

Commission on the Future

OF
HOWARD
COMMUNITY
COLLEGE



2017 - 2018

The Report of the
Commission on the Future
of Howard Community College

**Chair: Elizabeth Rendón-Sherman
January 2018**

Contents

- Executive Summary 2
 - I. Building Global Competence 4
 - II. Health Care 7
 - III. STEM 12
 - IV. Sustainability 19
 - V. Technology and Its Impact on the Organization 25
 - VI. Workforce Development 29

Executive Summary

Every five years, Howard Community College (HCC) launches the Commission on the Future (COF). The commission's purpose is to identify innovative ideas, emerging issues, and alternatives for the future of the college. The objectives of the COF are to: increase HCC's responsiveness to the emerging learning needs of Howard County; promote continued citizen participation in helping the college prepare for the future through strategic planning; create a widely understood and shared vision for the future of HCC; and communicate the mission of HCC.

The college's fifth COF took place over the fall 2017 semester. Serving as COF chair was Elizabeth Rendón-Sherman, chief executive officer and chief financial officer of LG-TEK, a leading software company with the intelligence community. Ms. Rendón-Sherman is a long-time supporter of HCC, having served as a former member of the Howard Community College Educational Foundation Board. She is also a veteran of the United States Army.

The COF involved more than 120 individuals, over half of whom were citizens and leaders with interests in the economic, cultural, and educational development of Howard County. Members of the COF also included HCC trustees, faculty, staff, and students who contributed a wealth of knowledge related to HCC's current practices and engaged in discussion related to new opportunities for the college.

The work of the COF was carried out through a task force structure. Six task force groups explored topics that were initially proposed by the college's planning council, refined by president's team, and endorsed by the COF chair. Those topics included:

- Building global competence;
- Health care;
- Science, Technology, Engineering, and Mathematics (STEM);
- Sustainability;
- Technology and its impact on the organization; and
- Workforce development.

Each task force undertook investigation of its topic through a unique process that included a variety of strategies. Each group addressed questions specific to its topic; for example, the workforce development task force considered what workforce sectors need to be developed to satisfy major regional employer needs. Additionally, all task force groups considered a mutual set of prompts that included:

- Would there be any new programs as a result of this exploration?
- What are the workplace expectations in this topic area?

- What can the community contribute to support the college's completion agenda?
- What internships are available?
- How can HCC foster innovation and efficiency in this area with static or dwindling resources?
- What are the related opportunities for fundraising, resource development, and scholarships?

After three months of intensive study and discussion, the work of the COF concluded in January 2018 with this final report to the college community, which includes 23 recommendations. Summaries of the individual task force findings and recommendations are provided in the body of this final report.

Recommendations of the COF will be considered fully through the college's strategic planning and budgeting processes, and those that align with the college's mission, vision, and goals and are fiscally feasible and responsible will be identified. Members of the COF, as well as the college community, will receive an annual update from the college on its progress related to the recommendations.

The college is indebted to the COF chair Elizabeth Rendón-Sherman; task force chairs Elizabeth Edsall Kromm, Erik Johnson, Larry Letow, Milton Matthews, Judy Smith, and Larry Twele; community members; trustees; faculty; staff; and students for their commitment of time and energy in developing these recommendations. Since 1999, the college has benefited from the work invested in the Commission on the Future and looks forward to incorporating the recommendations over the next five years.

I. Task Force: BUILDING GLOBAL COMPETENCE

Chair: Larry Twele, CEO, Howard County Economic Development Authority

Community task force members:

Mathew Alonsozana	Managing Partner, Percipient Strategies, LLC
Matt Archibald	Project Manager, Tecore
Brian Dykstra	CEO, Atlantic Data Forensics
Ryan Frederic	President/CEO, Applied Defense Solutions
Stacie Hunt	Executive Director, Leadership Howard County
Peter Hwang	Sung & Hwang LLP
Gloria Jacobovicz	Technology Manager & Faculty Member, Johns Hopkins University Applied Physics Laboratory
Jason Jannati	Vice President, Project Development, Power52
Paul Skalny	Attorney & Managing Director, Davis, Agnor, Rapaport, Skalny
Anuja Sonalker	Founder & CEO, Steer Technologies
David Tohn	CEO, BTS Software Solutions
Chao Wu	Senior R&D Engineer, Hillcrest Labs
Jason Zhao	Board Member, Howard County Chinese School

HCC task force participants:

Donna Brunne	Executive Assistant to the Vice President of Academic Affairs
Geoffrey Colbert	Assistant Director, Howard P.R.I.D.E. Program
Polly Coles	Office Associate, Academic Affairs
Greg Fleisher	Associate Professor; Dean, Social Sciences and Teacher Education
Lauren Hall	Associate Director of Learning Outcomes Assessment
Lori Hartley	Associate Director of Admissions (International)
Matt Van Hoose	Senior Director of Academic Engagement
Tamara Jones	Assistant Director of Intensive English Program
Felícita Solá-Carter	Board of Trustees Member
Jean Svacina	Vice President of Academic Affairs

The task force on Building Global Competence held three meetings to discuss topics ranging from student demographic data and current programs to economic and demographic data of the community at large. Two main themes emerged from these discussions: skills and awareness.

The task force felt that in order for a student (degree seeking, transfer, adult learner, or continuing education) to be considered to be globally competent, there is a basic set of skills that should be mastered. These skills range from math competency to understanding of basic computer programming and operations. While it was agreed that

the college does a superb job in these areas, the group felt the college needed to reiterate what constitutes the foundation of building a globally competent student.

Additionally, there needs to be an awareness of not only global issues, but of customs, protocols, and regulations. Whether the student will eventually work for a company that may have needs abroad, or will work in the United States with its increasingly growing diversity, an awareness of global issues is required.

Top Recommendations:

1. Establish an advisory panel to provide guidance and feedback to HCC.
2. Establish a global speaker series.
3. Commit to adding global topics more fully into the curriculum.

RECOMMENDATION 1:

Establish an advisory panel to provide guidance and feedback to HCC

Background:

Because of the rapid pace of change in the workplace and the evolving requirements by companies and institutions for a well-prepared workforce, the task force recommends that an advisory panel convene on a regularly scheduled basis to provide insight and guidance to the college to ensure the curriculum is current and relevant. This advisory panel should be comprised of representatives from companies dealing with international issues and members from the community at large who could provide insight and expertise on various global and cultural topics.

Available Resources:

Howard County enjoys a diverse community and a broad business base. The task force believes that constituents from these groups, as well as faculty and staff, would be eager to serve the college in this capacity.

Needed Resources:

This group could be easily assembled. The community could participate, and members of the task force expressed interest in serving in this capacity. The Howard County Economic Development Authority and the Howard County Chamber of Commerce could also be utilized to help identify companies and individuals who would be ideal candidates.

RECOMMENDATION 2:

Establish a Global Speaker Series

Background:

Topics of global interest and importance are widely varied and rapidly changing. By providing topics on global issues via TEDx style presentations, both students and community members would be able to enjoy provocative speakers that would

broaden their understanding of global issues. By opening the talks to the community at large, there would be the additional benefit of showcasing the campus and the role the college plays in county.

Available Resources:

It is anticipated that there are ample resources already existing in the community at-large, as well as faculty and staff, to provide compelling content.

