

# South Carolina Commission on Higher Education

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CHE  
10-4-12  
Agenda Item 5

**To:** Chairman John L. Finan and Members, S.C. Commission on Higher Education  
**From:** Ms. Julie Carullo, Acting Executive Director  
**Subject:** *Action Plan Implementation Status Report, October 2012*

On April 2, 2009, the Higher Education Study Committee which was authorized by the General Assembly in 2007 to recommend a statewide strategic plan for higher education formally released its final report titled ***Leveraging Higher Education for a Stronger South Carolina***. The report is commonly referred to as the ***Action Plan*** and outlines four goals for higher education:

- Goal 1: Making South Carolina One of the Most Educated States
- Goal 2: Increasing Research and Innovation in South Carolina
- Goal 3: Increasing Workforce Training and Educational Services in South Carolina
- Goal 4: Realizing South Carolina's Potential Resources and Effectiveness

The *Action Plan* provides clear direction through a series of specific strategies and recommendations to ensure the future success and competitiveness of South Carolina. Since its release, regular status reports on progress toward realizing the goals have been advanced. The *Action Plan Implementation Status Report, October 2012* (October Report) provides a catalog of all recommendations that were included in the Action Plan and describes many of the implementation activities of note that have been reported as completed or in progress since the previous implementation status report of June 7, 2012. The October Report includes information provided by both Commission on Higher Education (CHE) staff and institutional representatives. Consequently, it may not reflect all activities which have been accomplished or are in process in support of realizing the goals of the Action Plan.

Highlighted below is a sample of activities of note from the October Report that CHE staff, colleges and universities, and other stakeholders have undertaken together or independently for which significant progress has been made since the last implementation report advanced in June 2012. For more information on these and other activities, please refer to the recommendations referenced below by page number:

- CHE staff continues to pursue activities to increase awareness of the value of higher education to the state and individuals as well as to implement programs such as Carolina Certificates that improve pathways for adults returning to or entering college for the first time. (***See Recommendations 1.6 and 1.35, pages 11 and 13, respectively.***)
- The Commission's EEDA projects, the SC Course Alignment Project ([www.epiconline.org/southcarolina](http://www.epiconline.org/southcarolina)) and the SC Transfer and Articulation Center

([www.sctrac.org](http://www.sctrac.org)), undertaken in collaboration with the institutions and other key stakeholders, are benefiting students across the state by improving seamless transitions from K-12 to college. **(See Recommendations 1.11 and 1.23, pages 21 and 32, respectively.)**

- College Application Month, held in October, is geared toward first-generation college students and students who may not otherwise apply to college, and is designed to assist students in completing and filing college applications. An anticipated 150 high schools and 35,000 students will participate in College Application Month in October 2012. **(See Recommendation 1.20, page 16.)**
- The institutions continue to develop or expand higher education programs to support workforce shortage areas. In July 2012, Wells Fargo awarded the South Carolina Technical College System a \$325,000 grant to support programs that promote local workforce development and job creation. In addition, in June 2012, Spartanburg Community College announced it is expanding workforce development offerings at its Cherokee County campus to accommodate the growing manufacturing industry. The campus launched a new LEGO Robotics program with an emphasis on science, technology, engineering and math, and is expanding its curriculum offerings to include the Mechatronics Technology I Certificate program. **(See Recommendations 3.2 and 2.14, page 46 and 53, respectively).**
- The institutions continue to engage undergraduate students in research. In August 2012, the College of Charleston received a \$334,000 National Science Foundation grant to conduct research into the effects of releasing pharmaceuticals into the environment. The three-year grant provides laboratory research opportunities for at least 18 undergraduate students and also supports an outreach program through the college's Literacy Outreach Initiative to teach students at seven disadvantaged elementary schools in Charleston about water quality. In addition, NASA is partnering with the University of Michigan and South Carolina State University to conduct research to gain understanding of winds associated with tropical storms and hurricanes. The universities received a \$151.7 million award in July 2012 to lead a team of faculty and students to design, launch, and operate the Cyclone Global Navigation Satellite System. **(See Recommendation 2.3, page 26.)**
- The institutions continue efforts to increase service learning opportunities for students. For example, The Citadel's Service Learning Program is expanding significantly, providing cadets with a wide variety of opportunities to serve the community and make a real impact on the lives of people throughout the greater Charleston area. In 2011-12, a total of 13,420 service learning hours were completed by 2,214 cadets, providing an estimated positive economic impact of over \$12,000. **(See Recommendations 3.20, page 28).**

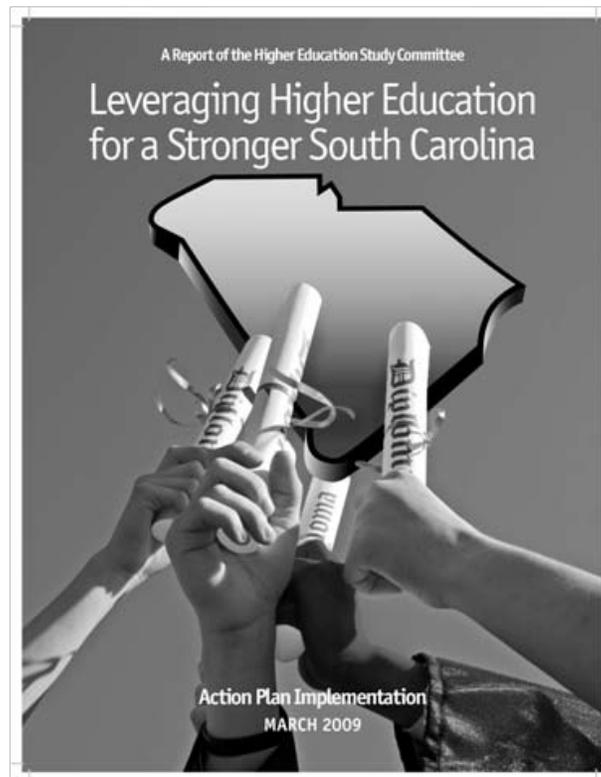
Again, the activities described above represent only a few of the many important initiatives that are underway in implementing the recommendations of the Action Plan.

**A copy of the full October Report is not enclosed due to its length (70 pages). To access the full October Report online, see <http://www.che.sc.gov/InfoCntr/actplanimp.htm>.**

Should you have questions or if you would like a printed copy of the report, please contact CHE staff member Trena Houpp at [thoupp@che.sc.gov](mailto:thoupp@che.sc.gov) or by telephone at 803.737.4853.

**SOUTH CAROLINA COMMISSION ON HIGHER EDUCATION**

# **ACTION PLAN IMPLEMENTATION STATUS REPORT**



**OCTOBER 2012**

# Action Plan Implementation Status Report as of October 2012

## INTRODUCTION

This report describes the activities specific to implementing the recommendations provided in the [Higher Education Action Plan](#) (March 2009). The Commission periodically requests that institutions provide reports on their activities specific to the recommendations. Information received from the institutions is included; however, because not all institutions provide reports, the updates may not fully reflect ongoing activities at institutions statewide.

The first two sections of this report cover high priority recommendations as identified in the March 2009 Higher Education Action Plan, both those with and without additional costs associated with implementation. The third section, "Other Recommendations," lists recommendations by subject area in numeric order. For each goal, key stakeholder responsibility is identified and bold type face indicates primary responsibility. A list of recommendations by category is provided at the end of the document.

Status Report updates are posted online at <http://www.che.sc.gov/InfoCntr/actplanimp.htm>

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### HIGH PRIORITY – NO COST RECOMMENDATIONS

#### 2.2. Enact appropriate regulatory relief to enhance innovation and promote research.

**Responsible:** Legislature; CHE; Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

S.172 (Act 74 of 2011), the Higher Education Efficiencies and Administrative Procedures Act and Transparency Act was enacted to provide a number of regulatory reforms for the public higher education institutions. In addition, provisions were added to require institutions to post online transaction registers. The reforms were a positive step forward, and continued progress toward reforming regulatory provisions for higher education remains a focus.

#### 3.1. Align higher education programs to support statewide and regional clusters.

**Responsible:** Colleges and Universities; CHE; SCTCS; and SC Council on Competitiveness

**See Also Related Recommendation:** N/A

**Action:**

Since FY 2007-08, the Committee on Academic Affairs and Licensing has approved new programs which support the following clusters:

##### Advanced Manufacturing and Technologies

- A.I.T., Mechatronics Technology, Piedmont Technical College
- B.S., Computational Science, USC Beaufort
- B.S.E., Engineering Science, USC Columbia
- M.Engr., Industrial Engineering, Clemson
- M.E., Systems Engineering, Clemson University
- M.S., Engineering Management, University of South Carolina Columbia
- M.S., M.E., Aerospace Engineering, University of South Carolina Columbia
- Ph.D., Human-Centered Computing, Clemson University

##### Energy

- A.I.T., Radiation Protection Technology, Aiken Technical College
- A.I.T., Radiation Protection Technology, Spartanburg Community College

##### Health Care Occupations

- A.H.S., Cardiovascular Technology, Piedmont Technical College
- A.H.S., Physical Therapy Assistant, Piedmont Technical College
- A.H.S., Veterinary Technology, Piedmont Technical College
- A.H.S., Occupational Therapy Assistant, Horry-Georgetown Technical College
- A.H.S., Emergency Medical Technology, Midlands Technical College
- A.H.S., Emergency Medical Technology, Paramedic, Aiken Technical College
- B.A. and B.S., Public Health, USC Columbia
- B.A./A.B., B.S./A.B., Public Health, College of Charleston
- B.S./A.B., Exercise Science, College of Charleston
- B.S., Exercise Science, The Citadel
- B.A., Sociology (Human Services Cluster), USC Beaufort
- B.S., Nursing (Completion), Coastal Carolina
- B.S., Health Administration, Coastal Carolina University
- B.S., Pharmaceutical Studies, Francis Marion University

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- Master of Health Information Technology (M.H.I.T.), University of South Carolina Columbia
- M.S.N., Family Nurse Practitioner, Francis Marion University
- M.S.N., Nurse Educator, Francis Marion University
- M.S.D., Dentistry, MUSC
- Ph.D., Health and Rehabilitation Science with concentrations in Pathology and Impairment, Functional Limitations, or Health Services, MUSC
- D.N.P., Doctor of Nursing Practice, MUSC

### **Tourism and Creative Industries**

- B.A., Studio Art, USC Beaufort
- B.S., Music Industry, Francis Marion
- B.A., Graphic Design, Coastal Carolina
- B.A., Commercial Music, USC Upstate
- B.A., Computing in the Arts, College of Charleston
- B.A., Communication Studies, USC Beaufort
- B.A./A.B., Dance, College of Charleston
- B.F.A., Theatre Arts with Concentrations in Acting, Design and Technology, and Physical Theatre, Coastal Carolina
- B.F.A., Musical Theatre, Coastal Carolina
- B.F.A., Interior Design, Winthrop University
- B.F.A., Visual Communication Design, Winthrop University
- M.A., Writing, Coastal Carolina
- Ph.D., Hospitality Management, USC Columbia

### **Education**

- B.A., Elementary Education, USC Beaufort
- B.S., Foreign Language Education, College of Charleston
- B.S., Secondary Education, College of Charleston
- M.A.T., Middle Level Education, The Citadel and College of Charleston
- M.Ed., Higher Education Business Administration, University of South Carolina
- M.Ed., Teaching and Learning, Clemson
- M.Ed., Teaching, Learning, and Advocacy, College of Charleston
- M.Ed., Teaching and Learning with concentrations in Diverse Learners, Exercise and Sports Studies, and Instructional Technology, Lander University
- Ph.D., Teaching and Learning, USC Columbia
- Ph.D., Engineering and Science Education, Clemson University

In Fall 2011, **Coastal Carolina** began offering a M.Acc. in Accountancy to support the Business, Management, and Administration cluster.

The **College of Charleston** has a number of initiatives that align education programs to clusters, including:

- a Biomedical Commercialization course co-taught by a Management professor from Charleston and a Neurosciences professor from MUSC, providing hands-on experience in biomedical companies (located in the Charleston Innovation Center);
- a management course involving students in the review and construction of strategic plans for operating units of MUSC;
- the Tate Center for Entrepreneurship, an active participant in the Charleston Creative Cluster;

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- the Department of Computer Science's work with New Carolina to align better the B.S. in Computer Science and M.S. in Computer and Information Science with the Advanced Security Regional Cluster;
- the School of the Arts' internship programs which place students in organizations tied directly to tourism and the creative industries (recent examples include fellowships with the City of Charleston's Office of Cultural Affairs, apprenticeships with Spoleto Festival USA, and internships with the Gibbes Museum of Art).

In the area of health care professions and occupations, **Francis Marion University** implemented the "Pee Dee Health Education Partnership" in cooperation with the University of South Carolina (this consortium was approved by the CHE in October 2008). The purpose of the partnership, which includes McLeod Health and Carolinas Hospital, is to support additional graduate programs in healthcare professions and occupations for the Pee Dee region and the state of South Carolina.

**USC Aiken** created several new programs to align with regional clusters, including a concentration in Allied Health in the Exercise and Sports Science major and a concentration in Environmental Restoration and Remediation in the Bachelor of Science in Biology major that includes undergraduate research at the Savannah River Environmental Lab.

**USC Beaufort** developed programs and certificates that align education programs to regional clusters, including a concentration in Coastal Ecology and Conservation to support the Science, Technology, Engineering, and Mathematics cluster and a B.A. in Communication Studies degree to support the Arts, Audio/Video Technology & Communications cluster. The institution also established a Center for Event Management and Hospitality Training to support the Hospitality and Tourism cluster.

