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December 22, 2020

Dr. James D. Fielder, Jr.
Secretary of Higher Education
Maryland Higher Education Commission
6 North Liberty Street
Baltimore, MD 21201

Secretary Fielder:

Maryland University of Integrative Health (MUIH) seeks approval for the enclosed new program, the Post-Baccalaureate Certificate in Culinary Health and Healing, beginning in Spring 2022. This new program falls within an existing program area (nutrition) at MUIH.

Please don't hesitate to contact me should you require additional information in considering this proposal.

A handwritten signature in black ink, appearing to read "Christina M. Sax".

Dr. Christina M. Sax
Provost and Vice President for
Academic and Student Affairs

Cc: Marc Levin, President and CEO, MUIH



Cover Sheet for In-State Institutions

New Program or Substantial Modification to Existing Program

Institution Submitting Proposal

Maryland University of Integrative Health

Each action below requires a separate proposal and cover sheet.

- | | |
|--|--|
| <input checked="" type="radio"/> New Academic Program
<input type="radio"/> New Area of Concentration
<input type="radio"/> New Degree Level Approval
<input type="radio"/> New Stand-Alone Certificate
<input type="radio"/> Off Campus Program | <input type="radio"/> Substantial Change to a Degree Program
<input type="radio"/> Substantial Change to an Area of Concentration
<input type="radio"/> Substantial Change to a Certificate Program
<input type="radio"/> Cooperative Degree Program
<input type="radio"/> Offer Program at Regional Higher Education Center |
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 Payment ☒ Yes
 Submitted: ☐ No

 Payment ☐ R*STARS
 Type: ☒ Check

 Payment \$850
 Amount:

Date Submitted: 12/14/20

Department Proposing Program	Nutrition and Herbal Medicine		
Degree Level and Degree Type	Post-Baccalaureate Certificate		
Title of Proposed Program	Culinary Health and Healing		
Total Number of Credits	12		
Suggested Codes	HEGIS: 131306.00	CIP: 513199.0000	
Program Modality	<input type="radio"/> On-campus <input checked="" type="radio"/> Distance Education (fully online)		
Program Resources	<input type="radio"/> Using Existing Resources <input checked="" type="radio"/> Requiring New Resources		
Projected Implementation Date	<input type="radio"/> Fall <input checked="" type="radio"/> Spring <input type="radio"/> Summer Year: 2022		
Provide Link to Most Recent Academic Catalog	URL: https://muih.edu/academics/office-of-the-registrar/academic-catalog/		

Preferred Contact for this Proposal	Name:	Christina Sax
	Title:	Provost and Vice President for Academic and Student Affairs
	Phone:	(410) 888-9048
	Email:	csax@muih.edu

President/Chief Executive	Type Name:	Marc Levin
	Signature:	Date: 12/21/20
		Date of Approval/Endorsement by Governing Board: 12/07/2020

Revised 4/2020

Maryland Higher Education Commission Proposal for New Instructional Program

Post-Baccalaureate Certificate in Culinary Health and Healing Maryland University of Integrative Health

Maryland University of Integrative Health (MUIH) proposes to add a new program, the Post-Bachelor's Certificate (PBC) in Culinary Health and Healing. This 12-credit program will be offered online and can be completed in two trimesters. The program is scheduled to begin in the spring 2022 trimester, pending approval by the Maryland Higher Education Commission.

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 mission of MUIH is: *MUIH promotes whole-person and community health and wellness through relationship centered integrative health education, care, and leadership.*

The vision of MUIH is: *MUIH is a global leader in advancing whole-person and community health and well-being.*

MUIH is a leading academic institution for integrative health. It is an accredited, private, non-profit university offering the most comprehensive array of graduate-level certificates, master's, and doctoral degrees in integrative health in the nation. MUIH focuses solely on a whole-person, relationship-centered care approach. Since 1974, MUIH has educated and informed practitioners and leaders in health and wellness through programs that draw from traditional wisdom and contemporary science. Graduate programs in acupuncture, Ayurveda, health and wellness coaching, health promotion, herbal medicine, narrative health, nutrition, workplace wellness, and yoga therapy are offered on-campus and online. As an anchoring academic institution for the emerging complementary and integrative health and wellness system in America, MUIH has an unduplicated fulltime equivalent headcount of 1065 students (Fall 2018 [IPEDS](#) reporting) and has awarded graduate credentials to more than 3,000 individuals across the U.S. and internationally. Student interns and professional practitioners provide compassionate and affordable healthcare through 20,000+ clinical visits annually in the on-campus Natural Care Center, and conventional healthcare and community outreach settings. The on-campus herbal dispensary formulates and compounds herbal preparations for local patients and practitioners, and for shipment across the U.S. MUIH conducts research in collaboration with leading national universities. Through scholarly publications and presentations nationally and internationally its faculty are recognized as experts in their field. MUIH offers a wide range of professional symposia and continuing education, community education, and outreach activities online and on-campus. MUIH alumni across the U.S. and internationally, provide affordable, high impact, and high-quality care in private practice, integrative group practices, conventional health care settings including VA and other hospitals, and mental health, addiction, pain, and rehabilitation centers, and community and corporate settings.

The addition of the proposed program extends MUIH's mission and vision by opening new avenues of academic study and employment in the fields of integrative health. MUIH is one of the few colleges and universities in the U.S. that focuses solely on integrative health and wellness. In addition, very few other colleges and universities in the U.S. offer degrees in integrative health and wellness fields. The proposed online PBC Culinary Health and Healing expands the options available for academic study in integrative health, nutrition, and culinary studies nationally.

The proposed PBC in Culinary Health and Healing educates students in the selection and preparation of whole foods as a foundation for health and wellness. Students learn scientifically based principles and practices of food selection and preparation and apply those skills to translate nutritional assessments and goals into personalized, family, and community meal plans. Students learn strategies for adapting meal plans based on specific health conditions, food sensitivities, and allergies as well as grocery budget and food availability. The program celebrates global cuisine and students explore multicultural and culturally specific meal plans. The role of the culinary educator in promoting healthy diets is investigated as well as how to partner with healthcare practitioners and a variety of clients to support health and healing through nutrition.

This 12-credit program is offered in the online format and can be completed in two trimesters. The program serves as both a standalone certificate and as a stackable certificate and pathway into the M.S. Nutrition and Integrative Health (MSNIH) program. This program uses both existing courses and requires some new course development; 11 of the 13 courses and 8 of the 12 credits are comprised of existing courses in the M.S. Nutrition and Integrative Health program. All faculty teaching in the program are current MUIH employees.

This program is designed for individuals who wish to promote health and wellness through the application of nutrition principles to whole foods cooking. The program is ideal for personal, specialty, and restaurant chefs, cooking blog writers, and others in culinary and hospitality fields who wish to enhance their skills and business through an emphasis on the diet-health connection and partnerships with nutrition professionals and other healthcare practitioners. It is also ideal for health and wellness coaches, community and health educators, nutritionists, dietitians, herbalists, Ayurveda practitioners, acupuncturists, yoga therapists, and other health care practitioners who wish to expand and diversify their professional practice and open additional career opportunities.

The proposed program helps to fill a national gap in the graduate educational needs of the emerging field of culinary medicine and culinary health and healing. To date, only one other graduate program in the field exists in the U.S. MUIH's program is unique in its focus is on whole foods cooking and holistic health and wellness.

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

The addition of the PBC in Culinary Health and Healing program supports MUIH's strategic goals, values and institutional principles. Since its founding, MUIH has been a pioneer and advocate in the national movement toward wellness, disease prevention, and patient- and relationship-centered health care. It is helping to lead the transformation of the U.S. healthcare delivery system through behavioral changes in consumer self-care and the services provided by conventional medical providers

and systems, by preparing MUIH graduates to become partners in health by educating, facilitating and coaching.

The creation of this program supports the goals and strategies outlined in MUIH's FY21-FY25 Strategic Plans:

Goal 1: Create dynamic opportunities for learning and success.

- Strategy 2: Enhance academic excellence, rigor, and quality
- Strategy 3: Develop a curriculum and learning environment grounded in principles of equity, diversity, and inclusion
- Strategy 5: Develop lifelong learning opportunities for alumni, professionals, and the public
- Strategy 6: Increase student retention and completion and new student enrollment

Goal 2: Promote health and wellness for individuals and communities.

- Strategy 3: Develop, assess, and disseminate interprofessional and integrative care models
- Strategy 5: Establish curriculum and outreach activities that address health care disparities

Goal 4: Propel MUIH to prominence as a leader in integrative health.

- Strategy 3: Be the integrative health university of choice for prospective students
- Strategy 5: Engage in public health, policy, advocacy, initiatives

This program complements MUIH's long-standing expertise in nutrition. MUIH has offered doctoral, master's and graduate certificate programs in nutrition since 2011. MUIH currently offers five graduate nutrition programs: Doctor of Clinical Nutrition, Master of Science in Nutrition and Integrative Health, Post-Master's Certificate in Nutrition and Integrative Health, Post-Master's Certificate in Nutritional Genomics in Clinical Practice, and Post-Baccalaureate Certificate in Sports Performance and Integrative Health. As with all MUIH disciplines, the program model is prevention and education oriented, nature-based, community-focused, and relationship-centered with an emphasis on establishing rapport with the client and developing a healing presence. Consistent with MUIH's mission to deliver innovative solutions for healthier living and career-oriented opportunities for students, the proposed program will continue to advance MUIH's leadership in the emerging health and wellness system.

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

Within MUIH's current and foreseen context, limited new resources specific to this new program are needed to fund and support it through its launch and through the first five years of its implementation. Based on the projected number of enrollments for the program, advising, student success, career services, registrar, student accounts, library, information technology, admissions, and financial aid support can be accommodated within MUIH's current staffing. Instructional needs can be accommodated within MUIH's current faculty complement. Modest program-specific resources are needed to develop and support the program in the form of new online course development; two of the thirteen courses in this program are new courses requiring development. One of these new course

developments, NUTR678 (2 cr), is an expansion of an existing course, NUTR686 (0.5 cr); a modest level of development is needed for this course since it builds on content from an existing course. The other new course development, NUTR680 (2 cr), requires full course development.

The Instructional Design Services unit's course development schedule and budget can accommodate the two new course developments that will be needed, given the small number of other new online programs and courses debuting during this time frame. Both new course developments will occur in the spring 2022 trimester, in preparation for them to be offered for the first time in summer 2022, trimester 2, of the program.

4. Provide a description of the institution's commitment to a) ongoing administrative, financial, and technical support of the proposed program, and b) continuation of the program for a period of time sufficient to allow enrolled students to complete the program.

This new program will be housed in the existing Nutrition and Herbal Medicine department which supports approximately 540 students annually (385 nutrition and 156 herbal medicine, fall 2020); an additional 6 students are projected for the PBC culinary Health and Healing program during the first year. MUIH has dedicated academic, administrative, faculty, and advising personnel, as well as instructional materials and facilities, marketing, recruiting, and additional general student affairs and administrative resources to this department. This is a stable department that currently administers nine programs: Doctor of Clinical Nutrition, MS Nutrition and Integrative Health, MS Clinical Herbal Medicine, MS Herbal Product Design and Manufacture, PMC Nutrition and Integrative Health, PMC Nutritional Genomics in Clinical Practice, PBC Sports Performance and Integrative Nutrition, PBC Herbal Studies, and PBC Cannabis Science: Therapeutics, Product Design, and Quality Assurance. Dedicated nutrition resources and infrastructure have been included in MUIH's budget on an ongoing basis since academic year 2010-2011; the existing budget division will continue and support the new program, and it will continue to be included in the University's standard annual budget planning process. The program will be overseen and administered by its existing Chair, Department Manager, and program curriculum committee. The two existing dedicated Academic Advisors from Student Affairs will support students in the current nutrition programs and the proposed PBC Culinary Health and Healing program. Courses will be staffed by a combination of existing salaried faculty and existing adjunct faculty (see Section I for additional details). The new program will be included in the centralized support provided to all programs by the Registrar's Office, Student Affairs, Financial Aid, Library, Information Technology Services, Instructional Design Services, and Faculty Development units. The impact on these areas is expected to be minimal given the projected 6 new students in the first year within MUIH's total enrolled population of approximately 970 students (fall 2020).

MUIH will use its previously successful enrollment management model to launch the PBC Culinary Health and Healing program; this model has been successful in growing University enrollments including the cultivation of new audiences for new program areas. New programs are allowed a minimum of five years to mature and develop an ongoing prospective student funnel. New student enrollment targets for this program have been set based on the enrollment history of previous new MUIH programs, tracking enrollment trends for similar programs at other universities, and considering MUIH's resources and capacity. MUIH's financial model permits it to run programs with small cohort enrollments, further supporting sustainability of the program in both its early and later years. Any choice to discontinue a program involves collaborative decision making by the academic department, Dean of Academic Affairs, Provost, Admissions office, Marketing unit, Vice President for Marketing and

Enrollment Management, Vice President for Finance and Administration, and President. Decisions to discontinue a program have been made rarely and have included teach-out plans for enrolled students with extended times to completion given the part time nature of MUIH's programs and the flexibility needed by its non-traditional student population.

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.

