

***Commission on the Future
of Howard Community College***

Chair: Mary Ann Scully
January 2008

The Commission on the Future

The Commission's purpose is to identify innovative ideas, emerging issues, and alternatives for the future of Howard Community College (HCC). Objectives for the Commission include:

- Identifying innovative ideas and alternatives to be considered in preparing HCC for the future.
- Increasing HCC's responsiveness to the emerging learning needs of Howard County.
- Establishing a process that will serve as a model for continued citizen participation in helping the college prepare for the future.
- Creating a widely understood and shared vision for the future of HCC.
- Promoting an understanding of the mission of HCC.

The Commission involved over 50 citizens with interests in the economic, cultural, and educational development of Howard County. The Commission formed six task forces that met during the fall 2007 semester. The members of the task forces were joined by HCC faculty and staff to explore HCC current practice and to discuss new opportunities.

Their recommendations have been formulated and are now presented for consideration by the college and the board of trustees. The college will produce an annual report to provide feedback to the community participants on the implementation of its recommendations.

I. Task Force: Creating a Leading Edge Learning Organization

Chair: Shirley Collier, C.E.O. Optemax, LLC

Community task force members:

Michelle Benvenga	T. Rowe Price
Kevin Kelehan	Reese & Carney
Rick Marquart	retired, Howard County Public Schools
Randall Slagle	Howard County Public Schools
Paula Spero	PAC Spero & Company
Deborah Zients	The Alternative Board

HCC task force participants:

Todd Allen	Director, Human Resources
Tara Hart	Division Chair, English/World languages
Susan Hellenbrand	Office Associate, Planning, Research & Organizational Development
Zoe Irvin	Executive Director, Planning, Research & Organizational Development
Dr. Cindy Peterka	Vice President of Student Services
Dr. Bernie Sandruck	Division Chair, Mathematics
Sharon Schmickley	Division chair, Computer Science
Sam Lawoyin	HCC student

Top Recommendations:

1. Focus on understanding the current and future markets for the college services and to use this information to set goals, evaluate viability of current programs and guide innovation.
2. Address technology, innovation and entrepreneurship by establishing and communicating clearly the top annual innovation priorities and fully embracing the power of the internet in its operations and academic programs.
3. Make organizational culture a priority.
4. Leverage the energy and experience of the county's senior population to encourage civic engagement by providing "second career" development classes on community leadership. We recommended that the college create a certificate program to acknowledge this training.
5. *Other recommendations:* institute flexible work schedules and telecommuting; use blogs and other internet-based tools to communicate; mix generations and cultures to obtain input on programs; teach adults to use current technology; work with community resources on technological access; and embed analytical and critical thinking skills in all curricula.

Recommendation #1. The top priority issue by consensus of the group is: How does the college determine what to keep doing or stop doing?

We recommend that the college focus on understanding the current and future markets for its services and to use this information to set goals, evaluate viability of current programs and guide innovation. This can be done with the following activities:

- a. Create a professional Marketing Research department. The marketing research effort should include leveraging partnerships with and gathering information from funding sources (local, state and federal government agencies and foundations), businesses, Howard County Public School System, regional universities, and current and prospective students to determine their perceptions, needs and expectations. It should also determine the leading and lagging indicators of demand for the college's services.
- b. Hire knowledgeable external advisors to participate in the R&D evaluation process at the college.
- c. Determine the metrics for measuring the business success (i.e., efficiency, effectiveness, quality of service, continuous improvement, etc.) of departments, programs and courses at the college. Use this to determine which non-productive programs, processes or courses should be eliminated. Tie incentives to these metrics to shape the behaviors of all employees.

Background: Our discussions surrounded the college's current informal method of assessing market demand. Although the college gathers quite a bit of operational data for quality purposes, like most academic institutions the emphasis has been on peer comparisons. Some market data such as student enrollment statistics in the Howard County Public School System and the growing percentage of seniors in the county have been collected. Many employees are active in the community, but no formal program exists for evaluating that data objectively and then using that information to guide the budget, establish or abolish academic programs or to inform goal setting and performance appraisals for the faculty and staff. A long tradition of "shared governance" and "public service" has precluded a hard look at academic efficiency and effectiveness.

This Task Force commends the HCC faculty, staff and administration for their courage to initiate these frank discussions and seek ways in which the college can leverage its resources in the most cost effective manner to meet the evolving needs of the community it serves.

Recommendation #2. The Issue is: How will technology impact the college? How do we address innovation and entrepreneurship?

We recommend that the college address technology, innovation and entrepreneurship by establishing and communicating clearly the top annual innovation priorities and fully embracing the power of the Internet in its operations and academic programs. This can be done with the following priority actions:

- Develop a “Council for Innovation”
 - Make campus-wide cross departmental innovation a priority
 - Develop a discretionary fund for innovative projects
 - Utilize a knowledge management system (Mind Align, CollectiveX, etc.) to track ideas and activities
 - Incorporate external resources, partnerships, consultants and businesses
 - Serve as a campus-wide repository and clearinghouse for proposals, active projects, materials, seminars and other resources
- Hire a Technology Futurist to advise an internal technology committee charged with ensuring the college is fully exploiting the benefits of current and emerging technologies to relate to all stakeholders: students, faculty & staff, funding sources and the community, and to fulfill its mission creatively and cost effectively.

Background: Discussions surrounded the use of the internet, specifically social networking, internet media and virtual worlds. It was agreed that the internet is the medium for technologies that will greatly impact the college over the next 5-10 years. The college should seek a position to leverage these exciting and popular technologies and be prepared for the many new internet opportunities yet to be developed.

Recommendation #3. The issue is: How does the college maintain organizational effectiveness as it grows?

We recommend that senior management at the college make organizational culture a priority. This can be done by the following actions:

- a. Communicate values and reasons why HCC is special throughout the organization.
- b. Integrate values and corresponding behaviors into the hiring, goal setting, performance appraisals and reward/award systems for all employees.
- c. Provide structured development, fellowship and career opportunities for all employees (faculty and staff).

- d. Conduct ongoing formal and informal employee and student satisfaction surveys and then meet with individual organizational units to review findings and ask for feedback on how to improve. Share both good and bad student feedback with faculty and staff during the face to face meetings.

Background: Discussions centered around how Kate Hetherington, the new president of HCC can instill a sense of community, excitement and loyalty among employees as the college grows. Although the college has many great programs aimed at employees, it is recommended that an overall values-centered approach be formulated, communicated and reinforced for all employees, and that senior management makes a concerted effort to interact with faculty and staff in informal ways. These activities will continue the “small college” feel throughout the institution even as it grows.

Recommendation #4. The issue is: How does the college deal with the growing population of seniors?

We recommend that the college leverage the energy and experience of the county’s senior population to encourage civic engagement by providing “second career” development classes on community leadership. We recommended that the college create a certificate program to acknowledge this training. Related to this we recommend that the college:

- Provide online courses for seniors.
- Leverage active seniors for:
 - Guest lecturers
 - Volunteers as a “council of elders” or brain trust for the college on other matters such as finance, operations, real estate, human resources, etc.
 - Mentors to students
- Provide discounts to seniors based upon “Time Banking” volunteerism
- Lobby the state to consider moving the minimum age from 62 to 65-67 for free tuition

Background: Discussions included the acknowledgment that “baby boomer” seniors are likely to live longer more active lives than previous generation. This is good news and bad news. The bad news is that seniors beginning at the age of 62 qualify for free tuition, which could significantly impact the operations at the college as the size of this group grows. The good news of an increasingly active, committed senior community is that seniors can provide a huge benefit to the college and external community through volunteerism and second careers.

Recommendation #5. These are suggestions and great ideas relating to the four issues our task force focused on as our priority items, but which didn't make it into the highest priority categories above:

- A. Provide flexible work schedules and telecommuting for all employees, whenever possible. Focus on and emphasize outputs.
- B. Use blogs and other internet based tools to communicate and elicit feedback on academic programs, policies and practices from students, faculty, staff (full and part-time) and community partners.
- C. Obtain student input in programs, mix generations and facilitate the teaching of each group to relate to one another and to those from different cultures.
- D. Teach adults how to use current technology.
- E. Work with community resources to obtain access to broadband communications and computers for all students
- F. Embed analytical and critical thinking skills in all curricula to teach students how to assess risk, and work with others, to solve real world problems.

II. Task Force: Environmental Sustainability

Chair: Carl Nelson, Corporate Office Properties Trust

Community task force members:

Jim Caldwell	Montgomery County Dept. of Environmental Protection
Bobbie Dillow	HCC Board of Trustees
Candace Dodson Reed	Howard County Government
Josh Feldmark	Howard County Commission on Environmental Sustainability
Cathy Hudson	Howard County Citizens Association
Ken Kolb	Riparius Construction, Inc
David Pratt	Lorax Partnerships
Jim Wallace	Gensler

HCC task force participants:

Wendy Alberg	HCC student
Lynn Coleman	Vice President, Administration & Finance
Nanette Douglas	Executive Assistant, Administration & Finance
Emily Joo	HCC student
Bob Marietta	Facility Renovations & Safety
Erin Yun	Director, Board Relations/ Special Projects
Ritta Zeilah	SGA President

Top Recommendations:

1. Become a model sustainable institution by planning, operating and teaching our students, staff and community the concepts and actions needed to meet our needs in the present without compromising the needs of the future. The college's tagline, to become this model, should be "Live it, Advocate It, Teach It."
2. Hire a full time director of sustainability to coordinate sustainable activities across the campus and Howard County community. This individual will provide a conduit to communicate among the various stakeholders.
3. Create partnerships with local, regional and state businesses, governmental agencies, nonprofits, civic and community groups.
4. Demonstrate leadership throughout the region in the use of systems and technologies that promote good environmental stewardship.
5. Fully develop the educational experience by integrating sustainable culture into the college curriculum and the student's extracurricular activities.

The Environmental Sustainability Task Force was charged with answering the following questions in developing sustainable practices for the college.

1. How can HCC infuse environmental sustainability practices across the college?
2. What role can HCC have in promoting environmental sustainability beyond the campus?
3. What partnerships need to be formed to assist in this effort?

In order to answer these questions the task force needed to review the current sustainable practices that HCC has initiated. It became clear that they have already taken many steps to become a more sustainable institution; working to balance the triple bottom line of people, planet and prosperity. Many of these are listed below and detailed in the appendix but much more remains to be done.

Current Sustainable Practices at HCC

In April 2007, Howard Community College's President, Kate Hetherington, signed the American College and University Presidents Climate Commitment committing the college to achieve climate neutrality within ten years. Already this year HCC has formed the Facility and Sustainability Team to develop college initiatives in the area of sustainability. Through legislation, the county executive has committed to all new campus buildings being LEED Silver and the college is developing a policy of purchasing only Energy Star appliances.

All current renovation projects and recent buildings on campus use LEED principals in their construction practices. All architects and construction managers have received LEED certification. Housekeeping services use green cleaning products and restroom paper products are made with recycled paper. Engineering is replacing incandescent bulbs with compact fluorescents and has standardized temperature settings. Pest control uses integrated management to minimize the use of poisons. Integrated lawn management and Bay Friendly landscaping are used to reduce water pollution. The campus is planning to establish an arboretum and a Nature Trail has been dedicated.

As alternatives to single driver commuting, bike racks have been installed and discounted commuter bus passes are available.

The campus has increased recycling efforts by installing more recycling containers and joining the single streaming program with the county. In addition, HCC is involved with county cardboard and metal recycling programs.

Co-curriculum programs have brought students and staff together for speakers, web casts and movies like "An Inconvenient Truth" and for programs from the Society for College & University Planning, Association for Physical Plant Administrators, and the Association for Advancement of Sustainability in Higher Education. With Earth Day events, the school's Environmental Club has partnered with many community and governmental agencies. A campus-wide survey, followed by a sustainability

conference with Lorax Partnerships, brought representatives from all areas to the campus to consider sustainability issues.

Finally, faculty has proceeded with sustainability in the classroom innovations including guest speakers on sustainable issues, service learning projects (for example, the trash clean up project), promotion campaigns to save energy, paperless classrooms and green projects and presentations.

HCC has initiated a great foundation to become a sustainable institution in the future. The recommendations following are presented to allow HCC to take the next step.