**Winthrop University** established the Winthrop School Partnership Network in cooperation with CERRA and The Olde English Consortium, and an Institute for Educational Renewal and Partnerships for the purpose of improving the P-16 education of students and increasing teacher quality. In addition, Winthrop University's College of Visual and Performing Arts and Department of Fine Arts initiated the creation of the Main Street Outdoor Sculpture Gallery, a collaborative project with the Rock Hill Economic Development Corporation, Old Town Association, Arts Council of York County, and the City of Rock Hill. This project has identified student artists who work with various local agencies to develop community-based projects that enhance quality of life, contribute to cultural tourism, and promote creative industries.

**The South Carolina Technical College System** continues to encourage colleges to align their programs with statewide and regional clusters and is promoting a cluster focus through programs such as *competeSC*. For example, Midlands Technical College offered a new Nuclear Technology program for the Fall 2009 semester that was created, in part, at the request of South Carolina Electric & Gas Company to supply the company's expansion of the V.C. Summer Nuclear Station with qualified nuclear technicians.

**Aiken Technical College** is developing a Nuclear Quality Systems associate degree in response to the needs of the nuclear workforce.

### 1.2. Use and promote the *Knowledge and Skills for University Success* standards as a common standard of college readiness. - **COMPLETED**

**Responsible:** SCDE; CHE; SCTCS; High Schools; and Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

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CHE staff sent letters to high schools to reiterate the importance of the *Knowledge and Skills for University Success* standards. The letters also discussed the *South Carolina College Readiness Reference Standards* developed as part of the South Carolina Course Alignment Project, which include the *Knowledge and Skills for University Success* standards.

### 3.21. Increase opportunities for relevant work experience as part of instructional programs.

**Responsible:** Colleges and Universities and Business and Industry (Connect2Business)

**See Also Related Recommendation:** 1.43

**Action:**

**The Citadel** is expanding the number of internship opportunities and student collaborations with business and industry. An example of this expansion is The Citadel School of Business Administration's program for advanced MBA students which works with and provides consulting services to businesses and non-profit organizations throughout the region. These student teams provide a wide range of strategic consulting services at no cost to the client organizations. From 2009-2012, over 25 projects have been completed for organizations ranging from entrepreneurial start-ups to established businesses with thousands of employees. The program provides clients with invaluable consulting services while giving students experiential learning opportunities that enhance their professional development.

The **College of Charleston** expanded its efforts to increase opportunities for relevant work experience as a part of its instructional programs. For example, the Arts Management Program, Historic Preservation and Community Planning Program, and Art History Department stress the importance of internships in students' education. The Theatre Department's *practica* accomplish the same goal. The College of Charleston has also recently expanded internship opportunities with the Federal Reserve and SCANA Corporation. Many of the academic programs in the School of Business have robust internship programs, as do Communication, Psychology, and Crime, Law & Society. The Joseph P. Riley Jr. Center for Livable Communities integrates academic programs of study with student research on various aspects of developing and maintaining livable communities. The Center for Civic Engagement helps faculty and students link academic goals with community needs and service opportunities through unique academic experiences that connect classroom learning to the Charleston community.

**Coastal Carolina University** has expanded opportunities to explore internships in all academic majors. A Director of Internships and Service Learning works with Experiential Learning Coordinators in all five colleges and Internship Coordinators within academic departments to prepare and place students into internship positions. A formalized internship program has been developed that qualifies the internship providers and guarantees relevant major-specific internship experiences that students can easily access through the Career Services website. Student interns are required to maintain a specific work schedule and provide feedback and reflection about their learning experiences to faculty course instructors. The employer site supervisor also provides a mid-term and final student performance evaluation to the course instructor. In order to help ensure that students are afforded as many internship options as possible, there is an ongoing effort to create partnerships with local and regional employers interested in offering new opportunities to students. In addition to internship courses offered through the academic departments, a UNIV 395 Internship Experience course was offered to students who have completed at least 30 credit hours and are interested in more than one university-supervised internship experience. Through this course, students are encouraged to explore career options, apply academic knowledge, and develop marketable work skills. Furthermore, Coastal Carolina University unanimously endorsed the creation of a 10-year Quality Enhancement Plan with a major focus of encouraging students to take part in engaged learning experiences and applying classroom learning to the local community and beyond. For example, Coastal Carolina University students participate in the NASCAR Kinetics: Marketing in Motion

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program which involves them in the motorsports industry. This innovative program gives student-teams an opportunity to work through real-world business challenges facing the motorsports industry. Students leverage techniques and lessons taught in the classroom to complete case studies and projects. Students chosen for the NASCAR Kinetics program are tasked with promoting brand awareness throughout the college and community. Students who have taken part in the program credit it for giving them a competitive advantage for internships and jobs in the industry. In addition, Wall College Connections is a signature event sponsored by the E. Craig Wall Sr. College of Business Administration at Coastal Carolina University. The event is designed to give students insight into career opportunities and the professional world. It highlights the Wall College of Business's study abroad and international internship initiatives. By providing a host of similar co-curricular learning experiences, the University supports student participation in internships that better prepare them to be more competitive in today's job market and with their applications to graduate school.

**Francis Marion University's** Health Physics program has increased the number of internships for students majoring in Health Physics by working with partner organizations in various appropriate fields. Additionally, as a result of the University's Quality Enhancement Plan which emphasizes nontraditional learning experiences, several academic programs have expanded internship opportunities for students. For example, the Mass Communication program and the Professional Writing program began new internship arrangements with area media outlets during summer 2011.

**USC Beaufort's** Office of Student Development expanded its Career and Disabilities Services Office into two new and distinct offices to focus better on individual needs of students. A Director of Career Services was hired to assist students with career-related issues including how to decide on a college major, how to choose a career, career planning, and job and graduate school searches. The Director works with the academic departments and students by exploring and arranging internship opportunities. In addition, a Coordinator of Counseling and Disability Services was hired to coordinate University services for students with special needs while maintaining appropriate documentation and records for students with disabilities. Personal Counseling Services are available to students for the purpose of increasing academic success and personal development through the promotion of health and wellness. USC Beaufort also offers internship, *practica*, and field experience opportunities to students in the areas of Business Administration, Education, English, Nursing, Hospitality Management, Human Services, Psychology and Studio Art. Human Services internships are arranged in conjunction with the Beaufort County Human Services Alliance housed on the Historic Beaufort Campus.

**USC Columbia** is assembling a comprehensive database of internship, fieldwork, and practical learning practices across all colleges. These data elements will be integrated into the Banner system database for the university. The database is expected to aid in decisions concerning future opportunities for incorporating work experience into instructional programs.

**USC Upstate** developed a minor in Child Advocacy Studies based on a model at the National Child Protective Training Center housed at Winona State University in Minnesota. The minor has an applied focus with a semester-long internship. The Department of Social Services, local law enforcement, Children's Advocacy Centers, and other organizations with a mission of child protection were consulted regarding curriculum development and internship placements. The goal is to prepare students better for careers working with children in child abuse prevention and intervention.

**Winthrop University** initiated a year-long senior internship for Early Childhood Education and Elementary Education programs in order to increase relevant work experience as part of the teacher preparation program.

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Internships, cooperative work experience, and supervised comprehensive work experience are commonly included in the **technical colleges'** applied degree programs. For example, South Carolina Electric & Gas (SCE&G) collaborated with **Midlands Technical College** regarding the content of courses in the Nuclear Operator program. SCE&G also holds a Boot Camp to train students to work at the V.C. Summer Nuclear Station after they complete the degree program because the company believes it is important to match a student's expectation of a career in the nuclear field with SCE&G's corporate culture successfully. **Aiken Technical College's** Associate of Applied Science Radiation Protection Technology program implemented a required internship experience. Students are placed with commercial nuclear plants, department of energy sites, or nuclear-related companies. See also Recommendation 1.43 for more information about the South Carolina Technical College System's Apprenticeship Carolina™ Division.

**Horry Georgetown Technical College** has increased the number programs requiring internships. For example, the institution now requires internships for the Human Services and Construction Project Management programs and the Management component of the General Business associate degree program. In addition to job relevance training for students, faculty participate in a "Return to Industry" program by spending time in the workplace to provide them with more knowledge of the subject matter and competencies in the latest trends in the industry.

### **2.7. Establish a network of programs to encourage statewide technology transfer of South Carolina-derived technologies/patents (e.g., Maryland technology transfer consortium). [The text of Recommendation 2.7 was changed by approval of the oversight committee on September 2, 2009.]**

**Responsible: Colleges and Universities and Business and Industry**

**See Also Related Recommendation:** Recommendation 2.22.

**Action:**

Based on staff suggestions, Recommendation 2.7 was modified in September 2009 to reflect an emphasis on a technology transfer consortium which would work to align business and institutional research interests. In May 2011, the SmartState™ Review Board acted to rebrand the CoEE Program as the SmartState Program. Accordingly, all CoEE references have been changed to SmartState.

In October 2009, the first Centers of Economic Excellence Council of Chairs convened on the USC Columbia campus for a conference that included private and public sessions devoted to topics such as economic development, SmartState Program objectives (including technology transfer), and the consideration of a Center of Economic Excellence Council of Chairs Charter.

In February 2010, the Centers of Economic Excellence Council of Chairs released an action plan that included the goal for SmartState Endowed Chairs to become a recognized science and technology advisory board in order to provide leadership to the state and to South Carolina industry concerning economic growth through academic research and technology transfer.

On March 2-3, 2010, Health Sciences South Carolina hosted the Health Economy Advancement Legacy (HEAL) SC 2010 Conference devoted to "the discovery, development and delivery of new concepts, new sciences, and new products emanating from the endowed chairs and SmartState scientific research of the HSSC-sponsored SmartState programs." The HEAL SC Conference included sessions on technology transfer and research commercialization from numerous healthcare SmartState Endowed Chairs and principal investigators as well as from several prominent national technology transfer experts and venture capitalists.

On April 11, 2011, the SmartState Program held a second Technology Transfer Forum at which representatives from the three research institutions, the SmartState Review Board, and CHE staff convened to discuss the types of technology transfer information and other program data which

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should be submitted annually by institutions in order to track the success of the SmartState Program.

The Centers of Economic Excellence Council of Chairs participated as a planning partner for a SBIR/STTR small business conference hosted by Innoventure and the USC Technology Transfer Office in Columbia in November 2011.

On November 30, 2011, the SmartState Review Board published the *SmartState Program 2010-2011 Annual Report to the South Carolina General Assembly and the South Carolina Budget & Control Board Report* (referred to as the *2011 SmartState Program Annual Report*). The *2011 SmartState Program Annual Report* announced the cumulative technology transfer data for the SmartState Program from FY 2002-03 to FY 2010-11. There were 364 scientific disclosures (increased from 271 the previous year), 321 U.S. and international patent applications (increased from 241 the previous year), 42 U.S. and international patents issued (increased from 24 the previous year), and 66 commercial licenses (increased from 22 the previous year). In addition, the report states that the three research institutions have collected more than \$800,000 in license income through the SmartState Program through FY 2010-11.

The SmartState Centers of Economic Excellence Council of Chairs hosted the inaugural SmartState Program National Conference in Charleston from December 4-6, 2011. See Recommendation 2.22 for more information about this conference.

**4.3. To maintain a more accurate picture of higher education funding, state data reporting should clearly distinguish between restricted funds (e.g., funding which is limited to a specific auxiliary activity or by donors or external agencies to a specific purpose) and unrestricted funding (e.g., funding derived primarily from state appropriations for Educational and General [E&G] support and student tuition and fees).**

**Responsible: Legislature; Governor's Office; and CHE**

**See Also Related Recommendation: N/A**

**Action:**

The Commission completed and disseminated to its members and other interested stakeholders a document entitled "Project 17: An Analysis of State Support for Higher Education in South Carolina" which clearly distinguishes between restricted and unrestricted state appropriations and authorizations. This analysis provides a clear picture of state-appropriated operating support for higher education.

The Commission continues efforts to establish a clearer picture of higher education funding through information provided online and in presentations such as those given at hearings before legislative committees, including a Joint Legislative Study Committee on Restructuring, the House Ways and Means Committee, and the Senate Education Committee.

**CHE Cost Reduction Committee described under Goal Four**

**Responsible: CHE**

**See Also Related Recommendation: N/A**

**Action:**

Given fiscal constraints since the Action Plan was released, CHE has not yet established a Cost Reduction Committee. We anticipate that the Cost Reduction Committee will be comprised of institutional leaders, members of the Commission, and others. The intended purpose is to provide a forum for sharing best practices and to encourage further sharing and consolidation of resources such as efforts of Technical Colleges to consolidate financial and human resource functions at like institutions where possible.