Health Care

Health care costs, and expenditures for health care, are on the rise. The Centers for Medicare and Medicaid Services has projected that health care spending will rise from \$2.9 trillion in 2013 to over \$5 trillion in 2022.¹ In percentage terms, the total expenditures on health care are projected to rise from 17.8% of GDP in 2015 to 19.9% of GDP in 2025.² Expenditures for preventive care, a key component of integrative health, are also increasing. The Federal Reserve Bank of San Francisco observed that "spending for preventive treatment increased at an extremely rapid rate over the [2003 to 2007] period. Growth in the percentage of enrollees getting preventive treatment ... drove half this increase. That indicates people are seeking preventive care at an increasing rate."³

It is now well established that our nation's health is a social, economic, financial, and behavioral issue of enormous proportions, offering significant opportunities for economic growth and employment. The U.S. Department of Labor and the U.S. Bureau of Labor Statistics (BLS) see the health care and social assistance sector as leading job growth. "Employment of healthcare occupations is projected to grow 15% from 2019 to 2029, much faster than the average for all occupations, adding about 2.4 million new jobs. Healthcare occupations are projected to add more jobs than any of the other occupational groups."⁴ Maryland's Department of Labor also predicts exceptional job growth in the health care of social service sector for the decade 2016-2026 - 21% for the decade 2018-2028.⁵ Taken together, these are an indicator of the increasing importance of health-focused programs and interventions. The growing costs associated with health care and demands on insurance and treatment systems make prevention and early intervention, strategies emphasized by integrative health care practices, even more important for employers.

Integrative Health

A key component of a successful preventive health program is the use of complementary and integrative therapies. Integrative and complementary health approaches include an array of modalities and products with a history of use or origins outside of conventional medicine.

¹ Centers for Medicare and Medicaid Services, "National Health Expenditure Projections 2012-2022," <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/Proj2012.pdf>.

² Centers for Medicare and Medicaid Services. "NHE Fact Sheet," last modified 6/14/2017, <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NHE-Fact-Sheet.html>.

³ A. Shapiro, "What's Driving Medical-Care Spending Growth?" Federal Reserve Bank of San Francisco, 2013.

⁴ BLS, "Occupational Outlook Handbook," updated January 30, 2018, <https://www.bls.gov/ooh/healthcare/home.htm>.

⁵ Maryland Department of Labor. Maryland Occupational Projections - 2018-2028 - Workforce Information and Performance. Dec, 2020. <https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml>

Medicine's leading accreditor, The Joint Commission⁶, the federal government's Inter-Agency Task Force on Pain Management⁷, the Centers for Medicare & Medicaid Services⁸, and the American College of Physicians⁹ have recognized the effectiveness of integrative health practices and have recommended their use to manage pain and mitigate the use of pharmacologic approaches, and in part assist in addressing society's opioid crisis.

2019 reports by the Global Wellness Summit¹⁰ and Forbes¹¹ cite integrative health practices among the top future global wellness trends. A 2013 McKinsey and Company report called the wellness industry "a demographic sweet spot of enormous potential" and calculated this market as close to \$16.5 billion per annum.¹² Individuals often use integrative health approaches to improve health and wellbeing¹³ or to relieve symptoms associated with chronic diseases or the side effects of conventional medicine.¹⁴ In the U.S., most persons who use complementary health approaches do so to complement conventional care, rather than as a replacement.¹⁵

The 2012 National Health Interview Survey conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics demonstrated significant use and spending on integrative health care approaches.¹⁶ One-third of U.S. adults and nearly 12% of children ages 4 to 17 used complementary health approaches. An estimated 59 million persons aged four years and over

⁶ J. Weeks, "The joint commission moves integrative approach ahead of pharmaceuticals for main management", *Integrative Medicine: A Clinician's Journal*, 2015, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4566474/>.

⁷ <https://www.hhs.gov/ash/advisory-committees/pain/index.html>

⁸ <https://www.cms.gov/newsroom/press-releases/cms-finalizes-decision-cover-acupuncture-chronic-low-back-pain-medicare-beneficiaries>

⁹ A. Qaseem, T.J. Wilt, R.M. McLean, M.A. Forciea, "Noninvasive treatments for acute, subacute, and chronic low back pain: A clinical practice guideline", *Annals of Internal Medicine*, 166(7). DOI: 10.7326/M16-2367, 2017.

¹⁰ Global Wellness Summit, "2019 Global Wellness Trends Report", 2019, <https://www.globalwellnesssummit.com/2019-global-wellness-trends/>.

¹¹ J. Sweet, "10 Wellness Trends You Have To Try In 2019", *Forbes*, Jan 4, 2019, <https://www.forbes.com/sites/jonisweet/2019/01/04/top-10-wellness-trends-2019/amp>

¹² P. Cloos, et al., "Healthy, Wealthy, and (Maybe) Wise: The Emerging Trillion-Dollar Market for Health and Wellness," McKinsey and Company, 2013.

¹³ A.M. McCaffrey, G.F. Pugh, and B.B. O'Connor, "Understanding Patient Preference for Integrative Medical Care: Results from Patient Focus Groups," *Journal of General Internal Medicine* 2007, 22(11):1500–5; and A.M. Greene, et al., "Perceived Benefits of Complementary and Alternative Medicine: A Whole Systems Research Perspective," *Open Complementary Medicine Journal* 2009, 1:35–45.

¹⁴ R.L. Nahin, et al., "Disease Severity Is Associated with the Use of Complementary Medicine to Treat or Manage Type-2 Diabetes: Data from the 2002 and 2007 National Health Interview Survey," *BMC Complementary and Alternative Medicine* 2012, 12:193; and C.B. Lo, R.A. Desmond, and S. Meleth, "Inclusion of Complementary and Alternative Medicine in US State Comprehensive Cancer Control Plans: Baseline Data," *Journal of Cancer Education* 2009, 24(4):249–53.

¹⁵ J.A. Astin, "Why Patients Use Alternative Medicine: Results of a National Study," *Journal of the American Medical Association (JAMA)* 1998;279(19):1548–53; also B.G. Druss and R.A. Rosenheck, "Association between Use of Unconventional Therapies and Conventional Medical Services," *JAMA* 1999, 282(7):651–6; and D.M. Eisenberg, et al., "Trends in Alternative Medicine Use in the United States, 1990–1997: Results of a Follow-Up National Survey," *JAMA* 1998, 280(18):1569–75.

¹⁶ National Center for Health Statistics, "Use of Complementary Health Approaches in the US: 2012 National Health Interview Survey," Centers for Disease Control and Prevention, <https://nccih.nih.gov/research/statistics/NHIS/2012>; also T.C. Clarke, et al., "Trends in the Use of Complementary Health Approaches Among Adults: United States, 2002–2012," *National Health Statistics Report*, Feb 10 (79): 1–16, 2015; and R.L. Nahin, et al., "Expenditures on Complementary Health Approaches: United States, 2012," *National Health Statistics Report*, June 22 (95):1-11, 2016.

had at least one expenditure for some type of complementary health approach, resulting in total out-of-pocket expenditures of \$30.2 billion per year. Out-of-pocket spending for complementary health approaches represented 9.2% of all out-of-pocket spending on health care. Moreover, spending on integrative medicine is expected to increase to \$115 billion by the year 2015.¹⁷ The 2017 National Health Interview Survey revealed an increase in the use of chiropractors from 9.1% in 2012 to 10.3%.¹⁸

Consumer use of herbal medicine continues to grow. A 2011 study by the National Center for Health Statistics indicated that the use of dietary supplements is common among the U.S. adult population and has been growing significantly.¹⁹ Over 40% of adults in the U.S. used supplements in 1988–1994 and over 50% used them in 2003–2006. The 2012 National Health Interview Survey indicated that more than 40 million individuals in the U.S. used non-vitamin, non-mineral supplements in 2012, up from 38 million users in 2007.²⁰ In addition, significant increases in the sales of herbal supplements has been seen in recent years.²¹ In 2017, total U.S. retail sales of herbal supplements surpassed \$8 billion for the first time, reaching nearly \$8.1 billion. Consumer spending on herbal supplements increased 8.5% from 2016 – the strongest sales growth for herbal supplements in more than 15 years. Total U.S. retail sales of herbal supplements have increased every year since 2004, and since that time consumer spending on supplements has nearly doubled.

The 2017 National Health Interview Survey revealed significant increases in the use of yoga-based mind and body approaches.⁴³ Yoga was the most commonly used complementary health approach among U.S. adults in 2012 (9.5%) and 2017 (14.3%) and demonstrated an increase in usage during that five-year period. The use of meditation increased more than threefold from 4.1% in 2012 to 14.2% in 2017. Similar increased usage of these modalities was observed in children aged 4–17 years. The percent of children who used yoga increased significantly from 3.1% in 2012 to 8.4% in 2017. The use of meditation increased significantly from 0.6% in 2012 to 5.4% in 2017. The 2016 Yoga in America Study conducted by Yoga Journal and Yoga Alliance also indicated significant and widespread use of yoga.⁴⁴ 28% of all Americans have participated in a yoga class at some point in their lives. The number of American yoga practitioners increased to over 36 million in 2016, up from 20.4 million in 2012. There were more older practitioners than ever before; nearly 14 million practitioners were over the age of 50, up from about 4 million in 2012. One in three Americans had

¹⁷ Report Linker, Alternative Medicine Industry: Market Research Reports, Statistics and Analysis.

<https://www.reportlinker.com/>.

¹⁸ National Center for Health Statistics, “Use of Complementary Health Approaches: Adults and Children, 2017”, Centers for Disease and Control Prevention, <https://nccih.nih.gov/research/statistics/NHIS/2017>; also L.I. Black, P.M. Barnes, T.C. Clarke, B.J. Stussman, R.L. Nahin, “Use of yoga, meditation, and chiropractors among U.S. children aged 4–17 years”, *NCHS Data Brief*, no 324, National Center for Health Statistics, 2018, <https://www.cdc.gov/nchs/data/databriefs/db324-h.pdf>; and T.C. Clarke, P.M. Barnes, L.I. Black, B.J. Stussman, R.L. Nahin, “Use of yoga, meditation, and chiropractors among U.S. adults aged 18 and over”, *NCHS Data Brief*, no 325, National Center for Health Statistics, 2018, <https://www.cdc.gov/nchs/data/databriefs/db325-h.pdf>.

¹⁹ J. Gahche, R. Bailey, V. Burt, J. Hughes, E. Yetley, J. Dwyer, M. F. Picciano, M. McDowell, C. Sempos, “Dietary Supplement Use Among U.S. Adults Has Increased Since NHANES III (1988–1994)”, *NCHS Data Brief*, No. 61, National Center for Health Statistics, 2011, <https://www.cdc.gov/nchs/data/databriefs/db61.htm>

²⁰ National Center for Health Statistics, “Use of Complementary Health Approaches in the US: 2012 National Health Interview Survey,” Centers for Disease Control and Prevention, 2015, <https://nccih.nih.gov/research/statistics/NHIS/2012>; and T.C. Clarke, et al., “Trends in the Use of Complementary Health Approaches Among Adults: United States, 2002–2012,” *National Health Statistics Report*, Feb 10 (79): 1–16, 2015.

²¹ T. Smith, et al., “Herbal Supplement Sales in US Increased 8.5% in 2017, Topping \$8 Billion”, *HerbalGram*, Issue 119, pg 62–71, 2018, <http://cms.herbalgram.org/herbalgram/issue119/hg119-herbmktrpt.html>.

tried yoga on their own (not in a class) at least once. 34% of Americans said they were somewhat or very likely to practice yoga in the next 12 months, equal to more than 80 million Americans, for flexibility, stress relief and fitness. Since 2012, the percentage of Americans aware of yoga climbed from 75% to 90%. Yoga practitioners reported spending over \$16 billion on yoga classes, accessories, equipment, and clothing in the last year, up from \$10 billion in 2012.

Additional studies point to the growing use of integrative health approaches in health care. Taylor et al. demonstrated in 2018 that 52% of veterans surveys used some type of complementary and integrative health approach.²² A 2010 study conducted by the National Center for Complementary and Alternative Medicine and the American Association of Retired Persons indicated that 50% of Americans age 50 and older reported using complementary and alternative medicine.²³ In 2018, health and wellness coaching emerged as a \$6 billion service market in the U.S., with an estimated 109,000 health coaches and health educators.²⁴

Traditional health care organizations, employers, and regulators are responding to increased consumer demand for integrative health therapies.²⁵ In 2020, the Centers for Medicare and Medicaid (CMS) announced that it would reimburse acupuncture for Medicare recipients.²⁶ A 2019 study by the National Center for Complementary and Integrative Health of the National Institutes of Health, and the National Center for Health Statistics, indicated that 53% of office-based physicians, across disciplines, recommended at least one complementary health approach to their patients during the previous year.²⁷ Massage therapy was the most commonly recommended approach (30%), followed by chiropractic/osteopathic manipulation (27%), herbs/nonvitamin supplements (27%), yoga (26%), and acupuncture (22%). In 2018, the U.S. Department of Veteran Affairs (VA) was the first to recognize licensed acupuncturists in the federal government's General Schedule (GS) classification and pay system; acupuncturists are included at the GS-9 to GS12 levels.²⁸ In 2014, the U.S. Department of Veteran Affairs (VA) launched its Whole Health Initiative which is centered in the use of integrative health practices to support veterans' health and wellness.²⁹ Its Integrative Health Coordinating Center (IHCC) was formed to identify and address barriers to providing complementary and integrative health across the VA, and serve as a resource for clinical practices and education for Veterans, clinicians,

²² Taylor, S. L., Hoggatt, K. J., & Kligler, B. (2018). Complementary and integrated health approaches: What do Veterans use and want. *Journal of general internal medicine*, 1-8.

²³ National Center for Complementary and Alternative Medicine, "Complementary and Alternative Medicine: What People Aged 50 and Older Discuss with their Health Care Providers," April 2011.

²⁴ Marketdata, LLC, "The U.S. Health Coaching Market", May 2018, <https://www.researchandmarkets.com/reports/4649614/the-u-s-health-coaching-market#rela2-4531925>.