Needed Resources:

Needed resources include funding in order to provide honorariums to guest speakers.

RECOMMENDATION 3:

Commit to adding global topics more fully into the curriculum

Background:

The task force believes that if the college wishes to produce students who have global competence, an aspect of global issues must be fully integrated into the curriculum. Much like English 121 – College Composition is a core requirement at HCC and elements of English are required in most classes, global competence should either be a core requirement or elements of global competence should be incorporated as a learning objective into multiple existing classes.

Available Resources:

Methods for globalizing curriculum are already evident and available to faculty. Further, the Global Distinction program serves as a reference for faculty interested in infusing global themes into courses.

Needed Resources:

Additional resources would be needed to provide summer grants to faculty to design updated global core lessons for the curriculum.

Moving Forward: What would change; what are the intended outcomes?

Through implementation of these recommendations, HCC would be able to implement more relevant and responsive programming to address the needs of employers and better prepare students for a broader educational experience.

By more fully integrating global topics into each class, students will be more aware of the world, global issues, and customs. If students are better prepared in this way, they may have a competitive advantage over their peers and the college may be recognized for better preparing students.

II. Task Force: HEALTH CARE

Chair: Elizabeth Edsall Kromm, Vice President, Population Health and Advancement, Howard County General Hospital

Community task force members:

Susan Arcadia	Vice President of Operations, The Village at Miller's Grant and Carroll Lutheran Village
Doug Beigel	CEO, COLA
Erica Bloomer	Senior Talent Acquisition Specialist, CareFirst
Ron Carlson	Chair, Paul R. Willging Endowment
Diane Caslow	Vice President of Strategic and Business Planning, MedStar Health
Karen Davis	Vice President of Nursing and Chief Nursing Officer, Howard County General Hospital
Krista Frederic	Owner/Physical Therapist, Forever Fit Physical Therapy and Wellness
Nikki Highsmith Vernick	President and CEO, The Horizon Foundation
David Horrocks	President and CEO, CRISP
Sheri Lewis	Program Area Manager, National Health Mission Area, Johns Hopkins University Applied Physics Laboratory
Carol Marsiglia	Senior Vice President, Strategic Initiatives and Partnerships, The Coordinating Center
DeWayne Oberlander	CEO, Columbia Medical Practice

HCC task force participants:

Jennifer Bukowitz	Continuing Education, Nursing & Allied Health Program Director
Georgene Butler	Professor, Nursing; Dean, Health Sciences
Llatetra Esters	Director of Student Conduct and Executive Associate to the Vice President of Student Services
Shannon Lichtinger	Associate Director for Research and Planning
Mary O'Rourke	Director of Admissions, Nursing & Allied Health
Cindy Peterka	Vice President of Student Services
Kevin Schmidt	Board of Trustees Member
Courtney Watson	Board of Trustees Vice Chairperson

Top Recommendations:

1. Develop a proactive employer engagement strategy for the health care sector.
2. HCC's health care programs must ensure student proficiency in the delivery of person-centered care, the ability to work effectively as part of a team, and the practice of resiliency.
3. Assess adequacy of current curriculum specific to behavioral health and develop business plans to expand credit and noncredit options that lead to new career pathways to address this key community health priority area.
4. Increase health sciences program capacity.

RECOMMENDATION 1:

Develop a proactive employer engagement strategy for the health care sector.

Background:

The purpose of this approach is to develop a mechanism for employers to regularly engage with HCC in order to communicate the needs of a constantly evolving health care industry and assist the college in providing students with the necessary skill set to succeed in the workforce of today and tomorrow. The strategy would need to encompass both credit and noncredit offerings and create partnerships that chart career ladders and specific pathways to them. The intent is to develop training opportunities related to these career ladders. Pathways should engage students as early as middle school and offer opportunities for up-skilling or re-skilling adult learners. This initial tool for engagement and idea generation could be a health care advisory council that assists the college in forming a center for innovation designed to stimulate new thinking in health care professions development and training. Such a center would help ensure that HCC is well positioned to keep pace with the current and expected changes that will continue to occur throughout the health care industry by inviting new initiatives relative to curriculum content and design and career pathways.

Available Resources:

The current Health Care Task Force is comprised of leaders from a variety of concentrations in the health care industry, making them an ideal resource for advisory members and partnerships. The Howard County Economic Development Authority, Howard Tech Council, and Maryland Center for Entrepreneurship should also be engaged. Workforce development grants may be available at the federal, state, or local levels. If the value proposition is made to key employers, the charitable arms may be interested in supporting components of this strategy.

Needed Resources:

Instead of connecting to one academic area, the council should involve all areas innovating for health care, as there may be economies of scale in terms of use of HCC resources. This approach may also open the door for new collaborations and partnerships across disciplines and employers.

RECOMMENDATION 2:

HCC's health care programs must ensure student proficiency in the delivery of person-centered care, the ability to work effectively as part of a team, and the practice of resiliency.

Background:

Existing programs will continue to develop and document these proficiencies. Continuing education offerings in these core competencies should be developed and marketed to employers to support re-skilling or up-skilling of the current workforce and opportunities for advancement.

A focus on person-centered care that also relates to customer service with a need to work across silos is the future of health care. Students entering the health care workforce must be able to effectively communicate with patients, clients, and caregivers. In order to do this, students must understand the non-clinical factors that affect health (e.g., physical and social environments) and be culturally competent.

Team-based care is the future of health services delivery. Health care workers need to be able to effectively communicate with each other as part of a diverse care team. Requisite skills for team-based care include: conflict resolution, clinical reasoning, translating data into usable information, and process management and improvement. As health professionals work in particularly high stress environments, they must possess the skill of resiliency to care for themselves.

Available Resources:

The college will need to assess what might be used and expanded upon from existing credit course offerings and those courses offered by the continuing education and workforce development division. The college will then begin to build competencies into pre-requisites and general education requirements. Where gaps exist, external partnerships may be sought to co-create new options or bring existing best practices to HCC (e.g., TeamSTEPPS master trainers, Maryland Area Health Education Center/Community Health Worker Training Institute, Johns Hopkins Patient Engagement Training program, and Maryland University of Integrative Health).

Needed Resources:

Significant investment may not be necessary. An understanding of what currently exists is needed and may require re-packaging or new marketing. HCC will want to work with employers to determine what constitutes skill “proficiency” and how clinical placements and internships can offer defined opportunities to practice skills and have performance evaluated.

RECOMMENDATION 3:

Assess adequacy of current curriculum specific to behavioral health and develop business plans to expand credit and noncredit options that lead to new career pathways to address this key community health priority area.

Background:

Issues related to behavioral health are dynamic and critical to the county, state, and nation. The college needs to continue to incorporate information regarding mental health and substance use disorder services and treatment modalities into the curriculum of health care and human services programs, both credit and noncredit.

HCC should formally assess the viability of new programmatic offerings focusing on behavioral health and develop subsequent business plans. Two examples would be associate degree programs in addiction counseling and human services counseling. This would include exploring new partnerships with employers who would be able to offer clinical rotations, internships, and potential job opportunities. The demand must be fully scoped before any programs are planned to create new supply.

Available Resources:

Less is known about available resources. It would need to be explored in detail as part of the assessment.

Needed Resources:

The assessment and business planning needs to be completed first. Scope must be defined in order to determine the necessary resources.