Recommendation #1: Over the next five years, Howard Community College will become a model sustainable institution by planning, operating and teaching our students, staff and community the concepts and actions needed to meet our needs in the present without compromising the needs of the future. The college's tagline, to become this model should be "Live it, Advocate It, Teach It"

HCC will meet or exceed the goals set when the president of the college signed the American College and University Presidents Climate Commitment Agreement. The College will live each day conserving and preserving resources, recycling waste, and adopting sustainable practices, advocate for best practices in sustainability by setting an example in college activities and carrying this forward into the community through partnerships that raise the profile of sustainability and educate and involve the community at large, and teach students of all ages, including the youngest and the most seasoned learners at HCC.

Recommendation #2: To become a model of sustainable practices, the college will hire a full time Director of Sustainability to coordinate sustainable activities across the campus and the Howard County community. This individual will provide a conduit to communicate among the various stakeholders. There are many effective approaches HCC can and is taking on the path to environmental sustainability and we recommend a full-time Director of Sustainability as one of those approaches for the following reasons:

- Dedicating a full time individual (and eventually staff as the position grows and continues to add increased value to HCC) will play a crucial role in coordinating sustainability activities and will help form a method of prioritizing activities. He/she will also provide a conduit to communicate among the various stakeholders.
- There are enough activities to justify this as a full-time role.
- This will demonstrate another visible commitment to sustainability and will add more credibility to that commitment.
- There are too many initiatives for a part-time person to allocate necessary time and focus for the priority that HCC has designated to sustainability, now and into the future.

There are many organizational approaches that can be taken as to where this position resides and how it reports administratively. While we recognize these decisions are best left to executive management, we would like to propose our suggestions.

In most organizations, it is important for a newly created position to establish credibility through a high-level position organizationally. A position such as this could report to the office of the president. However, our observations of HCC indicate a more flattened hierarchy culturally, and communication is encouraged regardless of title and reporting relationships.

With this in mind, the momentum that has already been generated should be considered when looking for the appropriate location for this new position. It is important to note that in order for this position to be effective, they will require access to all levels within the organization.

Recommendation #3: Howard Community College will become a model sustainable institution by forming meaningful partnerships with local, regional, and state businesses, governmental agencies, nonprofits, and civic groups.

Momentous partnerships are crucial to the success of any organization. By sharing resources, the community college can extend its environmental efforts to the students, employees, community and beyond.

A model sustainable institution forms partnerships and takes a leadership role in local, regional and national arenas; in government and private organizations promoting sustainability in society, the economy and the environment. Such partnerships are used to develop benchmarks that can be used to measure sustainability efforts with the American College and University Presidents Climate Commitment and the Association for the Advancement of Sustainability in Higher Education (AASHE) as an example.

- Work with partners to restore the Middle Patuxent backyard.
- Create Speaker Series to educate community on various topics. Topics should range from the simple ways for individuals to “Go Green” to ways how small and large businesses can reduce their carbon footprint.
- Create a “Green Roundtable Group”, whereby the college would host meetings with other large businesses in the county to discuss best “green practices”, partnership opportunities, and funding opportunities for “green initiatives”.
- Develop an aggressive internal and external marketing campaign aimed at educating students, staff, and the community on “being green”. Include inserts in all marketing materials (eNewsletters, catalogs, mailings), hire an environmental reporter for communications pieces, post signs throughout campus, etc.

- Develop environmental internship program.
- Explore different/creative transportation options by partnering with car sharing programs like Flexcar.
- Explore options for distance learning/decentralized locations for core courses- “Bring the classes to the people....”
- Offer a mix of environmental classes in the Kids on Campus Program.

Suggested partnership groups are listed in the Appendix.

Recommendation #4: Howard Community College will become a model of sustainable practices by demonstrating leadership throughout the region in the use of systems and technologies that promote good environmental stewardship.

- Utilize innovative water conservation technologies to reduce wastewater discharges. Minimize stormwater runoff by reducing impervious areas on campus through the use of infiltrative parking lots, green roofs, rain gardens and pervious pavers and new stormwater pond designs.
- Reduce the college’s carbon footprint through the incorporation of alternative energy systems on campus including solar water heating, photovoltaic electricity systems and the purchase of wind energy.
- Become a world class recycling organization. Incorporate waste minimization goals into all aspects of the college’s activities, making life cycle product and/or materials selection part of all decisions.
- Establish an arboretum of native tree species throughout the campus to reduce summer cooling demands, reduce stormwater runoff, increase wildlife habitat and increase carbon dioxide absorption.
- Integrate the science and technology of these various campus improvements into the classroom to provide students first-hand knowledge of the design, construction and effectiveness of these sustainable systems.
- Sponsor an annual *Sustainable Practices Summit* bringing together area businesses, government agencies and environmental professionals to share the knowledge, practice, performance, and suitability of various sustainable systems in use, or applicable for use throughout the region.

Recommendation #5: Howard Community College will fully develop the educational experience by integrating sustainable culture into the college curriculum and the student’s extracurricular activities.

- Establish an associate degree program for sustainable practices. Partner with four-year and graduate schools to develop sustainability/track degrees.
- Partner with local and regional business groups and employers to implement a program that will enable students to receive a certification of sustainable practices as a part of their HCC educational experience. This will also provide an employment base for local and regional “green” businesses.
- Add a “with concentration in sustainable practices” to existing HCC programs by identifying and creating elective classes that focus on sustainable practices. Program courses for possible implementation of sustainable practices are listed in the appendix.
- Implement elements of sustainability into the students’ daily lives. Some suggested activities include:
 - Inter-college contests to encourage students to conserve energy, water, resources. Encourage students to recycle paper, glass, metals, plastics. Money saved from hauling to landfill can be used to establish scholarships in “green” fields of study; purchase carbon offsets to make campus more climate neutral; plant trees to honor sustainability leaders.
 - Create entrepreneurial contests to encourage students to create greener ways to build, distribute, or dispose of products and/or services.
 - The environmental club can help establish a baseline of how waste is being disposed of now (quantity to landfill versus quantity recycled). Work to establish projects to protect and promote health of streams and the fauna and flora on campus. Identify and establish baseline for flora and fauna on campus (existing numbers and diversity versus future). Research current energy costs on campus versus “greener” sources like solar and wind.
- Children’s Learning Center and the Kids on Campus programs can host contests to maximize their recycling. Present lessons on the life cycle of a styrofoam cup. Schedule field trips to pick up trash. How many different kinds of birds, bugs, animals can they identify and count? How many different kinds of trees/flowers/shrubs can they identify and count?
- Establish link on HCC website so students can see how their monthly efforts contribute to energy savings. How much waste is diverted on a monthly basis from the landfill? How much money is saved on trash hauling costs? Detail and document college wide efforts towards sustainability. Website can serve as a resource for students and the community at large – listing energy conservation tools, waste reduction tools, a brief summation of history and intent of LEED. Have news items highlighting progress HCC is making towards climate neutrality. Use message boards, signage, and advertising to promote our message to the community.

SUMMARY

The Environmental Sustainability Task Force views these recommendations as a blueprint for Howard Community College to become a model of sustainability. The college will need to incorporate all aspects of these recommendations: (Live It, Advocate It and Teach It) to have a comprehensive program of sustainability for the future. HCC's mission is to:

- Live each day conserving and preserving resources, recycling waste, adopting sustainable practices, and incorporating them into planning and budgeting.
- Advocate and lead by example and carry this forward into the community by developing partnerships that raise the profile of sustainability and educate and involve the community at large.
- Teach principles and practices of sustainability to students of all ages.

III. Task Force: Global Education

Chair: Nayab Siddiqui, President, Scientific Systems and Software

Community task force members:

Roy L. Appletree	Community Advocate
Chel Cavallon	Consultant
Joanne Davis	Consultant
Robert Glascock	Assistant Superintendent, HCPSS
Irfan Malik	Director, Preserve Investments
Dr. Tom Tuttle	President, Tuttle Group International

HCC task force participants:

George Barlos	Director, International Education
Kevin Doyle	HCC Board of Trustees
Barbara Greenfeld	Associate Vice President, Enrollment Services
Farida Guzdar	Executive Assistant to the President
Carie Mellies	Research Associate, Learning Outcomes
Ron Roberson	Vice President, Academic Affairs
Dr. Jean Svacina	Associate Division Chair, English/World Languages
James Truby	Vice Chair, HCC Board of Trustees
Shayna Wise	HCC Student

Top Recommendations:

1. Adopt a framework for global competencies and engage faculty, students and staff in programs that develop foundational skills and environmental, economic and social/cultural competencies.
2. Revise the board's international education policy to enhance the strategic commitment to globalize the institution.
3. Integrate global education into the existing curriculum as a general education goal.
4. Create mechanisms that engage international students¹ and the international resources of the Baltimore-Washington region in constructive dialogues with local students.
5. Secure the funding and resources to expand and enhance global education programs.

¹ Includes students of all immigration status categories.

Introduction

To prepare students for successful participation in a rapidly changing and “flattening” 21st century world, there is a need to accelerate the focus on global education. The rapid growth of information and expansion of communication and information technologies have spurred the globalization of the world’s economy. The implication of these trends for the education community is pointed out by the Foundation for Education and Development, the Swiss National Center for Global Education:

Global Learning is a necessity because our everyday life is marked by global aspects. The values that determine our life are no longer passed on by the community, but by global means of communication, which create completely new guidelines. The schools, too, are subjected to these transformations as they follow the needs of a particular society that is embedded in the global environment.

From *Key Issues of Global Learning* Foundation for Education and Development, 2006-2007

(<http://www.globaleducation.ch/english/pagesnav/frames.htm>)

Students, faculty, and staff must acquire and strengthen their competencies to interact successfully in an intricate and complex global society. Understanding the multi-dimensional political, social and economic aspects of the global environment requires an ability to understand these dimensions from different perspectives.

Global education is a pedagogical response to the process of globalization. Increasing students’ knowledge and competencies are essential if they are to be informed and productive global citizens in the 21st Century.

To aid our communication, we will adopt the following definitions to insure that we and the readers have a common perspective:

International – *Of or relating to, or affecting two or more nations. Extending across or transcending national boundaries.* ²

Global- *Of or pertaining to the entire earth. Not national or continental but planetary.* ³

Globalization – *a process of interaction and integration among the people, companies, and governments of different nations, a process driven by international trade and investment and aided by information technology. This process has effects on the environment, on culture, on political systems, on economic development and prosperity, and on human physical well-being in societies around the world.* ⁴

² www.thefreedictionary.com/international

³ <http://dict.die.net/global/>

⁴ Carnegie Endowment for International Peace <http://www.globalization101.org/about>

Recommendations

To enable Howard Community College to further strengthen its Global Education efforts, the Task Force presents five recommendations to accelerate the integration of global competencies through programs focused on faculty, staff and students.

Recommendation #1: Adopt a framework for global competencies and engage faculty, students and staff in programs that develop foundational skills and environmental, economic and social/cultural competencies.

Background: The Global Education Task Force believes that:

- There is a framework of competencies required for effective global citizenship in the 21st century (e.g., the Global Competencies Framework, outlined in Appendix 1). This framework may intersect with competencies that are incorporated in each student's chosen major and/or career. It may also include competencies that are supplementary to or outside the scope of particular learning programs or the technical requirements of specific careers.
- This framework involves a continuum of competencies that may not be possible for every student to develop within the first two years of a college education. Some of these competencies are more easily acquired in some learning programs than in others. In addition, the competencies will require a spectrum of experiences that go beyond traditional classroom learning and the boundaries of any single curriculum providing a framework for lifelong learning.
- Howard Community College should adopt this framework and use it to identify which competencies it is already developing in its students as well as "competency gaps" where there need to be changes to curricula and other programs.

The Global Competencies Framework is detailed in Appendix 1. It includes specific competencies grouped into four categories. The categories (other than foundational) are adapted from the three elements of the "triple bottom line".⁵ The four competency categories are:

- **Foundational Competencies** – This set of competencies is fundamental to the acquisition of all other global competencies within the framework. These form the foundation of all global competencies and assist with the process of learning how to learn.
- **Economic Competencies** – This is a continuum of competencies that includes an understanding of key economic concepts ranging from personal financial matters to organizational issues that require a citizen's level of understanding of the financial and economic issues that underpin and are influenced by globalization.
- **Environmental Competencies** – These competencies include an understanding of the basic concepts of sustainability from an environmental perspective

⁵ John Elkington, *Cannibals with forks: The triple bottom line of 21st century business*, 1998, Gabriola Island, British Columbia: New Society Publishers.

including how the environment is impacted by globalization. For example, they focus on how individuals can choose a more sustainable lifestyle; how organizations can be more sustainable; and how natural resource and energy issues impact decision making at the individual, organizational, national and global levels.