²⁵ Hart, J. (2018). Cleveland Clinic Center for Integrative & Lifestyle Medicine: Setting the Standards for Chronic Disease Management and Prevention. *Alternative and Complementary Therapies*, 24(4), 180-181.

²⁶ <https://www.cms.gov/newsroom/press-releases/cms-finalizes-decision-cover-acupuncture-chronic-low-back-pain-medicare-beneficiaries>

²⁷ Barbara J. Stussman, Richard R. Nahin, Patricia M. Barnes, and Brian W. Ward. U.S. Physician Recommendations to Their Patients About the Use of Complementary Health Approaches. *The Journal of Alternative and Complementary Medicine*. Dec 2, 2019. <http://doi.org/10.1089/acm.2019.0303>

²⁸ <https://www.integrativepractitioner.com/practice-management/news/va-respectfully-recognizes-acupuncture-professionals-gs-9-gs-12-new-employment-handbook>

²⁹ <https://www.va.gov/WHOLEHEALTH/professional-resources/clinician-tools/cih.asp>,

AND

[file:///C:/Users/csax5/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/1137_D_2017-05-18%20\(4\).pdf](file:///C:/Users/csax5/AppData/Local/Packages/Microsoft.MicrosoftEdge_8wekyb3d8bbwe/TempState/Downloads/1137_D_2017-05-18%20(4).pdf)

leadership, and staff. This initiative includes acupuncture, biofeedback, clinical hypnosis, guided imagery, massage therapy, meditation, Tai chi / qi gong, and yoga.

A 2007 study by McKinsey and Company report found that 41% of patients' choice of hospital is based on their offerings of "amenities" that included complementary and alternative therapies.³⁰ A 2007 study by the Bravewell Collaborative indicated that in 1999 only 7.7% of hospitals offered integrative therapies, by 2004 that number had increased to 18.3%, and by 2005 25% of hospitals were offering services in a complementary or integrative fashion.³¹ A 2010 study by the Samueli Institute and Health Forum, and American Hospital Association Company, indicated that of the responding hospitals (299), 42% stated that they offered one or more complementary and integrative health therapies in the hospital.³² The 2007 National Home and Hospice Care Survey conducted by the Centers for Disease Control and Prevention's National Center for Health Statistics found that nearly 42% of hospice care providers offered complementary and alternative therapies, had a provider on staff or under contract, or both.³³ All twenty hospitals on the 2017-2018 US News and World Report America's Best Hospitals Honor Roll offer integrative health care and practices.³⁴ Membership in the Academic Consortium for Integrative Medicine and Health grew from 36 traditional and allopathic academic medical schools and centers in 2008, to 70 in 2018.³⁵ In addition, allopathic health care providers are personally using integrative therapies at an increased rate.³⁶ The spread of integrative health practices in allopathic settings is also demonstrated through the increase of hospitals and other health care organizations approaching MUIH in the last three to five years seeking internship placements for MUIH students.

The increase in integrative health approaches has been driven in part by changes in incentive structures for health care providers under the provisions of the Patient Protection and Affordable Care Act (known as the ACA or Obamacare), the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), and the 21st Century Cures Act of 2016. Briefly, these changes have resulted in awards to health care providers for reducing acute care consumption and impose penalties for inefficient, low-quality care. Integrative and allied health professions play a key role in delivering patient outcomes and support the shift in emphasis from acute to preventive care. Integrative health has been shown to be cost effective and yield savings in more than two dozen studies,³⁷ and in an analysis of research from medical literature, data from corporate wellness programs, and pilot projects at insurance companies.³⁸ Indeed, to succeed in the future, health care organizations will need to shift their

³⁰ K.D. Grote, J.R.S. Newman, S.S. Sutaria, "A better hospital experience", The McKinsey Quarterly, 2007.

³¹ B. Horrigan, "Integrative Medicine Best Practices: Introduction and Summary." Bravewell Collaborative, 2007.

³² Samueli Institute and Health Forum, "2010 Complementary and alternative medicine survey of hospitals: Summary of results", 2010, http://www.samueliinstitute.org/File%20Library/Our%20Research/OHE/CAM_Survey_2010_oct6.pdf.

³³ A. Bercovitz, et al., "Complementary and Alternative Therapies in Hospice: The National Home and Hospice Care Survey: United States, 2007," *National Health Statistics Report* 33, Jan. 19, 2011.

³⁴ US News and World Report, U.S. News Hospitals Rankings and Ratings, <https://health.usnews.com/best-hospitals>

³⁵ Academic Consortium for Integrative Medicine & Health, <https://www.imconsortium.org>. And Consortium of Academic Health Centers for Integrative Medicine, <https://www.integrativepractitioner.com/whats-new/all-news/consortium-of-academic-health-centers-for-integrative-medicine/>

³⁶ P. Johnson, A. Ward, and L. Knutson, "Personal Use of Complementary and Alternative Medicine (CAM) by U.S. Health Care Workers," *Health Services Research* 47 (part 1): 211-227, 2012.

³⁷ P. Herman, et al., "Are Complementary Therapies and Integrative Care Cost-Effective? A Systematic Review of Economic Evaluations," *BMJ Open* 2(5): e001046, 2012.

³⁸ E. Guarneri, B. Horrigan, and C. Pechura, "The Efficacy and Cost-Effectiveness of integrative Medicine," The Bravewell Collaborative, 2010.

workforce from one that prioritizes hiring for in-patient acute care toward new value-based models.³⁹ Professionals in those models will focus on preventive practices, the adoption of healthy lifestyles, consolidated visits and group sessions for education and support, and out-patient care in home and workplace settings.

Collectively, these represent some of the fastest growing occupations and areas of health care expansion in the U.S.⁴⁰ MUIH's programs, including the PBC Culinary Health and Healing program, prepare individuals to provide such integrative health care.

Nutrition

The critical role that nutrition plays in health, disease, and healing is now well documented, particularly in areas such as cardiovascular health, osteoporosis, diabetes, and obesity, as well as certain cancers and other diseases on a global scale.⁴¹ Six in ten Americans have a chronic disease, and nutrition is one of the four key lifestyle risks for developing a chronic disease.⁴² Mental health is also a significant public health concern in the U.S.; of adults aged 18 and over, 11.2% experience regular feelings of worry, nervousness, or anxiety, and 4.7% experience regular feelings of depression.⁴³ Worldwide, depression and anxiety are the most common mental health conditions making them a leading cause of disability.⁴⁴ Nutrition has also been shown to have a significant effect on mental health.⁴⁵

The growing awareness of the importance of nutrition among the public and health care providers is reflected in eating, nutrition, and related spending patterns. The Global Wellness Institute estimated the global wellness market at \$4.5 trillion in 2018, and the healthy eating, nutrition, and weight loss market represented 16% (\$702 billion) of the market.⁴⁶ The National Center for Health Statistics' National Health and Nutrition Examination Survey⁴⁷ and the U.S. Department of Agriculture (USDA)⁴⁸ have shown that Americans' diet quality has steadily improved. The International Food Information Council (IFIC) Foundation's 2018 Annual Food and Health Survey indicated that 36% of responding Americans reported following a specific eating pattern or diet within the past year, up from 14% in 2017.⁴⁹ The IFIC survey found that "food values" are increasingly driving consumers' decision-making,

³⁹ The Advisory Board, "Build Your Workforce from the Outside-In," 2016.

⁴⁰ Education Advisory Board, "Health Professions: Capitalizing on Creative Disruption," COE Forum Industry Futures Series, 2017.

⁴¹ World Health Organization, Diet, nutrition and the prevention of chronic diseases, 2002. <https://www.who.int/dietphysicalactivity/publications/trs916/summary/en/>

⁴² Centers for Disease Control, National Center for Chronic Disease Prevention and Health Promotion. Chronic Diseases in American. <https://www.cdc.gov/chronicdisease/pdf/infographics/chronic-disease-H.pdf>

⁴³ Clarke, T.C., Schiller, J.S., Boersma, P. National Health Interview Survey: Early Release of Selected Estimates Based on Data From the 2019 National Health Interview Survey. Sept, 2020. <https://www.cdc.gov/nchs/data/nhis/earlyrelease/EarlyRelease202009-508.pdf>

⁴⁴ Friedrich, M.J. Depression is the leading cause of disability around the world. JAMA 317:1517, 2017.

⁴⁵ Dog, T.L. The Role of Nutrition in Mental Health. *Alternative Therapies in Health and Medicine*, vol. 16, issue 2, Mar/Apr 2010, pages 42-6. AND Owen, L., Corfe, B. The role of diet and nutrition on mental health and wellbeing. *Proceedings of the Nutrition Society*, vol 76, issue 4, Nov 2017, pp. 425 - 426. AND Firth, J., Gangwisch, J.E., Borsini, A., Wootton, R.E., Mayer, E.A. Food and mood: how do diet and nutrition affect mental wellbeing? *BMJ* 369:m2382, 2020

⁴⁶ <https://globalwellnessinstitute.org/press-room/statistics-and-facts/>

⁴⁷ <https://www.cdc.gov/nchs/nhanes/index.htm>

⁴⁸ <https://www.usda.gov/media/press-releases/2014/01/16/american-adults-are-choosing-healthier-foods-consuming-healthier>

⁴⁹ <https://www.newhope.com/market-data-and-analysis/survey-more-one-third-americans-follow-special-diet>

with organics increasingly popular in purchasing choices. In 2018, 29% of shoppers purchased food and beverages labeled as organic, up from 25% in 2017. Similarly, 37% bought foods and beverages billed as natural, up from 31% in 2017. In addition, 59% of consumers indicated it is important that the foods they purchase and consume are produced in a sustainable way, up from 50% in 2017. At the same time, high and growing rates of obesity⁵⁰, diabetes⁵¹, poor diets⁵², and food insecurity⁵³ among significant segments of the population, especially among lower socioeconomic strata, point to a healthy eating divide in the U.S.

Our collective and better understanding of the relationship between diet and health has led to the emergence of a new professional field, culinary medicine, a new evidence-based field that blends the art of food and cooking with the science of medicine.⁵⁴ Culinary medicine intersects two key public health concerns, nutrition education and global food security, both of which are among the ten hottest areas of nutrition research noted by the American College of Nutrition for 2020.⁵⁵ Culinary medicine can combine with another emerging field, personalized nutrition, to further harness the power of food to support the health and well-being of specific populations and individuals. Personalized nutrition “tailors dietary recommendations to specific biological requirements on the basis of a person's health status and goals” and their unique genetic composition.⁵⁶ Personalized nutrition approaches were identified as one of the top eight global wellness trends in 2019 by The Global Wellness Summit.⁵⁷

The development of the PBC Culinary Health and Healing program parallels these health and wellness, professional practice, and consumer spending trends and responds to the growing need for health care professionals, health educators, and culinary specialists who have been trained in this emerging health care specialty and who can translate clients’ nutritional assessments and goals into healthy meal planning.

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

⁵⁰ Hales, C.M., Carroll, M.D., Fryar, C.D., Ogden, C.L. Prevalence of Obesity and Severe Obesity Among Adults: United States, 2017–2018. National Center for Health Statistics Data Brief No. 360, February 2020. <https://www.cdc.gov/nchs/products/databriefs/db360.htm>.

⁵¹ Centers for Disease Control and Prevention. National Diabetes Statistics Report 2020: Estimates of Diabetes and Its Burden in the United States. <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>.

⁵² National Center for Chronic Disease Prevention and Health Promotion. Poor Nutrition. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/nutrition.htm>.

⁵³ United States Department of Agriculture. Food Security in the U.S. <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/>.

⁵⁴ La Puma, J. What Is Culinary Medicine and What Does It Do? *Popul Health Manag.* 2016 Feb 1; 19(1): 1–3, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4739343/>.

⁵⁵ Dubick, M.A., et al., Forecasting Nutrition Research in 2020, *Journal of American College of Nutrition*, 2014, 33(4), 340–346. <https://www.tandfonline.com/doi/full/10.1080/07315724.2014.943113>

⁵⁶ Boorsma, A., van Someren, E., de Hoogh, I., Hogenelst K., van Erk, M., Wopereis, S., Rouhani-Rankouhi, T., van den Broek, T., Pasman, W., van Ommen, B., Anthony, J.C. Systems biology of personalized nutrition. *Nutr Rev.* 2017;75(8):579–599. AND Bush, C.L., Blumberg, J.B., El-Sohemy, A., Minich, D.M., Ordovás, J.M., Reed, D.G., Yunez Behm, V.A. Toward the Definition of Personalized Nutrition: A Proposal by The American Nutrition Association. *Journal of the American College of Nutrition*, 39:1, 5-15, 2020.

⁵⁷ <https://www.globalwellnesssummit.com/press/press-releases/gws-releases-eight-wellness-trends-for-2019/>

The proposed program will serve the needs of the State of Maryland, consistent with the goals of the Maryland State Plan for Postsecondary Education for 2017-2021.⁵⁸ Given that this program is a graduate program its focus is on Maryland's Success and Innovation goals, rather than the Access goal which emphasizes the K-12 to postsecondary education pathway.

Success: Promote and implement practices and policies that will ensure student success.

Strategy 4: The online format of the program increases accessibility to higher education by residents of Maryland and other states for whom geography and time may be barriers to enroll. MUIH provides the residents of Maryland and other states with unique access to educational opportunities in the emerging field of integrative health. MUIH is one of the few colleges and universities in the U.S. to focus solely on integrative health and to provide professional education in such fields. The PBC Culinary Health and Healing will be one of the few graduate programs in the field in the U.S. It will enhance MUIH's portfolio of programs, build on its existing expertise in integrative health and nutrition, support the State's goals of furthering the education of its citizens, and position Maryland as a national leader in the emerging field of integrative health.