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### HIGH PRIORITY – WITH COST RECOMMENDATIONS

#### 1.21. Ensure affordability of higher education through increased state funding.

**Responsible:** Legislature and Colleges and Universities

**See Also Related Recommendation:** 4.1

**Action:**

Since the economic downturn which began in FY 2008-09, funding for our public higher education institutions has dropped nearly 50%. Federal ARRA State Fiscal Stabilization Funds provided in FY 2009-10 and FY 2010-11 assisted as a one-time funding source in mitigating state cuts but are no longer available and did not cover budget gaps created by the significant loss of state funds during those years. CHE and the institutions have continued to encourage increased funding for higher education as the state's economy recovers. For the first time since the downturn, the FY 2012-13 budget includes increased funding for higher education at essentially "level" base budgets, with additional funds provided from non-recurring, one-time funding sources. While state funds for institutions declined, the state continued throughout the economic crisis to fund the state's undergraduate merit-based scholarship programs fully (Palmetto Fellows, LIFE, and SC HOPE) and provided level funding for need-based grant programs and Lottery Tuition Assistance (LTA). The state-supported scholarships and grants are assisting our state's students with affordability and the merit-based requirements are encouraging improved academic performance and on-time graduation. CHE and institutions have continued to pursue increased funding for need-based grants to assist the state's neediest students. A significant increase (\$4 million for Need-based Grants and \$1.5 million for Tuition Grants) was provided for the first time in several years. The LTA program also received an increase of \$2.1 million. Information about the funding situation has been reported during the year to legislative committees and copies of the presentations given are available at [http://www.che.sc.gov/New\\_Web/Data&Pubs.htm](http://www.che.sc.gov/New_Web/Data&Pubs.htm). Additionally, a legislative summary by CHE staff which outlines the 2012-13 appropriations for higher education is available at [http://www.che.sc.gov/InfoCntr/Legisl/2012\\_SessionUpdate\\_asof070612\\_rev7-25.pdf](http://www.che.sc.gov/InfoCntr/Legisl/2012_SessionUpdate_asof070612_rev7-25.pdf).

#### 3.3. Fund a bond bill to support necessary infrastructure and facilities renovation, maintenance and expansion.

**Responsible:** Legislature

**See Also Related Recommendation:** 4.2

**Action:**

The General Assembly has not yet considered a bond bill. While a bond bill is not expected in FY 12-13, CHE and higher education institutions continue to discuss the importance of capital funding and are requesting one-time funds for maintenance needs.

#### 4.4. Fund the Partnership Among South Carolina Academic Libraries (PASCAL) fully because it is a critically important partnership among South Carolina's academic libraries.

**Responsible:** Legislature

**See Also Related Recommendation:** N/A

**Action:**

CHE continued efforts to secure restoration of stable state funding for the state's higher education electronic library, the Partnership Among S.C. Academic Libraries (PASCAL) system, which includes the participation of 53 public and private institutions. PASCAL received \$2 million each year from FY 2004-05 through FY 2007-08. In FY 2008-09, PASCAL's funding was reduced to \$200,000 (provided in recurring funds), and ultimately to \$169,674, the program's current base-

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funding level. In light of budget reductions and lack of restored state funding in recent years, member institutions have been asked to pay increased assessments in order to maintain essential PASCAL services.

In FY 2011-12, the General Assembly authorized \$1.5 million for PASCAL if funds were available from excess unclaimed lottery prizes. At the end of fiscal year 2011-12, PASCAL received \$1.25 million. These one-time funds will enable PASCAL in FY 2012-13 to expand content access through a combination of creative one-time purchases and/or multi-year licenses for essential discipline materials that were previously cut as well as to modernize elements of its discovery and delivery infrastructure in order to improve the scope of services and to increase efficiencies in academic library operations. In FY 2012-13, PASCAL base funding remains at \$169,674 and is also included again in first priority position on the excess unclaimed lottery prize funds list for \$1.5 million. (Should excess unclaimed prize funds above the certified funds of \$12.4 million be available, PASCAL would be in position to receive \$1.5 million.) While PASCAL is well-positioned to realize additional funding in FY 2012-13, the outcome will not be known until nearer the end of the fiscal year. Along with the colleges and universities, CHE will continue to seek a stable state funding source for this important statewide project.

Budget reductions coupled with fee assessments have exacted a heavy toll on library budgets of individual institutions, resulting in significant funding losses for permanent collections statewide. Despite this toll on institutional collections, member institutions have maintained participation in the program, a fact which underscores both the importance of PASCAL resources and the significance of collaboration among the state's higher education institutions. In January 2012, PASCAL libraries agreed to participate with the South Carolina State Library in a joint procurement action for core electronic resources. PASCAL libraries also agreed to support a cornerstone element of the DISCUS package using institutional funds. This joint procurement action allowed the State Library to upgrade resources available to citizens through public and K-12 school libraries and should allow academic libraries to reduce expenditures for core resources through PASCAL in FY 2012-13. While such an agreement is remarkable and historic for South Carolina libraries, it should be noted that this consolidation of resources takes place within the context of large losses absorbed by all libraries since 2009. Indeed, when the full costs related to the joint procurement action are analyzed, PASCAL libraries will likely have expended the same overall amount for slightly more content as some expenditures will be shifted back to the institutional level. Furthermore, while the new content is important for supporting core undergraduate education, it does not replace all of the materials that were cut in 2009.

### **1.1. Implement compulsory high school attendance until the age of 18 or high school graduation.**

**Responsible:** Legislature; SCDE; and Department of Juvenile Justice

**See Also Related Recommendation:** N/A

**Action:**

Despite legislation which was introduced in 2009 (S.29) and again in 2011 (H.3244) that would have increased the age for compulsory attendance to age 18, no changes were approved. H.3244 did not pass as of the end of the 2012 session and will need to be reintroduced in 2013.

### **1.6. Develop a marketing campaign to promote college attendance and completion.**

**Responsible:** CHE

**See Also Related Recommendation:** 1.4, 1.40, and 3.8

**Action:**

In 2009, CHE staff consulted David J. English, Director, CFNC Technology & Internet Services for the University of North Carolina General Administration, to learn about North Carolina's higher education marketing plan. He recommended allocating between \$2 million and \$5 million

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dollars per year for a statewide campaign that would span multiple media formats and suggested speaking with a marketing firm to discuss specifics related to media purchase prices for TV, radio, billboards, etc.

Editorials promoting college attendance and completion have been and will continue to be sent to the state's major newspapers by members of the Commission, the Higher Education Study Committee, and others. Editorials have already appeared in *The State* and *The Post and Courier*. In addition, several articles about the importance of higher education were published in newspapers around the state following the release of a study conducted by the Darla Moore School of Business about the return on investment from higher education. The study, entitled *The Economic Return on Investment in South Carolina's Higher Education*, is accessible at [www.che.sc.gov/InfoCntr/HESC\\_Files/EconReturnHigherEdAugust09.pdf](http://www.che.sc.gov/InfoCntr/HESC_Files/EconReturnHigherEdAugust09.pdf).

### **College Access Media Campaign**

In addition to the efforts mentioned above, a SC College Access Network (SC CAN) Marketing Campaign contract was awarded in May 2009 to Ferebee Lane Brand Communications from Greenville, SC. The SC CAN Go website ([www.sccango.org](http://www.sccango.org)) and media campaign were officially launched in January 2010. The website serves as a comprehensive resource for information including but not limited to financial aid, college and career options, and planning advice. Supporting elements of the campaign include television and radio spots, outdoor advertising, and non-traditional efforts such as in-school gym banners and social media. The second installment of the South Carolina College Access Network's (SC CAN) marketing campaign began in early Spring 2011 to promote College Goal South Carolina. Promotional spots aired on Channel One in every high school in South Carolina during the months of January and February, and reached an estimated 65,762 high school students. In addition to television spots, SC CAN used a variety of outdoor advertising including billboards and banners.

### **School Counselor Resource Manual**

The counselor resource manual is designed to describe all resources, activities, courses, and other support available to school counselors across the state. Because school counselors are influential providers of information to students, it is important that counselors have all the information they need to appropriately advise the students they serve. The following content will be included in the resource manual:

- financial assistance resources (types of financial aid, list of helpful Web sites);
- scholarship-specific information (CHE, state scholarships, corporations that provide scholarship/grants, national grants/scholarships);
- college admission requirements (differentiating between requirements for various institution);
- college awareness lesson plans; and
- state and national organizations that promote college awareness.

In addition, sections that specifically address the different types of conversations that middle school counselors have with students and parents versus those conversations high school counselors have as part of their student/parent meetings will be included. The manual will be delivered to every middle and high school counselor in Fall 2012.

### **College Access Challenge Poll**

The College Access Challenge Poll surveyed 806 SC parents with public school students between the ages of 13 and 19 to assess parental perceptions of postsecondary education opportunities for high school students. The sample provided a statistically significant margin of error of  $\pm 3.4\%$ . In addition, the poll oversampled households below the median household income that also had a student between the ages of 13 and 19 in public school. The survey used both sample-targeted and random-digit dialing methodologies to ensure that no segment of the population was excluded. Regardless of which sample selection procedure was used to determine a selected household, all selected households were screened for students between the ages of 13 and 19 in public school.

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The results of the survey were that over 90% of parents surveyed have high hopes and expectations that their children will obtain a postsecondary degree. Students themselves also expect to attend college. Through the poll, it was learned that parents rely on schools for information about attending college. Parents also say that while schools have been helpful, school personnel must initiate the conversations. Most parents suggest that they are saving money for college, but are relying on traditional savings accounts. Such a response implies that parents need more comprehensive information regarding the numerous financial aid opportunities available to SC residents. A plurality perceives two-year technical, community, and vocational schools as cost-saving alternatives. The data suggest that if low-income students are to attend and complete college, then their parents will need significant help from educators, counselors, and others. The poll results were further segmented and analyzed by income level, race, and regions of the state. Conclusions drawn from the data suggest that even when accounting for these variables, parents still have high expectations for their children to attend college. While parents lean heavily on schools for information, most do not initiate conversations with school personnel about college requirements or financial aid. Most parents report that schools are helpful and say they are saving money for college, though this is not likely for persons living below the median household income. Finally, it also seems both parents and students would benefit from a “one stop shopping” site with information about colleges and the application process.

### **Spartanburg County’s “40/30 Plan”**

USC Upstate was the leader in Spartanburg County for beginning the “40/30 Plan.” This initiative was embraced by the area Chamber of Commerce and a task force was formed to implement the plan’s recommendations which call for 40% of the residents of Spartanburg to hold a minimum of a baccalaureate degree by 2030. The University also developed a marketing campaign entitled, “Return to Learn” that targets adults who have some college credits but have not completed a baccalaureate degree.

### **Know2 Initiative**

The Know2 Initiative aims to develop a strong education culture in SC by changing attitudes and beliefs in communities throughout the state concerning the importance and attainability of higher education. The initiative reinforces two key concepts: 1) Know that in the world of today being highly educated is essential for economic success and a high quality of life and 2) Know that being highly educated is possible for individuals, their family and the community. CHE has partnered with the S.C. Higher Education Foundation for this initiative and has sub-granted funds from the state’s federal College Access Challenge Grant to the foundation for the purpose of initiating Know2 pilots in several South Carolina communities.

### **1.35. Create a “New Front Door” that makes the transition to higher education vastly easier for adults.**

**Responsible:** CHE; SCTCS; and Colleges and Universities

**See Also Related Recommendation:** 2.14, 3.10, and 3.21

#### **Action:**

Adults have many responsibilities they must balance against the demands of learning that often serve as barriers against pursuing higher education. Some of these barriers include lack of time, money, confidence, or interest; lack of information about opportunities to learn; scheduling problems; “red tape;” and problems with child care and transportation. The best way to motivate adult learners is simply to enhance their reasons for enrolling in college and to decrease barriers.

The Commission realizes the need to create new, accessible pathways that make it easier for adult learners – particularly those from hard-to-serve populations – to prepare themselves for career-relevant postsecondary education and training. These new pathways, the “New Front Door/Knowledge Network,” must provide support to help adult learners overcome both academic and non-academic barriers and allow learners to move smoothly from adult career-technical

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programs to a credential or degree program at a two- or four-year campus. CHE is helping to build a “Knowledge Network/Stackable Certificates” system that makes it easier for adult learners to pursue higher education by combining literacy, adult education, workforce training, and college preparation into a coherent whole with dual focus on preparation for postsecondary learning and career access and advancement.

The “Knowledge Network/Stackable Certificates” system is currently being piloted. Beginning in March 2011, the Cherokee County Adult and Community Education Program partnered with Spartanburg Community College (SCC), CHE, and local participating industries to pilot a stackable certificates program for adults enrolled in the Cherokee County Adult Education Program. In August 2011, two additional pilot sites were implemented. Francis Marion University partnered with Florence-Darlington Technical College, Darlington Adult Education Center, Poynor Adult and Community Center, CHE, and local participating industries in the Florence, Darlington, and Marion counties. The Charleston Chamber of Commerce partnered with Dorchester School District 2 Adult Education, Berkeley County School District Adult and Community Education, CHE, and local participating industries to pilot a stackable certificates program for adults enrolled in the Charleston, Berkeley, and Dorchester Education Programs. For the first year of the pilot, stackable certificates were issued only at the pre-college level at the Cherokee County Adult and Community Education Program pilot site. Of the 73 participants at the Cherokee County pilot site, 47 (63%) earned pre-college level certificates - with 20 of the 47 currently enrolled at Spartanburg Community College and one enrolled the University of Phoenix. Five students who participated in the pilot have completed the necessary coursework and will learn soon if they met the required General Educational Development (GED) test scores needed to receive the South Carolina High School Equivalency Diploma.

**The Citadel** reinstated its Veteran’s Program in 2010, creating a new pathway for returning adult veteran students to complete postsecondary work.

The **College of Charleston** will implement the Bachelor of Professional Studies in Fall 2012. This program is an adult degree completion program and will provide an undergraduate education to adult learners who have completed an associate’s degree from an accredited institution or the equivalent of 60 college credits.