- **Social/Cultural Competencies** – This is a continuum of competencies that includes an understanding of intra and inter-group processes and organizational sustainability as it relates to social responsibility. This category emphasizes the development of cultural competence at the interpersonal, inter-and intra-regional, national and global levels. Also heavily stressed is the need and desire for language competence in both one's native language and non-native languages as an essential tool for developing global competence.

The task force recommends that the Global Competencies Framework be incorporated into:

- Professional Development (faculty and staff)
- Curriculum and Program Enhancement
- Student Services and Programming (such as advising; student life; career counseling; service learning; etc.)

The task force recommends that these competencies be featured in graphic and print forms (if needed) available to all members of the college community.

Recommendation #2: Revise the board's international education policy to enhance the strategic commitment to globalize the institution.

Background: HCC's Policy on International Education was adopted by the Board of Trustees on April 26, 2000. This policy is broad in scope, acknowledges HCC's strategic position and experience, and identifies specific program offerings. It recognizes the importance of international education.

Today, however, we recognize a greater need, the essence of which is captured in the word 'global.' Earlier ideas relating to international education are seen as only a part of the broader concept of global education. This task force recommends that HCC and the Board of Trustees review and rewrite the International Education Policy to reflect the current imperative to prepare students for success in the global community of the 21st century.

The new Global Education policy must reflect a strategic commitment to globalize the college. Specific recommendations include:

- Clarify that the policy applies to all faculty, staff, students, units of the college and all academic and non-academic programs.
- Substitute 'global' for 'international'.
- Review the policy for currency and relevancy.
- Make the policy more student-focused.
- Make the policy more inclusive of faculty and staff.

- Make the policy inclusive of activities within the United States.
- Use language that reflects passion and enthusiasm for global education as our response to globalization.

Recommendation #3: Integrate global education into the existing curriculum as a general education goal.

Background: In order to carry out Recommendation 1 and support the revised policy – Recommendation 2 - global education must be integrated into every program within the college. Regardless of the student's specific educational objectives, there are competencies from the Global Competencies Framework that are relevant. By making global education a general education goal, it will stress its relevance for all students and it will emphasize the need to enhance the global competencies of all faculty and staff in order to successfully integrate these competencies into course curricula and other College programs. By integration we:

- Are not necessarily recommending new courses or new programs.
- Are recommending that all courses and programs be reviewed in order to integrate examples, case studies, readings, experiential learning, guest speakers, etc., that will contribute to global competence development.
- Are recommending the use of existing and emerging technologies, e.g., internet, web-casting, video conferencing, You Tube, Skype, etc., to provide increased interaction between HCC students, faculty and staff and those from other cultures.

Recommendation #4: Create mechanisms that engage international students⁶ and the international resources of the Baltimore-Washington region in constructive dialogues with local students.

Background: We have been impressed with the extent to which the Howard Community College campus is already an international community. However, we believe that the college currently does not take full advantage of the resources at its disposal to enhance the global competencies of students, faculty and staff. In particular we believe that the college can increase the extent to which:

- International students engage in meaningful dialogue with local students.
- The resources of the greater Baltimore-Washington community are utilized as resources to enhance global education experiences and competency development (e.g., embassies in Washington; international businesses in the region; other higher education institutions such as UMBC, UMCP, Towson, Georgetown, etc.).
- Collaboration between the Howard County Public School System (HCPSS) and HCC can be expanded to strengthen global education programs in each system (e.g. offering world language programs to obtain sufficient numbers of students to make courses feasible; benchmarking the HCPSS website and communication

⁶ Includes students of all immigration status categories.

processes with international communities, collaborating on multi-cultural center being developed by HCPSS, etc.).

Recommendation #5: Secure the funding and resources to expand and enhance global education programs.

Background: The Task Force has been impressed by our exposure to the study abroad programs. For those students, faculty, staff and community members who have participated, these programs have often been life-changing experiences. As a strategy to globalize the college, we support an expansion of these programs and we support efforts to make them more accessible to those who don't have the funds to cover the costs of participation. The Task Force recommends the following actions to expand and enhance the effectiveness of study abroad programs:

- Dedicate a significant percentage of Student scholarship funds to study abroad programs.
- Allocate funds from international grants for faculty to faculty exchange programs (leveraging the experience of faculty members to benefit hundreds of students whom they impact and influence).
- Work with the HCC Educational Foundation to identify housing options for students and faculty who participate in exchange programs.
- Partner with study abroad programs at other higher education organizations in the region so as not to duplicate resources.
- Clarify the competencies from the Global Competencies Framework that the study abroad program is designed to develop and how they will be assessed.

In addition, we recognize that the efforts to fully globalize the campus must extend far beyond study abroad programs. To expand and enhance the entire global education program offerings, we recommend that HCC:

- Develop a focus for the Howard Community College Educational Foundation in fundraising for global initiatives in support of the Board's new global education policy (Recommendation 2).
- Apply for grants to local, regional and national public agencies and private foundations. (Partner with organizations like HCPSS to broaden the impact and increase our chances of being funded.)
- Integrate global initiatives into the diversity cross-functional team charter to develop the global education programming including translation of website and promotional materials to languages that represent the student body and the community at large - e.g., Korean, Spanish, etc.
- Invest college funds in developing partnerships with higher education, public school systems, state and federal government agencies and regional businesses to augment the resources of HCC with respect to global education.

IV. Task Force: New Programs for the Future

Chair: Dr. Sam Seymour, JHU Applied Physics Laboratory

Community task force members:

John Baker	JHU Carey Business School
David Bower	Data Computer Corporation of America
Bonnie Cronin	The Arc of Howard County
Christopher Foley	JHU Applied Physics Laboratory
Valerie Gross	Howard County Public Library
Stacie Hunt Irish	Leadership Howard County
John Jadik	Northrop Grumman Corporation

HCC task force participants:

David Buonora	Director, Government Affairs and Resource Development
JoAnn Hawkins	Associate Vice President, Continuing Education and Workforce Development
Steve Horvath	Associate Vice President, Academic Affairs
Virginia Kirk	Director, Distance and Alternative Learning
Valerie Lash	Division Chair, Arts & Humanities
Dorothy Plantz	Associate Director, Advising
Malena Schmidt	Office Supervisor, Science & Technology
Dr. Mary Beth Tung	HCC Board of Trustees

Community Interview Support:

Julie Coons	Technology Council of Maryland
Robert Glascock	Howard County Public School System
Suzanne Jenniches	Northrop Grumman Corporation
Richard Roca	JHU Applied Physics Laboratory

Top Recommendations:

1. Develop the following centers: Center for Virtual Environment Education - An Academic "Second Life," Center for Adoption of Technological Change, Center for Civic Engagement and a Regional Educational Center for the Ft. George Meade Region.
2. Work to ensure routine articulation and certification of Howard Community College courses to 4-year schools.
3. Develop a Corporate Connections Institute.
4. Institute a cross-curricula program for sustainable resources.
5. Advocate for Howard Community College BS degree programs.

The New Programs for the Future Task Force has defined the stretch goal recommendations listed above. These stretch goals are innovative and capable of identifying Howard Community College as a leader in these topics. However, they require long-term planning, resources, patience, and a commitment by the college. In addition, it will be useful to develop partnerships with business and academic institutions. Following the stretch goals, the Task Force provides additional specific program recommendations.

Recommendation #1: Howard Community College will develop four new centers.

1A. Create the Center for Virtual Environmental Education

The New Programs for the Future Task Force recommends that an exciting, challenging, and nationally significant initiative be undertaken by Howard Community College to create a campus-wide virtual environment to enhance learning, delivery of service, and community impact. Future students entering Howard Community College will be increasingly computer literate. Living in an age of digital multimedia and instantaneous global connectivity, they have an expectation that in their higher education environment—from the day they visit the campus until the day they graduate—they will be introduced to and will use appropriate Information Technology (IT) in the academic process.

The current generation has created a “technology-on-steroids” culture. A key to student success is to use IT to engage him/her in the education process. Today, the internet, iPods, text messaging, social networking, gaming, handheld-everything devices, mobile computing, and video are but a few of the rapidly expanding applications of IT that are an omnipresent, integral part of our youths’ lives. Students need to explore the world, to apply scientific principles, to sample and analyze data, and to make connections among the new communities. The constraints in a classroom setting of real-world data collection, safety issues, and lack of equipment are challenging to orchestrate.

A large number of technological advances have reached the state where the use of virtual environments is now feasible for educational purposes. Human computer interaction, user interface design, advanced architectural design, modeling and simulation, three-dimensional modeling, computer animation, computer games, multi-user online role-playing games, virtual teaming, rapid prototyping, performance of the real-time computer systems (hardware and software)—all now allow simulated scenes to be navigated, explored, and interacted with in real time. Couple these advances with the rapid adoption of social software applications, such as Weblogs, Wikis, social networking, gaming, and data-sharing services, where students can work in collaborative virtual environments to design and build systems and develop software, conduct business, discover technology, create art, and develop myriad other uses. These technical environments are effective in learning by doing.

Virtual environments can be easily made personal with the computer technology found today in homes and offices and on mobile PCs, allowing projection of highly realistic simulated environments, sometimes augmented with sensory feedback devices. This

creation of personal virtual environments has a minimal investment in facilities where Howard Community College can take a leadership role.

In a multi-user virtual environment (MUVE), student learning occurs by solving problems as part of a community in an authentic real-world context of complex challenges. This is a difficult environment to create in a normal classroom. MUVEs enable multiple simultaneous participants to access virtual contexts, such as graphically represented buildings, museum artifacts, or laboratory equipment; interact with digital artifacts, such as digitized images, virtual microscopes, or audio files; represent themselves through “avatars” (in some cases graphical and in others, text-based); communicate with other participants and with other computer-based agents; and take part in collaborative experiences about problems similar to those in real-world contexts. The college’s students would be motivated to participate in MUVEs because they represent familiar environments with rapid visual and information response. The participant gains skills and deep academic knowledge while being entertained.

The Center for Virtual Environment Education would be a campus-wide initiative, serving not only the academic divisions but also service and administrative functions. For example, the Admissions Office may have a virtual environment interface to allow campus tours, dynamic exploration of curricula and the resulting career fields, student communications, and advising. In a chemistry course, a student avatar, as an agent, would seek out from the instructor’s electronic files the relevant lessons and lecture materials and send his/her avatar to the instructor’s avatar with issues and a need for clarification of points, like today’s frequently asked questions, or the student would virtually participate in a chemistry laboratory experiment dynamically interacting with the equipment and chemicals to solve a problem or demonstrate a concept.

There are already educational institutions that have recognized the use of virtual environments for instruction. Most often, the outcomes are for a few selected topics or, more rarely, for an entire course. High interest exists in many disciplines, including business, science, engineering, art, and the humanities. The center is not envisioned to replace real campus life or all classroom teaching but to provide the best match between delivery methods and educational content. Success in this initiative will be enhanced by full collaboration with business, government, and other academic institutions. Local research universities are now exploring the feasibility of such technology in their programs. Virtual universes already exist, such as Second Life™, providing easy leverage for the college to begin the center.

1B. Establish a Center for the Adoption of Technological Change

This center is intended to put the college “front and center” in understanding, planning for, and providing academic programs for technological change. In our rapidly evolving world, it would provide a “single source” for anyone at any age to obtain information on the following:

- Evolving changes in technology, software, communications, and technology devices;

- The impact technology could have on our lives and culture; and
- The ways to become better educated and/or trained in the use of new technologies.

Whether we are expectant users of technology or need defensively to become familiar with the hottest new tools needed to survive in the modern world, the center would become the “go-to” place for short and in-depth courses. The center would maintain a current inventory of the hot new technologies and become the place for students of all ages to “hang out” trying out or learning to use the latest stuff. It also would serve as a laboratory for many courses across the college.