Strategy 7: MUIH provides the residents of Maryland with unique degrees and certificates that provide direct access to career pathways in the growing health care sector. The field of integrative health is increasingly being recognized by consumers, patients, employers, and conventional medicine as a powerful health care adjunct that provides access to high quality, high impact, and low-cost health care. In this respect, MUIH integrates academic and career advising throughout students' enrollment; provides professional development and employment search services to students and alumni through the Career Center; and offers a variety of co-curricular professional opportunities. The PBC culinary Health and Healing program has direct applicability to a wide variety health and wellness and health care professions and disciplines and will be incorporated into MUIH's suite of professional, career, and employment services.

Innovation: Foster innovation in all aspects of Maryland higher education to improve access and student success.

Strategy 8: MUIH develops partnerships to support workforce development and improve workforce readiness. The proposed program is grounded in a holistic health and wellness philosophy which is aligned with the goals and work of the Health Department of Howard County, in which MUIH is situated. The Health Department's vision is that of a model community in which health equity and optimal wellness are accessible for all who live, work and visit Howard County. Its mission is to promote, preserve and protect the health of all in Howard County. Among its core values are strategic public health investment and advancing the public health field. In support of our shared goals, MUIH regularly partners with non-profit, community, and health and wellness related organizations in Howard County including the Association of Community Services of Howard County, Business Women's Network of Howard County, Community Foundation of Howard County, Community Action Council of Howard County, Howard County Community College, Howard County Office on Aging and Independence, Howard County Fire and Rescue, Howard County Human Resources Society, Howard County Local Health Improvement Coalition, Humanim, Green Farmacy, and Johns Hopkins Medicine/Howard County General Hospital. In other parts of Maryland, MUIH regularly partners with the Foundation for Advanced Education in the Sciences at National Institutes of Health, Fort Meade

⁵⁸ <https://mhec.maryland.gov/About/Pages/2017StatePlanforPostsecondaryEducation.aspx>

Military Family Alliance, Shoemaker Center Rehabilitation Center, Uniformed Services University of the Health Sciences, University of Maryland Medical System's Upper Chesapeake Health/Kaufman Cancer Center, and Veterans of Foreign Wars (VFW) Post 160.

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

1. Market Demand

It is now well established that our nation's health is a social, economic, financial, and behavioral issue of enormous proportions, offering significant opportunities for economic growth and employment. BLS sees the healthcare sector as leading job growth. "Employment of healthcare occupations is projected to grow 15% from 2019 to 2029, much faster than the average for all occupations, adding about 2.4 million new jobs. Healthcare occupations are projected to add more jobs than any of the other occupational groups."⁵⁹ Maryland's Department of Labor also predicts exceptional job growth in the healthcare sector - 21% for the decade 2018-2028.⁶⁰ Taken together, these indicate the increasing importance of health-focused programs and interventions. The growing costs associated with health care and demands on insurance and treatment systems make prevention and early intervention, strategies emphasized by integrative health care practices, even more important for employers.

The growing awareness of the role that nutrition plays in promoting health and wellness, and both combating and preventing chronic and acute disease, continues to fuel a high demand for individuals trained in the nutrition and dietetics field. Nationally, BLS indicates that there were 74,200 jobs in the U.S. in 2019, and employment is projected to grow 8% from 2019 to 2029, much faster than the average for all occupations.⁶¹ The U.S. Department of Labor Employment & Training Administration classifies the profession as a Bright Outlook occupation.⁶² Such occupations match at least one of the following criteria: projected to grow faster than average (employment increase of 5% or more) over the period 2019-2029 for the U.S. nationwide, and/or projected to have 100,000 or more job openings over the period 2019-2029 for the U.S. nationwide. Regionally, BLS indicates a high level of employment of nutritionists and dietitians.⁶³ Five regional states were among the thirteen states with the highest employment levels of this occupation in May 2019: NY (3), PA (4), NC (9), NJ (10), and VA (13). Three regional metropolitan areas were among the nine areas with the highest employment levels of this occupation in May 2019: New York-Newark-Jersey City, NY-NJ-PA (1), Philadelphia-Camden-Wilmington, PA-NJ-DE-MD (4), and Washington-Arlington-Alexandria, DC-VA-MD-WV (9). All eight states in the region have a faster than average projected growth rate of the occupation for the period 2018-2028 (as compared to the average national growth rate of 4% for the period 2019-2029): DC (13%), DE (19%), NC (12.3%), NJ (11%), NY (18.4%), PA (12.9%), VA (9.6%), WV (12.2%).⁶⁴ In Maryland, the Department of Labor predicts job growth in nutrition and dietetics at 21.7% for the

⁵⁹ BLS, "Occupational Outlook Handbook," updated Dec, 2020, <https://www.bls.gov/ooh/healthcare/home.htm>.

⁶⁰ Maryland Department of Labor. Maryland Occupational Projections - 2018-2028 - Workforce Information and Performance. Dec, 2020. <https://www.dlir.state.md.us/lmi/iandoproj/maryland.shtml>

⁶¹ U.S. Bureau of Labor and Statistics. Dieticians and Nutritionists, Occupational Outlook Handbook. Dec, 2020. <https://www.bls.gov/ooh/healthcare/dietitians-and-nutritionists.htm>

⁶² O-Net Online, Dieticians and Nutritionists, Dec 2020. <https://www.onetonline.org/link/summary/29-1031.00>

⁶³ USBLS. Occupational Employment and Wages, May 2019, 29-1031 Dietitians and Nutritionists. Dec, 2020. <https://www.bls.gov/oes/current/oes291031.htm#st>

⁶⁴ Projections Central. State Occupational Projections. Dec, 2020. <https://www.projectionscentral.com/>

period 2018-2028.⁶⁵ Maryland had the eighteenth highest level of employment of nutritionists and dietitians in the U.S. in May 2019.

This program is designed for three groups of individuals who wish to promote health and wellness through the application of nutrition principles to whole foods cooking. First, individuals who complete this program are prepared to move into such careers as whole-foods chef or caterer; personal, specialty, and restaurant chefs; therapeutic chef working with nutritionists or in integrative healthcare settings; food and cooking educator or consultant; professional food writer and/or cookbook author; and as hospitality industry professionals. The program prepares individuals in culinary and hospitality fields who wish to enhance their skills and business through an emphasis on the diet-health connection and partnerships with nutrition professionals and other healthcare practitioners. BLS projects jobs for chefs and head cooks (6%)⁶⁶ and meeting, convention, and event planners (8%)⁶⁷ to grow at faster than average rates nationally for the years 2019-2029. Maryland's Department of Labor projects 23% growth for chefs and head cooks and 11% growth for meeting, convention, and event planners in the state for the years 2018-2028.⁶⁸ Second, the program is ideal for the many types of professionals supporting the projected 15% growth in healthcare occupations and the 2.4 million new jobs in the field from 2019 to 2029.⁶⁹ The integrative health, public health, and conventional medical professionals supporting this growth can expand and diversify their professional practice and open additional career opportunities through this certificate program. This includes health and wellness coaches, community and health educators, nutritionists, dietitians, herbalists, Ayurveda practitioners, acupuncturists, yoga therapists, and among other healthcare practitioners. Third, the COVID-19 pandemic has driven increased attention on healthy home cooking.⁷⁰ This trend is likely to continue leading the need for culinary health and healing educators to support the growth in healthy home cooking.

The proposed program is being created at an advantageous time. It offers an opportunity not only for new entrants but for existing professionals in workplace settings to acquire an additional area of expertise. The online format means that the program can reach those workers throughout Maryland and the nation.

2. Educational and Training Needs

The U.S. Department of Labor Employment & Training Administration indicates that most of the nutrition and dietetics occupations require graduate school.⁷¹ The educational pathways at the intersection of the nutrition, culinary, and integrative health fields were analyzed.⁷² Only one graduate program in the field has been identified in the U.S. No master's or doctoral degrees have been

⁶⁵ Maryland Department of Labor. Maryland Occupational Projections - 2018-2028 - Workforce Information and Performance. Dec, 2020. <https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml>

⁶⁶ <https://www.bls.gov/ooh/food-preparation-and-serving/chefs-and-head-cooks.htm>

⁶⁷ <https://www.bls.gov/ooh/business-and-financial/meeting-convention-and-event-planners.htm>

⁶⁸ <https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml>

⁶⁹ BLS, "Occupational Outlook Handbook," updated January 30, 2018, <https://www.bls.gov/ooh/healthcare/home.htm>.

⁷⁰ Poiniski, M. Coronavirus changed 85% of consumers' food habits. FoodDive, June 10, 2020. <https://www.fooddive.com/news/coronavirus-changed-85-of-consumers-food-habits/579532/>.

⁷¹ O-Net Online, Dieticians and Nutritionists, Dec 2020. <https://www.onetonline.org/link/summary/29-1031.00>

⁷² National Center for Education Statistics, College Navigator, <https://nces.ed.gov/collegenavigator/> AND Holistic Nutrition Programs, National Association of Nutrition Professionals, <https://nanp.org/holistic-nutrition-programs-list/>.

identified. An increasing number of medical schools are adding culinary medicine courses to their curriculum.⁷³ A variety of related bachelor's and associate degrees and non-credit training programs exist across the U.S.

Nationally, only one other university offers a related graduate program. The University of Kentucky's (UK) School of Medicine began offering an online graduate certificate in Applied Nutrition and Culinary Medicine in fall 2020.⁷⁴ The program is designed for health and medical professionals that seek to promote positive health outcomes using evidence-based nutrition information. Core coursework explores the basic principles and underlying mechanisms of nutritional strategies for the healthy and diseased patient, as well as practical culinary approaches to bridge evidence-based nutrition recommendations with food selection, cooking and preparation. Elective courses offer supplemental skills to enhance any health professionals' toolkit, such as applicable and current information on dietary supplements, social marketing for behavior change, and community programming. The MUIH and UK programs are similar in their inclusion of foundational evidence-based nutrition principles and community education. MUIH's program is differentiated from the UK program with its singular focus on holistic culinary contributions to health and wellness and whole foods cooking labs. The UK differs from MUIH's program by offering a core set of foundational courses and the option to pursue electives in a variety of specialized topic areas: nutraceuticals, obesity, and drug and nutrient interactions.

3. Prospective Graduates

The proposed PBC Culinary Health and Healing program has differentiating factors that will support its competitiveness in the growing integrative health and nutrition and culinary fields: one of only two graduate programs in the field in the country; the only culinary health and healing program grounded in holistic health and wellness; distinctive features of the program experience including online whole foods cooking labs; MUIH's singular and hallmark focus on integrative health and a holistic, relationship-based, and healing presence approach; the opportunity for further study and advanced standing in MUIH's M.S. Nutrition and Integrative Health program; the opportunity to sequentially cross-train in other integrative health fields at MUIH; and cost.

Given the upward trends in the integrative health field, the enrollment history for new programs at MUIH, and the enrollment trend for nutrition programs at other universities, the following enrollment projections call for modest but solid growth over the first five years.

Projected Enrollments for Program*

Year	Trimester	New Students	Continuing Students	Total Students per Trimester	Total Students per Year
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⁷³ Polak, R., Phillips, E.M., Nordgren, J., La Puma, J., La Barba, J., Cucuzzella, M., Graham, R., Harlan, T.S., Burg, T., Eisenberg, D., Health-related Culinary Education: A Summary of Representative Emerging Programs for Health Professionals and Patients, *Glob Adv Health Med*, Jan; 5(1): 61–68, 2016, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4756781/> AND Kowarski, I. Take Culinary Medicine Courses in Medical School. *US News and World Report*, Feb. 12, 2018, <https://www.usnews.com/education/best-graduate-schools/top-medical-schools/articles/2018-02-12/take-culinary-medicine-courses-in-medical-school>

⁷⁴ <https://pharmns.med.uky.edu/pharmns-online-graduate-certification-applied-nutrition>
<https://pharmns.med.uky.edu/pharmns-course-descriptions>

Year 1	Fall 2021			0	11
	Spring 2022	6		6	
	Summer 2022		5	5	
Year 2	Fall 2022			0	22
	Spring 2023	12		12	
	Summer 2023		10	10	
Year 3	Fall 2023			0	27
	Spring 2024	15		15	
	Summer 2024		12	12	
Year 4	Fall 2024			0	27
	Spring 2025	15		15	
	Summer 2025		12	12	
Year 5	Fall 2025			0	36
	Spring 2026	20		20	
	Summer 2026		16	16	

*Enrollment Assumptions: New students are admitted once a year in the spring trimester. The program is designed to be completed in two trimesters. Continuing students have an overall average retention rate of 80%, consistent with that of MUIH's existing programs.

D. Reasonableness of Program Duplication:

No other college or university in Maryland offers a graduate program in culinary health and healing or the related topic of culinary medicine. The University of Maryland School of Medicine (UMSOM) requires its students to complete culinary medicine courses, but these do not constitute a stand-alone graduate degree or certificate.⁷⁵

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

There are no graduate programs in the culinary health and healing, or related culinary medicine field offered by Maryland HBIs. The proposed program will have no potential impact on high-demand programs at Maryland's HBIs or on the uniqueness and institutional identities and missions of the HBIs.