RECOMMENDATION 4:

Increase health sciences program capacity.

Background:

Workforce demand and student interest, as reflected by wait lists, exceeds program capacity for several health sciences programs. Programmatic infrastructure should keep up with workforce demand and scale offerings as needed, and provide opportunities for scaffolding of credentials to maximize career options and mobility, as well as earning potential. HCC needs to develop a plan with specific targets and timelines to increase capacity for high demand health sciences programs.

Available Resources:

Recommendation 4 will be aided by efforts related to task force recommendations 1 and 2. Increased clinical placement opportunities and career options for graduates should result from a proactive employer engagement strategy and demonstrated ability to train health care workers to be proficient in the core skills of person-centered care, team-based care, and the practice of resiliency.

Needed Resources:

Based on feedback from HCC staff, needed resources include both capital and operating support. Specific to the dental hygienist program, it is likely that a capital improvement request will be necessary to expand the dental hygiene suite. Funding for additional clinical instructors and preceptors to accommodate expansion of nursing and allied health programs will also be needed. It will be important to seek opportunities for scaffolding credentials pre- and post-licensure/registry to increase earning potential and career mobility. The college will likely have to seek approval from external accreditors for program expansion,

which is dependent upon regional needs analysis, as well as clinical site availability.

Moving Forward: What would change; what are the intended outcomes?

Through implementation of these recommendations, HCC would increase its capacity to offer a diverse catalogue of degree programs, certificates, trainings and internships/placements closely linked to industry trends and community health priorities such as behavioral health and healthy aging. More connections with employers would be formalized to foster investment in the college and its students.

The college would also increase capacity within degree programs because employers will be more likely to accept students for placements and hire graduates with documented proficiency in these core competencies. Increased demand for continuing education offerings may result if employers see HCC as the place for employees to acquire skills needed to advance in their careers.

Matters relating to a key community health priority – behavioral health – would be effectively integrated across the HCC curricula. The supply of trained paraprofessionals and professionals seeking to work the behavioral health field would increase and meet the needs of providers and the community. HCC graduates would have enhanced preparation to work in diverse settings with optimal skills to address common behavioral health concerns.

Finally, the supply of trained professionals to meet the demand of county and regional employers would increase. Additionally, the number of pre- and post-licensure/registry students would increase earning potential and career mobility.

III. Task Force: STEM

Chair: Erik Johnson, Managing Executive, Force Projection Sector,
Johns Hopkins University Applied Physics Laboratory

Community task force members:

Andra Cain	President/CEO, Cain Contracting
Dwight Carr	STEM Program Manager, Johns Hopkins University Applied Physics Laboratory
Sarah Jewett	Executive Director, t-STEM Student Success Initiative, University of Maryland, Baltimore County
Rebecca Mariner	Administrative Assistant, Johns Hopkins University Applied Physics Laboratory
Debora Plunkett	Principal, Plunkett Associates LLC
Tracy Turner	Executive Director, Howard Technology Council, Howard County Economic Development Authority
Mary Weller	Secondary Science Coordinator, Howard County Public School System
Mark Wolkow	Director of Academic Outreach, National Security Agency

HCC task force participants:

Yonas Berhane	Associate Director, Planning, Research and Organizational Development
Katrina Bowers	Office Associate, Planning, Research and Organizational Development
Alison Buckley	Associate Vice President for Enrollment Services
Zoe Irvin	Executive Director Planning, Research, and Organizational Development
Mike Long	Associate Professor, Mathematics; Co-Chair, Mathematics Student
Kendall McWilliams	Professor, Computer Systems; Dean, Business & Computer Systems
Sharon Schmickley	Professor, Computer Systems; Dean, Business & Computer Systems
Kevin Schmidt	Board of Trustees Member
Haley Smith	Research Analyst, Planning, Research and Organizational Development
Patti Turner	Professor, Anatomy/Physiology; Dean, Science, Engineering & Technology

Top Recommendations:

1. Go “all in” on cybersecurity, and establish HCC as the leading community college in the region for preparing cybersecurity professionals. Consider a bold, branded initiative to dramatically expand programs in cybersecurity and related disciplines and establish HCC as a leader in cybersecurity education and preparation.
2. Integrate “on-site internships” for HCC STEM students by formalizing situated learning through cognitive apprenticeships on HCC’s campus.

3. Develop and deploy a robust outreach initiative that emphasizes consistent and focused engagements between HCC STEM faculty and staff and STEM-focused strategic partners within the business community, academia, and other local organizations.
4. Advance the role of technology and social media in HCC's advertising, offerings, and communications. Develop revenue streams beyond grant and foundation funds.

RECOMMENDATION 1:

Go “all in” on cybersecurity, and establish HCC as the leading community college in the region for preparing cybersecurity professionals. Consider a bold, branded initiative to dramatically expand programs in cybersecurity and related disciplines and establish HCC as a leader in cybersecurity education and preparation.

Background:

Like many areas in the nation, demand for cybersecurity and computer-related professionals in the Maryland/DC/Northern Virginia region is exploding and is not being satisfied by existing pipelines. Opportunities in these disciplines abound in Maryland and the surrounding area, a trend that is likely to continue for the foreseeable future. Cyberseek.org estimates that the cybersecurity workforce in Maryland is comprised of over 33,000 professionals, and Maryland employers sought to fill over 14,000 cybersecurity job openings from October 2016 to September 2017. A recent press release by Maryland's Governor Hogan noted that “computing-related jobs in the state are projected to grow by another 12 percent over the next decade” and nationally, the United States Department of Labor predicts 1.4 million job openings for computer specialists by 2020, with only 29 percent being filled by qualified university graduates.

The demand for cybersecurity professionals is acute, and the Maryland/DC area combines an unmatched confluence of government and industry organizations that is focused on cybersecurity and information technology security. Correspondingly, HCC is very well-positioned geographically, economically, and academically to respond to this demand and improve the regional needs by serving as a hub for future cybersecurity and computer specialist professionals.

Available Resources:

Current degree and certificate offerings in the areas of cybersecurity, cybersecurity forensics, and computer science, along with the corresponding faculty and facilities, provide a great foundation for expansion. Existing relationships with key government agencies and local industry partners (e.g., National Security Agency, Johns Hopkins University Applied Physics Laboratory, and others) provide significant leverage opportunities with organizations that have a substantial stake in the success of HCC and its graduates, and will open the doors for relationships with other government and academic partners. HCC's long-standing relationships

with area universities can continue to facilitate strong rates of transfer for those desiring to pursue four-year degrees in these fields.

Needed Resources:

The task force views this initiative as a very bold strategic option that would benefit HCC and its students, while responding proactively to regional and national demand for cybersecurity and computer specialists. Implementation of such a strategy would require significant resources to develop new programs and course offerings, recruit and hire additional faculty, expand and improve IT and cybersecurity facilities, develop and execute marketing strategies, and support outreach initiatives with government/industry partners and stakeholder organizations. Should HCC choose to move in this direction, the task force would recommend the establishment of a cybersecurity advisory board to make recommendations for areas such as curricula, external engagement and outreach, and fundraising and grants. Panel members could also leverage their connections and experiences to enrich HCC programs. Finally, the situated learning opportunities described in recommendation 2 and the expanded outreach and engagement initiatives described in recommendation 3 would complement this recommendation. (Note: The task force recommends that HCC assess the cybersecurity initiatives underway at Northern Virginia Community College to determine if implementation of similar initiatives would meet HCC's program objectives.)