1C. Create a Center for Civic Engagement

This stretch goal is to extend the credit options for the Center for Service Learning as part of a new Center for Civil Engagement. The existing Center for Service Learning will engage this year over 500 students and 22 faculty members. The Center has established over 75 partnerships with non-profit and community organizations. In the alternative winter and spring break programs, the Center for Service Learning works with students with international and national communities through training and immersion. Students who participate in the offerings of the Center for Service Learning enhance their personal growth, mutual awareness, and life-long opportunities for learning.

The task force recommends the Center for Service Learning become the Center for Civic Engagement, with a broader motif, encompassing service learning but not limited to it. In the new Center for Civic Engagement, students will be given opportunities to develop into actively engaged citizens with the ability and skills to effectively navigate through their local and global community.

This program would not require all students to take a course in civic engagement, but rather open the doors to students who feel a greater calling in the areas of service learning, community studies, immersion and outreach programs, and diversity and social justice. While current programs may grant credit for a service learning component within a discipline, students are not given credit for pursuing service learning of their own accord, thus lacking an academic motivator. With the new Center for Civic Engagement and with credits earned for completed hard work, more students will want to take advantage of this experience, thus creating a more involved community.

1D. Create a Regional Educational Center for the Ft. George Meade Region

The continued job growth in the central Maryland region will place an increasing demand on post-secondary education at all levels, particularly in the science, technology, engineering and mathematics fields. To meet this demand and to best serve the population, Howard Community College should seek a regional collaboration with higher education providers for delivery for education and training in a joint campus facility convenient to Ft. Meade. It may be possible to expand the nearby existing Regional Higher Education Center - The Laurel College Center (LCC) to meet this need.

While there may be various reasons that would impede such an initiative, this is felt to be so critical that all parties should contribute to the greater good. They would likely find considerable mutual benefit by such teamwork and collaboration. The mission would be to provide an enhanced access to higher education in the region, meeting the applied science and professional educational needs of the region; to facilitate cooperative projects and entrepreneurial activity to create growth and expansion of technology-based businesses; and to promote a climate of cooperation among colleges, government, and business, advancing the region as a technologically advanced area and creating high technology jobs.

Recommendation #2: Routine Articulation and Certification of Howard Community College Courses to 4-Year Schools

While Howard Community College has been aggressive in seeking articulation agreements with 4-year schools, public and private, within Maryland, as well as in other states, its efforts are frequently stymied by parochialism from other institutions. The recommendation is to establish more statewide articulation agreements, as well as a vehicle for achieving those agreements. BRAC might well be the motivating force for colleges to collaborate, especially because there is strong state support for a cohesive plan to address the educational needs of the incoming workers and their families.

The task force finds the challenges the college faces in this area as incredible. While it has been an issue within the Maryland academic community for many years, the very significant needs that this country faces must take precedence, and state authorities must take positive actions to enable increased standardization and ease of course articulation.

Recommendation #3: Establish a Corporate Connections Institute

The goal of the Corporate Connections Institute is to partner with business and industry to provide leadership in educating professionals and transforming skills and innovation into competitive advantage. The institute would provide credit and non-credit offerings. Most course offerings would be provided on-site, at business centers, or at the institute at Howard Community College.

The institute provides a one-stop shop with the infrastructure and resources to address the needs of business and industry. The institute could be located in the small business centers being considered by the government in our area. These centers are intended as incubators for small business in support of government opportunities and centers of innovations. The college's participation in these centers not only allows direct service to these budding enterprises but also gives the college direct feedback as to emerging needs. The efficiency of scale of a ready pool of clients and the potential sourcing of interns benefits the business community and our college community.

Recommendation #4: Develop a Cross-Curricula Program for Sustainable Resources

Howard Community College should integrate environmental education courses across the curriculum and extracurricular activities and clubs on campus. The environment is increasingly reaching the public conscience as a critical global topic requiring urgent attention and associated with phrases like "Going Green." Many people lack an understanding of the impact on their lives because it is not immediately tangible. Interest in understanding the impact sources of our global environment and what we can do about them are areas tailored for education and training at the college.

Having already started the Facilities and Sustainability Team (FAST) for its daily operations, the college could build on the goals of FAST to develop academic plans supporting it. This would further demonstrate the college's commitment to its sustainability goals and provide an opportunity to be a leader in developing cutting-edge programs that address climate neutrality. As with most recommendations here, this one also encompasses an interdisciplinary approach.

The Sustainability Education Initiative and the Second Nature: The Education for Sustainability organizations work with colleges and universities to develop, achieve, and advance a vision of truly sustainable higher education. The college should develop cross-curricula programs that explain, support, and address environmental concerns such as the greenhouse effect, holes in the ozone layer, air and water pollution and acid rain, saving plants and animals, and recycling trash and waste.

Recommendation #5: Advocacy for Howard Community College BS Degree Programs

In other states, community colleges offer baccalaureate degrees in critical shortage areas. Howard Community College should be allowed to offer baccalaureate degrees in nursing (addressed by another task force), science and technology, education, and critical languages. The critical language training would be especially beneficial to the federal government, and if a degree is not feasible, a certificate in languages for special needs (e.g., translation, intelligence gathering) might be appropriate. In the language area especially, collaboration with receptive agencies would be essential. While this is not a new recommendation, its implementation has reached an imperative stage.

The New Programs for the Future Task Force also has fourteen specific program recommendations, many of which have additional recommendations that are listed in the explanatory text that follows. The fourteen program recommendations are:

The New Programs for the Future Task Force also has fourteen specific program recommendations.

1. Extend programs in languages and culture with use of the arts and media;
2. Focus on training for older adults with disabilities (how to survive as a “boomer”);
3. Integrate civility, ethics and values cross-curriculum;
4. Develop a program for early childhood business management;
5. Provide training for excelling and managing in the mobile workforce;
6. Expand Howard Community College internship program;
7. Develop a rigorous set of homeland security programs;
8. Initiate and strengthen programs in fundamental STEM (Including offering an Associate of Science in Engineering degree);
9. Provide programs in information assurance and information security;
10. Expand and develop programs in biotechnology/nanotechnology;
11. Create knowledge transfer/knowledge management and portal technology programs;
12. Expand 3 + 1 programs;
13. Enhance teacher education programs; and
14. Expand online/distance education offerings.

Background for Program Recommendations

Over the next 5 years, our country will face a tsunami of change in technology, political, energy, environmental, and global uncertainties. Business and financial pressures will increase the demand for innovative and qualified workers needed for the United States to remain relevant and competitive in the global society. Norm Augustine stated the following in his 2006 report to Congress as part of a National Academies study, “Rising Above the Gathering Storm”: “America faces a serious and intensifying challenge with regard to its future competitiveness and standard of living. The inadequacies of our system of research and education pose a greater threat to U.S. national security over the next quarter century than any potential conventional war that we can imagine.” The study goes on to recommend a strengthening of our educational system and expanding the talent pool in science, mathematics, technology, and engineering.

Howard County residents have a high quality of life, high standard of living, and model secondary schools and public institutions. They are highly educated with high academic expectations for themselves and their families. Continual learning is a way of life. In this environment, Howard Community College has established a reputation for dynamic, responsive, and high quality education. There are already in place a significant number of relevant and exciting programs for credit and non-credit populations. Dedicated expert faculty maintain technology currency and offer programs that are highly relevant and that can provide skilled degree graduates or fully prepare students to continue with their education at a 4-year institution. A vigorous program to seek out new programs and course topics includes input directly from business, government, and industry; reviewing programs and reports at 4-year institutions and national surveys; student requests; opportunities in technology or program content identified by the faculty; collaborations with the Howard County Public School System and public libraries; and agreements with local and regional institutions.

Community colleges play a unique and critical role in our educational system and can serve as the catalyst to address the challenge we face as a nation in educational deficiencies. While expanding programs and pursuing the stretch goals recommended by this task force, Howard Community College should also strengthen its primary role of providing affordable 2-year credit programs and courses and offering exciting and relevant programs for local non-credit adult learners. In the future, high demand will continue for skilled workers who only need 2 years of formal advanced training.

The task force also noted that there are a number of job categories in crisis and that need special attention and concerted regional and statewide effort. Careers in science, technology, engineering, and mathematics; health care; secondary education; and languages are examples where collaboration, articulation agreements, and special degree considerations are needed to increase students in the pipeline.

Howard County is a leader in the nation in federal funding dollars, exceeding several hundred million dollars annually. Our median household income is the fourth largest in the nation, and we are sixth in the nation with adults holding advanced degrees. Over the next five years the Ft. Meade Base Realignment and Closure (BRAC) activities are projected to add up to 22,000 new jobs to the region, with the largest percentage of those technology jobs the result of local new hiring. With or without BRAC, the opportunities to address the needs of the growing population are obvious.

Several themes and motivators cut across the New Programs for the Future Task Force recommendations: diversity, globalization, cross-curricula and interdisciplinary needs, technological change, and building collaboration and partnerships. The following recommendations include specific program topics in five overall areas: community culture, business, government, technology, and academics.

Community Culture

In the five years between 2000 and 2005, Howard County saw a 53-percent increase in the number of Asian and Pacific Islanders residing in Howard County; it also saw a 43-percent increase in those of Hispanic origin. This diversity is quickly becoming apparent in our school, workplaces, and communities. The U.S. Census Bureau projects that between 2000 and 2035, Howard County will experience a 242-percent growth in the number of residents between the ages of 65 and 74. This growing population will introduce new areas of need, especially from educational institutions.

With such sound evidence of the changing face of our community, Howard Community College must examine the social ramifications and develop curricula and programming to respond. While the college is on the cutting edge compared to similar institutions, the task force identified programs that could be developed or improved.

Program Recommendations

1. Extend Programs in Languages and Culture with Use of the Arts and Media

Because our community is quickly becoming one rich in diversity and culture, curricula and extracurricular programs will need revisions to widen students' understanding of world cultures, as well as their own personal beliefs. This "out of the box" thinking will be required cross-curricula in order to support the globalization efforts at Howard Community College. In addition, these efforts will allow for the college to reach a larger and more diverse group of students.

The college already does an excellent job at offering a multitude of world language courses paired with cultural studies. The task force recommends continual expansion of these programs to include the language, culture, and immersion programs. Arts and media, such as cinema, music, and visual arts, can also expose students to culture not apparent in textbooks or traditional classroom instruction. Continuing to develop philosophical and religious studies of other cultures will help students traveling abroad and understanding people in their own communities. A student does not necessarily need to major in a language or have a career exclusive to that language.

Accommodation of culture, language, history, and religious differences shapes international relations and enhances productivity. The college should explore the needs of local employers with diverse and multicultural employees. With our proximity to the nation's capital and many federal government agencies, it would serve the college well to further explore their current needs in language, culture, arts, and media.

2. Focus on Training for Older Adults with Disabilities (How to Survive as a "Boomer")

Residents of Howard County are getting older and are experiencing new concerns or obstacles to living healthy lives. This includes the "baby boomers," many of whom have

lived full lives and are now finding themselves with physical, visual, and hearing impairments. While there are some resources for people with lifespan disabilities, there is limited intellectual and lifestyle training for this group. In addition, people with cognitive and developmental disabilities are living longer and have a more specialized need in enhancing their educational needs.

Howard Community College should offer educational courses for the aging population, including seminars for pertinent issues and training programs for caregivers. These programs and opportunities would also include seeking access to financial services and financial planning, providing recreational activities, transitioning from work to retirement, assisting with health issues (interfacing with physicians and other professionals), providing nutrition information, and learning to access public services, e.g., transportation.

Options in the human service program, gerontology, and developmental disabilities should be combined. The disabilities option is counseling and communication oriented, while the gerontology option touches on the aging process and available services. Participants in this program could gain a better understanding of social service resources and gain communication skills to advocate for the best interests of themselves or the person they are caring for.

A partnership with the Association of Community Services of Howard County would be valuable for recruiting, advertising, and assisting with grant writing. Another potential partner would be with the wellness programs of the Howard County General Hospital.

Additional Recommendations

In addition to the previous primary recommendations, there were other areas discussed that could be incorporated into already established programs at Howard Community College. They include the following:

- Training programs to assist the “boomers” or those pursuing “encore careers” to keep up with the modern world.
- Leadership training for women and for people from diverse cultures.
- Extended programs in hospitality and culinary arts.
- Introducing coursework on personal security and protection.
- Formalizing study of the effects of media on modern society.