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

⁷⁵ University of Maryland School of Medicine - <https://cim.umaryland.edu/Education/Culinary-Medicine/> AND <https://www.newswise.com/articles/medical-school-has-new-requirement-for-students-to-graduate-culinary-medicine>

There are no graduate programs in the culinary health and healing, or related culinary medicine field offered by Maryland HBIs. The proposed program will have no potential impact on high-demand programs at Maryland's HBIs or on the uniqueness and institutional identities and missions of the HBIs.

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

1. Program Development Model

MUIH uses an ongoing and iterative process to identify and research potential new programs. Potential new programs are routinely identified by faculty, academic and administrative leadership, and external professional collaborators through an ongoing analysis of trends and career needs in the health care sector and the field of integrative health, and the career pathways and needs of MUIH's students and alumni. Data sources include national and regional career outlook and projection statistics; professional credentialing trends and requirements; competitive programs at other colleges and universities; the results of student learning outcomes assessment activities in existing programs; the results of periodic academic program reviews; and the results of alumni surveys. The Provost's office leads an annual review of potential new programs and selection of new programs for development in collaboration with the academic leadership, departments, and faculty, and with input from the President's Executive Council, and the advising, admissions, marketing teams. Faculty are responsible for the development of the program learning outcomes, description, requirements, curriculum, courses, student learning experiences, and program assessment plans, in collaboration with academic administrators. These aspects of the program are then reviewed and approved successively by the department curriculum committee, University Curriculum Committee, Provost, Board of Trustees' Academic Affairs Committee, and Board of Trustees.

The need for the proposed program was informed by a variety of analyses conducted by MUIH's nutrition and herbal medicine department, all with the goals of ensuring a student-centric design, a quality student learning experience, and workplace relevance and alignment of the curriculum. First, the M.S. Nutrition and Integrative Health program engaged in a comprehensive self-study in 2017-2018 as part of becoming initially accredited by the Accreditation Council for Nutrition Professional Education (ACNPE). Second, the career readiness and employment status of nutrition alumni was assessed through a survey of nutrition alumni in 2017, and nutrition alumni one year after graduation in 2018-2019. Individuals with graduate level credentials in nutrition are achieving employment. MUIH's Next Destination Survey of alumni (2018-2019) indicated that 87% of respondent nutrition master's graduates were employed within one year of graduation. Third, the nutrition program's curriculum committee engages in ongoing environmental scanning of emerging specialty areas in the profession and develops new courses and programs to meet new needs within the field. In 2017-2018, two graduate certificates were developed to meet such needs - PBC Sports Performance and Integrative Nutrition and PMC Nutritional Genomics in Clinical Practice. The same ongoing process has recently noted the growing specialty area of culinary health and healing. This collective analysis resulted in the PBC Culinary Health and Healing program proposed here.

2. Program Description and Requirements

Program Description

The proposed Post-Baccalaureate Certificate (PBC) in Culinary Health and Healing educates students in the selection and preparation of whole foods as a foundation for health and wellness. Students learn scientifically based principles and practices of food selection and preparation and apply those skills to translate nutritional assessments and goals into personalized, family, and community meal plans. Students learn strategies for adapting meal plans based on specific health conditions, food sensitivities, and allergies as well as grocery budget and food availability. The program celebrates global cuisine and students explore multicultural and culturally specific meal plans. The role of the culinary educator in promoting healthy diets is investigated as well as how to partner with healthcare practitioners and a variety of clients to support health and healing through nutrition. This 12-credit program is offered in the online format and can be completed in two trimesters.

The program serves as both a standalone certificate and as a stackable certificate and pathway into the M.S. Nutrition and Integrative Health program. Five to twelve credits of the PBC culinary Health and Healing program can be applied to the M.S. Nutrition and Integrative Health program, depending on the master's degree area of concentration that students select – human clinical nutrition, herbal medicine, or community education.

Course	Credits	Human Clinical Nutrition AOC	Herbal Medicine AOC	Community Nutrition Education AOC
NUTR601	1.0	X	X	X
NUTR668	1.0	X		
NUTR671	1.0	X		X
NUTR672	2.0	X		X
NUTR678	2.0	X		
NUTR681	0.5	X	X	X
NUTR682	0.5	X	X	X
NUTR680	2.0	X	X	X
NUTR683	0.5	X	X	X
NUTR684	0.5	X	X	X
NUTR687	0.5	X		
NUTR688	0.5	X		
		12 credits	5 credits	8 credits

Program Outcomes

Upon completion of the program graduates will be able to:

1. Demonstrate how to select and prepare nutrient-dense whole foods.
2. Devise meal plans to support disease prevention and optimal health.
3. Adapt healthy whole foods menus to meet the needs of individuals of diverse demographic, cultural, and clinical groups.
4. Collaborate with nutrition professionals and other healthcare practitioners to support dietary health and healing for individuals and populations.

Admission Requirements

- Bachelor's Degree from a degree-granting college or university accredited by an accrediting body recognized by the U.S. Department of Education, with a minimum GPA of 2.5
- Official transcript(s) for prior undergraduate and graduate course work and degrees

- Resume
- Essay questions
- TOEFL/IELTS/PTE for international students

Program Requirements

This program consists of 12 credits and 13 courses.

Didactic Courses (9 cr)

- NUTR601 Redefining Nutrition (1 cr)
- NUTR668 Culinary Herbs in the Kitchen and Beyond (1 cr)
- NUTR671 Food and Culture (1 cr)
- NUTR672 Mindful Eating (2 cr)
- NUTR678 Culinary Educator (2 cr) (NEW COURSE)
- NUTR680 Behavior Change in Selection and Preparation of Meals (2 cr) (NEW COURSE)
- MUIH 550 Academic Research and Scholarship (0 cr)

Cooking Lab Courses (3 cr)

- NUTR681 Whole Foods Cooking Lab I (0.5 cr)
- NUTR682 Whole Foods Cooking Lab II (0.5 cr)
- NUTR683 Whole Foods Cooking Lab III (0.5 cr)
- NUTR684 Whole Foods Cooking Lab IV (0.5 cr)
- NUTR687 Whole Foods Cooking Lab VII (0.5 cr)
- NUTR688 Whole Foods Cooking Lab VIII (0.5 cr)

Additional Requirements

- Complete the Serv-Safe™ Food Safety Manager Course offered by the National Restaurant Association

Course Descriptions

Course descriptions and course learning outcomes are provided in Appendix A.

3. Student Learning Assessment and Achievement

Student learning achievement and outcomes assessment is governed by each programs' comprehensive Academic Assessment Plan. Such Plans include program and course learning outcomes established during the initial development of the program and courses, respectively. The Plans include a five-year schedule for the assessment of specific program learning outcomes and university learning outcomes, in specific courses or activities, and via specific assessment methods. The Plans also include avenues for the use of assessment results for program and course improvement. Such avenues include ongoing department, faculty, and program curriculum committee meetings; University Curriculum Committee, and Institutional Assessment Committee meetings; the formal course development and redevelopment cycle; the five-year Academic Program Review cycle; and faculty development initiatives. Annual Assessment Reports are prepared by each program and they include an analysis of student learning outcomes assessment and how such results will be or have been used to improve the curriculum and instruction. These annual reports are reviewed by the Provost, Dean of Academic Affairs, and the Institutional Assessment Committee as a part of institutional assessment and planning

activities. Student learning outcomes and achievement are also included in the five-year comprehensive Academic Program Review process.

The academic departments, programs, and curriculum committees, subject matter experts (SMEs), and faculty are responsible for designing, delivering, and assessing learning outcomes. They are supported by the University Curriculum Committee to guide and facilitate academic assessment initiatives. Additional support is provided by the Assistant Provost for Academic Assessment and Accreditation, Dean of Academic Affairs, Provost, and Institutional Assessment Steering Committee in gathering, interpreting, documenting, and using assessment results.

The Curriculum Map for the PBC Culinary Health and Healing program is provided in Appendix B. It maps the program learning outcomes to specific courses where various levels of outcome mastery will be achieved and assessed.

4. Specialized Accreditation or Graduate Certification Requirements

Not applicable to the proposed program.

5. Program Oversight

Oversight of the program will be provided by the faculty listed in Appendix C. This includes the Chair of the Nutrition and Herbal Medicine department, and the salaried/ranked and adjunct faculty with expertise in nutrition and culinary health and healing.

6. Program Information for Current and Prospective Students

Multiple means are used to provide current and prospective students with clear, complete, and timely information on the curriculum, course and degree requirements, policies, the nature of faculty/student interaction, assumptions about technology competence and skills, technical requirements, the learning management system, the availability of academic support services and financial aid resources, and costs and payment policies. These include:

Publicly Available to Prospective and Current Students

- Student Consumer Webpage: <https://www.muih.edu/admissions/student-consumer-information>
- Admissions: <https://www.muih.edu/admissions>
- New Students: <https://muih.edu/new-student>
- Academic Catalog: <https://www.muih.edu/academics/academic-catalog>
- Academic Program Webpages: <https://www.muih.edu/academics>
- Academic Policies (Transfer and Exemption, Satisfactory Academic Progress, Attendance, Leave of Absence, Withdrawal Process): <https://www.muih.edu/admissions/student-consumer-information>
- Office of the Registrar: <https://www.muih.edu/academics/office-registrar>
- Disabilities Services: <https://www.muih.edu/disabilities-services>
- Technology Requirements: <https://www.muih.edu/academics/online-learning/technical-requirements>

- Learning Management System: <https://muih.edu/academics/online-learning/support/>
- Financial Aid Resources: <https://www.muih.edu/admissions/financial-aid>
- Program Costs: <https://www.muih.edu/admissions/tuition-fees> and <https://www.muih.edu/cost-attendance>
- Payment Policies: <https://www.muih.edu/admissions/tuition-fees> and <https://www.muih.edu/admissions/financial-aid>
- Career Center: <https://www.muih.edu/career-services/career-center>

Password Protected Resources Available to Current and Confirmed New Students

- Full set of Administrative and Academic Policies
- Student Handbook
- Program Plans of Study
- Online New Student Orientation
- Program-Specific Student Community Site
- Student Affairs Community Site (advising, student success, disabilities support, career center)

H. Adequacy of Articulation

Not applicable to the proposed program.

I. Adequacy of Faculty Resources

As with many health professions programs where the curriculum calls for expertise across a broad spectrum of theory and practice, and consistent with the model through which MUIH delivers all its programs, the PBC Culinary Health and Healing program will rely on a combination of salaried and adjunct faculty with expertise in nutrition and culinary health and healing. Salaried faculty will be strategically placed to anchor the program and provide stability and continuity for students. It is vital that faculty have practical skills and knowledge in the field, generalized experience, as well as specialization in discrete areas that will allow for expert instruction, supervision, and guidance.

Salaried and adjunct faculty are hired and staffed to develop and teach program courses based on the following general criteria. Guest lecturers are subject to the same high standards of education and experience.

- Ph.D., Professional Doctorate, M.S., or other advanced graduate degrees in the related field of the course.
- Professional or academic credentials or experience in herbal medicine, physiology, and/or research
- Qualified to teach graduate courses, and to advise and mentor students.
- Faculty experience in higher education, in didactic, experiential, and/or clinical education.
- Experience developing and teaching courses related to the field.
- Demonstrated commitment to continuing education and professional development.
- Desire to engage in activities for a new program with a strong wellness philosophy at its foundation.
- Research publication and scholarship are preferred but not required.

Appendix C contains the list of faculty for the program. The faculty for the program includes four salaried/ranked faculty and four adjunct faculty, all of whom are currently part of MUIH's faculty complement.

Pedagogical preparation for teaching online courses is provided by the Faculty Development and Instructional Design Services units through ongoing opportunities for professional development offered via face-to-face and online trainings, workshops, tutorials, symposia, conferences, and one-on-one consultations tailored to individualized needs. Evidence-based pedagogical best practice resources and guides are provided for faculty on an ongoing and on demand basis through the online Faculty Community Site; such resources and guides are created and provided by in-house, external, and commercially developed sources. Before beginning their first online or hybrid course development or teaching assignment, MUIH requires faculty to complete basic onboarding focused on online pedagogy/andragogy, instructional design principles, the Quality Matters design principles and rubric, the Canvas Learning Management System (LMS) and embedded technology tools and web conferencing training. Faculty who use the Canvas LMS have access to 24/7 support through the Canvas Help Desk.

J. Adequacy of Library Resources

The Sherman Cohn Library's physical space includes the Collaborative Commons, which serves as a space for individual and group learning, researching, interacting and engaging in collaborative work, and use of computers, and a printer/scanner/copier. The Library houses the Physical Collection of carefully selected materials from small presses and mainstream publications in support of the innovative academic programs offered at MUIH. Library Services includes circulation, reference, and research assistance from Library staff members. MUIH provides online support for students and faculty with an enhanced integrated and online library system, and the Library continues to expand to support all modalities of teaching and learning as well as enrollment growth. All online courses contain a direct link to the Sherman Cohn Library at MUIH, prominently positioned in the Canvas online classrooms. The Library conducts the MUIH550 Academic Research and Scholarship non-credit course that is required of all students during their first trimester at MUIH; this course is available online to all students.

The Library has a total collection of over 18,000 titles in health and wellness (13,000 physical holdings and 5,000 electronic). Electronic resources augment the number of health and wellness materials available. The Library's computerized systems and licensing agreements with vendors permit access to open-access journals and other free Internet resources, as well as selected journal articles from individual subscriptions and from the Library's EBSCO host databases. The Library uses the National Library of Medicine's Docline service for document delivery. When the Library does not own an article, it can be obtained in a timely manner for faculty and students through the Library's use of Docline.

The adequacy of library resources to support academic programs is ensured through various measures. The Library Reports to the Provost and Library leadership is a member of the standing University Leadership Council. In addition, Library leadership is a member of the Faculty Senate's Information, Research, and Scholarship subcommittee and the Library engages faculty and the academic departments in the regular and periodic review of the Library's collection.