RECOMMENDATION 2:

Integrate “on-site internships” for HCC STEM students by formalizing situated learning through cognitive apprenticeships on HCC’s campus.

Background:

High attrition rates for students majoring in STEM fields are well documented and have received much attention over the past decade. Among the reasons cited for the high attrition rates are perceptions of uninspiring early coursework and a “disconnect” between STEM coursework and real-world problems. Organizations like the Business-Higher Education Forum (BHEF) and Olin College have focused on changing first- and second-year STEM courses to include more problem- and project-based learning exercises. Their goal is to increase the retention and persistence of students majoring in STEM during their freshman and sophomore years.

The constructivist learning theory supports the idea of improving student engagement and achievement in STEM subjects by situating instruction in a professional context. Situated learning works to help students elaborate on existing knowledge by connecting it to new information in various ways. The specific type of situated learning that aligns with applied learning is the cognitive apprenticeship model. Simply stated, cognitive apprenticeships occur when learners practice and model the behaviors of professionals. For example, in the context of an

engineering course, students would learn about the practices of actual engineers, be presented with a real-world problem from industry, and then solve the problem. Operationally, students could work in teams as part of the course to develop solutions to a problem presented by an industry partner/volunteer (the instructor would work with the industry partner to situate the problem in an interesting and realistic scenario). Students would use the skills acquired during the course to develop solutions to the problem. The solutions would be presented to the industry partner near the end of the course for critique and feedback (these types of opportunities are frequently used in master of business administration capstone classes). Situated learning could provide practical experience for students and mitigate the difficulty in identifying internships for two-year degree students. In essence, the cognitive apprenticeship model would bring the internships to HCC's students.

Available Resources:

Current resources that are available to implement this recommendation include HCC's strong business and community partnerships, dedicated career and academic services staff, and new cutting-edge facilities that could be used to facilitate student projects for internship providers.

Needed Resources:

The infrastructure needed to support on-site apprenticeships includes: 1) developing a process for incorporating cognitive apprenticeships into the course curriculum for selected STEM subjects; 2) selecting a representative from each academic division who would work with career services to engage businesses and other agencies to find internship opportunities, recruit students, and host student-employer events; and 3) identifying a pool of committed volunteers from companies that would partner with instructors to identify authentic problem sets and infuse on-site internship modules into the course. Additional resources that would be needed are formal and routine project- and problem-based learning training for instructors, and developing memoranda of understanding between HCC and industry partners to define relationships, commitments, and potential intellectual property protections.

RECOMMENDATION 3:

Develop and deploy a robust outreach initiative that emphasizes consistent and focused engagements between HCC STEM faculty/staff and STEM-focused strategic partners within the business community, academia, and other local organizations.

Background:

HCC has developed strong relationships with area organizations that have a stake in the college's success. The breadth of participation in HCC's Commission on the Future effort provides a good example, and HCC has done an effective job of leveraging that support to enhance its strategic planning process. The members

of this task force believe there would be substantial benefit to more consistent and frequent engagement of HCC's strategic partners in the local business community, government, and academia. This task force discussed the potential for quarterly focus groups comprised of HCC faculty/staff and selected stakeholders, with each quarterly meeting focused in a different area of STEM (e.g., cybersecurity, biology, engineering, etc.). Key objectives of each focus group would be building shared awareness around major STEM programs and curricula, and soliciting input from the strategic partners regarding the following objectives:

- 1) Building awareness of and having proactive conversations about HCC STEM programs and curricula, how well they serve the students, and any recommended adjustments/initiatives to reflect what the business community needs in ready-to-hire workers and what universities require for successful STEM transfer;
- 2) Identifying and leveraging sponsorship and funding opportunities dedicated to advancing HCC's STEM programs and goals (e.g., scholarships, grants, internships/apprenticeships); and
- 3) Sharing and capitalizing on collective STEM experience and expertise in order to: identify creative ways to resource additional STEM courses and instructors; assist HCC in developing grant proposals; identify additional experiential learning opportunities; and, expand opportunities for HCC faculty development.

Local industry and universities have a big stake in the success of HCC's students, and anecdotal feedback indicates that there are pockets of creative—and mutually beneficial—solutions being identified. A good example is the partnership between HCC and ESI to develop a new course in Amazon Web Services; ESI is supporting curriculum development, providing expert instructors, and establishing apprenticeship/internship opportunities. Additionally, HCC has already collaborated with local universities to support strong transfer opportunities for its STEM students, including University of Maryland, Baltimore County's STEM Transfer Student Success (t-STEM) Initiative. The task force members believe more purposeful and consistent outreach may result in additional leverage opportunities like these.

Available Resources:

The strong relationships that HCC has developed with the local business community, along with collaborative partnerships in K-12 and higher education, provide a solid foundation from which to develop the proposed outreach program. HCC has resources devoted to such areas as grant proposal development, experiential learning opportunities, and scholarships. However, much of the outreach for STEM appears to be based on faculty contacts and may not always achieve the consistency or comprehensive coverage that dedicated focus groups could provide. The Business-Higher Education Forum has published extensively on the topic of business-academia strategic partnerships to improve STEM

persistence and transfer rates, and those publications would be valuable resources if this recommendation is implemented.

Needed Resources:

Establishing an intentional, visible, and systemic way to initiate and maintain strong relationships with strategic partners within the business community and local government and academia is key to successfully identifying and leveraging the opportunities that are possible with this recommendation. Identifying and appointing a dedicated STEM outreach manager would facilitate a consistent focus on engagements between HCC faculty and staff and the external partners, and provide a designated office to lead follow-up activities to pursue potential leverage opportunities. It is anticipated that this outreach initiative would support both recommendations 1 and 2.

RECOMMENDATION 4:

Advance the role of technology and social media in HCC's advertising, offerings, and communications. Develop revenue streams beyond grant and foundation funds.

Background:

Budget challenges will likely continue. Increased attention must be given to expense control and operational efficiency. Programs that generate revenue beyond the usual grants and foundation funds (e.g., business-centric, internship tracks) or development opportunities (e.g., naming of schools of..., asking seniors who benefit from waived tuition to "opt in" to fundraising newsletters/campaigns) need to grow. Business models used effectively to generate revenue at four-year schools and other community colleges should be evaluated. Innovative instructional methods (hybrid programs and "Flip the Classroom") need investigation and experimentation. This could create a role for HCC as a "skills gap closer," be valuable to employers, and be economical and effective. The college should continue to focus on student retention, especially with challenged student populations and the possibility of performance-based funding by the state. HCC should also continue to advance the role of technology and social media in its marketing, class content, and internal communications. The creation of a leading edge workforce should become a priority, on par with attention to students and instruction.

Available Resources:

Continuous process improvement underpins the work of the faculty and staff at the college using tools such as social media analytics to enhance its efforts.

Needed Resources:

Increase use of tracking tools and social media analytics to help determine which branding efforts are bringing results and guide placement of marketing dollars.

Moving Forward: What would change; what are the intended outcomes?