**South Carolina State University** offers a Weekend College Program for non-traditional students designed to meet the needs of adult students across the state. To be admitted to the program, undergraduate students must have completed prior coursework equivalent to the General Education Curriculum. Both graduate and undergraduate students must also meet all other regular admissions requirements for SC State University as well as any admissions requirements specific to the academic program to which application is made. Programs approved for the Weekend College are:

- Bachelor of Science in Accounting
- Bachelor of Arts in Political Science (Public Administration Option)
- Bachelor of Social Work
- Master of Business Administration
- Master of Science in Rehabilitation Counseling

**USC Beaufort** offers a Saturday Degree Business Plan for working adults with partial four-year degree completion, an associate degree, or a degree in another subject. USC Beaufort also entered into the Leadership Scholars Program with the Marine Corps Installations-East to expedite the transition of Marines to USC Beaufort through the admission process. In addition, USC Beaufort participates in the Yellow Ribbon Program as part of the post 9/11 bill. Because of the University’s participation in the Yellow Ribbon Program, qualifying military veterans and their dependents are now eligible for additional tuition benefits.

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**USC Columbia** has several programs focused on easing the transition for adults. The Extended University unit makes USC's undergraduate course offerings and related services more accessible to students who vary in some way from the traditional profile. Older students, either prospective or enrolled, are counseled and advised through the Adult Student Services Office. The Adult Student Advancement Program (ASAP) offers a second-chance opportunity to those students whose past college experiences have not been successful. Adult Student Services also advises students who are taking USC undergraduate courses but are not working toward USC degrees. In addition, the Fort Jackson Program serves military students as well as civilian students who find its location or schedule convenient.

**Aiken Technical College** implemented an "open lab" concept to enhance the opportunity for working adults to earn a degree.

### **4.1. Fund higher education at the SREB average or above.**

**Responsible:** Legislature

**See Also Related Recommendation:** 1.21

**Action:**

Given the state's present economic situation, additional state funding has not been available. Colleges and universities have experienced reductions since FY2007-08 of nearly 50%. See recommendation 1.21 for additional information.

### **4.2. Support routine and predictable capital funding of colleges and universities with a portion of funding directed at eliminating accumulated maintenance needs.**

**Responsible:** Legislature

**See Also Related Recommendation:** 1.21 and 3.3

**Action:**

The Commission is responsible for advancing higher education recommendations for capital improvement bond funding. CHE, along with institutions, have encouraged investment in capital needs, but the General Assembly has not been in a position to undertake consideration of a bond bill or the establishment of a routine funding source in recent years given the severe economic downturn. The General Assembly did provide approximately \$39 million in one-time funds for across institutions for deferred maintenance needs in FY 2011-12 and again provided institutions with a similar amount of non-recurring funds for deferred maintenance needs in FY 2012-13.

### **1.4. Create a South Carolina College Access Network (SC CAN) as a statewide network of local community-based college access programs.**

**Responsible:** CHE

**See Also Related Recommendation:** N/A

**Action:**

Throughout Fall 2008 and Spring 2009, CHE staff reviewed the field of literature and programs that address comprehensive approaches to college access, including motivating behavioral approaches, financial aid, and barriers to college access among a distinct population (elementary, middle, and early high school as well as adults). The findings revealed through research and direct source surveys (GEAR UP) include:

- **Geography:** Certain urban and rural districts in SC support and value education and have made more significant strides in academic preparation and early college access opportunities than others.
- **Lack of knowledge, Especially Among First Generation College-students:** Parental educational attainment has a critical influence on student experience and college access. There is a strong correlation between students' academic track and their parents'

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level of educational attainment, particularly among first-generation students attempting to pursue postsecondary education. Information about middle and high school course selection to prepare for college entrance and active participation/updates on students' progress toward high school graduation play a major part in college aspiration.

- **Financial Aid:** Many students lack knowledge about the entire college process, including the selection and application process as well as available financial assistance. SC students and parents are often intimidated by the perceived arduous process of applying for any government-sponsored program.
- **Low-income, Minority:** Often, in lower-income, minority communities, seeking higher education is outside the norm and sometimes viewed negatively by peers. There can be a need (real or perceived) in lower-income, minority communities to forego education in order to get into the workplace quickly to help support the family. While they may understand the eventual monetary benefits of higher education, it is often difficult to look that far into the future when there are monetary needs that exist in their daily lives.

### College Access Programs Survey

South Carolina has a broad array of successful college access programs and initiatives; however, many low-income and minority families, and even educators, are unaware of their existence. To make these programs more visible, CHE conducted a statewide college access programs survey in June 2009. CHE will continue on an ongoing basis to facilitate the development of a comprehensive statewide college access programs directory.

### Website Development

The primary mission of the SC College Access Network (SC CAN) is to expand postsecondary educational awareness, access, and attainment throughout SC, particularly among low-income, first generation, and underrepresented students and their families. In addition, SC CAN will: (a) develop an inventory of existing college awareness and access programs in SC; (b) promote local grassroots college awareness and access programs throughout the state; (c) showcase state and national best practices relating to college awareness and access; (d) provide counsel to communities seeking to start college awareness and access programs, and (e) act as a catalyst for change in advocacy and public policy initiatives relating to low-income, first generation, and underrepresented students and their families. To facilitate information dissemination, a SC CAN website ([www.sccango.org](http://www.sccango.org)) was developed. This website is the definitive source for students, parents, educators, community members, and other stakeholders seeking information regarding postsecondary education in South Carolina. See Recommendation 1.6 for more information about the SC CAN Marketing Campaign.

In November 2009, the SC Higher Education Foundation adopted as one of its key initiatives a focus on the development of local college access programs and will work in collaboration with the Commission.

### **1.20. Expand statewide college application and financial literacy initiatives for high school students to assist in the preparation for college and the transition from high school to postsecondary education.**

**Responsible:** Colleges and Universities; CHE; and SCDE

**See Also Related Recommendation:** N/A

#### **Action:**

Modeled after North Carolina's national best practice model, S.C. College Application Month was established to show all students that college is possible if they prepare. The goal of College Application Month is to provide a forum for all SC seniors to complete and file college applications. While much of the focus of College Application Month is geared toward first-generation college students and students who may not otherwise apply to college, participating

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high schools are encouraged to include activities for all students, including freshmen, sophomores, juniors, and seniors who have already applied to college. In fall 2009, CHE piloted College Application Month events throughout the months of September and October. In the inaugural year, events were held at 10 high schools and over 1000 seniors completed nearly 2000 college applications. For 2010, the CHE and the SC Department of Education declared October as College Application Month. Throughout the month of October 2010, 57 high schools hosted individual College Application Day events where 15,000 students received assistance completing and filing college applications. On average, each student completed two applications and a total of over 30,000 applications were submitted to colleges throughout the state. In 2011, over 121 high schools participated in College Application Month and 15,000 students received assistance completing and filing college applications. On average, two applications were completed by each student that participated, and a total of over 40,000 applications were submitted to colleges throughout the state. Three new Regional Coordinators were selected in the expansion of College Application Month. During the course of the program, over 25,000 students received assistance completing college applications and over 60,000 college applications were completed and submitted.

### **College Application Month 2012**

During October 2012, an anticipated 150 high schools and 35,000 students will participate in College Application Month activities.

### **Collaborative Counselor Training Initiative (CCTI)**

CHE collaborated with the Southern Regional Education Board's (SREB) Go Alliance and the states of Alabama, Delaware, Georgia, Mississippi, and Tennessee to create and deliver the Collaborative Counselor Training Initiative. The course consists of four interactive modules with twelve one-week sessions. These sessions are designed for school counselors to develop an understanding of their role in developing a college-going mission for all students, particularly students in poverty and those that are facing other barriers in postsecondary planning. Additionally, the sessions help counselors develop approaches for communicating and working with high-poverty students and diverse populations to remove barriers to high aspirations and achievement. Collaborative Counselor Training Initiative was offered in the fall of 2010 and the spring of 2011 and was completed by a total of eighty-two high and middle school counselors. The fall 2012 and spring 2013 modules will focus on the following: The Role of the Counselor in Promoting Career and Academic Planning, Engaging Students in Early Career Awareness and Planning, and Guiding Parents and Students through the Complexities of Financial Aid. In addition, during 2012, a new module is in development. This module will focus on students in the middle grades, including re-engaging at-risk middle students in education, developing early career awareness and planning, using data to guide academic planning, and transitioning students from elementary grades to the middle grades and from the middle grades to high school.

### **HEART Award**

The Higher Education Awareness Readiness Transition (HEART) Award was created to recognize outstanding school counselors and their guidance programs. Counselors play a pivotal role in addressing the academic, personal, social, and career development of all students through comprehensive guidance programs. These programs serve as a springboard for young minds as they explore the possibilities of postsecondary education. The HEART Award is open to all school counselors working in SC's schools. Applicants should demonstrate strong professional expertise and success in preparing students for postsecondary opportunities. Successful applicants emphasize creating a college-going culture from elementary through high school to include career exploration, appropriate course selection and planning, college application process (financial aid, state scholarships, grants, etc.). Since its inception in 2008, the HEART Award has recognized twelve winners, twelve finalists, and over 70 participants. Information about the HEART Award is available at <http://www.sccango.org/heart-award-content.html>.

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### **College Goal Sunday**

In the summer of 2006, CHE was awarded a three-year grant from the Lumina Foundation to implement College Goal Sunday in S.C. This program, which aims to increase the number of college-bound students completing the "Free Application for Federal Student Aid" (FAFSA), was piloted along the I-95 corridor. College Goal South Carolina has evolved into a true statewide effort. In 2011, College Goal South Carolina events were hosted in 17 areas throughout SC. Nearly 620 students and their families were served at College Goal South Carolina events, and over 180 financial aid officers, their staffs and school guidance counselors helped make this event a resounding success. On Saturday, February 18, 2012, 17 institutions participated in this event: Central Carolina Technical College, Claflin University, Columbia International University, Francis Marion University, Greenville Technical College, Horry-Georgetown Technical College, Lander University, Midlands Technical College, Newberry College, Spartanburg Community College, USC Lancaster, USC Upstate, USC Trio Programs, Technical College of the Lowcountry, Tri-County Technical College, Trident Technical College, Williamsburg Technical College and 1290 families were served.

College Goal Sunday brings together financial aid professionals from colleges and universities and other volunteers to help college-bound students and their families complete the Free Application for Federal Student Aid (FAFSA) form. This form is required for any student seeking federal and state financial aid for college, including the Federal Pell Grant and student loans. More detailed information about College Goal Sunday can be found at [www.CollegeGoalSundaySC.org](http://www.CollegeGoalSundaySC.org).

### **Institutional Outreach**

**The Citadel** greatly expanded its outreach to high school students during the 2011-2012 academic year, hosting 10 freshmen visits, where students stay overnight on campus and experience the campus learning environment. A total of 885 students attended these visits. The Citadel's admissions officers also collaborated with guidance counselors extensively and attended guidance counselor professional association conferences in both South Carolina and North Carolina.

In Fall 2009, the **College of Charleston's** Admissions Office established a collaborative with the Admissions Offices at the University of South Carolina and Clemson to host joint events, including nine statewide guidance counselor informational meetings and nine student information sessions.

**Coastal Carolina University's** Admissions Office presented admissions and financial aid overviews for the 2011-2012 recruitment season to SC guidance counselors at four SC Educational Opportunity counselor forums. The Admissions Office hosted four guidance counselor luncheons in key geographic markets in November 2011. They also participated in the entire eight weeks of the SC Educational Opportunity student recruitment tour and an additional 36 programs across the state of South Carolina to provide information to and answer questions from over 3,700 high school seniors. A total of 338 students attended the on-campus SC Application Review Day for high school students and received application fee waivers. The Admissions Office also provided tours for 2,389 students. Through the application fee waiver process, 2,274 SC freshmen applicants (54% of the total) received application fee waivers. Financial Aid & Scholarship counselors presented federal and state financial aid information sessions at seven Horry County high schools from November of 2011 to February of 2012.

The **Francis Marion University** Office of Admissions conducts application days at high schools in the northeastern, midlands, and Lowcountry areas of South Carolina.

USC Aiken hosts well-attended on-campus gatherings for guidance counselors several times a year. The events include a campus tour for those who have not previously visited the university and updates on programs, student development initiatives, and financial aid.

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**Horry Georgetown Technical College** is increasing its financial literacy initiatives. For example, the institution now requires a Personal Finance course in the General Business Associate in Applied Science Degree program and faculty advisors are being trained to improve the financial aid advisement processes to increase student retention and to assist students in avoiding problems with meeting the Standards of Academic Progress.

### OTHER RECOMMENDATIONS

#### Student Financial Aid/Funding

**1.33. Explore how the higher education funding mechanism could be structured better to support student success more effectively.**

**Responsible:** CHE and Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

**1.34. Add a new component in the higher education funding model to increase support of college readiness services such as tutoring, coaching, math and reading labs, academic success/learning success centers, computer and technology labs, mentoring, and other supplemental instruction.**

**Responsible:** CHE and Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

**1.36. Provide state financial aid and/or state grants targeted to adult learners.**

**Responsible:** Legislature and CHE

**See Also Related Recommendation:** 3.19

**Action:**

**1.44. Create a Fulbright-like scholarship program to attract international students in knowledge-based clusters.**

**Responsible:** Legislature; CHE; and Colleges and Universities

**See Also Related Recommendation:** 2.20

**Action:**

**1.45. Increase higher education operating funding to allow institutions to offer graduate student stipends that are nationally competitive.**

**Responsible:** Legislature

**See Also Related Recommendation:** N/A

**Action:**

**1.48. Increase opportunities for loan-forgiveness programs.**

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**Responsible:** Legislature and CHE

**See Also Related Recommendation:** N/A

**Action:**

### **2.20. Create innovative scholarship programs and pathways to attract and retain top-notch graduate students.**

**Responsible:** Legislature; CHE; and Colleges and Universities

**See Also Related Recommendation:** 1.41, 1.42, 1.43, 1.45, 1.46, 2.14, 2.17, and 3.28

**Action:**

The South Carolina Graduate Professional Alliance (SC-GPA) was created to examine this issue and other issues related to graduate education. The SC-GPA held its first meeting on March 26, 2009, where discussion focused, in part, on scholarship programs. The SC-GPA met several times and proposed a plan to attract and fund graduate students. However, because of the economy, the SC-GPA decided to schedule meetings to coincide with meetings held or attended by the graduate deans and therefore meets less frequently.

