional methods are appropriate for the course objectives.
- **Ongoing technology evaluation**: The learning management system (LMS) and digital tools used in the program are continuously evaluated for effectiveness, accessibility, and ease of use.

- **Faculty and student feedback**: Online courses include a mid-term and end-of-term evaluation process where students provide feedback on course design, technology use, and overall learning experience. Faculty collaborate with instructional designers to refine courses based on this feedback.
- **Continuous monitoring and improvement**: After course launch, the instructional design team continues to monitor performance and student engagement, making data-driven adjustments as needed to optimize the learning experience.

This structured quality assurance process ensures that the DSc program meets Johns Hopkins' rigorous educational standards and provides an effective, engaging learning experience for students in a distance education environment.

3. Faculty Support

a. An institution shall provide for training for faculty who teach with the use of technology in a distance education format, including training in the learning management system and the pedagogy of distance education.

Faculty support for the development of online courses is provided by several offices, including the Office of Online Education, the Office of Assessment and Evaluation, and the Office of Information Technology.

All faculty will have multiple opportunities to receive training in the learning management system and pedagogy of online learning. These training opportunities are offered throughout the year in various formats, including workshops, webinars, and instructional guides. Once an instructor has been identified to develop an online course, they are given access to a set of web-based resources covering a broad range of topics on online pedagogy, use of instructional technologies, and learning management system tutorials. Throughout the online course development, the instructor receives direct support and guidance from their assigned instructional designer on a variety of online learning-related topics.

b. An institution shall provide for training for faculty who teach with the use of technology in a distance education format, including training in the learning management system and the pedagogy of distance education.

As described in the previous section, faculty support services include classroom instruction on teaching online, an assigned instructional designer, teaching assistants, technical help desk support as well and extensive technical support for their specific course sites.

c. An institution shall provide faculty support services specifically related to teaching through a distance education format.

The School of Medicine's Office of Online Education provides a wide range of faculty support services for instructors engaged in online instruction. Instructors have access to multimedia specialists, instructional technologists, instructional designers, and other institutional support staff to assist them in their role as online instructors. Some of the services provided include instructional technology training, course design support, pedagogical best practices in online courses, learning management system training, course production support (such as recording studios), video production, and a faculty support help line and email.

In addition, there are learning opportunities available through the Institute for Excellence in Education (IEE), including online courses, educational Grand Rounds, and a Summer Teaching Camp.

d. An institution shall ensure that appropriate learning resources are available to students including appropriate and adequate library services and resources.

The students will have online access to the Welch Medical Library. Digital resources include access to over 20,000 journals and 1200 databases. The Welch Medical Library building is intended as a place for historical archives and as the home base for informationists and library administration. In addition to the resources available through the Welch Medical Library, students have access to collective Johns Hopkins libraries, which boasts almost a million e-books. The interlibrary loan department makes the research collection of the nation available to faculty and students. Many of the databases are accessible remotely. Librarians help students electronically and the library maintains an extensive web site to take visitors through all its services and materials.

4. Students and Student Services

a. A distance education program shall 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.

The School of Medicine (SOM) maintains numerous web-based resources to inform current and prospective students of the information they may need as online students. These resources include the JHUSOM main website (https://www.hopkinsmedicine.org/som/) and the JHUSOM online catalog, which provides detailed programmatic information, academic support services, financial aid, costs, policies, and specific information for online learning (https://e-catalogue.jhu.edu/medicine/.

As new students are admitted and enrolled, they will receive timely communications with essential information to help them prepare for online learning. These communications include instructions on creating their JHU login account, accessing productivity tools and course management systems, technical requirements, and available academic support services. Once students matriculate into the program, a student information center will be hosted in Canvas, where important information, resources, announcements, and updates will be posted.

b. A distance education program shall 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.

i. Academic Advising

Student advising, mentorship, and coaching will be carried out by the faculty. Upon matriculation into the program, students will be assigned a faculty advisor who will serve as their primary point of contact throughout the program. Advisors will support students in navigating academic and non-academic issues and career planning.

ii. Library Services

Students have online access to the Welch Medical which provides easy access to a wide selection of electronic information resources, including the library's online catalog, and numerous electronic abstracting and indexing tools. Many of the databases are accessible remotely. Librarians are available to assist students remotely and the library maintains an extensive web site to take visitors through all its services and materials.

iii. Services with Students with Disabilities

The Johns Hopkins University is committed to making all academic programs, support services, and facilities accessible to qualified individuals. Students with disabilities who require reasonable accommodations can contact the School of Medicine Disability Services Administrator.

iv. Johns Hopkins Student Assistance Program

The Johns Hopkins Student Assistance Program (JHSAP) is a professional counseling service that can assist students with managing problems of daily living. Stress, personal problems, family conflict, and life challenges can affect the academic progress of students.