HCC is well positioned to proactively address the current and anticipated regional and national shortcomings by serving as the launch point for future cybersecurity and computer specialist professionals, such as high school graduates seeking to start their careers or transfer to a four-year school, or early- to mid-career professionals (including veterans) who are interested in changing careers. Opportunities abound in this space, and could include eventually establishing HCC as a center of excellence for a particular area of cybersecurity (Critical Infrastructure Protection, for instance). By going “all in” on cybersecurity, HCC can assume a key educational leadership role in this critical and compelling area.

Through implementation of these recommendations, HCC would increase the number of STEM students participating in developing solutions to real-world problems; greater academic engagement and achievement, increased enrollment, decreased attrition, and increased persistence of STEM majors would occur. STEM students would be better prepared to enter the workforce, student and faculty exposure to industry professionals would be increased, and stakeholder partnerships would be strengthened.

HCC has built strong relationships with many strategic partners in the local business community, academia, and government agencies. With proactive and consistent engagement with these strategic partners, HCC can identify, pursue, and realize additional opportunities in such STEM-related areas as curriculum development, additional instructors, scholarship and grant resources, internships and experiential learning opportunities, faculty resources, and others.

IV. Task Force: SUSTAINABILITY

Chair: Milton Matthews, President/CEO, Columbia Association

Community task force members:

Bob Calloway	President/CEO, Global Facility Solutions
Lori Lilly	Executive Director, Howard EcoWorks
Dennis Matthey	Director, Columbia Association
Jack Nye	Vice President, Whitman, Requardt & Associates
Jeremy Scharfenberg	Energy Manager, Columbia Association
Betsy Singer	Environmental Chair, League of Women Voters
Ned Tillman	Principal, Sustainable Growth
Bert Wilson	Managing Director, EFW, Inc.

HCC task force participants:

Shelly Bilello	Capital Programs Administrator, Administration and Finance
Lynn Coleman	Vice President of Administration and Finance
Kevin Doyle	Board of Trustees Member
Catherine LaFerriere	Professor, Mathematics
Sharon Lyon	Professor, Science, Engineering & Technology
Bob Marietta	Safety Manager, Safety/Sustainability/Facilities
Rahim Salih	Professor, English/World Languages
Vivi Vaidya	Research Associate, Planning, Research, & Organizational Development

Top Recommendations:

1. Advance the college's climate leadership position. The college should continue efforts to aggressively reduce its carbon footprint and promote clean energy programming on and off campus.
2. Develop a climate adaptation and resiliency plan.
3. Deploy advanced transportation management strategies and programs.

RECOMMENDATION 1:

Advance the college's climate leadership position. The college should continue efforts to aggressively reduce its carbon footprint, and promote clean energy programming on and off campus. The college should set a near term of 2028 for its total greenhouse gas (GHG) emissions reduction target.

Background:

HCC maintains a climate action plan that is regularly updated to reflect interim GHG emission reduction progress, campus infrastructure changes, and other factors help guide the college's future decisions. The college has also committed to achieve carbon neutrality by 2050 as part of the Presidents' Climate Leadership Commitment. Achieving carbon neutrality will require a multitude of strategies

including more on-site renewable power generation, which will increase the share of renewable generation in electricity supply beyond the state mandate, the use of advanced energy efficiency and conservation measures, and continued engagement of students and staff. Current science-based recommendations also indicate that meaningful GHG emissions reductions are needed in the next three to five years to help reduce the most significant threats associated with climate change.

This recommendation also includes the following implementation notes:

- Seek to promote the college as a living laboratory for collaborative advancement of sustainability practices involving students, faculty, and the broader community;
- Conduct an audit of operational practices to reduce energy use, cost savings, and GHG emissions;
- Engage resource planning practices to support sustainable capital investment and planning;
- Focus on behavioral change as a mitigation measure (e.g., commuting);
- Leverage existing interpretive/education programming associated with clean energy;
- Explore student/staff managed green fund matched by college or foundation funds and registration fee add on to fund sustainability projects or offset purchases;
- Pursue grants for advanced clean energy projects;
- Increase deciduous tree canopy along roadways, parking lots and south sides of buildings to reduce solar heat gain in summer but opened in winter and plant or renew evergreen hedges acting as windbreaks;
- Utilize the ENERGY STAR Portfolio Manager program for reporting and benchmarking;
- Participate in the Association for the Advancement of Sustainability in Higher Education (AASHE) Sustainability Tracking, Assessment & Rating System (STAR) program; and
- Explore creative strategies for leveraging renewable energy certificates (RECs) or other offsets as a mitigation measure.

Available Resources:

The college is already taking strides to reduce its energy usage and carbon emissions. New facilities are being designed to meet the Leadership in Energy and Environmental Design (LEED) standard at the gold level, and LED lighting is being installed campus-wide along with electric vehicle charging stations. The college is able to leverage current capital funding processes for new facilities or major renovations and can work to elevate clean energy facets of those projects. More broadly, awareness of current and future sustainable actions should continue to be promoted through the use of social and other media. Orientation programs for students and employees should present sustainability goals, actions, and activities. Outreach activities by faculty and staff to the greater community should

also be encouraged. Local government, nonprofits and sustainable vendors and contractors should be urged to participate in outreach activities on campus. The college also has a burgeoning Green Teaching program that can be leveraged to advance internal and external clean energy, environmental ethics, and sustainability practices.

Needed Resources:

The college will likely need support with budgetary processes for non-capital funding streams to support some of these activities. Partnerships with other entities to support on-site renewables development may also be an option for the college's efforts to support clean energy. Continued growth of partnerships with local transit related organizations and government agencies, increased utilization of on-line or virtual instruction methods, and increased teleworking would also contribute to reducing climate impact of operations. Efforts should also be made to address indirect GHG emission sources, such as expanding current recycling efforts to include composting and other measures to make operations "zero waste" including source reduction and reuse. Additionally, the college should seek to further promote its clean energy and sustainability related programming through increased signage and marketing, courses focused on core sustainability topics, identifying existing courses where a sustainability aspect could be added, and furthering opportunities to facilitate an integrated, sustainable community.

RECOMMENDATION 2:

Develop a climate adaptation and resiliency plan.

Background:

Climatic changes are already being felt in our region in the form of more intense rain events, atypical weather patterns, hot/cold temperature extremes, and changes in biological systems. Continuing climatic changes have the potential to impact campus operations in unexpected ways, such as needing to cool a facility in December or February, or manage very intense rainfall events that greatly exceed design conditions of stormwater management facilities with increasing frequency. While the college does have an Emergency Operations Plan, it does not have guiding information associated with broader campus infrastructure and operations resilience. Aspects of the adaptation and resiliency plan would include: enhancement of stormwater facilities and design standards to manage larger rain events; consideration of advanced energy systems such as microgrid technology, enabling HCC to isolate from the Baltimore Gas and Electric (BGE) distribution system and function independently in some capacity leveraging combined heat and power systems, battery storage, and other technologies; evaluating building operations practices to support space conditioning in temperature extremes; utilization of native vegetation that is tolerant of variable precipitation; and ensuring a healthy vegetative and aquatic ecosystem that will better tolerate climatic changes.

This recommendation also includes the following implementation notes:

- Explore advanced microgrid technologies and on-site generation and power management capacity for efficiency and resiliency;
- Promote robust natural infrastructure systems and planting native species that are more resilient to climate changes, mitigating pest threats that weaken vegetation health;
- Incorporate educational component for students to promote awareness and personal actions they can take; and
- Ensure that the college's emergency management plan is integrated with county, state, and federal agencies.