### **3.17. Conduct a comprehensive analysis of financial pathways and barriers.**

**Responsible:** CHE

**See Also Related Recommendation:** N/A

**Action:**

### **3.19. Enact legislation to close financial aid gaps in order to make relevant education and training available for all adults.**

**Responsible:** Legislature; CHE; SCTCS; Colleges and Universities; Chambers of Commerce; and Business and Industry

**See Also Related Recommendation:** 1.35

**Action:**

An op-ed, "Keeping Our Best and Brightest," describing a proposed plan to fund graduate students was published in *The State* newspaper on December 28, 2009. SC Graduate Professional Alliance (SC-GPA) members met with Senator Leatherman on January 21, 2010, to discuss the "Keeping Our Best and Brightest" proposal. The SC-GPA continues to pursue implementing the "Keeping Our Best and Brightest" proposal, but efforts have been hampered by the current economy.

## **Alignment and Preparation**

### **1.3. Identify a common, statewide assessment that high school students can take to identify and remedy gaps in their preparation for college.**

**Responsible:** CHE; SCDE; Colleges and Universities; SCTCS; and High Schools

**See Also Related Recommendation:** 1.19

**Action:**

South Carolina is a governing member of the SmarterBalanced Assessment Consortium and both SC Department of Higher Education and CHE representatives participate in the Consortium which is designing assessments for the Common Core State Standards. One assessment being development will be given to students in the junior year of high school to measure college readiness and identify areas of improvement. See <http://www.smarterbalanced.org/for> more information.

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In addition, the longitudinal data system grant awarded to the SC Department of Education requires scores on tests measuring whether students are ready for college; data on students' success in college, including whether they enrolled in remedial courses; and data on whether K-12 students are prepared to succeed in college be included in the system. See Recommendation 1.19 for more information about the grant.

### **1.5. Develop a funding mechanism to expand and enhance offerings for college credit during high school.**

**Responsible:** SCTCS; CHE; and SCDE

**See Also Related Recommendation:** N/A

**Action:**

The **College of Charleston** is working with local high schools to re-establish dual enrollment offerings in certain disciplines, including languages and computer science.

The **University of South Carolina** expanded its dual enrollment offerings to local participating high schools. In addition, the University houses the Scholar's Academy, a unique and competitive federally funded grant program offered to students in area high schools. Each year, 25 ninth graders are selected to participate in the program. As these students progress through the program, they have the opportunity to enroll in college-level courses and earn over 60 college credits by the time they complete their senior year in high school. Other institutions, such as USC Beaufort and Coastal Carolina University, also house Scholar's Academies.

While no state support for this initiative has been forthcoming, **USC Aiken** has significantly expanded its concurrent enrollment program to allow high school students to earn college credit in courses offered on campus in a wide range of disciplines. USC Aiken's Office of Enrollment Services hired a former public school guidance counselor to promote concurrent enrollment opportunities at USC Aiken to area high school students and their parents and work with academic unit heads at the university to ensure class availability. In the past, virtually all students in the concurrent enrollment program at USC Aiken were earning credits through the Teacher Cadet program. In Fall 2010, however, the institution had 25 high school students enrolled in general education courses.

**USC Beaufort** offers dual enrollment courses to qualified high school students in the service area at a reduced tuition rate. In Spring 2010, USC Beaufort developed and piloted a special UNIV 101 (The Student in the University) course for qualified seniors and a few juniors from Jasper County High School to prepare them for the college experience. The course had 16 enrollees. As a result, USC Beaufort offered another section of UNIV 101 in Fall 2011. The Fall 2011 course was so successful that the Jasper County School District contracted for two additional courses in Fall 2012 and one course in Spring 2013.

In the Fall of 2010, **Aiken Technical College** implemented a dual-credit Pre-Engineering Academy for high school juniors and seniors in cooperation with the Aiken County School District. The Academy is based on the Project Lead the Way curriculum and Aiken Technical College provides high school students with a dedicated advisor.

In Fall 2010, **Piedmont Technical College** expanded its dual enrollment offerings to assist local school districts impacted by the budget cuts. General Education courses in area schools as well as ones provided on campus were taught by college faculty.

### **1.11. Continue to support EEDA initiatives, including dual/concurrent enrollment, transfer and articulation, college course alignment, and other related projects.**

**Responsible:** Legislature; CHE; SCDE; SCTCS; Colleges and Universities; Employment Security Commission; Dept. of Commerce

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**See Also Related Recommendation:** N/A

**Action:**

CHE initiated and leads the **South Carolina Course Alignment Project (SC CAP)** designed to align exit-level high school courses with entry-level college courses in English, mathematics, and science and to make students aware of the contextual skills and behaviors necessary for college-level success. The SC CAP began in 2007 with:

- An environmental scan (discrepancy analysis) examining K-16 alignment issues in SC.
- Creation of a Steering Committee charged with oversight and strategic direction for the project.
- Development of college readiness standards for use in paired courses. These South Carolina College Readiness Standards are accessible at [www.che.sc.gov/AcademicAffairs/EEDA/SC\\_College\\_Readiness\\_Standards.pdf](http://www.che.sc.gov/AcademicAffairs/EEDA/SC_College_Readiness_Standards.pdf).

In 2009, design teams consisting of secondary and postsecondary faculty created seventeen paired courses. The paired courses consist of a secondary course matched or "paired" with a postsecondary one. Secondary and postsecondary faculty members served as pilot implementers and taught the paired courses during the 2009-10 academic year. Pilot Implementers attended training sessions held on August 5, 2009, and September 12, 2009, and were grouped with each other in geographical clusters according to type of institution, with all clusters containing at least one high school and one institution of higher education. The pilot implementation of the paired courses resulted in activities including:

- Requests for higher education cluster partners to speak with high school classes about college expectations;
- Philosophical debates about best ways to approach teaching particular topics and in what order;
- Opportunities for professional development with colleagues at other institutional level;
- Requests to borrow equipment across institutions; and
- More detailed syllabi used in courses and posted on course websites.

The paired course materials were revised based on the feedback received from pilot implementers and revised course materials were provided to new and returning implementers during a training workshop held on February 5, 2011. During the 2011-12 school year, 79 high school and college faculty participated in the project and completed the required training and partnership building activities. In 2012, CHE and EPIC staff held statewide workshops for high school, college, and university administrators to learn more about the project to support better participants' efforts in the classroom and meet administrator colleagues from nearby institutions with whom they share students. Workshops were held in Greenville (February 27), Columbia (February 28), Charleston (February 29), and Florence (March 1).

CHE and EPIC are also actively recruiting additional participants for the project and will support 120 implementers during the 2012-13 academic year. See [www.epiconline.org/south\\_carolina](http://www.epiconline.org/south_carolina) for additional information about this project, including a detailed timeline of activities and videos of participants teaching the paired courses and discussing the project.

In addition, in February 2009, CHE completed a transfer guide for dual enrollment students that lists only the courses that will transfer to any public institution in the state. This guide is reviewed annually for accuracy and helps ensure that students take courses that will count toward a degree program rather than as electives.

See Recommendation 1.23 for information about the Commission's other major EEDA initiative: the **South Carolina Transfer and Articulation Center** ([www.SCTRAC.org](http://www.SCTRAC.org)).

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### **1.12. Promote more rigorous high school coursework.**

**Responsible: SCDE and High Schools**

**See Also Related Recommendation: N/A**

**Action:**

One of the goals of the South Carolina Course Alignment Project is to promote increased academic rigor. See also above recommendation 1.11.

### **1.13. Align college course prerequisites with high school graduation requirements and sequence undergraduate general education requirements so that they are linked with appropriate high school senior-year courses.**

**Responsible: Legislature; SCDE; High Schools; CHE; SCTCS; and Colleges and Universities**

**See Also Related Recommendation: 1.11, 1.17 and 3.26**

**Action:**

The South Carolina Course Alignment Project (SC CAP) seeks to align exit-level high school courses with entry-level college courses in mathematics, science, and English. The success of this project will lead to the alignment of additional courses. See Recommendation 1.11. for more information about this project.

The Chancellor of USC Aiken, the President of Aiken Technical College, and the Superintendent of Aiken County Schools organized a team of public school mathematics teachers and college mathematics and mathematics education faculty members to work intensively on mathematics course alignment. The Aiken County Mathematics Alignment Project has included a series of ongoing professional development opportunities for middle and high school mathematics teachers. A 2010 Algebra Summer Institute was offered as a three-hour graduate course focused on algebra content and technology support. The Algebra Institute course content incorporated the SC CAP's College Readiness Standards. USC Aiken continued its district-level Math Alignment Project with a second successful summer institute for middle and high school mathematics Teachers in 2011. USC Aiken continues to be actively involved in the SC CAP as well.

### **1.14. Improve high school course-taking patterns and monitor results.**

**Responsible: SCDE; High Schools; and Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

### **1.15. Expand and enhance student transition programs to reduce repetition of courses or course content and attrition.**

**Responsible: SCDE; High Schools; CHE; SCTCS; and Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

**The Citadel** Success Institute (CSI) is designed to help incoming freshmen make a successful transition by taking two academic courses and engaging in military and physical training the summer before matriculation. Due to the dramatic retention increases attributed to this program, The Citadel has grown the program from 67 students in 2007 to 266 students in 2012.

**Clemson University's** Tri-County Bridge Program is designed for a select group of academically talented freshmen. The program is a competitive academic-enhancement transfer program available by invitation only; students must first apply for freshman admission to Clemson to be considered for the program. Beginning with a strong academic freshman year at Tri-County Technical College, which is located two miles from the Clemson campus, the Bridge program includes advising, academic support, and residential life components that facilitate a

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seamless transition to Clemson upon successful completion of academic requirements. Faculty and advisers from both institutions assist students in selecting courses that will satisfy program requirements and allow for continued success after bridging to Clemson.

**Coastal Carolina University** (CCU) and Horry-Georgetown Technical College (HGTC) have an active Memorandum of Understanding and jointly administer the Bridge Program for select students who do not meet the qualifications for admission to CCU. In this program, students take classes at HGTC, live on the CCU campus, and have access to all of the CCU student activities. In Fall 2010, 84 students entered the program and 29 of those students (34%) registered for their sophomore semester at CCU. With the dedication of increased services for the Fall Semester 2011, 115 of the 135 Bridge Program cohort group will be housed on the main campus of Coastal Carolina University.

The **College of Charleston** was awarded a \$1.1 million TRIO Student Support Services grant by the US Department of Education. The grant provides academic and advising support for 140 first generation, low income and/or disabled students. The goal of the TRIO program is to increase the college retention and graduation rates of its participants. With this grant, an individualized action plan is developed for each participating student and is closely monitored to ensure that the student is fully utilizing campus and program resources. Along with academic support, the program connects each student with cultural events, personal financial education, career counseling, and peer mentoring. In addition, the College of Charleston's Office of Multicultural Student Program and Services hosts an annual summer transition program, SPECTRA, for first generation and/or multicultural high school students who have been accepted to the College of Charleston. The students spend a month on campus taking classes, attending workshops led by faculty, and learning about campus life. Students also have the opportunity to volunteer with local non-profits during the program.

In Fall 2010, **Lander University** was also awarded a \$1.1 million TRIO Student Support Services grant by the US Department of Education. Lander's program is funded to serve 160 students with the goal of increasing college retention and graduation rates of its participants. The following services are provided to student participants: academic tutoring, assistance in postsecondary course selection, consultation regarding student financial aid programs and scholarship programs; and assistance in completing financial aid applications. Education and counseling services designed to improve the financial and economic literacy of participants are also provided. Lander's program also provides additional grant aid to participants receiving federal Pell grants.

For the 2012-13 academic year, **USC Columbia's** bridge program with technical colleges, the Gamecock Gateway Program, allows students enrolled at Midlands Technical College who are participating in the program to live on the USC campus and partake in student activities while attending classes at the technical college.

**USC Upstate** began a marketing campaign entitled "Upstate Direct Connect" to ensure a seamless transition from two-year colleges to USC Upstate. Students complete their Associate of Science, Associate of Arts, and selected Associate of Applied Science degrees at local two-year colleges and then seamlessly transfer to USC Upstate to complete their baccalaureate degrees in the appropriate field. Currently, five technical colleges have signed agreements with USC Upstate to participate in this program and over 60 students have enrolled in the program.

In August 2010, **Spartanburg Community College** was awarded a \$1.4 million, five-year TRIO Student Support Services grant from the US Department of Education to continue the Success Network program. The Success Network is an academic support program that focuses on students' learning needs by offering a variety of services and activities, including tutoring, study-skills development, peer mentoring, career-oriented services, and transfer-related services that

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encourage students to further their education. To be eligible for the Success Network, students must be a first-generation college student, currently reside in an economically disadvantaged household, or have a documented disability.