Business

Howard County and our surrounding region is faced with the challenging task of serving our community in the face of BRAC with its pending influx of population and needs, the growing demands of our local businesses for skilled laborers and talent, the evolution of society accelerated by enabling technologies, the need within our community to

embrace civility and a heightened awareness of ethics in our modern lives, and the mobility of our workforce. Our business program recommendations strive to address these needs—consistent with the mission and unique construct offered by Howard Community College.

Program Recommendations

1. Integrate Civility, Ethics, and Values Cross Curriculum

“Choose Civility” is an ongoing community-wide initiative led by Howard County Library to position Howard County as a model of civility. The project intends to enhance respect, empathy, consideration, and tolerance in Howard County. The civility initiative would provide new course offerings at Howard Community College, while an ethics initiative would expand the existing college’s course offerings. While we envision the credit courses would be electives in an associate degree program, the college could consider making one mandatory.

To accomplish this objective, a series of credit and non-credit course offerings in civility is recommended. The first non-credit offering would include and be an extension to the “Choose Civility” program offered by the college. The second non-credit course would include modules on civility and ethics centered on areas of need, such as business etiquette, civility and etiquette on the internet, home etiquette, travel etiquette, and dining etiquette. The credit offering would include core courses offering in civility. Tailored non-credit programs would be constructed and offered on an as-needed basis; e.g., business etiquette and protocol in Asian settings.

2. Develop a Program for Early Childhood Business Management

Day care is recognized as representing a critical shortage in our area. With a large population growth projected, this shortage will be further exacerbated. This recommendation complements the day care courses offered at Howard Community College by incorporating the business management dimension and related skills. This offering could be piloted as a non-credit offering.

Early childhood business management would be offered as credit and non-credit programs to fill the gap between the day care provider skills and certificates currently offered and the business skills required to successfully establish and run a day care business.

3. Provide Training for Excelling and Managing in the Mobile Workforce

These non-credit offerings would focus on the employer and employee in separate sections. The employer section covers the development of the management toolkits—especially at senior technical levels and subcontract/partner management options. Examples of courses for the employer could include the following: Successful Techniques for Managing by Work Package, Realizing the Potential of the Mobile

Workforce, The Engineer in Transition to Management, and Intellectual Property Cultivation and Protection. Example courses for the employee include the following: Building Your Career – One Company at a Time, An Introduction to Workflow Processes and Tools in Industry, and Adding Value in a New Business Culture.

Unlike past generations, today's professionals transition between jobs and companies every 3 to 5 years. This puts a new strain on corporations to manage this mobile workforce from the aspects of productivity and continuity of business operations; e.g., intellectual asset management strategy. This would be a new series of offerings at Howard Community College. This program would be piloted using in-house training at select employers in our area.

4. Expand Howard Community College Internship Program

These credit offerings would allow our students to gain experience and enable them to see real life in the workplace. As part of the initiative, a pre-program activity would be offered to train the participating managers. This will help to ensure a successful partnership between employer and employee.

The benefit to our students is the exposure to potential employers, as well as the experiential learning itself. Businesses also benefit from an early look at potential employees. This complements Howard Community College's service learning offerings. While a challenge exists concerning the transferability of internship credits from an associate's degree to a bachelor's program, the value to the student is well worth the opportunity. A key component of this offering is to establish partnerships with local mid-to large-size businesses to facilitate placement of interns.

C. Additional Recommendations

- Develop a program for warehouse management.
- Extend courses in marketing and media usage.
- Expand on-site corporate business, human resources, executive, and strategic planning and information technology training.

Government Area

The geographic location of Howard County places it near the largest federal and defense agencies and their contractors in the nation. In addition, the changing global environment increases the potential for domestic terrorism and a focus on new jobs to support homeland security. Setting an example in regionalism, the college has already established a presence in Laurel, MD, teaming with Prince George's Community College to develop curricula that meet the local needs and, through collaboration, to bring the best talents and opportunities to the student population.

The Maryland Association of Community Colleges created a vision to guide its members in its report, "Approaching 2020: A Vision for Maryland's Community Colleges," stating the following: "The community college will be the center within its region for workforce

development, full partners with state and local economic development agencies and other providers of education and training as required by the community.” With increasing scarce resources, Howard Community College must increase its efforts to collaborate with other institutions to ensure maximum effectiveness.

Program Recommendations

1. Develop Rigorous Set of Homeland Security Programs

In the future, our nation will need to find better ways to protect our critical infrastructure: IT and telecommunications, electricity, energy, banking and finance, transportation and border security, water, and emergency services. Increasing interdependencies in these areas have increased our vulnerabilities to equipment failures, human errors, and physical and cyber attacks.

Homeland security consists of the efforts of any agency to protect and recover the nation from disasters of any source, including natural disasters. Proactive and reactive programs are essential to its mission. Proactive programs may include understanding the historical context of homeland security, analyzing and forecasting threats, public health issues arising from biological and chemical agents, and information management. Reactive programs may include assembling and mobilizing emergency response teams, effective interagency communications, and contingency training.

Howard Community College should develop a nationally recognized program supporting homeland security. Because homeland security topics cover a wide range of disciplines, some courses for a homeland security program may be derived from or combined with existing programs at the college, while new ones may be needed. Possible course topics include the historical and evolving concept of homeland security; homeland security threats; overview of homeland security approaches, techniques, and processes (analytics, indications, warnings, and forecasting); phases of a homeland security incident (mitigation, planning, response, and recovery); emergency operations centers and communication; homeland security law; and IT security.

Technology Area

Technology is an ever-changing component of our lives and educational processes. As a result, existing programs may need minor adjustments, new programs need to be developed, and older ones may need to be retired. In addition, it is increasingly important to bring together components of various programs in interdisciplinary offerings.

Program Recommendations

1. Initiate and Strengthen Programs in Fundamental STEM (Including Offering an Associate of Science in Engineering Degree)

This is a critical area, central to U.S. economic competitiveness, where the pipeline needs to be improved from kindergarten through high school to community colleges and universities. Federal and state agencies are committed to building the gateway to STEM careers, enhancing the talent of academic institutions and catalyzing innovation and technical growth. There are broad applications, where the government and companies tend to hire general engineering talent versus specialists because they want to train them in their own processes. Maryland is now supporting an ASE degree, and we need clear articulation from Howard Community College to 4-year colleges. In addition, our youth are not always well prepared to go directly into STEM courses. The college should reach back to high schools to assist in improving readiness, including support for the STEM-BEC Initiative.

According to the report, “STEM Workforce Challenge” (Department of Labor, April 2007), “Competitiveness in STEM fields requires a focus on skills and the supply of those involved from the most complex research and development and leadership positions to the production, maintenance, marketing and other jobs that require competences built upon math, science, engineering and technology knowledge,” with a leadership role best played by community colleges. These changes at Howard Community College can be effected by stronger faculty training in STEM disciplines, effective linkages with local businesses, and richer content strategies. Coupled with more direct and smoother articulation of course credits to 4-year institutions is essential for all parties. Differences must be put aside if this critical national and local need is to be met.

2. Provide Programs in Information Assurance and Information Security

Many future government-related jobs will deal with information management. Information Assurance (IA) is a unique area of interest in the Federal sector due to the increasing need to communicate and store information securely. IA ensures confidentiality, integrity, availability, and authentication of our communications. The organizations at Ft. Meade and the DOD contractors in Howard County need fundamental competencies to enable development of future IA specialists.

In our net-centric world, new information technologies are developed quickly, allowing us to share information across the world faster than ever before. Professionals in the field are detecting, reporting, and responding to cyber threats, making encryption codes to securely pass information between systems, and placing IA measures directly into communication networks. They are also developing a seamless, secure, and reliable web of network systems, computers, software, databases, and computer applications. The field also includes secure audio and video communications equipment, making tamper-protection products and providing trusted microelectronics solutions.

Howard Community College students can be prepared to contribute to this growing area with fundamental courses, including infrastructure and network architecture and security, software development and systems engineering, computer systems vulnerabilities and protection, modeling and simulation, encryption and biometric

technologies, and other courses that are part of a basic technology education. Because this is a critical area, articulation agreements are essential to carry the college's graduates on to the next level.

3. Expand and Develop Programs in Biotechnology/Nanotechnology

The biotechnology and nanotechnology fields are expected to be very large growth areas for the future. They are both strong industries in their own right and have major impact in other industries, such as computer technology, manufacturing, research and development, and health care. Howard Community College should consider independent offerings and a combination of these programs, which could lead to more advanced educational opportunities for the students.

The biotechnology field includes a range of activities, such as life sciences, technology, and manufacturing. There are diverse applications areas as well, such as DNA fingerprinting, forensic medicine, and anthropology and wildlife management. In the nanotechnology world, the employment outlook is very positive because there are emerging practical commercial applications in fields such as health care, IT, manufacturing, and national defense.

Although nanotechnology deals with the very small, its anticipated impact on job growth and career opportunities in the United States is expected to be very large. Within the next 10 years, the National Science Foundation estimates that the worldwide need for nanotechnology workers will rise from the current 20,000 to 2 million.

4. Create Knowledge Transfer/Knowledge Management and Portal Technology Programs

Typically, knowledge transfer (KT) and knowledge management (KM) are considered a part of the IT field. While they conceptually deal with organizing, maintaining, and disseminating information, they appear most often in the context of systems. Computer systems are increasingly the central component that serves the major role in the capturing and providing of data in a variety of organized ways.

However, in contemporary context, KT and KM are much more than automated systems. The goals of KM in the organization include achieving shorter product life cycles, facilitating learning and innovation across the organization, making the expert's knowledge available to everyone who needs it, managing the intellectual capital of the organization for its benefit, and gaining competitive advantage. Studies in these fields could include information systems, human learning behavior, memory management, information organization, learning and retention processes, business decisions processes, and competitive business intelligence management.

Web portals are evolving technologies providing technological and business opportunities for the organization. Portals allow a plethora of information available on internet and intranet web sites to be organized and customized through a single entry point through

seamless access by all users. Programs in portal technology encompass web technologies, database systems, human search behavior, knowledge management and presentation methods, and information security.

Additional Recommendations

In addition to the previous major program recommendations, other areas are recommended

- Digital entertainment, including areas of modeling and simulation, game theory, and the entertainment component of digital media.
- Electronic translation, including intercultural communications, web translations, disabled persons assistance, effective business communications, education, training, literacy, and workforce development. It is a multidisciplinary topic, combining information systems, computer science, psychology, linguistics, and culture.
- Space sciences, including life science, life-support systems, space medicine, astrophysics, earth science, satellites, robotics, and information systems.

Academic Area

Howard Community College has already developed partnerships to enhance the quality and scope of its academic programs and to provide its students with more opportunities for achieving degrees and satisfying other professional goals. These recommendations build on existing partnerships and statewide articulations, and the college should increase such efforts, particularly in areas of critical needs and shortages.

Recommended Programs:

1. Expand 3 + 1 Programs

The Excelsior partnership is a model that can be expanded to other institutions. Through this model, Howard Community College students may transfer up to 90 academic credits to Excelsior College and earn their bachelor's degrees through academic testing and distance education options. Given the rising costs of the baccalaureate degree, the more opportunities students have to take courses at the college, the greater the chance of completing the degree without assuming significant debt. The Excelsior model is of particular interest to the more mature student who has accumulated credits but not a degree and has a professional background that can be converted into academic credit. More traditional students also need this option, and the recommendation is to find additional partnerships with four-year institutions that will be receptive to accepting more credits from the college. Specific areas include allied health and nursing; science, technology, engineering, and mathematics; secondary school education; and languages.

The college should also expand partnerships at the Laurel College Center similar to the one the college currently has with the College of Notre Dame of Maryland. Students

may earn a bachelor's degree from the College of Notre Dame of Maryland in business or elementary education/ special education.