Available Resources:

Climate adaptation and other resilience planning efforts have been underway throughout the country for many years. The college already has an established effort to maintain and periodically update a climate action plan and many organizations will typically expand this effort to specifically include adaptation and resilience aspects. Presently, numerous resources exist to support this effort, including the Maryland Commission on Climate Change Adaptation and Response Working Group, and adaptation plans developed by other entities including colleges and universities. HCC also has a strong foundation of understanding its existing environmental and infrastructure systems to reference for this planning exercise.

Needed Resources:

HCC will need to undertake an expanded planning effort, likely by leveraging existing climate action planning to incorporate adaptation and resilience aspects. Opportunities for grant funding for adaptation planning should be explored at the federal and state levels. Additionally, HCC should engage local partners, such as Howard County government, BGE, private sector thought leaders, and other stakeholders to support the effort.

RECOMMENDATION 3:

Deploy advanced transportation management strategies and programs.

Background:

Transportation is a significant aspect of the HCC community as it plays a role in student accessibility to learning and the environmental impact of college operations. A more dynamic and efficient multi-modal transportation infrastructure will support improved educational experiences, reduce single occupant vehicle parking demands, encourage electric vehicle (EV) use, and reduce emissions. Enhanced areas of focus should include exploring options to increase student access to online courses and lectures and more robust local transportation options targeting the large percentage of students who reside within a five-mile radius of campus. Other aspects to focus on include growing HCC's bike sharing capacity,

promoting increased carpooling, leveraging rideshare technology/platforms, increasing the availability of EV charging infrastructure, and planning for driverless vehicles as a transit option for HCC access. In addition, sustainable/alternative solutions for road maintenance should be explored, particularly management of road salts and other additives, which are a significant pollutant to local streams.

This recommendation also includes the following implementation notes:

- Explore collaboration with Howard County General Hospital and other nearby landowners for shared access to transit buses;
- Expand and promote use of incentives to encourage alternate transportation methods;
- Establish and manage a more robust carpool program (including online applications such as Waze or Uber) and explore ways HCC can incentivize student participation with a focus on EVs;
- Improve transportation survey and car count to increase accuracy of planning and reporting numbers;
- Install improved directional signage;
- Develop a web and paper promotional program for walking and biking routes, as well as other commuting alternatives;
- Improve walking and biking paths and their signage;
- Consider advanced technologies associated with electric vehicles and charging stations to lay groundwork for infrastructure that will support future transportation needs. Howard County transportation plan coordination for buses, etc.; and
- Engage the Howard County Public School System to examine the concept of leveraging school bus contractors during the daytime for auxiliary transport to campus.

Available Resources:

HCC is already implementing a Transportation Demand Management Plan, which was developed in 2015 and can be leveraged in concert with other strategic planning efforts underway by Howard County Government, Howard County General Hospital, Columbia Association, and other community partners. Existing transportation programming by HCC should continue to be refined and expanded, and promoted through avenues such as the Green Teaching program to increase utilization by students and staff. The recently launched downtown Columbia bikeshare program should be a focus of review and optimization as a transportation mode for students and staff.

Needed Resources:

HCC should continue to develop collaborative partnerships with entities from all sectors - public, private, and nonprofit - to facilitate advanced transportation management strategies. For example, grants and technical assistance are available from the United States Department of Energy's Clean Cities Program. Similar programs are offered by the state of Maryland. Capital funding will be

needed to support advanced transportation strategies associated with infrastructure improvements, such as EV charging stations. Enhanced strategic planning in collaboration with Howard County government for bus route optimization is a critical component of enhancing transportation options for staff and students.

Moving Forward: What would change; what are the intended outcomes?

Through implementation of these recommendations, HCC would continue its progress toward sustainable operations and advancement of clean energy practices to reduce its carbon footprint. Staff and students would be engaged and empowered by HCC's leadership role in mitigating the impacts of climate change in the region and statewide.

A comprehensive strategy would be developed to inform HCC planning efforts to account for climate change and other threats to operational resiliency. The college would be better prepared to manage its operations in the future, resulting in fewer adverse effects from climatic variability and other factors. Also, HCC would lead by example in the critical area of planning for other organizations in the region.

A multi-faceted transportation infrastructure working jointly with a robust campus engagement plan would be a solid foundation for reducing environmental impact, increasing course participation, and reducing costs for HCC. The college would pursue ongoing collaboration between key transportation providers in the region so that efficiencies gained by HCC are also mutually beneficial to the larger community in terms of reduced traffic and accessibility of campus resources.

V. Task Force: TECHNOLOGY AND ITS IMPACT ON THE ORGANIZATION

Chair: Larry Letow, President & CEO, Convergence Technology Consulting

Community task force members:

Toshia Ellis	Security Sales Specialist, SecureWorks
Glenn Falcao	President, Falcao Investment Group
Colin Ferguson	Senior Sales Engineer, Corning Optical Communications
Lou Gallo	President, Mediatech
Dave Harvey	Vice President, Ellucian
Wynne Hayes	CIO, Howard County Government
Todd Marks	CEO, Mindgrub
Ed Rothstein	CEO, ERA Advisory
Jack Suess	CIO, UMBC
Richard Talkin	Attorney, Talkin & Oh, LLP

HCC task force participants:

Rebecca Bell	Assistant Director for Institutional Research
Tom Glaser	Vice President of Information Technology
Chris Marasco	Board of Trustees Member
Jay Mathur	Student
Nana Owusu-Nkwantabisa	Director, Library and Learning Commons
Dorothy Plantz	Director of Admissions & Advising
Rick Pollard	Executive Director of Information Technology Services
Rose Volynskiy	Professor, Computer Science; Chair, Technology
Linda Wu	Director, Administrative Information Systems

Top Recommendations:

1. "Smart" Campus Digital Environment
2. Integrated Mobile, Education and Workforce Portal
3. Micro-credentialing / Digital Badging

RECOMMENDATION 1:

"Smart" Campus Digital Environment

Background:

An opportunity exists to establish HCC as the central connector and primary focal point for education, training, and job placement, offering a full digital experience that elevates student engagement, expands learning formats and increases community access to services, training, and employment opportunities.

The development of a “Smart” campus digital environment would significantly enrich campus life, promote student engagement and success, and extend HCC’s presence in the community by building meaningful digital connections that contribute to enrollment goals and workforce development needs. Some features may include:

- Utilizing student tracking to enhance the existing use of predictive data analytics (e.g., to examine student engagement patterns, observe service utilization and demand, and improve campus resource allocations);
- Using "proximity beacons" and digital alerts to transmit targeted messaging for learning activities and campus events, as students move around campus. These alerts would track students’ locations during emergencies, allow self-guided navigation and tours, give notification of nearby campus events, track student concentrations and flows on campus, offer parking availability alerts, and highlight open advising sessions;
- Automating “intelligent” course recommendations and notifications using latest customer relationship management models, based on personal preferences, interests, past performance, program requirements; and
- Maximizing operating efficiencies and improving daily operations using integrated dashboards and controls to manage parking, lighting, signage, energy consumption, physical security, and transportation availability.

Available Resources:

Available resources include the campus network infrastructure.

Needed Resources:

Needed resources include integrated systems and unified applications and delivery platforms to connect enterprise, operations, and services.