**Piedmont Technical College** and **Newberry College** have an active Memorandum of Understanding and jointly administer a Bridge Program for Early Childhood majors to seamlessly transfer from an A.S. in Early Care and Education to a B.S. in Early Childhood. In addition, welding courses offered in area high schools automatically transfer into welding certificates and diplomas.

### **1.16. Develop statewide policies for assessing college readiness levels.**

**Responsible:** SCTCS; CHE; SCDE; and Colleges and Universities

**See Also Related Recommendation:** 1.19.

**Action:**

Statewide policies for assessing college readiness levels will be developed through the state's participation in the Smarter Balanced Assessment Consortium as well as through the longitudinal data system grant.

### **1.17. Foster a college-going culture in high school by developing and implementing activities such as senior seminars.**

**Responsible:** High Schools; School Districts; and Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

**Clemson University's** Emerging Scholars Program has made higher education a reality for students who have not seen college in their future. The mission of the Emerging Scholars Program is to enhance SC's economic prosperity by increasing the number of college graduates who come from economically disadvantaged areas and are first-generation college students. Students are taught that knowing the basics in reading, writing, and math are the most important factors in high school and college completion. These skills are emphasized throughout their participation in the program, along with more information about applying to any college or university. Even though the students attend summer sessions on the campus of Clemson University, the goal of college attendance is not limited to Clemson. The students are encouraged to apply and attend any college of their choice with an emphasis on schools in SC. The Emerging Scholars Program targets students in five different high schools in the Lowcountry. According to the US Census Bureau, the average poverty rate for the five high schools is 25.6%, meaning 1 in 4 people are in poverty (with an income of \$18,392 or less), which has strong implications for college attendance in these areas. According to Postsecondary Education Opportunity, college participation rates in families that make less than \$36,539 is only 40.2%, compared to a 71.1% college participation rate in families with income higher than \$64,109. This situation coupled with below average SAT scores makes it even harder for these students to find success in college.

The Office of Admissions at **Coastal Carolina University** played an integral role in helping two high school students in the Early College High School program at Horry/Georgetown Technical College transition to Coastal Carolina University for Fall 2012. Admissions conducted an application day at for all interested seniors at the school, personally helped them complete the on-line application with a waived application fee, and provided scholarship support to help fund these students' continuing education. Admissions also participated in five other application review days at South Carolina high schools across the state, as well as 14 other college awareness programs and visits to SC high schools. A local high school visitation initiative was also started in order to build relationships between Horry County high school students, guidance counselors, and Admissions counseling staff.

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The **College of Charleston** Admissions Office conducted “Senior Project” in summer 2009 and invited high school students to on-campus workshops to prepare for college. The College of Charleston also continues to administer an Upward Bound program.

### College Teaching/ Learning

#### 2.3. Engage more undergraduates in research.

**Responsible: Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

The academic departments within the School of Science and Mathematics at **The Citadel** have enhanced their recruitment of undergraduates for summer research experiences and have placed a number in industry.

**Clemson University’s** Creative Inquiry Program combines engaged learning and undergraduate research. Creative Inquiry is available to every undergraduate student and anyone can suggest a new project. Students take on problems that spring from their own curiosity, from a professor's challenge, or from the pressing needs of the world around them. Team-based investigations are led by a faculty mentor and typically span three to four semesters. Students take ownership of their projects and take the risks necessary to solve problems and get answers. This program was recognized in *The College Solution: A Guide for Everyone Looking for the Right School at the Right Price*, by Lynn O'Shaughnessy, who says that "Unfortunately, the experiences that Clemson students enjoy are not nearly common enough among undergraduates elsewhere."

**Coastal Carolina University** created the Undergraduate Research Office in 2008 in order to foster initiatives to increase participation in, and spotlight, student accomplishments in undergraduate research. Thirty-five undergraduate students presented their research topics at the Third Undergraduate Research Competition in April 2011. The Competition enables undergraduate students from all disciplines the opportunity to present their University research at a venue outside their regular classroom. The University's Office for Undergraduate Research assists students in these efforts. In addition, The Board of Trustees approved the establishment of a "Green Fund" to provide resources for undergraduate research projects and activities relating to environmental sustainability. Students whose proposals are chosen will receive stipends from the Green Fund to develop their projects. Coastal Carolina University's Office for Undergraduate Research (UGR) promotes the benefits of UGR to students and faculty. The Director presented at all New Faculty Orientations and several Freshmen Year Experiences classes (UNIV 110). Spring 2012's Undergraduate Research Competition included 80 student presenters (compared with 35 the previous year) who represented disciplines from all five colleges in this faculty-judged competition. The new Quality Enhancement Plan, Experiential Learning, will provide additional and enhanced opportunities for students to gain knowledge and experience through undergraduate research activities and enable more funding opportunities for professional presentations and/or refereed journal publications of student research results.

The **College of Charleston** has a campus-wide Undergraduate Research and Creative Activities program. In 2009, this program supported approximately 100 undergraduates in creative and scholarly efforts undertaken in collaboration with faculty members. The College of Charleston also participates in the SC NIH-INBRE (Infrastructure for Biomedical Research) grant, among a group of seven state institutions, in which the focus is on preparing undergraduates for graduate level research in areas relating to human health. In 2012, the College of Charleston also received a \$1.4 million grant from the Howard Hughes Medical Institute that will help engage more

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undergraduates in meaningful research experience. The award is part of a national \$50 million initiative that will enable schools to work together to create more engaging science classes, bring real-world research experiences to students, and increase the diversity of students who study science. For the grant, the College plans to use of High Impact Learning Experiences to enhance undergraduate science education, with mentored undergraduate research being a central component. In addition, new senior capstone courses in emerging interdisciplinary areas and new laboratory experiences in freshmen and biology labs will be developed and opportunities for service learning in key courses and the new public lecture series are also planned. In August 2012, the College of Charleston received a \$334,000 National Science Foundation grant to conduct research into the effects of releasing pharmaceuticals into the environment. Undergraduate students will work with a chemistry and geology professor to look at what happens to a variety of pharmaceuticals, including common pain and allergy medications, when introduced into the environment. The three-year grant provides laboratory research opportunities for at least 18 undergraduate students and also supports an outreach program under the college's Literacy Outreach Initiative to teach students at seven disadvantaged elementary schools in Charleston about water quality.

Since 2009, **Francis Marion University's** Quality Enhancement Plan has increased and expanded the number of undergraduates engaged in faculty-mentored research in Biology, Chemistry, Physics, and other liberal arts fields. Francis Marion University is also part of the statewide consortium IDeA Network of Biomedical Research Excellence (INBRE) grant from the National Institutes of Health which provides fellowships and summer research opportunities for students in biomedical research under the guidance of a faculty mentor.

NASA is partnering with the University of Michigan and **South Carolina State University** on a mission to understand winds associated with tropical storms and hurricanes. The universities received a \$151.7 million award in July 2012 to lead a team to design, launch, and operate the Cyclone Global Navigation Satellite System. The system will consist of eight small satellites that will be carried into orbit on a single launch in order to improve tropical cyclone and extreme weather prediction. South Carolina State University will receive \$400,000 over six years by participating in the program. Students will participate in the project through undergraduate research helping with data analysis.

**USC Columbia** offers undergraduates the option of graduation "with Distinction" in a growing number of disciplines. In this program, undergraduate students actively engage in significant research, scholarship, and/or performance activities within their major in collaboration with a faculty mentor. "USC's Magellan Scholar Program competitively awards grants of up to \$3,000 to support faculty-mentored undergraduate research projects and is administered by the Office of Undergraduate Research. The program has hit the \$1 million mark in research awards to students with nearly 400 Magellan Scholars named since spring 2006.

**USC Aiken** holds a campus Research Day each April to provide a forum for students to present their research and creative endeavors. USC Aiken secured private funding for its annual Research Day and for student academic travel, enabling the university to increase support for undergraduate research. In addition, forty-three students at USC Aiken have earned Magellan Scholar awards in the past five years. USC Aiken also received a grant from the Department of Energy to support creation of a concentration in the B.S. in Biology degree in environmental remediation and restoration to prepare students for careers in the nuclear industry. Some grant funds provide summer research and internship support for undergraduate students at the Savannah River Environmental Lab.

**USC Beaufort** holds a Student Research and Scholarship Day annually in April to showcase the research and scholarship activities of its students. Participants and spectators have the opportunity to enhance their knowledge base, form collaborations, enhance lines of

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communication, and develop new ideas in a friendly collegiate atmosphere. Forty-five students participated in 2010, 40 students participated in 2011, and 41 participated in 2012.

The Center for Undergraduate Research and Scholarship at **USC Upstate** publishes the *USC Upstate Undergraduate Research Journal* annually. The journal is a compilation of outstanding papers submitted by undergraduate students who have been involved in faculty-mentored research projects and creative activities. The journal is distributed to regional high schools, colleges, business, and organizations and provides a snapshot of the types of research activities at USC Upstate that involve undergraduate students.

**Piedmont Technical College** received a grant to send three faculty members to a conference to develop a research component in its associate degree programs. Once the development process is complete, these individuals will compete for grants to implement a research project into the curriculum.

### **2.6. Develop a system of "Research Sabbaticals" for faculty from comprehensive teaching institutions.**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

The **College of Charleston** has a program in place to provide research sabbaticals to faculty and **The Citadel** sponsors a series of research sabbaticals for faculty annually.

### **3.20. Encourage further use of best practices in learning-centered teaching including community and problem-based research, service learning, interdisciplinary course models, study abroad integration, intensive writing, and creative inquiry.**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

CHE's Service Learning Awards, awarded annually, recognize the extensive contributions made by the service learning efforts of our colleges and universities and their students. CHE presents awards in three categories: public four-year college or university, public two-year college, and independent college or university. The selection committee chooses the single most commendable service learning project in each category. The criteria used to select the winners include the ability to resolve community concerns or address community issues; the degree to which the project serves as a meaningful opportunity for students to apply acquired knowledge and skills in solving real world problems to enhance students' learning; the impact of the project on campus; and the integration of the project's activities into academics. This year's award winners – Francis Marion University, Tri-County Technical College, and Columbia College – were recognized at the Commission meeting on April 5, 2012. A list of current and past winners is available at [www.che.sc.gov/AcademicAffairs/SerLrnAwd/Past\\_Service\\_Learning\\_Award\\_Winners.pdf](http://www.che.sc.gov/AcademicAffairs/SerLrnAwd/Past_Service_Learning_Award_Winners.pdf).

**The Citadel's** Service Learning Program is expanding greatly, providing cadets and faculty/staff with a wide variety of opportunities to serve the community and make a real impact on the lives of people throughout the greater Charleston area. The Citadel placed all sophomores in Service Learning activities during the fall and spring of 2011. Additionally, The Citadel offered service learning opportunities for all students, faculty, and staff members. The following chart provides a summary of service learning participation and impact:

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<b>Total Service Hours 2011-2012 By Category</b>			
<b>Category</b>	<b># Cadets</b>	<b>Total Hours</b>	<b>Economic Impact*</b>
Poverty	466	3,281	\$70,082.16
Education	1,108	7,180	\$153,364.80
Health	572	2,386	\$50,964.96
Animals/ Environment	68	573	\$12,239.28
<b>Totals</b>	<b>2,214</b>	<b>13,420</b>	<b>\$286,651.20</b>

The **College of Charleston** is participating in the Wabash National Study of Liberal Arts Education, focusing on increasing integrative/interdisciplinary learning in the First Year Experience program and in study abroad experiences. The First Year Experience program supports interdisciplinary programs through learning communities and a focus on inquiry-based pedagogy in First-Year Seminars. The College of Charleston is one of thirty institutions selected for the 2010 study, which will last three years. The goal is for institutions to use evidence to identify an area of student learning or experience that they wish to improve, and then to create, implement, and assess changes designed to improve those areas. The study is designed to create a deliberative process for using evidence that an institution can build on for improvements in student learning, including building institutional capacity and infrastructure that can support successful assessment efforts after the study is completed. The focus of the College of Charleston's assessment project is Integrative Learning. During the first eighteen months, a team of faculty and staff has investigated integrative learning in the First Year Experience. The team will incorporate a number of high impact learning experiences beginning with study abroad.

**Coastal Carolina University** continues to develop study abroad opportunities and make the university population aware of these offerings. Several initiatives are in place to increase the accessibility of study abroad opportunities, including formalizing the process by which proposals for study abroad programs are vetted for academic rigor, student safety and risk management concerns, and program viability; centralizing the promotional offerings of these courses across all colleges with standardized formats available on a centralized website, thereby allowing better comparability of the offerings, their academic and programmatic plans, and their cost components; initiating standardized training programs for all study abroad program leaders; and creating an online application form that is more accessible. In support of these initiatives, the Horry County Higher Education Commission allocated \$20,000 to fund an International Awareness Award scholarship beginning in 2009-10. In 2011 – 2012, ten students who graduated from a Horry County high school received an award to participate in programs in Europe, South America, and Asia, including two Horry County students who will study abroad for a year in Italy on a new program through the Department of Theatre. A further \$9,800 was awarded in scholarships to support study abroad programming through the Wall Board of Visitors International Scholarship. In addition, the University has added new Study Abroad Programs, including Accademiadell'Arte (Italy) as well as new collaboration via a memorandum of understanding with Francis Marion University to cooperate in having students participate in one another's study abroad programs. Based on review processes, agreements with two partners were also revised. An engaged International Education Week experience was developed and delivered to our campus. Best practices with institutional procurement, finance offices, and institutional research offices were identified to improve processes related to study abroad facilitation for students and to compensation for faculty. In coordination with the Institutional Quality Enhancement Program initiative methods to integrate study abroad programming and funding into the institution's Quality Enhancement Program (Experienced @ Coastal) were identified, and a new course to recognize this effort on student transcripts was proposed. This change will also allow for more flexibility in future year's programming efforts by faculty. In addition, an annual

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reporting process to evaluate each international partner and to identify future needed actions resulted from the internal assessment processes.