2. Enhance Teacher Education Programs

The shortage of teachers and the limited capacity of four-year institutions provide an opportunity for Howard Community College. The opportunity includes training the traditional high school graduate who wants to become a teacher and retraining the degreed professional who wants to teach as a second career but lacks the necessary education courses. Although the AAT degree has helped traditional students in early childhood, elementary education, and in areas of critical shortages like secondary mathematics, physics, chemistry, and Spanish that transfer to four-year colleges, the scope of disciplines needs to be broadened. It is recommended the college develop additional AAT's in the areas of secondary social studies, world languages, technology education and physical education.

The task force strongly recommends that the college work closely with the Maryland Department of Education and partner with other community colleges to continue to provide teacher certification and coursework to expand the community colleges' capabilities in training teachers. The college should be allowed to offer the education courses required for initial certification for career changers as an effective solution to the teacher shortage.

Teacher certification is not necessarily restricted to degree programs. The college should work with Howard County and other school systems to continue to provide credit courses for the alternative teacher preparation program in the areas of science, English, family and consumer science, mathematics, technology education, and world languages. This could be for teachers currently employed by the school system or those professionals wanting to enter the teaching profession.

3. Expand Online/Distance Education Offerings

Howard Community College already has an impressive array of distance education offerings including over 90 online courses drawn from all divisions of the college. Many of these online courses are TeleWebs, as well as synchronous distance learning through video Web conferencing software (Elluminate) and a two-way interactive (Polycom) classroom.

The college should continue to recruit faculty to develop and teach online in order to expand the range and depth of course offerings. There is an increased need for more online sections of general education core courses. Over the next five years, the college should plan on extensive expansion of its distance offerings, providing dozens more programs via "Howard Community College On-Demand."

The Division of Continuing Education and Workforce Development needs to expand its distance learning options, continuing credit courses and increasing non-credit distance

learning programs. The English Language Institute can use online and distance learning to deliver English as a second language to students here and abroad, particularly for Asians and Hispanics. The Polycom interactive video classroom, linked through the University of Maryland System, offers the potential of providing national and international educational experiences for our students. The college should promote the use of this technology for students in under-enrolled and statewide programs. It can also support the partnerships that the college is developing through its Office of International Education with institutions in Mexico, Turkey, Great Britain, Ireland, and Macedonia.

V. Task Force: Preparing Health Care Professionals

Chair: Dr. Judith Cooksey Krieg, University of Maryland School of Medicine

Community task force members:

Lisa Boarman	Howard County Public School System
Dorothy Brilliantes	Howard County General Hospital
Rob Goldman	Columbia Association
Dennis Keilholz	Tai Sophia Institute and Baersolutions, llc.
Ann Mech	Univ. of Maryland School of Nursing and Horizon Foundation
Eric Regelin	Atlantic Builders Group
Peggy Rightnour	Howard County Office on Aging
Donna Wells	Howard County Mental Health Authority

HCC task force participants:

Randy Bengfort	Director of Public Relations & Marketing
Shelly Bilello	Program Administrator
Dan Friedman	Chemistry Professor and Division Chair, Science & Technology
Dr. Kate Hetherington	HCC President
Dr. Patrick Huddie	Chair, HCC Board of Trustees
Kathy Jones	Con Ed Nursing and Allied Health Program Director
Melanie Moore	Executive Office Associate
Emily Owen	Admissions and Advising
Dr. Sharon Pierce	Nursing Professor and Division Chair, Health Sciences

Top Recommendations:

1. Expand associate degree and certificate programs for training new health care professionals to help meet critical local and regional health workforce needs. Highly recommended programs include those that can be completed at HCC to graduate more registered nurses (RNs), respiratory therapists and radiological technicians. There should be ongoing monitoring of existing and future training programs using relevant criteria and input from a new community-college advisory group.
2. Expand its partnerships with local health care facilities and employers to allow expansion of clinical training sites and recruitment of clinical preceptors. These should be win-win opportunities for both parties. Howard County General Hospital warrants priority due to its geographic proximity, interest level, clinical program diversity and commitment to improving community health.
3. Create partnerships with local organizations to recruit students that strive to increase awareness of the varied health care jobs and careers that can start with an associate degree. Recruitment efforts should include expanded awareness efforts for 1) Howard County school students and their parents and 2) non-traditional students such as early retirees, mid-career individuals and residents of the county from other countries.

4. Design of new facility (or facilities) to allow for great flexibility in the spatial and functional configuration, information technology use, access to multimedia learning tools and changing programs and faculty and student needs.

Recommendation #1: HCC should expand associate degree programs (and certificate programs) for training new health care professionals to help meet critical local and regional health workforce needs. Highly recommended programs include those that can be completed at the community college such as registered nurses (RNs), respiratory therapists, and radiological technicians. There should be ongoing monitoring of existing and future training programs using relevant criteria and input from a new community-college advisory group.

Background: Health care is the fastest growing employment sector in the country and is projected to hold this pace over the next ten years.¹ Extensive national and state level data indicate a high need and job demand for mid-level health care professionals. Many of these professionals can complete training in community colleges with associate degree or certificate programs. These include registered nurses (RNs), licensed practical nurses (LPNs), respiratory therapists, radiological technicians, physical therapy assistants, occupational therapy assistants, surgical technologists, and many other allied health fields. Competitive wages and opportunities for career advancement make these fields attractive to individuals with varied personal and career goals.

HCC has several tracks for students interested in health care careers.² Associate degree and certificate programs are offered in registered nursing (the RN programs now enroll 1,026 students), licensed practical nursing (LPN), and smaller programs (enrollment of 25 students) in cardiovascular technology, paramedic/emergency medical services (EMS), and radiologic technology. A small number of HCC students (under 15 total) are enrolled in allied health associate degree programs offered through other Maryland community colleges. Finally, HCC has about 450 students enrolled in pre-professional programs that require students to complete their education at other institutions for baccalaureate, masters, or doctoral degrees in allied health, counseling, health care management or medical-related fields.

To answer the question, what new programs should HCC develop, the Task Force identified eight criteria that should be considered for any new or expanded programs.³ We invited Task Force members or local experts to present information on about a dozen different fields, allowing us to gather information relevant to the criteria.⁴ Our recommended fields reflect this work.

Due to time constraints, several fields that merited consideration were not reviewed (pharmacy technician, dental hygienist, medical laboratory technician, public health workers). Additionally, some fields reviewed but not on the first priority list (e.g., surgical technologist) should be watched since key factors may change (wage levels, student interest, local job demand, etc.). Several certificate programs are important to continue as a means to help fill critical local workforce needs and serve as points of entry into health care fields for community residents. As described below, expanding partnerships with health care facilities/organizations will be key factor in allowing HCC

to develop or expand programs and meet community needs. HCC should appoint a new advisory group that includes representation from these organizations, practitioners or other experts in the community, and HCC faculty.

The Task Force did not focus on curricular content but several concepts were discussed that would apply to most health care training. These include content on the aging population's health care needs, the growing cultural and language diversity of the community, the importance of wellness concepts, personal responsibility, and physical fitness to overall health, and the growing role and demand for alternative and complementary medicine integration with overall health care.

Recommendation #2: HCC should expand its partnerships with local health care facilities and employers to allow expansion of clinical training sites and recruitment of clinical preceptors. These should be win-win opportunities for both parties. Howard County General Hospital warrants priority due to its geographic proximity, interest level, clinical program diversity, and commitment to improving community health.

Background: Hospitals have been the major clinical training site for many health care professionals (physicians, nurses, laboratory technologists, radiologic technicians, etc). As health care delivery has expanded into other settings (practitioner offices and clinics, imaging centers, commercial clinical laboratories, surgicenters, fitness centers, long term care facilities, etc.), these facilities/organizations will be asked to serve as clinical training sites for health care students. Clinical training is labor intensive and generally not funded (with the exception of medical residency training). However, it is seen as a shared responsibility among health care providers and educators and a necessity to assure highly qualified professionals at all levels of practice. Prior to embarking on any new programs or program expansion, HCC should seek commitment from local and regional health care facilities that will serve as clinical training sites.

The Task Force heard from several departments of Howard County General Hospital (HCGH) that they have interest in expanded collaboration with HCC. There are ways that HCC can assist HCGH in retaining high quality staff through continuing education programs and certificate programs for career advancement of some classes of health professionals (e.g., LPNs, patient care technicians). A stronger partnership should be developed between these organizations and areas for win-win collaborations should be explored.

Recommendation #3: Partnerships with local organizations to recruit students should strive to increase awareness of the varied health care jobs and careers that can start with an associate degree. Recruitment efforts should include expanded awareness efforts for 1) Howard county school students and their parents, and 2) non-traditional students such as early retirees, mid-career individuals, and residents of the county from other countries.

Background: The general public has limited understanding of the vast array of health care careers and jobs. In fact, many groups report that most people know only about a

few medical specialties and nursing. Yet there are over two hundred health fields that can accommodate individuals with varied skills, interests, and educational aspirations. Also, there are many misconceptions about who can enter health care fields, the amount of training required, and the exciting opportunities for clinical practice.

Experts agree that efforts to recruit youth to health care careers should begin in middle school and continue through high school. The Howard County Public School System (HCPSS) has a curriculum for career awareness and counseling that is developmentally sound and begins in elementary school and continues into high school. HCPSS has career academies that include a successful partnership with HCC on a certified nurse assistant program. However, the Task Force felt that targeted efforts could be expanded and must include parents and creative approaches to introduce students to practitioners and possibly trainees. The Howard County Public Library is a marvelous resource for the community and an innovator in information access. The library is also accessible to individuals beyond high school age that may have interest in a health care job or career. The county has a large number of early retirees, mid-career individuals, and residents born in other countries that could bring life and job skills to a new health care job or career. There are numerous organizations within the community that could be asked about their members' interest in learning about health care careers and educational opportunities at HCC.

Recommendation #4. The design of a new facility (or facilities) should allow for great flexibility in terms of the spatial and functional configuration, information technology infrastructure, access to multimedia learning tools, and changing programs and faculty and student needs.

Background: Educational facilities for health care students require both classroom space/configuration for lectures and small group discussions, and laboratories for a variety of hands-on learning experiences. The laboratory experience will vary greatly by program, with students using patient models or simulations, equipment set-ups that resemble real life health care settings, data entry and analysis with computers and software programs resembling those used in real settings, and much more. A key issue seems to be a design that allows for flexibility to accommodate changing demands for use of space and accessories.

HCC may wish to gather information (and possibly site visits) from individuals at newer facilities such as local schools of nursing (e.g., University of Maryland, Johns Hopkins University), community colleges, and other allied health programs to find out what worked and what did not with regard to facility design and use.

Due to the proximity of HCGH and a proposed stronger partnership between HCC and HCGH, it may be wise to share plans with HCGH to see if any synergies can be identified or considered. A Task Force member prepared a helpful overview of other issues to consider for designing the facility⁵. The Task Force fully supported the college's plans to continue or expand shared programs or facilities with other Maryland community colleges.

VI. Task Force: Workforce Development

Chair: Mr. Richard Story, Howard County Economic Development

Community task force members:

Anne Darr	Howard County Chamber of Commerce
Vicki Duvan	Strategic Resource Group
Kent Menser	Howard County BRAC Director
Lois Mikkila	Howard County Department of Citizen Services
Elizabeth Rendon	Lingual Information Systems Technology, Inc.
Kathy Rensin	HCC Board of Trustees Liaison
Darryl Stokes	BGE
Francine Trout	Howard County Employment and Training
Bruce Wahlgren	The Maryland Institute for Workforce Excellence
John Wasilisin	Maryland TEDCO

HCC task force participants:

Tom Glaser	Vice President Information Technology
Heather Joseph	Executive Assistant Information Technology
Patty Keeton	Executive Director Workforce Development
Janice Marks	Associate Vice President for Student Development
Richard Pollard	Director Information Technology Services
Dr. Nidhi Srivastava	Research Associate, Learning Outcomes Assessment

Top Recommendations:

1. Expand its academic training and certifications to address emerging workforce needs in language and translation skills; green technology and sustainable design; informatics; and Science, Technology, Engineering, and Math (STEM) areas.
2. Accelerate the construction of building projects as outlined in its master facilities plan and pursue the development of a Center for Research, Education and Technology Entrepreneurship.
3. Seek opportunities and partnerships created by the Base Realignment and Closure (BRAC) program to enhance its workforce development role in the community.