RECOMMENDATION 2:

Integrated Mobile, Education and Workforce Portal.

Background:

An opportunity exists for HCC to expand its contribution to the economic growth of Howard County by creating a mobile-ready, education and workforce portal that connects students, residents, and potential employers. The ability to allow the efficient identification and transfer of required knowledge and skillsets among the emerging and existing workforce would contribute immeasurably to continued community growth and personal success.

This initiative could be achieved by developing a community portal that bundles and links employment opportunities and internships with career mapping. The portal would offer students and community members the ability to create a personalized career path that links employment opportunities with personality assessments and preferences, along with desired skill sets, career interests and

credentialing. The possible integration of existing business- and employment-oriented social media networking services and partnerships could provide additional benefit to students and community members. Some suggested features include:

- Personalized and commercially-guided career paths;
- Linked internships and personal interests;
- Integrated student achievement with social media career sites;
- Targeted messaging on available career sessions, fairs and jobs; and
- Interactive development of curriculum with the business community.

Available Resources:

Available resources include existing HCC web development tools and infrastructure, Howard County business partners, and the Howard County Economic Development Authority.

Needed Resources:

Needed resources include development, technology infrastructure, and management support.

**RECOMMENDATION 3:
Micro-credentialing / Digital Badging**

Background:

HCC could take a leadership role by offering micro-credentialing and digital badging. This initiative may create a strategic advantage and serve an underrepresented education need in the workforce.

Micro-credentialing is an emerging trend within various professional fields – particularly information technology, which recognizes the attainment of sought-after skills, work experiences, training, and industry-recognized competencies. This includes the recognition of student college experiences, such as participation within academic clubs, student government, and service roles. Micro-credentialing offers students and county residents the ability to present a documented portfolio of completed training and desired skills to employers in contrast to traditional degrees and certifications. It provides a bridge that aligns and maps professional growth with the attainment of in-demand skills within the workforce.

Micro-credentialing can also satisfy needs of an underserved market of people who need training, but cannot afford the cost or time commitment of traditional college programs and courses. As a result, HCC should evaluate the option offering short, low-cost online or condensed class formats, which are bundled to meet existing workforce needs, and where learners can quickly earn a form of digital recognition.

It is recommended that HCC collaborate with the Howard County Economic Development Authority and sponsoring employers to determine award criteria

since completion requirements for micro-credentials are usually determined by the granting institution and not through accreditation processes.

Available Resources:

Collaboration and partnership with the Howard County Economic Development Authority is needed in this effort.

Needed Resources:

Needed resources include an HCC-sponsored, integrated system to document and award micro-credentials/digital badging.

Moving Forward: What would change; what are the intended outcomes?

Through implementation of these recommendations, HCC would encourage efficient management of campus resources, enhanced communication, and student engagement. Increased community access to services would also be an outcome.

The college would develop an integrated mobile, education and workforce portal to promote academic training and employment opportunities to connect students, residents, and employees.

A micro-credentialing/digital badging system that awards and recognizes sought-after skill sets by employers would result. HCC would create standards for award of micro-credentials that are verifiable.

VI. Task Force: WORKFORCE DEVELOPMENT

Chair: Judy L. Smith, Managing Partner, On Point Consulting

Community task force members:

Landon Davies	Chief Software Systems Architect, Leidos
Harvey Davis	Vice President, Enterprise Growth Strategies Group, AECOM
Greg Fitchitt	Senior Vice President, Development, Howard Hughes Corp
Tameika Hollis	Vice President, Engineering, Manufacturing and Logistics for the Advanced Concepts and Technologies Division, Northrop Grumman Corporation
Harry Holt	Executive Vice President, Operations, BITHGROUP Technologies
Steve Hrubala	Global Head of Procurement and Strategic Sourcing, The Carlyle Group
Diane Martin	Director, Community Outreach and Engagement, Howard County Public School System
Leonardo McClarty	President and CEO, Howard County Chamber of Commerce
Richard Schaeffer	President, Riverbank Associates, LLC
Donna Stevenson	President, Early Morning Software

HCC task force participants:

Christi Ewing	Assistant Director for Research and Planning
Tiana Flores	Public Relations & Marketing Associate
Beth Homan	Executive Director of Public Relations and Marketing
Dave Jordan	Associate Vice President of Human Resources
Steve Joss	Board of Trustees Member
Janice Marks	Associate Vice President for Student Development
Betty Noble	Associate Dean and Chair, Business & Computer Systems
Kathie Williams	Student
Minah Woo	Associate Vice President, Continuing Education/Workforce Development

Top Recommendations:

1. Create an ambassador program [Retired Employee Ambassador Program (REAP)] to enhance public/private partnerships and supplement student learning of soft skills. The program would tap into industry in a creative way, using retirees as guest lecturers, mentors, and coaches.
2. Infuse “soft” skills development into the curriculum to improve career outcomes, moving students from enrollment to employment.
3. Develop and implement a skills competency inventory to gauge student experience in both technical and “soft” skills.

RECOMMENDATION 1:

Create an ambassador program [Retired Employee Ambassador Program (REAP)] to enhance public/private partnerships and supplement student learning of soft skills. The program would tap into industry in a creative way, using retirees as guest lecturers, mentors, and coaches.

Background:

According to the U.S. Census, 10 percent of the county population was 65 years old or more in 2010. In 2016, the number jumped to 13 percent. The Baltimore Sun reports that the percentage will grow to 22 percent by 2035. With a location at the heart of the Baltimore/Washington corridor, Howard County is rich with STEM-related career professionals. By linking with the very active and vibrant population of retired individuals in the community, the college will create another bridge with the industry to support students. Students often enter college without knowing exactly what they would like to study and/or how their studies translate in the real work world (“How to Be, Not Just What to Be”). Leveraging public/private partnerships through an ambassador program provides a gateway to support students in learning about the industry so they can select careers more carefully and thoughtfully. This program may help students decipher how to find a career path that is rewarding, and what they can do that is a distinctive and worthy long-term investment in their careers.

Available Resources:

- Industry to include small, mid-sized, and large businesses, a robust Chamber of Commerce, and a growing retiree population;
- Workforce-related and professional community organizations and groups;
- Current staff, faculty, and curriculum;
- Current materials and online opportunities offered within the college’s career services area (e.g., HCC Job Connection, job fairs, internships, etc.);
- Entrepreneurship program already has strong partnerships with businesses and could be a model for identifying retirees and businesses; and
- Advisory boards already exist at the college and could be a model for the organization of this program.

Needed Resources:

- Hire a staff person (preferably from industry) to manage and oversee the program. This staff member would develop and implement creative funding ideas that engage and incentivize industry, create ways to leverage industry’s retirees, build relationships with the students, and connect with the external community to identify the retiree participants;
- Develop benefits for the ambassadors to encourage engagement and involvement (e.g., free theatre tickets, parking passes, name in publications, name listed in the catalog). Consider utilizing the same benefits as advisory boards receive;
- Find and implement online tools to recruit, engage and retain retirees;

- Identify ways to inform students of the new program and to connect students to ambassadors;
- Expand industry partnerships, such as developing an industry day; and
- Maintain currency of staff to ensure up-to-date industry needs are incorporated into the curriculum, and then retool existing materials as needed.