**USC Aiken's** Quality Enhancement Program is focused on Critical Inquiry. All incoming freshmen take a required one-credit-hour Critical Inquiry seminar. The course is based on the common freshman reading, incorporates writing and information literacy, and emphasizes team-based learning. A Creative Inquiry Faculty Learning Community has been established, and intensive professional development workshops have been provided for faculty on team-based learning and other strategies intended to engage students more fully in their education. Over a third of the full-time faculty has participated in these professional development programs which began in May 2011. A similar model has been followed for support of faculty who teach writing intensive courses across the disciplines.

**USC Beaufort** offers Study Abroad programs to students. Language study, course work on foreign cultures, and extensive financial planning are invariably part of the planning process.

**USC Upstate** has been engaged in immersing students into second life learning in engineering technology management, nursing, and education. These technological pedagogical strategies also form the basis of new faculty development opportunities.

**Lander University's** Experience Your Education program (EYE), which was introduced to help students apply their classroom learning to real world settings won a national award in September 2010 when the National Society for Experiential Education (NSEE) selected Lander's EYE Program as the Experiential Education Program of the Year. The EYE Program is designed to provide students with the opportunity to use academic knowledge to address real world challenges in an authentic context. The program includes internships, co-ops, service learning, course-embedded projects, and study abroad experiences.

**MUSC** developed a Patient Simulation Center that promotes inter-professional learning experiences.

**Aiken Technical College's** Health Science Division implemented a "Patient-Family Centered Care Learning Lab" in partnership with the Medical College of Georgia. The Learning Lab provides training to students pursuing a career in the health sciences relevant to the care of both patients and their families. The certificate of completion is recognized by Health Care Facilities nationwide as part of the commitment to Patient and Family care.

**Horry Georgetown Technical College** developed a two-course offering in British Literature and British History for the purposes of a study abroad program. In March 2012, a third group of students completed the dual course offering through in-class programming and a trip abroad to England.

In 2010, **Piedmont Technical College** implemented a required course for all new faculty. This course is a year-long, hybrid course and new faculty are given release time during their first year of teaching to complete the course requirements. In addition, monthly faculty meetings are held at Piedmont Technical College with a portion of the meetings focusing on Best Practices in Technology and engaging students.

### **3.29. Develop a statewide undergraduate minor in computational science. COMPLETED**

**Responsible: Colleges and Universities and CHE**

**See Also Related Recommendation: N/A**

**Action:**

**USC Beaufort** developed and currently offers a B.S. in Computational Science.

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### Transfer and Articulation

#### **1.22. Create incentives and requirements for seamless student transitions between and among two-year and four-year institutions, including the implementation of a statewide initiative to monitor transfer effectiveness.**

**Responsible:** Legislature; CHE; SCTCS; and Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

CHE implemented the course articulation and transfer system ([www.SCTRAC.org](http://www.SCTRAC.org)) to facilitate student transitions and the portability of academic credits between and among public institutions of higher education. See Recommendation 1.23 for more information about this system.

In September 2012, **The Citadel** announced it is partnering with 11 of the state's technical colleges to allow students to transfer to The Citadel after completing two years at a participating technical college. The program, named 2+2, allows students to earn an associate degree and college credits toward a four-year degree from The Citadel in business administration, criminal justice, electrical engineering and civil engineering.

**Coastal Carolina University** maintains a full-time transition coordinator in residence on the Horry-Georgetown Technical College campus to advise both the general student population inquiring to transfer to Coastal Carolina University and the cohort of students enrolled in the Bridge Program shared between both institutions. Eight 2+2 degree completion programs have signed memoranda of agreement, or are in the final stages of development, to provide seamless transfer from a variety of Associate of Applied Science degrees into related bachelor degree programs at Coastal. Additionally, the University facilitates the transition of students from two-year institutions by exempting core curriculum requirements for students who have earned an associate's degree from a regionally accredited institution.

**Lander University** has established Bridge programs with all 16 technical colleges in SC in order to guarantee a smooth transition to Lander. The Lander University Department of Teacher Education has taken it a step further and developed the Education BRIDGE Plus ONE program with Piedmont Technical College that provides a new gateway for students who would like to enter the education field by allowing students to take Lander courses and receive specialized advisement. Students considered for participation in the Plus ONE Program must be enrolled in a minimum of 12 credit hours and remain in good standing with both Lander University and Piedmont Technical College.

**USC Aiken** added a 2+2 agreement in Early Childhood Education with Piedmont Technical College. The institution also has 2+2 agreements in Early Childhood Education and Business Administration with Aiken Technical College.

**USC Beaufort and the Technical College of the Lowcountry (TCL)** signed a Passport Agreement in which students who are denied admission to USC Beaufort are admitted to TCL with the ultimate objective of transfer to USC Beaufort. This collaboration provides support and services which facilitate that transfer process and requires that the student complete the program of study advised by USC Beaufort successfully, thereby making the student eligible to matriculate at USC Beaufort. The agreement is primarily intended for first-time college students. USC Beaufort and TCL have also signed articulation and transfer agreements for the B.A. in Early Childhood Education program, the RN to BSN program, and a 2+2 agreement where TCL students transfer General Education courses and complete the Nursing Core at USC Beaufort. In

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addition, USC Beaufort signed an articulation agreement with the Georgia Institute of Technology Savannah Campus to establish a transfer program in which an undergraduate student will engage in a pre-engineering preparatory track at USC Beaufort then transfer to an engineering program at the Georgia Tech Savannah Campus. USC Beaufort has recently been informed that Georgia Tech may phase-out the program and has initiated discussions with Georgia Southern University about a future relationship in engineering.

**Piedmont Technical College** has agreements with several colleges and universities to provide pathways for its students. For example, Piedmont has signed articulation agreements with Clemson University and Abraham Baldwin Agricultural College (ABAC) for Horticulture, Turfgrass, and Agriculture. ABAC has expanded the agreement to include Rural Studies and Wildlife Management and Clemson University and Piedmont have an agreement in the Animal and Veterinary Sciences program as well.

### **1.23. Implement the state-funded Course Articulation and Transfer System at the earliest possible opportunity in order to improve the efficiency and effectiveness of transfer processes, to reduce time-to-degree, and to monitor progress to degree completion.**

**Responsible:** CHE; SCTCS; Colleges and Universities

**See Also Related Recommendation:** N/A

#### **Action:**

A kick-off meeting for the implementation of the Course Articulation and Transfer System project was held on March 31, 2009. During Phase One, institutions were provided with the following electronic tools by the developer, AcademyOne:

- the Transfer Agreement Management Center, which enables institutions to publish their transfer agreements, codify them, and promote them to prospective students;
- the Course Equivalency Management Center, which helps institutions map their courses to equivalencies at other institutions, record them in the database, and provide updates; and
- the Transfer Profile Management Center, which provides a summary of transfer attributes so that institutions can promote their programs and services.

During Phase Two, AcademyOne created a customized web portal that serves as the main interface for public SC institutions to communicate with students about transfer policies, course equivalencies, and articulation agreements. The portal, [www.SCTRAC.org](http://www.SCTRAC.org), was launched on April 1, 2010. The SC TRAC website:

- displays detailed and up-to-date transfer information, including course equivalencies;
- enables institutions to display articulation information that addresses college transfer and helps students succeed across institutions by providing improved guidance;
- enables institutions to coordinate formal and informal alignment efforts with other institutions; and
- improves student advising, tracking, and persistence to foster student degree completion.

During Phase Three, AcademyOne implemented interfaces at the institutions so that information related to course articulation and transfer is easily added into the system and displayed on the SC TRAC website. For example, equivalency data from each institution is synchronized with the SC TRAC database by the Equivalency Synchronizer to save institutions the time and effort of recording course equivalencies in two places. The Coursework Importer is a secure interface between an institution's student information system and the SC TRAC system. This feature enables the import of an individual student's coursework history (including each course taken, when the course was taken, the grade earned for the course, and the number of credits earned), saving the student time and effort since there is no need to input data manually.

In 2010-11, in support of statewide policies, Advanced Placement and International Baccalaureate exam transfer-in credit awards were created and recorded in SC TRAC by all institutions. For the

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transferability of universally transferable courses among and between all public institutions (86 courses per the Statewide Articulation Agreement), SC TRAC was used by the institutions to systematically record all possible transferable course equivalencies. In addition, the system included several new enhancements: equivalency maps were enhanced to take grades into consideration; the option was created to compare equivalency maps and results for up to three institutions; and institutional reports were developed to show institution specific usage and metrics.

The first annual User Group Conference was held on February 22, 2011, in Columbia, SC. All institutions sent participants to the conference, which featured a keynote by Dr. Bruce Chaloux from the Southern Regional Education Board and included presentations on functionality, current project activities, marketing SC TRAC, and portal enhancement options.

In March 2011, South Carolina won a prestigious national award for SC TRAC when it was recognized by the national Postsecondary Electronic Standards Council (PESC) as winner of its 12th Annual Competition for Best Practices. SC TRAC received high praise from PESC because the system “focuses strategically on a high risk population (transfer students) through collaboration and the use of centralized resources and infrastructure, resulting in a robust, statewide solution that streamlines student transfer steps.” Receipt of this award highlights SC’s commitment to ensuring seamless student transitions from secondary to postsecondary education by using a coordinated approach to college transfer and the evaluation of prior coursework, and places SC at the forefront of states whose education policies support workforce and economic development for the 21st century knowledge economy.

The second annual SC TRAC User Group Conference was held on February 21, 2012, in Columbia, SC, and featured a keynote by Mr. David Moldoff, Founder and CEO of AcademyOne and included presentations on functionality, current project activities, marketing SC TRAC, and portal enhancement options. During 2011-12, several enhancements were added to the system, including a video User Guide for students, a transfer events calendar, a contact database of institutional system users, and a course equivalencies widget that institutions can place on their own websites.

AcademyOne continues to work with the institutions to manage course equivalencies and transfer information in the system. CHE staff are also working collaboratively with institutions to identify, design, and implement additional functionalities for the system. Subsequent phases of the project are currently being defined and full implementation is expected to take several years.

### **3.22. Develop a reverse bridge pathway from four-year to two-year institutions to provide students enrolled in liberal arts programs and liberal arts graduates access to practical, technical and hands-on training in order to match their range of skills with workforce needs.**

**Responsible: SCTCS; CHE; and Colleges and Universities**

**See Also Related Recommendation: 1.21**

**Action:**

**Aiken Technical College** developed an accelerated Radiological Control Technology certificate tailored to students who have a bachelor’s degree to provide a pathway related to the region’s workforce needs.

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### Retention

#### **1.27. Redesign academic programs to improve student results while reducing costs through the exploration of course redesign initiatives.**

**Responsible: Colleges and Universities and CHE**

**See Also Related Recommendation: N/A**

**Action:**

**Francis Marion University** has been working to redesign the freshman experience based around a freshman only course: University Life 100. The course will improve study skills and time management in a population with high numbers of first-generation college students and increase their academic performance.

**USC Aiken** sent a team of faculty members from the math department to a course redesign conference in March 2010 to gather ideas for their ongoing work in redesigning introductory mathematics courses.

**USC Upstate's** faculty and administration have been actively involved in the "Red Balloon" project of the American Association of State Colleges and Universities, working to redesign courses to focus on different ways to teach and engage students in the learning process. One of the outcomes of course redesign is the use of Avatars to enhance learning for future teachers, the use of Second Life to assist nursing students in the virtual care of patients, and the use of a Second Life factory to test best practices in selected business practices and designs.

The Computer Technology program at **Aiken Technical College** piloted an innovative open/flexible lab approach coupled with lecture capture and streaming to create a hybrid educational approach to curriculum delivery. Preliminary data indicates this approach has increased retention and improved student assessment results, most likely as a result of the increased interaction between student and faculty resulting from the open lab and the dissolution of time constraints.

#### **1.28. Provide more effective developmental education**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: 1.2, 1.3, 1.12, 1.14, and 1.16**

**Action:**

Piedmont Technical College offers open labs in math, writing, and science. In addition, online tutoring services/software was purchased in Fall 2011 to assist students. Data to follow developmental student success into college-level courses is being collected and used to make decisions concerning course effectiveness.

#### **1.29. Develop and monitor institutional retention plans for student success.**

**Responsible: Colleges and Universities and CHE**

**See Also Related Recommendation: N/A**

**Action:**

A committee has been created to identify and analyze potential statewide initiatives, programs, and policies that would strengthen the retention of first-generation and low income students. This committee will also address freshmen-to-sophomore and sophomore-to-junior retention.

**The Citadel's** Enrollment Management Team carefully monitors student retention data and utilizes the data to implement continuous improvement strategies. The Citadel has invested in

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expanding its Academic Support Center over the last three years. The Center provides services that enhance students' academic achievement, advising services, and services and accommodations for students with documented disabilities. Academic services include tutoring services six days a week in all fields of study, a Writing Lab for assistance with papers from any discipline, and a Math Lab. In addition, the Center houses a Supplemental Instruction program for students in key, freshman-level courses in history, biology, Spanish, and others that provides supplemental small-group instruction and learning activities. The Center was recently selected as the winner of the 2011 Frank L. Christ Outstanding Learning Center Award from the National College Learning Center Association. Other services that enhance students' academic success are the LEAD program, which offers one-on-one or small-group counseling with regards to time management and study skills, and the Mandatory Study Program for students identified as academically at risk.