K. Adequacy of Physical Facilities, Infrastructure and Instructional Equipment

MUIH's 12-acre campus contains a 32,500 square-foot, two-story building, herbal medicine teaching garden, parking for all students, and ample space for additional buildings to be built in order to accommodate growth. Over 300 people can be accommodated in the current building's large event space, which totals 2,750 square feet. The current building serves as the primary home for all of MUIH's programs, and includes eight classrooms and a ninth, multipurpose space; a library and quiet study room; 22 clinical treatment rooms and an herbal dispensary, assigned to the Student Teaching Clinic; a Student Affairs suite consisting of academic advising, a Student Success Center, and a Career Center; a student lounge with an adjacent kitchen; and a bookstore/café that includes seating. Offices for general administration of the University and faculty are located at the current campus locations. Other space is available and leased in Howard County as needed, for overflow office and classroom needs. All classrooms have access to voice and data communications and WiFi is available throughout the building. Two large, dividable classrooms are equipped with ceiling-mounted data projectors and screens, as well as an integrated sound system. A portable sound system, TV, laptops, and overhead and LCD projectors are available for use in classrooms as needed. Since the program will be delivered primarily online, these physical instructional and support spaces will not be affected except inasmuch as students may use them during the two weekends they are on campus for class meetings and may wish to otherwise use them and concurrently enroll in other programs offered on campus.

All students are served by the current infrastructure including remote and online access to admissions, financial aid, registrar, library, advising, student success, disabilities support, counseling, career, IT support, and student account services, an online University Wide Orientation, and online Program Community Sites. The Student Success Center provides individualized academic and non-academic success support to students who are either self-directed or referred by faculty. Such services include writing and scientific tutoring, study skills, academic success strategies and planning, and disabilities support and counseling services. The Career Center provides individualized and group services focused on career development and employment search, as well as a job board. Each department maintains a Program Community Site in the Canvas LMS for all students enrolled in its programs. These sites contain learning resources that cut across the program, access to selected online course learning modules, and resources that assist students in their study and practice for national licensing exams.

All students are provided Office 365 accounts, including access to an institutional electronic mailing system. IT support for electronic mail, Office 365 functions, the Student Information System, and other technologies is available to all students remotely. MUIH has licensed the Canvas Learning Management System (LMS) and embedded technology and web conferencing tools. All students have access to the Canvas LMS and 24/7 support through the Canvas Help Desk, and online tutorials and guides. These and other technologies have the capacity to scale with additional enrollments with little to negligible budgetary impact.

L. Adequacy of Financial Resources with Documentation

1. Table 1: Resources and Narrative Rationale

TABLE 1: RESOURCES					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated Funds	\$0	\$0	\$0	\$0	\$0
2. Tuition/Fee Revenue (c + g below)	\$425,250	\$722,250	\$1,030,050	\$1,210,800	\$1,222,800
a. Number of F/T Students	0	0	0	0	0
b. Annual Tuition/Fee Rate	\$0	\$0	\$0	\$0	\$0
c. Total F/T Revenue (a x b)	\$0	\$0	\$0	\$0	\$0
d. Number of P/T Students (new students each year)	6	12	15	15	20
e. Credit Hour Rate (credits/student/year) (new students each year)	12	12	12	12	12
f. Annual Credit Hour Tuition/Fee Rate	\$894/credit \$250 fee/ trimester	\$897/credit \$250 fee/ trimester	\$924/credit \$250 fee/ trimester	\$952/credit \$250 fee/ trimester	\$981/credit \$250 fee/ trimester
g. Total P/T Revenue (d x e x f)	\$67,368	\$135,168	\$173,820	\$178,860	\$245,440
3. Grants, Contracts & Other External Sources	\$0	\$0	\$0	\$0	\$0
4. Other Sources	\$0	\$0	\$0	\$0	\$0
TOTAL (Add 1 – 4)	\$67,368	\$135,168	\$173,820	\$178,860	\$245,440

Revenue Narrative

- The enrollment assumptions for years 1 through 5 are 6, 12, 15, 15, and 20 new students, respectively, as shown in section C3.
- Tuition rates reflect the per credit rate for FY21 in Year 1, and 3% increases each year for Years 2-5.
- There is a flat University Fee of \$250/trimester.
- Students will complete 12 credits per year, based on the program design.
- There are no reallocated funds, grants, contracts, or other internal or external sources of revenue associated with the program.

2. Table 2: Program Expenditures and Narrative Rationale

Table 2: EXPENDITURES					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Total Faculty Expenses (b + c below)	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400

a. #FTE NOTE: #Credit Course Assignments (adjunct and salaried)	12	12	12	12	12
b. Total Salary NOTE: Based on MUIH starting mid-point adjunct compensation rate.	\$14,400	\$14,400	\$14,400	\$14,400	\$14,400
c. Total Benefits	\$0	\$0	\$0	\$0	\$0
2. Total Administrative Staff Expenses (b + c below)	\$9,000	\$9,180	\$9,364	\$9,551	\$9,742
a. # FTE	0.1	0.1	0.1	0.1	0.1
b. Total Salary	\$7,500	\$7,650	\$7,803	\$7,959	\$8,118
c. Total Benefits	\$1,500	\$1,530	\$1,561	\$1,592	\$1,624
3. Total Support Staff Expenses (b + c below)	\$7,440	\$7,589	\$7,740	\$7,895	\$8,052
a. # FTE	0.1	0.1	0.1	0.1	0.1
b. Total Salary	\$6,200	\$6,324	\$6,450	\$6,579	\$6,710
c. Total Benefits	\$1,240	\$1,265	\$1,290	\$1,316	\$1,342
4. Equipment	\$0	\$0	\$0	\$0	\$0
5. Library	\$0	\$0	\$0	\$0	\$0
6. New or Renovated Space	\$0	\$0	\$0	\$0	\$0
7. Other Expenses (Course development, marketing, overhead)	\$18,960	\$14,042	\$14,126	\$14,212	\$15,549
TOTAL (Add 1 - 7)	\$49,800	\$45,211	\$45,630	\$46,058	\$47,743

Expenditures Narrative

- Faculty will teach 12 credits per year plus the 0 credit MUIH550 course, based on the program design.
- Faculty salaries are based on MUIH's starting mid-point adjunct per credit compensation rate.
- There are no benefits paid to adjunct faculty.
- Direct administrative staff are projected to spend 10% of their time dedicated to this program. The salary and benefits reflect prorated annual amounts.
- Direct support staff are projected to spend 10% of their time dedicated to this program. The salary and benefits reflect prorated annual amounts.
- New library resources will be accommodated in the current Library budget through a reallocation of funds.
- There are no new or renovated equipment or space expenditures associated with this program.
- Other expenses include:
 - New course development: Year 1 - 2 courses, 4 credits (\$4,000)
 - Academic Program Review: \$1,000 in Year 5
 - Marketing: \$5,000 per year, for all five years
 - Overhead: 25% on all direct expenses

M. Adequacy of Provisions for Evaluation of Program

Assessment System: Assessment and evaluation of programs is conducted through a multi-faceted approach. The academic departments, programs, and curriculum committees, subject matter experts (SMEs), and faculty responsible for designing, delivering, and assessing learning outcomes are the primary drivers of assessment and evaluation of the program. They are supported by the University Curriculum Committee which serves to guide and facilitate academic assessment initiatives. Additional support is provided by the Assistant Provost for Academic Assessment and Accreditation, Dean of Academic Affairs, Provost, and Institutional Assessment Committee in gathering, interpreting, documenting, and using assessment results.

Academic Assessment Processes: Student learning outcomes assessment is governed by each programs' comprehensive Academic Assessment Plan. Such plans include program and course learning outcomes established during the initial development of the program and courses, respectively. These outcomes, the methods and timeline for their assessment, and use of assessment results for program and course improvement are part of the program's comprehensive assessment plan. The Annual Assessment Reports prepared by each program and the comprehensive five-year Academic Program Review process include an analysis of student learning outcomes assessment and how such results have been used to improve the curriculum and instruction. Academic Assessment Plans, Annual Assessment Reports, and Academic Program Reviews are developed and executed by the faculty in each program, and reviewed by the Provost, Dean of Academic Affairs, and the Institutional Assessment Committee as a part of institutional assessment and planning activities.

Course Design: Centralized course design and development is guided by the Quality Matters rubric to ensure alignment of the stated course learning outcomes, assessments, activities, and instructional materials and resources. (Further details on assessment and evaluation in online courses are provided in Appendix D.) Faculty use an institutional master Syllabus Template to prepare their classes each trimester, and this template includes course learning outcomes and the alignment framework.

Student Retention: Student retention rates are calculated, monitored, and reported on an ongoing basis using an automated reporting system developed by the IT unit drawing upon course completion and student status stored in the Student Information System. This information is reviewed on a regular and periodic basis by the Provost, Dean of Academic Affairs, Associate Provost for Student and Alumni Affairs, Retention Committee, and Enrollment Management Committee.

Student Satisfaction: First, the IDEA Student Rating of Instruction tool and Campus Labs online platform are used by students to evaluate courses and faculty at the end of every trimester. IDEA is a nonprofit organization whose mission has been to provide assessment and feedback systems to improve learning in higher education. The IDEA tool meets the needed and desired criteria for a sustainable course evaluation system that was previously identified by the Learning Outcomes Assessment Team. Further, the IDEA system is based on 26 years of research and allows the institution to compare faculty performance within similar disciplines and among over 400 other universities. Second, the Provost holds program-specific Open Forums for enrolled students throughout the academic year. The feedback gathered during these sessions is used by the academic departments and faculty to make improvements in curriculum, instruction, and program administration. Third, periodic customer service surveys are conducted centrally for student-facing units such as the Library, Registrar's office, advising, Career Center, and Student Success Center.

Faculty Feedback and Evaluation: Faculty are evaluated annually by their department chair. Salaried faculty are evaluated against the annual teaching, research/scholarship, and service requirements specified in institutional policy. Adjunct faculty are evaluated based on teaching activities only. The results of IDEA course evaluations are used as a measure of teaching effectiveness. A Faculty Peer Review system provides salaried and adjunct faculty with formative and constructive feedback to improve their pedagogy. Faculty satisfaction and needs analysis are assessed through the annual Employee Satisfaction Survey and the periodic Faculty Professional Development Survey.

Cost-Effectiveness: The revenue-to-expense ratio of each academic program and academic service department is calculated at the end of each trimester. These ratios are reviewed by the President, Vice President for Finance and Administration, Provost, Dean of Academic Affairs, and academic department chairs and used to manage current year academic department budgets and plan for future years' budgets.

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

MUIH seeks qualified applicants who have the maturity, commitment, and preparation necessary to take full advantage of the specialized studies offered in each of its programs of study. MUIH is committed to being, communicating, and educating in ways that recognize and honor the full range of human diversity. Each student, faculty, staff, and Board member strives to use language and manifest behavior that promotes inclusiveness and cultivates a positive learning community. Further, each student and faculty, staff, and board member is responsible for creating an atmosphere that supports all in growth and movement toward inclusiveness and the appreciation of diversity. MUIH is committed to broadening the diversity of student body, staff, administration, and Board members.

MUIH is an equal opportunity institution. Applicants for admission, employment, and financial aid are considered based on individual merit. No person is excluded from participation in, denied the benefits of, or subject to discrimination in any program or activity of MUIH on the basis of race, color, national or ethnic origin, gender, gender identity, sexual orientation, marital status, pregnancy, age, religion, disability, or any other characteristic protected by law. MUIH does not specifically recruit or advertise to any race, color, national or ethnic origin, gender, gender identity, sexual orientation, marital status, pregnancy, age, religion, or disability group; however, we find that the nature of our programs draws students from all races and backgrounds and countries.

O. Relationship to Low Productivity Programs Identified by the Commission

Not applicable to this program.

P. Adequacy of Distance Education Programs

At MUIH, online courses are considered to be those in which 100% of instruction is conducted at a distance, while hybrid courses are those in which a significant portion of face-to-face instruction is replaced by online or other means of digitally enhanced teaching and learning. The proposed program will be offered completely online.

MUIH has successfully offered fully online courses and programs since 2013, as approved by both the Maryland Higher Education Commission and the Middle States Commission on Higher Education. Thus, MUIH is well versed in supporting teaching and learning via online and digitally enhanced modalities, and its principles and practices align with MHEC's Principles of Good Practice for Distance Education and comply with C-RAC's guidelines. These principles and practices will be incorporated into the design and delivery of the MS Clinical Herbal Medicine program.

Appendix D provides a full description of how this program and others at MUIH comply with the Principles of Good Practice for Distance Education of MHEC and C-RAC.

Appendix A

Course Descriptions

MUIH550 Academic research and Scholarship (0 cr)

This fully online, self-paced course is designed to prepare students to engage in graduate-level research and scholarship with a focus on the utilization of resources available at or through MUIH's Sherman Cohn Library. Modules cover the Association of College and Research Libraries information literacy threshold concepts in higher education. These concepts are: Scholarship as Conversation, Research as Inquiry, Authority is Constructed and Contextual, Information Creation as a Process, Searching as Strategic Exploration, and Information Has Value.

NUTR601 Redefining Nutrition (1 cr)

This course re-defines the assumptions of nutrition by exploring controversies and conflicting opinions, and by addressing reductionism and holism in nutrition. It encourages critical thinking and healing presence as a framework for understanding whether or not current issues or personal biases in the field of nutrition are valid. Students explore new interpretations of food, eating, and nourishment. Students investigate the impact of food choices on the health of the planet, the community, and the mind-body spirit of an individual.