JHSAP focuses on problem solving through short-term counseling. Accessing the service is a simple matter of a phone call to arrange an appointment with a counselor. Online students may call a phone number for consultation and will be directed to the appropriate resource or office. JHSAP services are completely confidential. The program operates under State and Federal confidentiality legislation and is HIPAA compliant.

v. Transcript Access.

Students may request electronic or paper transcripts through the Office of the Registrar via an online request form. There is no charge for transcripts ordered through the School of Medicine.

c. Accepted students shall have the background, knowledge, and technical skills needed to undertake a distance education program.

The rigorous, data-driven admissions process ensures students have suitable background knowledge to complete the program successfully. New online students are strongly encouraged to complete the "New Online Student Orientation" course prior to beginning their first online course. This course covers a broad range of topics on how to be a successful online student: online student learning expectations, how to access the library, how to conduct online research, and how to participate in online discussions.

d. Advertising, recruiting, and admissions materials shall clearly and accurately represent the program and the services available.

Once approved, the program will include program information on a program-specific website as outlined in the main proposal, section G9.

5. Commitment to Support

a. Policies for faculty evaluation shall include appropriate consideration of teaching and scholarly activities related to distance education programs.

Faculty teaching in the Doctor of Science (DSc) in Rehabilitation Science program will have their contributions to distance education formally recognized as part of their annual faculty evaluations. This includes assessing their effectiveness in online and hybrid instruction, as well as their engagement in scholarly activities related to distance learning.

Faculty recruited to develop and implement courses in the DSc program will demonstrate expertise in their subject areas and evidence of teaching effectiveness in hybrid and online learning environments. The evaluation process will consider:

- Teaching effectiveness in distance education, as assessed through student evaluations, peer reviews, and course assessments.
- Engagement in scholarly activities related to online and hybrid learning, including publications, presentations, and innovations in digital education.
- Participation in professional development related to instructional technology and online pedagogy.

Institutional evaluation frameworks and best practices in distance education will guide the faculty evaluation process to ensure ongoing excellence in online teaching and learning.

b. An institution shall demonstrate a commitment to ongoing support, both financial and technical, and to continuation of a program for a period sufficient to enable students to complete a degree or certificate.

The DSc in Rehabilitation Science program is designed as a sustainable and long-term academic offering, with financial and technical resources allocated to support its success. The program benefits from institutional investment in faculty development, instructional technology, and student support services to ensure program stability.

Commitment to program continuation includes:

- Dedicated funding for program infrastructure, including faculty salaries, course development, and student support services.
- Ongoing technical support for faculty and students to ensure seamless access to digital learning resources.
- Regular program reviews to assess sustainability, student success, and evolving educational needs.

For additional details on financial and institutional support, please refer to sections K and L of the main body of the proposal.

6. Evaluation and Assessment

a. An institution shall evaluate a distance education program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

The Doctor of Science (DSc) in Rehabilitation Science program follows a comprehensive and continuous self-assessment process to ensure program effectiveness and improvement. The program will conduct an annual review of relevant data, including:

- Student learning outcomes assessment
- Student retention and progression data
- Student and faculty satisfaction surveys
- Resource evaluation (faculty, technology, library resources, and student services)
- Financial sustainability and cost-effectiveness analysis

Findings from these assessments will be summarized in a program assessment matrix, and data-driven improvements will be implemented as needed. The program will engage in ongoing evaluation to maintain academic excellence and enhance the student experience.

b. An institution shall demonstrate an evidence-based approach to best online teaching practices.

The DSc program faculty will build, implement, assess, and revise all online and hybrid courses with the support of the instructional design team through the Office of Online Education. All courses will be built using criteria and benchmarking tools from the Online Learning Consortium Quality Scorecard Suite. Course content, student evaluations, faculty feedback, student engagement data from the learning management system (e.g., student logins, length of time on quizzes/exams, student performance, etc.), and other relevant course data will be evaluated yearly, with course modifications implemented as needed.

c. An institution shall provide for assessment and documentation of student achievement of learning outcomes in a distance education program.

Please see sections G.3.a. and G.3.b. in the main body of the proposal for a detailed description of assessment and documentation of learning outcomes. As part of the course design process, all course assessments will be mapped to course learning objectives, which align with program learning outcomes.

Student achievement of learning outcomes will be assessed through:

- Competency-based evaluations and applied research projects
- Course grades documented within Canvas, the learning management system
- Formative and summative assessments throughout the program
- Capstone project and defense to demonstrate mastery of rehabilitation science competencies

A faculty-led Assessment Committee will oversee the program’s assessment matrix, ensuring that all program outcomes are reviewed annually to support continuous improvement and program accountability.