RECOMMENDATION 2:

Infuse “soft” skills development into the curriculum to improve career outcomes, moving students from enrollment to employment.

Background:

Employees who master “soft” skills significantly contribute to a harmonious workplace. Having employees interact effectively with others as they execute the technical portion of their job is a necessity. The deficiency of employees with “soft” skills appears to be a systematic problem across various industries. There are multiple, innovative ways to integrate soft skills into a student’s daily workflow. Some examples would be a mandatory/non-mandatory one-credit course, a mandatory/non-mandatory seminar, an orientation, webinars, introductory workshops, incorporating them into the general studies curriculum, or adding them to all core curricula throughout the college.

Available Resources:

- Existing public/private partnerships could be leveraged to identify soft skills and the associated situational awareness needed;
- Current curriculum, staff, and student services; and
- Companies that have identified their soft skill needs.

Needed Resources:

- Funding to support a project team, training, and meetings (budget line item);
- Time and funding to develop and implement curricula, which may include role play exercises for the classroom, online materials, and courses;
- Funding for or access to audio-visual resources to record students in role play situations;
- Communication plan to illustrate the motivation for college staff and external industry to engage in teaching soft skills (explain the why, why now, what’s in it for me, and benefits);
- Greater numbers of industry partners who are willing to share their soft skills needs with faculty on a regular basis via consulting groups used by industry or internal company resources such as training departments; and
- Annual or semi-annual leadership conference to discuss education and culture with industry partners.

RECOMMENDATION 3:

Develop and implement a skills competency inventory to gauge student experience in both technical and “soft” skills.

Background:

Employers want students to have quality soft skills regardless of their majors or technical skills. These include written and oral communications, teamwork, creativity, problem solving, critical thinking, cultural competency, crisis and conflict management, time management, project management, and the ability to apply knowledge in real-world settings. A recent Association of American Colleges & Universities survey states that employers describe only 37 percent of recent college graduates as prepared to work in teams, 30 percent exercise ethical decision making, and 23 percent are prepared to apply knowledge to real-world problems. No one in the college student’s experience owns the responsibility of soft skill development. As a result, in most cases the curriculum is content versus skills driven. There is a need to promote the awareness of what employees want and need, to tie this awareness to industry success, and then close the gap between the soft skills that employers require and the soft skills that the students acquire during their college tenure.

Available Resources:

- Student orientation;
- General studies curriculum;
- Graduation criteria;
- Student Planner (online resource used by enrollment services with students);
- Workshops;
- Career and interest assessments through the career services office; and
- Future resource of Guided Pathways.

Needed Resources:

- Inventory assessment tool;
- Possible increased staffing in career services area;
- Identification of resources inside and outside the college that could augment student areas of weakness, such as Toastmasters or student clubs;
- Increased internship opportunities, job shadowing programs, and other industry experiences that promote thinking “outside of the box” and the use of soft skills where gaps exist;
- Checklist of competencies and check-in points. Plan for assessing, monitoring, and obtaining skills;
- Faculty trainings on how to infuse soft skill competencies in their curriculum;
- Time and funding to develop soft skills learning within each academic program; and
- Revised graduation criteria to include a review of competency inventory use and successful completion, and establishing a minimum achievement level that must be met in order to graduate and represent the college in the workforce.

OTHER RECOMMENDATIONS:

Develop an adult pathways program that consists of guidance, remediation, curricula, and other support elements to enable career-limited or transitional adults to enter or re-enter the workforce; Integrate contextual learning into current programs to optimize learning gains and workforce readiness; and Partner with Howard County and state resources that focus on workforce.

Background:

The population of adults who need workforce assistance is diverse and may include veterans, senior citizens, high school drop outs, immigrants, people who have not completed college in the past, criminal offenders, and those seeking skills retooling. These individuals may not have the education and/or skills needed to earn a “living wage” or transition to an occupation that keeps pace with technology/workforce advancements. There needs to be a structured/non-structured approach to upgrading adult learner skills without being intimidating.

Available Resources:

- Howard County Economic Development Authority;
- Maryland Workforce Exchange;
- HCC student services;
- Academic progression/roadmaps; and
- Current curriculum.

Needed Resources:

- Career roadmaps that contain potential jobs in the industry, progression of education and training needed along the pathway, salary information, potential industry partners, and any associated support services;
- Industry partners (connecting to business to identify targeted sectors, skills, and competencies);
- Resources to review the current curriculum;
- Work readiness assessments;
- New programs to bridge the gaps among adult basic education and college, remedial and credit courses, and military and non-military training;
- Best practices and other business resources that target the area needs; and
- Programs that address the following topics: What does the workforce look like today? As a student, how do I leverage what I am currently doing; how do my skills apply to other areas? What is the generational impact in today’s workplace – age, veterans, sex, race, and outlook?

Moving Forward: What would change; what are the intended outcomes?

In implementing these recommendations, the college would need to:

- Establish a task force to develop a plan for the program;

- Within four months, generate a plan that describes the program, identifies program resources and a timeline, highlights the benefits/incentives of the program, and determines the measures of success;
- Reach out to businesses in the area to establish relationships and jointly plan activities between industry and college/students;
- Broaden beyond health care and technology to encompass tradecrafts, such as manufacturing, electricians, plumbers, and other areas;
- Integrate these partnerships (relationships) with skill sets (soft skills – teamwork, corporate culture, agility, communications, resilience, entrepreneurial, etc.); and,
- Prototype the program for six months. At the conclusion of the six months, the college can determine the best path forward for full program implementation.

Changes and outcomes expected from recommendation 2 include:

- Identify and develop a project team, develop a schedule, and create a project plan that includes surveys, communications standards, professional development training, tools, measures of success, and prototype; and
- Keep the following goals in mind when infusing soft skills into the curriculum:
 - ✓ Have students begin with the end in mind. Think about preparing for job opportunities from Day 1;
 - ✓ Prepare students to think about the “how” (how will I successfully integrate into the workplace) versus the “what” (what career do I want?);
 - ✓ Place focus on what students want to do and how they will get there;
 - ✓ Change the mindset of students: what they must do to prepare for the job, how to engage with others and potential employers, and thinking about a career versus just a job;
 - ✓ Build in check points (50 percent program completion and leverage inventory assessment to provide feedback on progress and path forward to fill gaps);
 - ✓ Develop a soft skills project team that consists of business, faculty, staff, and students; and
 - ✓ Develop and implement soft skills operational scenarios, plan, and framework and/or competency assessment/inventory as a measurement tool.

Changes and outcomes expected from recommendation 3 include:

- Develop the inventory to include:
 - ✓ Career-related activities – Career interest survey, career exploration, personality/affinity, pathway plan, career counseling; and
 - ✓ Competency/skill-related topics.
- Modify student orientation to include initial assessment of student soft skill competencies;
- Build in periodic check-ins with career counselors, but require at least one meeting per year with career counselors;

- Align with recommendation 1 to promote collaboration between the business and education sectors and the notion that a shared goal of obtaining soft skills is best for businesses, educators, and the students; and
- Align with recommendation 2 by infusing soft skills education into the curriculum.

Changes and outcomes expected from other recommendations include:

- Identify one target employment area and a target group of adult learners and plan/prototype a program (one that can leverage existing HCC training or majors);
- Move from “students” as the only customers to both “student and the employers” as the customers; and
- Focus on work readiness, preparation, and transition.