NUTR668 Culinary Herbs in the Kitchen and Beyond (1 cr)

The purpose of this course is to help students develop a working relationship with the individual culinary herbs used as flavor enhancers in culinary practice and as remedies in herbal practice. The course will help students to evaluate their own knowledge and to think critically and analytically about the role of culinary herbs in diet. This course supports students who seek to integrate culinary herbs in different dishes based on nutritional science to enhance their personal life and it will empower them to use this knowledge in their future careers as health professionals. Students will start their own culinary herb garden.

NUTR671 Food and Culture (1 cr)

This course explores the cultural influences on food and diet globally as well as in the United States. With a focus on the dynamic influences which shape diet and eating practices, students will discover new ways to assess the food and diet of an individual within the context of their culture. The focus of this course will be on the myriad of cultural influences which created the diets seen across the United States today.

NUTR672 Mindful Eating and Nourishment (2 cr)

This course is designed for the student to explore his/her relationship to food from a psycho-spiritual perspective, to explore many of the cultural and familial messages that one carries, and to identify personal patterns around eating. Students will explore the concept of mindful eating and learn tools and techniques for guiding clients and groups in mindfulness practices.

NUTR678 Culinary Educator (2 cr) NEW COURSE

This course facilitates the transition from student to culinary educator. Students learn how to devise meal plans to optimize health and prevent disease. Students develop foundational skills for effective oral and written communication and apply them to the topics of cooking, diet, and health. In health settings, they will collaborate with nutrition professionals and healthcare practitioners to educate individuals and populations about the role of nutrition in health and wellness. Each student demonstrates his/her cooking skills by designing and implementing a whole foods cooking demonstration for a group, or a community, supported by powerful educational materials to support their topic.

NUTR680 Behavior Change in Selection and Preparation of Meals (2 cr) NEW COURSE

In this course, students will learn how health behavior change can be critical for adapting meals to healthy alternatives. Students will explore the personal, social, and cultural factors that impact meal choices and learn how foundational knowledge of the principles and practices of health behavior change can influence behavior. Students will apply knowledge of the selection and optimal cooking methods of whole foods to revise menus to plans that support health and wellness.

NUTR681 Cooking with Whole Foods Lab I (0.5 cr)

Cooking with Whole Foods Lab I is the foundation lab upon which all other labs are built. This lab will cover basic kitchen sanitation, safety, quality of ingredients selection, stocking a pantry and equipment essentials. Lab I also includes knife skills practice, along with basic cooking techniques of grains, beans and greens. Students will prepare recipes for group tasting and discussion.

NUTR682 Cooking with Whole Foods Lab II (0.5 cr)

Cooking with Whole Foods Lab II builds on the foundational skills learned in Lab I. The focus will teach the developing nutritionist how to balance the flavors (salt, sweet, sour, bitter, pungent and astringent) by incorporating them into delicious meals with health supportive properties. Students will discover their own innate taste buds and create dishes with natural salts, salt substitutes, and natural sugars, and will learn how to minimize the use of processed ingredients. Students learn to optimize flavor/taste for various health concerns. To fit these criteria, the class will discuss how to adjust favorite recipes and create educational handouts on healthy sweets and salts.

NUTR683 Cooking with Whole Foods Lab III (0.5 cr)

Cooking with Whole Foods Lab III prepares the developing nutritionist with the skills to educate others about healthy food, food preparation, and whole foods cooking. Through engaging in the kitchen, students link theory with real food and real-life applications. In addition to building essential culinary skills, this lab will teach the developing nutritionist the traditional cooking techniques of lacto-fermentation, creating enzyme-rich sauces, making nutrient-dense bone and meat stocks, and working with organ meats.

NUTR684 Cooking with Whole Foods Lab IV (0.5 cr)

Cooking with Whole Foods Lab IV covers feeding the individual with food allergies and/or sensitivities. Best techniques for replacing allergens are explored and special focus is given to gluten free and dairy-free shopping, cooking, and food preparation. Students practice and explore best cooking techniques that support the lifestyle of the diverse population who suffers with food allergies and learn skills to create nutrient-dense meals in 30 minutes or less.

NUTR687 Cooking with Whole Foods Lab VII (0.5 cr)

Cooking with Whole Foods Lab VII continues to expand and elevate the student's repertoire of ingredients and culinary skills in order to help them engage clients in making healthy lifestyle choices with food and cooking as the foundation. This lab focuses on food as medicine, develops the skills of the practitioner to help the client transition with ease from Standard American Diet. Students are engaged in market basket cooking for specific imbalances by creating one-pot meals in harmony with the season, healthy snacks and other easy-to-make meals by improvising and adapting to a variety of client populations at all socioeconomic levels.

NUTR688 Cooking with Whole Foods Lab VIII (0.5 cr)

Cooking with Whole Foods Lab VIII explores raw food preparation as well as medicinal and healing food preparations. This lab also expands the student's food pharmacy. Students will learn the application of raw foods, how to balance raw food flavors and experience the benefits of a dehydrator, sprouting, and juicing to

create nutrient-dense meals. Students build confidence improvising and adapting raw foods cooking for a variety of client populations at all socioeconomic levels.

MUIH550 Academic Research and Scholarship (0 cr)

This course is designed to prepare students to engage in graduate-level research and scholarship with a focus on the utilization of resources available at or through MUIH's Sherman Cohn Library. Modules cover the Association of College and Research Libraries information literacy threshold concepts in higher education. These concepts are: Scholarship as Conversation, Research as Inquiry, Authority is Constructed and Contextual, Information Creation as a Process, Searching as Strategic Exploration, and Information Has Value.

Appendix B Curriculum Map

	Program Outcomes											
	NUTR601	NUTR668	NUTR671	NUTR672	NUTR687	NUTR678	NUTR680	NUTR681	NUTR682	NUTR683	NUTR684	NUTR 688
1. Demonstrate how to select and prepare nutrient-dense foods.								D	D	D	M, A	M, A
2. Devise meal plans to support disease prevention and optimal health	I	D			M	M, A						
3. Adapt healthy whole foods menus to meet the needs of individuals of diverse demographic and cultural groups			I		D		M, A					
4. Collaborate with nutrition professionals and healthcare practitioners to support dietary health and healing for individuals and populations				D		M, A						

I = Introduce. D = Develop. M = Master. A = Assess.

Appendix C Program Faculty

1. Academic Department Chair

Kathleen Warner

- Department Chair and Professor, Nutrition and Herbal Medicine
- Ph.D. Biochemistry

2. Current Ranked/Salaried Faculty

Bevin Clare

- Professor and Program Director, Clinical Herbal Medicine
- M.S. Infectious Disease
- Certificate in Clinical Herbal Medicine Advanced Studies
- Certified Nutrition Specialist (CNS)

Camille Freeman

- Professor, Nutrition and Herbal Medicine
- Doctor of Clinical Nutrition
- M.S. Physiology & Biophysics
- M.S. Herbal Medicine
- Licensed Nutritionist
- Certified Nutrition Specialist (CNS)

Eleonora Gafton

- Assistant Professor and Program Director of Cooking Labs
- M.S. Herbal Medicine
- Post-Master's Certificate Nutrition and Integrative Health
- Professional Chef Training and Certification Program

Carissa Hernandez

- Head Librarian
- Master of Library Information Science (MLIS)

3. Current Adjunct Faculty

Penny Friedberg

- Adjunct Faculty, Nutrition
- M.S. Nutrition and Integrative Health
- Master of Business Administration (MBA)

Jenny Libkhen

- Adjunct Faculty, Nutrition

- M.S. Nutrition and Integrative Health
- Licensed Dietician Nutritionist (LDN)
- Certified Nutrition Specialist (CNS)

Kathy McNeely

- Adjunct Faculty, Nutrition
- M.S. Nutrition and Integrative Health
- Master of Divinities – Theology, Education, Counseling
- Licensed Dietician Nutritionist (LDN)
- Certified Nutrition Specialist (CNS)

Victoria Yunez-Behm

- Adjunct Faculty, Nutrition
- M.S. Nutrition and Integrative Health
- Licensed Dietician-Nutritionist (LDN)
- Certified Nutrition Specialist (CNS)

4. Course Staffing

	Ranked Salaried Faculty				Adjunct Faculty			
	Bevin Clare	Camille Freeman	Eleonora Gafton	Carissa Hernandez	Penny Friedberg	Jenny Libkhen	Kathy McNeely	Victoria Yunez-Behm
NUTR601			X		X			
NUTR668			X					
NUTR671	X							
NUTR672		X						
NUTR678								X
NUTR680		X						
NUTR681			X					
NUTR682			X					
NUTR683						X		
NUTR684							X	
NUTR687			X					
NUTR688			X					
MUIH550				X				

Appendix D

MUIH and Principles of Good Practice for Distance Education

1. Curriculum and Instruction

(i) A distance education program shall be established and overseen by qualified faculty.

MUIH faculty have Master's, doctoral, or professional degrees and academic, clinical, or practical expertise in the content areas of the courses they are assigned to teach. Online and blended programs are established and overseen through a collaborative process that includes such qualified faculty. Each program is led by an Academic Director or Program Director, who is also a faculty member. Larger programs include faculty positions such as Director of Academic Development and Division Chair, who lead particular academic aspects of their programs. Curriculum committees composed of faculty members exist in each academic department to oversee courses and programs, including those that involve online and blended delivery methods.

A comprehensive program review of each program in the University is conducted every five years, involving program faculty and using internal and external experts. The University Curriculum Committee, which includes representation from the Faculty Senate, provides integrated and institutional oversight of courses and programs, including online or blended offerings.

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

MUIH's curricula, regardless of delivery format, are designed in consultation with experts in the field, MUIH's qualified faculty, and external environmental scanning and workforce needs analyses to ensure coherence, cohesiveness, and academic rigor. The curriculum, learning outcomes, and academic expectations of faculty and students of a program, regardless of the delivery format, are the same and are overseen and approved by the same program faculty and curriculum committees. They are also overseen by the same University bodies including the University Curriculum Committee, Faculty Senate, Executive Management Committee, and the Board of Trustees.

(iii) A program shall result in learning outcomes appropriate to the rigor and breadth of the program.

Program learning outcomes are developed based on input from MUIH's qualified faculty and academic leaders, consultation with expert professionals in the field, and external environmental scanning and workforce needs analyses. The academic rigor and expectations of programs, regardless of their delivery format, are aligned with the nationally recognized standards specified by the Council of Graduate Schools and the Lumina Foundation's Degree Qualification Profile (DQP). The content, learning outcomes, rigor, depth, and breadth of programs, regardless of their delivery format, are also aligned with external program-specific accrediting and curriculum-guiding bodies, where available. These include the Council on Naturopathic Medical Education (CNME), Council of Chief Academic and Clinical Officers of the Association of Accredited Naturopathic Medical Colleges (AANMC), Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM), Accreditation Council for Nutrition Professional Education (ACNPE), Board for Certification of Nutrition Specialists (BCNS), International Coaching Federation (ICF), National Consortium for Credentialing Health and Wellness Coaches (NCCHWC), Certified Health Education Specialist (CHES)

examination of the National Commission for Health Education Credentialing (NCHEC), and International Association of Yoga Therapists (IAYT).

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

Online and blended courses and programs are delivered using the Canvas Learning Management System (LMS). This platform supports asynchronous interaction between faculty and students through a variety of embedded tools. Faculty and students also have the opportunity for synchronous interaction using the Big Blue Button web conferencing system, which can be directly accessed from the Canvas online classroom.

MUIH develops its online and blended courses according to the “master course philosophy.” For each online and blended course, a master version is developed, with components and activities designed to foster ongoing engagement between faculty and students. These components include online asynchronous discussion forms and synchronous lectures, chats, and office hours. Appropriate asynchronous and synchronous interactions between faculty and students are designed and included in online and blended courses as guided by Standard 4 (Instructional Materials) and Standard 5 (Course Activities and Learner Engagement) of the Quality Matters Rubric.

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

MUIH uses a collaborative team approach to develop its online and blended courses. Faculty subject matter experts (SMEs) design, develop and offer online and blended courses appropriate to the mission and objectives of the program. Faculty SMEs are selected based on their discipline expertise, professional and teaching experience, and their completion of onboarding and training activities for online and blended faculty. Academic and Program Directors, who are also faculty members, lead the course development teams and guide and collaborate with the faculty SMEs.

The Center for Teaching and Learning (CTL) supports the faculty SMEs and academic departments in online and blended course development, and in teaching and assessing the quality of online and blended learning. The Center’s instructional designers, instructional technologists, digital learning specialists, multimedia specialists, and learning management system administrator are collaborative members of the online and blended course development teams. The Center’s Assistant Provost provides oversight and guidance for the course development teams, who are also supported by the Assistant Provost for Academic Assessment and Accreditation.

The University develops its online and blended courses according to the “master course philosophy,” developing and maintaining a master version of each online and blended course. The master version contains certain course components as determined by the University’s academic leadership, including the learning outcomes, a syllabus, content learning modules, reading assignments, key learning objects, and key assessment tools, thus ensuring consistency of delivery of online and blended courses and allowing more precise assessment across various occurrences/sections of online and blended courses. Each instructor of online and blended courses receives a copy of the master course and reviews it to determine whether any edits are necessary. The faculty then make all appropriate edits to the master course, and each instructor supplements the master course with his/her unique teaching materials, including discussion forums and other activities.

2. Role and Mission

(i) A distance education program shall be consistent with the institution's mission.