To address the questions presented to the workforce development taskforce, the taskforce created a definition of “workforce development” to ensure recommendations align with the college mission:

Howard Community College defines workforce development as the education, job training, and employment efforts designed to help employers acquire a skilled workforce and assist individuals to succeed in the workplace and achieve their educational goals. This is accomplished by providing degree programs, certifications, career development pathways, professional development and job training.

Recommendation #1: The college should expand its academic training and certifications to address emerging workforce needs in language and translation skills; green technology and sustainable design; informatics; and Science Technology, Engineering and Math (STEM) areas.

- Language and translation skills. These skill sets are needed to respond to the needs of federal agencies and commercial entities operating in a global environment. There is also a critical need for interpreters for the county’s health care providers and non-profit human service agencies. Programs should also address the cultural and hidden aspects of languages, often referred to as paralanguages. Today, students and employees must possess the linguistic and cultural skills to foster working in a new international and culturally diverse environment. A stretch goal would include the development of interdisciplinary courses that blend and teach specific languages with traditional courses.
- “Green” technologies and sustainable design. The curriculum should provide students the knowledge to use technology to promote a sustainable economy and environment. As an interdisciplinary program, students who understand the fundamentals of technology, business and regulations can be effective agents for the conservation of energy and sustainable change. Also, a new green building professional certificate could provide education for contractors, project managers, and other building professionals who are interested in advancing their career in the construction industry and building management.
- Informatics. Informatics is science of information analysis, the practice of information processing, and the engineering of information systems to solve specific problems in diverse areas. As more businesses and organizations seek to computerize vast amounts of information, there will be an increasing need in the job market for people who can gather and analyze information. An example of informatics is the process of data mining.
- STEM Areas. The college should expand outreach programs to inform and encourage students to pursue STEM-related career opportunities. The college should also work to attract additional faculty capable of teaching these disciplines.

Additionally, HCC should continue its current efforts to meet the growing occupational demands in health care, human services and hospitality and tourism.

Background: The State of Maryland projects that job growth for 2005 – 2020 will be approximately 425,000 new jobs in the Baltimore-Washington Corridor. Reports from the Maryland Department of Labor, Licensing and Regulation (DLLR) and the Governor’s Workforce Investment Board (GWIB) have suggested that, because of the high demand in professional and technical fields, education systems in our region must focus on the need to increase enrollments in the Science, Technology, Engineering and Math (STEM) areas. There is also a projected shortfall of teachers in the K-12 system and post-secondary faculty capable of teaching in these STEM areas.

In addition, demand is increasing for individuals to fill skilled jobs in the middle of the labor market. This is particularly true for jobs that require an associate degree or particular vocational training and certification. Demands for skilled labor in construction, health care, computer technologies, transportation, human services and elsewhere are projected to grow at above-average rates. Replacement needs for retiring workers will also be strong.

Recommendation #2: Where possible, the college should accelerate the construction of building projects outlined in its master facilities plan and pursue the development of a new Center for Research, Education and Technology Entrepreneurship (CREATE).

- Redefine the role of the BTC to meet the expanding educational and training needs of its stakeholders and support future demands created by the Base Realignment and Closure program (BRAC).
- Extend invitations to government, business and academic organizations to invest and partner in the development and operation of the new center to allow the creation of mutually beneficial alliances.
- Merge the recently developed Center for Entrepreneurial and Business Excellence (CEBE), located on the college campus, with the proposed CREATE Center to further support the “one-stop” concept.
- Seek financial support for development of the Create Center from Howard County Government and state agencies, such as the Department of Business and Economic Development.
- Create new internships with prospective business partners that could result in employment for students who acquire new skills or additional training through credit or non-credit programs offered at the center.

Background: Howard Community College has a current instructional space deficit of 170,676 square feet, which equates to approximately 341 average-size classrooms that seat 25 students. This shortage of space restricts the college’s ability to meet the

growing demands for trained health care professionals and provide support for other current and emerging occupational training needs in the community. To address this issue, the college has proposed, as part of their master facilities plan, the construction of a new allied health building. The college has also secured funding for the Belmont Conference Center for the culinary arts program and to integrate its current hospitality management program into Belmont's operations. The workforce development taskforce recognizes the value of these planned improvements and supports both initiatives.

Another factor regarding the lack of available instructional space concerns the Charles I. Ecker Business Training Center (BTC). Howard County Government does not currently charge the college for the BTC space; however, its long-term availability to the college is uncertain. Should the building be sold to an investor or developer, it may be necessary for the college to pay rent to remain in this facility. The market rate for this space would be approximately \$300,000 per year. The lack of instructional space on campus, along with the added expense of a lease, could reduce the college's ability to generate income and impact the availability or quality of services to the community.

Ideally, a new CREATE center should be centrally located within the county's business area to take advantage of potential service partnerships. Such partnerships can create synergies to lower operational costs, pool resources and expand training capabilities and program offerings. The success of the Laurel College Center that resulted from the joint effort between Prince George's Community College and Howard Community College to make education more accessible to the residents of Laurel and the surrounding area serves as a model for the concept of the CREATE center. Other examples of similar facilities and successful partnerships include The Universities at Shady Grove in Montgomery County and Harford County's Higher Education and Applied Technology (HEAT) Center. The new CREATE center should provide state-of-the-art technology, classrooms and meeting rooms.

Recommendation #3: The college should seek opportunities and partnerships created by the Base Realignment and Closure (BRAC) program to enhance its workforce development role in the community.

- Conduct an analysis of the Federal and Department of Defense (DoD) regional markets to determine how the college can best focus its resources. Designate a project manager to guide the college through initial planning steps. This person should be familiar with the organization and interrelationships of federal and Department of Defense agencies, to include contracting.
- Develop an action plan and designate a program manager if the college's vision and capabilities match with federal market requirements analysis.
- Include the placement of experienced federal government executives in key advisory positions in the college. Their experience and contacts in the federal workplace will expedite and then sustain this effort into the federal workplace.

- Recruit new faculty from the arriving population coming to Fort Meade and the region who possess the desired academic credentials and can assist the college with achieving its workforce development goals.
- Form partnerships with the leadership of BRAC agencies to provide student internships, student development and career opportunities. There is also the opportunity for the college to establish contractual agreements with government agencies and contractors to offer customized training.

Background: Future growth on Fort George G. Meade, of which Base Realignment and Closure (BRAC) is one of four components, will increase the working population on the installation to approximately 60,000 federal and contract employees. This growth will increase the regional economic contribution of Fort Meade from four to five billion dollars per year! BRAC's significance to Howard Community College is not the approximately 6,000 employees it brings to this area, but, in the fact that it presents a window of opportunity for the college to act on the installation's current and future workforce development requirements.

The magnitude of Fort Meade growth makes this a regional issue. Across the region, governmental and non-governmental organizations are working together to leverage the resources necessary to take action. Howard Community College, in alignment with its strategic goals, should assess the value of partnering with other educational institutions, regional governments and private industry.

Appendix - Environmental Sustainability Task Force

Partnerships- “the who”

1. Businesses
 - a. Business groups: Howard County Chamber of Commerce, Baltimore Washington Corridor Chamber of Commerce, Economic Development Authority, the Green Building Network
 - b. Owners/builders of large campuses: Howard Co Public Schools, Columbia Association, Howard County Libraries Howard County General Hospital, COPT, Mannekin, Riparius, APL, Streuver Brothers, General Growth Properties, Mangione Family, Harkins Builders, Whiting-Turner Contracting Company,
 - c. “Teachers of Green”: The Green Building Institute, US Green Building Council (USGBC), The Baltimore Regional Chapter of the USGBC Growth Adventures
 - d. Small businesses- Look at getting grants to help train/retool existing trades to implement green practices (Continuing Ed)
 - i. plumbers,
 - ii. contractors,
 - iii. electricians,
 - e. Media -Baltimore Business Monthly, Baltimore Business Journal, Corridor News, Patuxent Papers, Baltimore Sun, Washington Post
2. Government
 - a. State: DNR (especially Patapsco State Park as the nearest neighbor to Belmont) and Office of the Environment ,
 - b. County: Office of the Environment; link with Green Central Station ;
 - i. DPW/Environmental Services (recycling, storm water issues);
 - ii. DPZ/Environmental Planning (green building, watershed restoration and transportation planning);
 - iii. Recreation and Parks (Natural Resources and Land Management
 - iv. Howard County Public School System
3. Civic, Community and Environmental groups
 - a. Foundations: The Columbia Foundation, The Horizon Foundation, The Chesapeake Bay Trust
 - b. Chesapeake Bay Foundation, Alliance for the Chesapeake, Patuxent Riverkeeper (regional groups that can provide training, expertise and possible student service learning opportunities)
 - c. Master Gardeners (mentors, help with campus plantings)
 - d. Howard County Conservancy (student service learning projects, team building projects, internship)
 - e. In the Belmont area: Friends of the Patapsco Valley and Heritage Greenway and the Rockburn Land Trust (student service learning

projects, team building projects, documenting the biology of the Belmont area, removing invasives, planting trees, putting in rain gardens, planting bird and bee friendly areas. Howard County Bird Club and Chesapeake Audubon would be good birding resources.

- f. Climate Change Initiative of Howard County and Simplicity Matters Earth Institute; both enable small group discussion of 4-6 weeks focused on lessening an individuals carbon footprint and living more simply
- g. Howard County Forestry Board (help with riparian buffer planting, development of an arboretum, student service learning projects)

Courses which are encouraged to integrate elements of sustainable living into their curriculum include:

Academic

ARTT-107	History of Western Architecture II
ARTT-108	Environmental Design: Introduction to the Built Environment
ARTT-115	Introduction to Interior Design
BMGT-120	Small Business Management
BMGT-203	Business Ethics
BIOL-104	Oceanography
BIOL-105	Environmental Science
BIOL-115	Environmental Science Laboratory
BIOL-290H	Biology Research - Honors
CHEM-290H	Chemistry Research – Honors
CMGT-145	Foodservice Facility Planning
ENTR-101	Entrepreneurship and Creativity
ENTR-104	Business Plan Development
GEOL-107	Geology
GEOL-117	Geology Laboratory
HMGT-225	Hospitality Purchasing and Cost Control
HORT-100	Introduction to Horticulture
HORT-220	Landscape Design and Contracting
HORT-230	Pest and Disease Control
HORT-240	Turf Grass Management
PHIL-103	Introduction to Ethics
PHYS-106	Earth and Space Science
PHYS-107	Physical Science

Continuing Education:

XE 474 M1887	Building Your Dreams Through Entrepreneurship
XB 805 8785	Be a Wedding Planner
XE 700 M1899	Niche Marketing for Florists
XE 691 M1300	Running an Independent Floral Design Practice
XB 877 M1898	Floriculture: Advanced Floral Design
XB 962 6535	Home Improvement License Preparation
	Home Modifications across the Lifespan

XB 315 7833	Landlord 101
XI 879 M1666	Oil Painting Landscapes
XE 723 6408	Beginning Stained Glass
XB 817 6493	Real Estate Investing
XE 876 6527	The \$100,000 Real Estate Formula
XE 942 6517	Freehabbing: Fun and Profit in Urban Development
XE 577 6532	Creative Real Estate Investment Series
XE 405 6524	Staging Your Home for Sale
XB 945 6419	Stock Analysis I: BetterInvesting Method(TM)
XB 408 6420	Investment Strategies: the Basics and Beyond
XE 989 6409	Upholstery 101
XE 498 M1672	Interior Decorating Basics
XE 486 6425	Preparing to Remodel Your Home
XE 866 M1681	Design a New Bathroom
XE 311 M1673	Design a New Kitchen
XE 815 6426-30	Ms. Fix-It: Secrets of Home Repair/Women
XI 780 M1669	Pruning and Fertilizing
XI 505 6431	Residential Landscape—Master Plan
XE 763 M1680	Live Well, Eat Well and Save Money
XE 566 6464	The Road to Retirement: Planning Your Personal Journey
XE 580 6467	Car Maintenance for Women
XE 920 6468	Face the Facts
XE 559 6470	Dress to Impress
XE 919 6469	Happy Hair
XE 568 M1670	Family Celebrations: How to Plan Your Family Reunion
XE 988 6519	Making Self-Care a Part of Health Care
XE 433 6481	Nutrition 2007—ORGANICS and Beyond
XE 573 6482	Nutrition for Parents and Those To-Be
XE 413 6525	Stop Singin' Those Sugar Blues
XE 481 M1671	Fit and Fabulous in 15 Minutes
XE 407 M1675	Feng Shui Basics
XH 675 7717	Painting I for Senior Adults: Mixed Media
XI 606 7718	Painting Techniques-Level 2
XI 655 7719	Pottery: Form, Function, and Design
XK 262 6502	Young Inventors At Work
XK 228 6526	Structural Engineering and Economics

Appendix - Global Education Task Force

Global Competencies Framework: Competencies Required for Effective 21st Century Global Citizenship

Introduction

The Task Force has developed a set of competencies that we believe are necessary for effective citizenship in the 21st Century. This competency framework defines competencies in three perspectives – Economic, Environmental and Social/Cultural.⁷ We also define a set of cross-cutting competencies that are fundamental to all three perspectives and have labeled these as foundational competencies. Foundational competencies are those which enable and support the development and retention of competencies in the three perspectives.

The competency framework does not address the competencies that students must develop for their vocation. We view these as supplementary to the knowledge and skills that are required for technical success in a career field. This vocational competency development might be considered a fourth perspective in the framework.

We readily acknowledge that a community college cannot be expected to assure that every student develops all of these competencies as well as the vocational competencies that students seek. So, how then is this framework to be used?

Our task force recommends the following uses of this framework.

- 1. Faculty and staff development** – Create development plans for faculty and staff and use the competencies in the process of assessing the development needs of faculty.
- 2. Curriculum enhancement** – Use the competencies to review the curricula in each of the credit domains of the college. Link competencies to individual course syllabi and identify gaps e.g., competencies that are not addressed in existing courses that would be relevant to the course or program. Where needed, modify curricula to fill the competency gaps. The goal is to assure that opportunities exist in the curriculum for students to develop all of the competencies that are appropriate for the curriculum area.
- 3. Student advising** – The framework should be used to augment and strengthen the student advising process. While these competencies do not address the core vocational competencies, they do address knowledge, skills and abilities that will enhance an individual's success in any career field. While they are supplementary, they are quite relevant to success at work in the 21st Century.

⁷ These three categories are adapted from the Triple Bottom Line framework proposed by John Elkington in his 1998 book. The reference is: John Elkington. *Cannibals with forks: The triple bottom line of 21st century business*. 1998. Gabriola Island, B.C.: New Society Publishers.

In the advising process, these competencies should be viewed as a template for the advisor and student to review. Within each perspective, the lower level competencies should be viewed as requirements; however, the higher level competencies should be viewed as opportunities for the student to engage in life-long learning. Where this “line” between requirements and optional competencies is drawn is dependent on the advisor and the program the student is entering. Students should leave the advising process with an awareness of all the competencies, a plan for those that will be developed at the college, and an understanding of how the remaining competencies might be developed on their own.

The competency framework is presented below.

1. Foundational Competencies that enable and support development of the competencies in the three major perspectives

a. Information literacy – The capability to rapidly and successfully utilize information technology to obtain, screen, and interpret data in order to produce usable information to meet a defined need or purpose.

b. Critical thinking – The ability to sort and analyze data and information within the context of a values system and use logic to make reasoned, values-based judgments and decisions.

c. Communication -The ability to effectively share ideas, facts, and emotion with others both orally and in writing.

d. Conflict resolution - The willingness and ability to confront situations in which individuals, groups, or cultures have competing interests and create or facilitate either win-win or acceptable compromise solutions.

2. Economic Competencies

a. Personal financial management – The ability to develop a personal budget, to balance a checkbook, utilize on-line banking and bill-paying, and effectively utilize and manage debt financing. Also included are the basic principles of savings and investment including the common methods used to build and maintain personal wealth in an era of multiple employers and reduced pension opportunities.

b. Economics of the firm - The ability to understand and interpret a firm’s income statement and balance sheet. The ability to explain how organizations create value, the relationship between customer value created and the ability to pay wages, the range of profit margins among typical businesses, and what is productivity and why it is important for a firm.

c. National economic systems - The ability to understand and explain how supply and demand impact pricing, how countries manage tax and monetary policy, the role of the

Central Bank, what is productivity at the national level and why it is important, forces impacting the value of a nation's currency and a basic understanding of how national policy is shaped by economic forces.

d. Global trading system – A basic understanding of the forces that shape economic activity between countries, pros and cons of “free trade”, how trade is impacted by trading blocks or cartels, balance of trade and its importance, the pros and cons of regulatory policy, trade and national security concerns.

e. Environmental economics – An emerging field that attempts to account for resources that have traditionally escaped economic accounting. For example, how to include in the cost equation for a product the costs to society of air or water pollution in order to create an honest market, the need for a nation to not measure simply “Gross Domestic Product” but “Green GDP” = the economic value created less the environmental damage done.

f. Wealth distribution and poverty – Focuses on the issues of wealth distribution and national economic security and national stability. Will include an understanding of the principal ways that nations distribute wealth – wages, tax policy, public welfare systems, and charity. Includes an understanding of the strengths and limitations of each approach to income distribution as well as other alternatives to welfare and charity e.g., micro entrepreneurship.

3. Environmental Competencies

a. Ability to define sustainable development – Being able to explain the implications of the definition of sustainable development as “meeting the needs of the present without compromising the ability of future generations to meet theirs” (World Commission on Environment and Development, 1987). The definition places an emphasis on both environmental management and social justice as equal elements in the definition of sustainable development.

b. How sustainable development relates to an individual's personal life and values – The ability to explain one's own values with respect to environmental issues and social justice and how the individual chooses to live these values and reflect the values in daily habits.

c. Consumer behavior – The ability to translate one's values with respect to environmental issues and social justice into purchasing decisions and consumer advocacy.

d. System interrelationships – The ability to think in terms of systems and their interrelationships. For example, the ability to explain how the desire to obtain the lowest price for “sneakers” in a developed country might reinforce unfair labor practices in a “less developed” country. Or, how the price of oil can relate to the rate of development of alternative technologies by oil dependent nations. Or, how an increase of the average

water temperature in the Chesapeake Bay relates to other changes in the ecology of the bay.

e. Change agent skills - The ability to be an effective change agent in one's family, work organization or community. Requires knowledge of models of individual and organizational change and how to apply those models in a variety of situations.

f. Application of sustainable development concepts on campus - The ability to apply the competencies described in a-e to actions and decisions in the campus environment.

g. Application of sustainable development concepts globally – The ability to translate one's values and views with regard to sustainable development to decisions and actions that have regional, national and global implications (e.g., voting behavior, decision making at work, involvement in religious or other volunteer organizations, etc.).

4. Social/Cultural Competencies

a. Personal values - The ability to explain one's own values in terms of those values that are *foundational* – often implicit and in the background until threatened; *focus* – those that are present in day-to-day living and influence daily decision making and *vision* – those that may not be actuated.

b. Intercultural competence - The desire and ability to effectively interact with people from other cultures and the ability to assess these interactions and make appropriate behavioral adjustments to improve effectiveness.

c. Comparative religions – A basic understanding of the history and tenets of the major religions of the world and how religious beliefs have impacted the behavior of groups and nations. The ability to compare and contrast these religions and use this knowledge to improve one's ability to interact with people from various religious groups.

d. Political geography – A basic understanding of how geography impacts national policy development in terms of location, natural boundaries and barriers, natural resources, and an ability to locate nations of the world on a map.

e. Language – Competency in at least one language other than one's native language.

f. History – In-depth knowledge and understanding of one area of history and a broad understanding of world and one's native country's history.

g. The Arts – Formal training in at least one arts discipline (painting, photography, music, drama, crafts, etc.).

Appendix and Citations - Preparing Health Care Professionals Task Force

1. *Health Care Employment Projections: An Analysis of Bureau of Labor Statistics Occupational Projections 2004-2014*. R Martiniano and J Moore. The Center for Health Workforce Studies, School of Public Health, University at Albany, State University of New York. 2006. <http://chws.albany.edu>.
2. *Summary of HCC Student Enrollment in Current Programs in Health Care Fields. Produced by Task Force on Preparing Health Care Professionals.
3. *Selection Criteria for Expansion of Training Programs at HCC in Health Care Fields. Produced by Task Force on Preparing Health Care Professionals, 2007.
4. *Review of Potential Health Care Fields for Training Program Expansion or Initiation at HCC. Produced by Task Force on Preparing Health Care Professionals, 2007.
5. ** Issues Related to Health Care Training Facilities. Produced by Eric Regelin, Atlantic Builders and Task Force on Preparing Health Care Professionals, 2007. (**Need to obtain electronic copy and permission).

Summary of HCC Student Enrollment in Health Care Fields

	2003	2006	2007	Associate Degree	Certificate Awarded
Health Sciences Division - Programs with Graduates Ready to Enter the Job Market					
Nursing - RN level	679	917	1,026	yes	
Nursing - LPN level	130	89	100	no	yes
Cardiovascular Technologist (invasive)	12	30	25	yes	
EMS Technician/Paramedic	23	26	26	yes	yes
Radiologic Technology	0	0	27	yes	
Physical Therapy Assistant*	7	6	10	yes	
Respiratory Therapy*	0	1	1	yes	
Surgical Technology*	0	0	1	yes	yes
Total Enrollment	851	1,069	1,216		

* Through other Maryland community college degree programs

Science and Technology or Health Division Additional Degrees Required to Enter the Job Market					
Pre-Allied Health	49	74	54	yes	
Pre-Doctoral Degree (medicine, dentistry, veterinary medicine, optometry, pharmacy)	234	289	279	yes	
Athletic Training or Exercise Science	24	52	70	yes	
Health care Management & Admin	9	17	13	yes	
Human Services	4	56	53	yes	
Total Enrollment	320	488	469		

Selection Criteria for Expansion of Training Expansion at HCC	
Rank	Criteria
1	There is a strong demand for this professional in the community (county, region, state). There will be jobs for the graduate.
2	The education/training can be <i>completed</i> at the community college level. Students earn an associate degree or certificate.
3	The graduate can expect a decent wage when employed in the community. The investment in the education/degree is worthwhile to the graduate.
4	There are opportunities for strong partnership relationships to be developed in the community (county) or region. This may require clinical training sites/assistance provided by partners.
5	The training program can accommodate traditional and non-traditional college students.
6	There are possibilities for career advancement or career ladders.
7	The training program builds upon or can partially draw from resources or programs already at HCC.
8	The health professional trainees or graduates have the potential to contribute to improving the health and wellness of community residents and/or the community as a whole.

	Strong Job Demand	Student Interest	CC Edu	Working Wage	Current HCC Program	Local Partners	HCC Resources / Interest	Degree, Certificate, Continuing Edu	Overall
<i>Nurses (RN Level)</i>	+++	+++	+++	+++	AAS, 1,026 students	HCGH, other hospitals	need bldg, faculty, clin sites	degree, continuing education	
<i>Nurses (Practical or Vocational - LPN)</i>	++	career advance from PCT or entry level for some nurses	+++	+	Certificate, 100 students			certificate, continuing education	
<i>Patient Care Technicians (PCT) or Certified Nurse Aide (CNA)</i>	++	+ often entry level for some nurses		+ (PCT >CNA)		HCGH		certificate, continuing education	
<i>Radiologic Technician</i>	++		+++	++	AAS, new program	HCGH willing		degree as Rad Tech,	
<i>Athletic Training/ Physical Fitness/Exercise Science</i>	+	++ growing enrollment	++	++	AAS, 70 students	Columbia Assoc willing			
<i>Respiratory Therapists</i>	+++		+++	++		HCGH willing		Frederick CCC	
<i>Physical Therapist or Occupational Therapist Assistants (must be considered as distinct professions)</i>	+	+	+++	++					
<i>Health Care/ Medical Administration</i>	++	?	++ and BA/MB A	+				continuing education for health practitioners	
<i>Surgical Technologist/OR Tech</i>			+++					certificate or degree,	

	Strong Job Demand	Student Interest	CC Edu	Working Wage	Current HCC Program	Local Partners	HCC Resources / Interest	Degree, Certificate, Continuing Edu	Overall
<i>Groups not reviewed: pharmacy technician, med lab technician, dental hygienist, EMS/Paramedic</i>								<i>Frederick CC</i>	