MUIH's mission is ... "A distinctive community of scholars, researchers, practitioners, and advocates, Maryland University of Integrative Health promotes whole person, relationship-centered healthcare. Through discovery and exploration, we deliver progressive educational programs, advance innovative clinical models, build mutually beneficial partnerships, and provide opportunities for fulfilling careers." All of MUIH's programs, regardless of their delivery method, are aligned with this mission and emphasize innovative and progressive practices and philosophies in the emergent fields of integrative health.

While such programs constitute the foundation and core of MUIH's academic offerings, they are unique among other colleges and universities across Maryland, the Mid-Atlantic region, and the United States. To ensure consistency with the university's mission, new programs are developed according to a process flowchart that emphasizes cross-functional input at early and frequent decision points, from initial exploration to program launch. In addition to faculty, academic program leadership, the Faculty Senate, and program and university curriculum committees, the Executive Management Committee provides a further level of oversight with respect to institutional mission alignment and the impact and integration of the curriculum with student affairs, admissions, marketing, budget and finance, facilities and technology, and legal and compliance issues.

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

As part of the online and blended course development process, the development team conducts a review of technology needs and potential uses in the course and program. Technologies are selected for inclusion based on their ability to support the achievement of the course learning objectives, alignment with the discipline, and the principles of Standard 6 (Course Technology) and Standard 8 (Accessibility and Usability) of the Quality Matters Rubric.

All online and blended courses are designed with the support of instructional designers, instructional technologists, digital learning specialists, multimedia specialists, and learning management system administrators. These specialists assist faculty and the Academic and Program Directors in identifying and recommending the most effective learning technologies to facilitate and achieve the course's learning objectives. The Academic and Program Directors and the Assistant Provost of CTL use these recommendations to approve the inclusion of particular technologies in particular online and blended courses.

The adoption of new learning technologies across the curriculum is considered by the Academic Leadership Council (ALC) in collaboration with the Director of Information Technology. The ALC is composed of the Provost, all Associate and Assistant Provosts, and all of the Academic and Program Directors, who are faculty members.

3. Faculty Support

(i) 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 developing and teaching online and blended courses are supported by CTL (The Center for Teaching and Learning), which provides both group and one-on-one support. CTL recognizes the central role of teaching and learning at MUIH and its deep commitment to academic excellence. Its activities and initiatives, designed to enhance students' learning experience and support faculty teaching excellence in all disciplines and formats, include: fostering quality and innovation in pedagogical approaches, the meaningful use of technology in teaching and learning, the role of assessment in teaching and learning, the scholarship of teaching and learning, and the application of learning science and research.

CTL comprises an integrated set of units: the digital learning team of instructional designers, instructional technologists, digital learning specialists, and multimedia specialists; the learning management system (LMS) administration team; the faculty onboarding and engagement team; and the faculty professional development team. It is led by an Assistant Provost, who provides oversight for all online and blended course developments and for faculty training and professional development.

Before beginning their first online or blended course development or teaching assignment, MUIH requires faculty to complete the Best Practices in Online/Blended training focused on online pedagogy/andragogy, the Canvas LMS training, Big Blue Button web conferencing training, and one-on-one consultation tailored to their individualized needs, all provided by CTL. These faculty are also provided the Quality Matters Rubric as a guiding resource and access to 24/7 support through the Canvas Help Desk. Faculty developing and teaching online and blended classes also have with ongoing opportunities for professional development through various face-to-face and online webinars, workshops, trainings, and conferences.

(ii) Principles of best practice for teaching in a distance education format shall be developed and maintained by the faculty.

MUIH's principles of best practice for developing and teaching online and blended courses are based on nationally recognized research-based standards, including those of Quality Matters, the Online Learning Consortium (OLC), EDUCAUSE, WICHE Cooperative for Educational Technologies (WCET), National University Technology Network (NUTN), the Middle States Commission on Higher Education, and the Council of Regional Accrediting Commissions (C-RAC). Ongoing opportunities for the dissemination of best practices in online and blended course development and teaching are coordinated jointly by CTL and the Faculty Development subcommittee of the Faculty Senate. Such opportunities include the Annual All Faculty Meeting, the Faculty Explorations Webinar Series, program-specific faculty meetings, and informal faculty peer review, shadowing, and mentoring activities. These activities highlight the best practices of MUIH's faculty teaching online and blended courses in areas such as differential pedagogies for face-to-face, online, blended, and digitally-enhanced teaching and learning; student learning outcomes assessment; strategies that foster student engagement; and the effective use of the Canvas LMS and other learning technologies.

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

Faculty who teach online and blended courses are provided the extensive training and support specifically related to online and blended teaching that are detailed in section 3.i. In addition, they have access to the same support services as faculty who teach face-to-face classes.

Through online and other digital means, CTL's faculty onboarding and engagement team provides support to online and blended course faculty through their transition from recruitment and hiring, to onboarding and orientation, to teaching and university engagement. Faculty teaching online and blended courses have online and other remote access to the university's library, student academic advising office, student academic support office, student information system, Registrar, academic program leadership and support staff, human resources office, and 24/7 Canvas support. Through online and other remote means, faculty teaching online and blended courses have the opportunity to participate in ongoing university activities such as the All Staff, Faculty Senate, and academic program meetings; faculty journal club; academic, administrative, and search committees and working groups; and trainings and professional development activities.

4. Appropriate Learning Resources

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

Students enrolled in online and blended courses have online and other remote access to the Library, Student Academic Support office, and Program Community Sites. The University provides online support for faculty and students with an enhanced integrated and online library system, and the Library continues to expand to support all modalities of teaching and learning as well as enrollment growth. The Library's computerized systems and licensing agreements with vendors permit access to online and open-access journals and other free Internet resources, as well as selected journal articles from individual subscriptions and from the Library's EBSCO host databases. The Library uses the National Library of Medicine's Docline service for document delivery. When the Library does not own an article, it can be obtained in a timely manner for faculty and students through the Library's use of Docline. The Library also conducts the MUIH550 Academic Research and Scholarship non-credit course that required of all students during their first trimester at MUIH; this course is available online to all students.

All Canvas classrooms contain a direct link to the Library. In addition, each department maintains a Community Site in the Canvas LMS for all students enrolled in its programs. These sites contain learning resources that cut across the program, access to a selected online course learning modules, and resources that assist students in their study and practice for national licensing exams.

The Student Academic Support office conducts the online University Wide Orientation, which provides an introduction to academic resources. The office also provides individualized academic success support to students who are either self-directed or referred by faculty. Such services include writing and scientific tutoring, study skills, and academic success strategies and planning.

5. Students and Student Services

(i) 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.

MUIH's public website (www.muih.edu) and password-protected portal (MyMUIH) provide all students with information regarding their curriculum, course and degree requirements, tuition and fees, payment policies and procedures, financial aid resources, academic advising and support services, and all university academic policies. The website and portal also provide information about online and blended course expectations, technical skills, hardware and software requirements for online and blended courses, and access to the Canvas LMS, tutorials, and 24/7 help desk. These aspects are also provided in the online University Wide Orientation and students' academic program online orientation, both of which are required for new online and blended learning students, as well as students' online Program Community Site. MUIH's online and blended courses are also designed to provide access to such information through the Syllabus and course information, as specified by Standard 1 (Course Overview and Introduction) and Standard 7 (Learner Support) of the Quality Matters Rubric.

(ii) Enrolled students shall have reasonable and adequate access to the range of student services to support their distance education activities.

MUIH's public website (www.muih.edu) and password-protected portal (MyMUIH) provide all students with information regarding student services including registration dates and processes, disability support services, student complaint and grievance processes, graduation and commencement application and review, textbook and instructional material purchasing, as well as all university administrative policies. This information and access are also provided in the online University Wide Orientation and students' academic program online orientation, both of which are required for new online and blended learning students, as well as students' online Program Community Site. MUIH's online and blended courses are also designed to provide access to such information through the Syllabus and course information, as specified by Standard 1 (Course Overview and Introduction) and Standard 7 (Learner Support) of the Quality Matters Rubric.

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

The same admissions requirements and criteria apply to all students in a particular program, regardless of the program's delivery format. Prior to admission, prospective students are invited to participate in open houses, webinars, and interviews to learn about the nature of online and blended courses and to determine whether the online learning environment is suitable to their circumstances and learning style. All new students are required to complete the online MUIH550 Academic Research and Scholarship non-credit course and the online University Wide Orientation, which includes an introduction to the university's academic resources, academic success and planning strategies, and strategies for being a successful online student.

(iv) Advertising, recruiting, and admissions materials shall clearly and accurately represent the program and the services available.

All relevant program information is kept up-to-date on the university's public website (www.muih.edu); print, online, social, and broadcast media; open house presentations and materials; online informational webinar presentations; campus visitation materials; and information tables at off-campus education fairs and conferences.

6. Commitment to Support

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

The criteria for faculty appointment, evaluation, rank, and promotion are the same regardless of the delivery method in which the faculty member teaches. With respect to faculty workload and the number of credits taught annually, online or blended courses are weighted the same as face-to-face instruction. Faculty, including ranked faculty, who teach online or blended courses are eligible and encouraged to participate in scholarly activities, including those related to distance education.

(ii) 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 University's five-year strategic plan includes innovative course and program delivery formats such as online, blended, and digitally-enhanced learning to provide flexible and accessible programs. The university's budget, directly linked to its strategic plan and approved annually by the Board of Trustees, outlines all resource requirements (financial, personnel, administrative, support, compliance, and technical) to maintain and grow. As part of its commitment to the sustainability of online and blended teaching and learning, MUIH maintains a rolling annual online and blended course development schedule. It adheres to the nationally recognized Hallmarks of the Excellence in Online Leadership specified by the University Professional and Continuing Education Association (UPCEA) and the Quality Scorecard: Criteria for Excellence in the Administration of Online Programs specified by the Online Learning Consortium (OLC).

In the event that the University decides to cease admitting students for an academic program, it will ensure that courses continue to be offered to allow students already enrolled in that program to complete their degree or certificate.

7. Evaluation and Assessment

(i) 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.

MUIH administers a standardized online student evaluation process at the end of each trimester for all courses, using the IDEA course evaluation tool and Campus Labs online platform. Individual faculty members may also add course-specific items to the standardized evaluation instrument. Faculty members have access to the results of their student course evaluation results. Academic and Program Directors also have access to the student course evaluation results of the faculty teaching courses in their department/program. The Directors review and discuss these results with faculty on an ongoing basis, and use these results to guide referrals of faculty for additional support, future staffing assignments, and recommendations for appointment, rank, and promotion.

When an online or blended course first launches, the design team continually monitors it, and consults with the instructors and Academic and Program Directors to make adjustments to the course as needed. Academic and Program Directors, in collaboration with faculty in their department/program, review the curriculum, learning objectives, and learning outcome results of all courses, regardless of the delivery format, on an annual basis. Any needed substantive curricular changes are reviewed and approved by the faculty, department curriculum committee, and University curriculum committee. Any needed changes to the online or blended course Syllabus, course structure, learning modules, activities, instructional materials, or assessments are reviewed with CTL, and placed on the university's annual online and blended course development schedule.

Enrollments and retention rates for all programs, specific to each delivery format, and their impact on the university's budget are tracked and analyzed on an ongoing basis by the university's Vice Presidents, Associate Vice President for Enrollment Management, and the Academic and Program Directors. The results of comprehensive exams and projects, clinical evaluations, portfolios, peer-to-peer evaluations, patient outcomes and feedback, licensure examinations, and graduate surveys for all programs, specific to each delivery format, are also tracked and analyzed. The results of all such reports are used to make adjustments as needed in online and blended courses and programs with respect to curriculum, course development, student and faculty support, staffing, library and technology resources, marketing, recruitment and admissions, tuition/fees and budget, new course and program development, and course and program discontinuation.

(ii) An institution shall demonstrate an evidence-based approach to best online teaching practices.

MUIH's principles of best practice for developing and teaching online and blended courses are based on nationally recognized research-based standards, including those of Quality Matters, the Online Learning Consortium (OLC), EDUCAUSE, WICHE Cooperative for Educational Technologies (WCET), National University Technology Network (NUTN), the Middle States Commission on Higher Education, and the Council of Regional Accrediting Commissions (C-RAC). CTL and the academic leadership continually participate in professional development activities to keep abreast of evidence-based approaches in online and blended teaching and learning practices. When appropriate, such opportunities are also provided to faculty. These online and blended teaching practices are then incorporated into faculty, student, and course development practices conducted by CTL, the Faculty Senate, and academic programs.

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

Online and blended courses are included in the university's overarching academic assessment plan. Expected student learning outcomes are clearly stated centrally and in syllabi at the course and programmatic levels, and are the same for each course regardless of the delivery format of each section of the course. With MUIH's master course philosophy, consistent delivery of certain content and utilization of common key assessment tools allows more precise learning outcomes assessment across various occurrences or sections of the online course. As part of the standard online and blended course design process at MUIH, course assessments are required to be aligned with the stated course learning outcomes, as specified by Standard 2 (Learning Objectives/Competencies) and Standard 3 (Assessment and Measurement) of the Quality Matters Rubric.

The Academic and Program Directors, in collaboration with the Learning Outcomes Assessment Team (LOAT), Assistant Provost for Academic Assessment and Accreditation, and Assistant Provost of CTL

compare attainment of course and programmatic learning objectives by students in online, blended, and face-to-face courses, reporting this data to the Provost to ensure its inclusion in continuous assessment of the University's courses and programs. Any needed changes to the online or blended courses, revealed by learning outcome discrepancies with the face-to-face instances of the same course, are reviewed with CTL, and placed on the university's annual online and blended course development schedule.