**Clemson University** has several programs designed to facilitate student success:

- The Academic Success Center (ACS) provides students with Personalized Academic Assistance to allow students the opportunity for one-on-one interaction with a professional to address specific academic issues.
- The FIRST Program assists first-generation college students in reaching their career goals in science, technology, engineering, or mathematics (STEM) majors.
- The Early Success Program (ESP) is a year-long, structured academic support program that provides participants with tools and support needed to be successful during their first year at Clemson. ESP is not a remedial program, but rather a foundational program geared at easing the transition from high school to college.
- New Student and Sophomore Programs developed by Clemson's Student Affairs division support students by facilitating transition and retention programs for the first two years of the undergraduate experience. The division works collaboratively with academic affairs staff, faculty, and various offices across campus to provide engaging learning opportunities that foster student success.
- Clemson Connect is designated for new Clemson students and is an integral part of the transition to Clemson life and the Clemson family. Clemson Connect is a series of activities and programs taking place before the first semester classes start to help students make academic and social connections, which will contribute to their success at the institution.
- TigerWire is an online community designed to help students connect with each other and with the campus. There are two exclusive communities within TigerWire for students, one for freshmen and one for sophomores and transfer students. Students can create a profile, post discussions, connect with peers, and view videos from upperclassmen who give tips on how to be successful at Clemson.

**Coastal Carolina University's** Retention Committee represents a deliberate strategy of student engagement and involvement. The Committee is dedicated to researching best practices and ongoing student needs, recommending plans of action, and monitoring the progress of all proposed activities. As such, the Retention Committee developed and monitors the progress of the University Academic Advising Seminar designed to help the faculty become more fully attuned to student academic advising needs. The Retention Committee also recommended and succeeded in increasing the number of scholarships available to returning students. From a student life perspective, the Committee has been instrumental in creating an Outdoor Adventure Center that promotes building student self-esteem, trust, and compassion for others. Finally, the Committee led the integration efforts of new student living-learning environments, seeking to create student-centered living areas designed for effective studying and safe recreation.

**Francis Marion University** developed programs for monitoring underperforming students and increased availability of the Writing Center (providing online or one-on-one sessions) and the All Campus Tutoring Center.

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The goal of the Office of Student Success and Retention Programs (SSRP) at **South Carolina State University** is to curb student attrition while increasing the percentage of students who graduate. The program is undergirded by the philosophy that all students can succeed, especially with appropriate academic and social support. This mission is realized through the implementation of a comprehensive network of retention and support services in five program areas: New Student Orientation, Academic Support Services, Quality Assurance, Student Support Services, and the Black Males Project. The major objectives of the Office are:

- to increase the percentage of students who are retained from freshman year to the sophomore year;
- to improve the overall retention rate of students at the University over a four-year period;
- to increase the percentage of students who persist through graduation;
- to improve customer service to students and other University constituents; and
- to analyze retention trends and make recommendations for institutional response and change.

During New Student Orientations in the Summer, students are provided information that will assist them in their transition to the University. Students meet with representatives from academic departments, the Office of Financial Aid, and other relevant units on campus for guidance. SSRP also offers a tutorial program to assist students with academic work. In addition, through a \$1.2 million TRIO grant from the Department of Education, the Office of Student Support Services offers tutoring; academic, personal and career counseling; developmental workshops; and other services to 160 low-income, first-generation or physically or academically challenged students. In addition, SSRP implemented the Early Academic Warning Alert System designed to identify students having academic and or social adjustment challenges. They are identified through an on-line instrument that feeds to an SSRP staffer who in turn addresses the reported matters. The Black Males Project is a special initiative with activities and support services, including tutoring, aimed at increasing the potential for Black male college students to complete undergraduate studies. The Quality Assurance arm of SSRP is responsible for conducting focus groups, secret shopping campaigns, and other methods of gathering qualitative and quantitative information that will impact customer service at the University because poor customer service affects retention. The Coordinator of Quality Assurance reports her findings to the various University Units to foster improvement.

**USC Beaufort's** Enrollment Management Team meets regularly to improve its retention plan for the university. However, the institution currently has several programs in place to facilitate student success, including the USC Beaufort Academic Success Center, which provides a broad range of academic support services; Testing Services; Tutoring Services; and the Writing Center, which is designed to help students become greater overall communicators and offers support in all stages of the writing process. In Fall 2011, USC Beaufort opened a new Academic Success Center that aggregates various student support services such as tutoring, advising, and career counseling. Services range from those that are directly tied to specific classes (faculty office hours, course laboratory, and recitation sections) to broader services designed to help student's in general academic preparation and planning. Four designated freshmen advisors are located in the Academic Success Center. In addition, USC Beaufort implemented a new program in Fall 2011, First Year Outreach, for volunteer faculty, staff, and administrators to advise and mentor first-year students in order to increase retention. In order to gather information about the incoming freshmen class, all incoming freshmen were given the Beginning College Survey of Student Engagement at orientation prior to the start of classes. Volunteer advisors participated in several training sessions in summer 2011 and advisor meetings were held throughout the year to discuss common issues that arose during the year. The program will continue in 2012-13.

In Fall 2009, **USC Upstate** implemented a new retention plan that is projected to increase retention rates by 2-3%. In 2012, USC Upstate broadened the focus of its Center for Student Success to include more academic programming opportunities in the residence halls.

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**Piedmont Technical College** has an icon on each faculty member's computer containing retention and graduation data. This icon, The House, houses graphic and statistical data on a semester-to-semester, year-to-year, and cumulative basis per program and is used to set benchmarks on retention and graduation rates for all programs. Piedmont Technical College also completed a one-year self-study under the Foundations of Excellence program and implemented identified retention factors for first-year students beginning in 2012. In addition, the institution recently received a Title III grant to address retention and the first-year experience for underrepresented populations in science and technology fields.

### **1.31. Create an early warning system at institutions of higher education to prevent student withdrawal during first semester of first year.**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: N/A**

#### **Action:**

**The Citadel** employs several early intervention strategies to identify students who may benefit from additional instruction and support services. The Citadel's LEAD program identifies at-risk students on the first day of classes and provides supplemental instruction, time management, and study skills training. The Citadel's CIT 101 freshman transition course also serves as an early intervention technique. Faculty in all of The Citadel's undergraduate courses assign mid-term grades, which enables the institution to identify and provide service to students needing to make academic improvements.

**Coastal Carolina University** has a two-tiered early warning system for students. The first-tier is an Early Alert Report that faculty complete within the first 2-3 weeks of class if they have concerns about a student. The Early Alert system notifies the student a concern has been reported and the student is asked to attend a meeting with the Dean of University College, the Director of Academic Advising/First Year Experience, and his/her advisor where they discuss and help the student develop an "action plan" for the rest of the semester. The advisor follows up with the student at periodic intervals throughout the semester. If the issues are seen to be multiplying or persisting, then the student is sent to the second-tier of the system: the Students at Risk Committee. The purpose of this committee is to identify and assist students who are at risk of failing academically or leaving the university for behavioral, psychological, or health reasons.

The **College of Charleston** administers the College Student Inventory, MAP-Works, an early alert instrument, to all incoming freshmen to gauge strengths and weaknesses and to measure drop-out proneness. Additionally, Faculty and Staff Assisting Students in Trouble is an online reporting tool that allows faculty and staff to report students who seem to be having academic or personal difficulties to Undergraduate Academic Services. Several offices on-campus also monitor midterm grades and intervene with students in academic difficulty.

At **Francis Marion University**, all students in the freshman course University Life 100 take part in a survey to assess general motivation and coping with their university experience. The University Counseling and Testing Center uses the results to identify students experiencing difficulties and designs an appropriate response early in their first semester.

**Lander University** instituted a web-based Early Alert system that helps identify students early in the academic semester who are having difficulty in coursework or trouble with excessive absences. These students are referred via the online Early Alert Form to the Academic Success Center for tutorial assistance, study skills enhancement, intensive advising, and/or career counseling. In addition, faculty and staff members may use the system to alert the Director of Lander's Behavioral Intervention Team when a student displays a troubling behavior or appears to be at risk. The Director then gathers information to determine what type of assistance the

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student of concern may need and the student is contacted to schedule an appointment with a member of the University's wellness staff.

At **South Carolina State University**, The Early Academic Warning Alert System is designed to identify students who may be having academic and or social adjustment challenges.

The **USC Aiken** Center for Academic Success has an Early Warning System for identifying students whose attendance record or academic performance in the first half of a semester suggests they are academically at risk. The program has been more aggressively promoted since Fall 2009, with a resulting increase in the faculty participation rate.

In Fall 2011, **USC Beaufort** implemented the First Year Outreach program to increase retention.

**USC Upstate** has an early warning system in which 67% of all faculty teaching 100 and 200 level courses participate. As the faculty members notify the Center for Student Success about possible students who may need additional support, members of that center contact each student and offer in-depth counseling, career counseling, tutoring, and mentoring. Over 75% of students who participate in those activities improve their course grades for the semester.

### 3.27. Increase the productivity of gateway science and mathematics courses.

**Responsible: Colleges and Universities**

**See Also Related Recommendation: 1.26**

#### **Action:**

**The Citadel** expanded its Supplemental Instruction Program to include General Chemistry courses to improve student success. The Citadel also increased the number of tutors and Supplemental Instruction instructors through the Academic Support Center in freshman courses taken by students in STEM majors (especially math) to improve retention of students in STEM majors.

The **College of Charleston** is establishing initiatives to improve placement and student success rates in critical science and mathematics courses. The college has selected a new mathematics placement tool and will be expanding efforts in Supplemental Instruction, math- and science-based learning communities, and other learning support.

Faculty at **Coastal Carolina University** began teaching a new one credit course, Math 159-Calculus Calisthenics, which is a week-long intensive course that meets four consecutive days for three hours and 25 minutes each meeting prior to the start of classes each semester. The main purpose of this course is to help students succeed in passing calculus their first time taking the course. Students work in groups on a series of worksheets designed to promote a deeper understanding of certain topics, including algebra and trigonometry. In addition to learning mathematics, a portion of class time is devoted to advising students about how to succeed in calculus, e.g., explaining the resources available at the University to help students with math, describing how to build a math community, and providing time management tips.

**USC Beaufort** hired a mathematics professor/consultant in Fall 2010 to review and restructure its mathematics curriculum. Math courses geared toward non-mathematics majors were added to the curriculum in Fall 2011 and Spring 2012.

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### Workforce Development

#### **1.8. Produce more and better prepared teachers in all critical needs areas, including more male and minority teachers.**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: 2.4**

**Action:**

**CHE** established an Education Articulation Task Force to develop a transfer guide applicable to all Education programs of study in an effort to recruit more students into the profession as well as promote degree completion and facilitate enrollment of transfer students in education programs. The transfer guide was approved by the Advisory Committee on Academic Programs on July 14, 2010, and is available online at:

[www.che.sc.gov/AcademicAffairs/TRANSFER/TransferGuideforEducationPrograms.pdf](http://www.che.sc.gov/AcademicAffairs/TRANSFER/TransferGuideforEducationPrograms.pdf).

**The Citadel's** Schools of Education, Engineering, and Science and Mathematics, in a collaborative effort, launched the STEM Center of Excellence in July 2010. The mission of the Center is to advance STEM literacy in the Lowcountry of South Carolina and beyond. The STEM Center of Excellence at The Citadel is working to prepare students for the 21st century workforce and maintain America's standing as a leader in STEM fields. Working with P-20 educators, STEM industry professionals, non-profits and governmental agencies the Center works to address the critical needs of the region and is committed to:

- Promoting STEM literacy in the Lowcountry of South Carolina and beyond;
- Developing, invigorating and expanding STEM programs for teachers and students;
- Preparing effective teachers of STEM disciplines by offering a robust professional development program;
- Employing community outreach programs to encourage and stimulate the interest of underrepresented students in the STEM disciplines;
- Inspiring student interest in STEM;
- Strengthening the STEM workforce; and
- Increasing opportunities for all people in the STEM disciplines P-20.

From August 2011 to August 2012, over 1500 people had been served by the center, including 178 K-20 teachers and 1,154 K-20 students.

In Fall 2010, the Spadoni College of Education at **Coastal Carolina University** admitted the first five students into its *Call Me Mister* program, which assists with the recruitment, training, and certification of male teachers who are planning to teach in South Carolina schools, especially in the lowest performing elementary schools. The program seeks to help build a more diverse group of educators by providing academic, social, and financial support to individuals interested in entering the teaching profession. After an initial enrollment of five students in the program in Fall 2010, the University enrolled an additional five students in Fall 2011 and an additional five in Fall 2012. Several other institutions in SC also house the *Call Me Mister* program, which originated at Clemson University, including the College of Charleston, Greenville Technical College, Midlands Technical College, Tri-County Technical College, Trident Technical College, South Carolina State University, and USC Beaufort.

The **College of Charleston's** Early Literacy Program is a partnership with the Charleston County School District in which minority teacher education candidates (primarily male) are employed to work as teaching assistants with first grade master teachers in low performing schools and simultaneously complete the Master of Arts in Teaching in Early Childhood Education. In addition, the College of Charleston hosted the annual conference in January 2010 for the Holmes Scholars Partnership. As a member of the partnership, the institution's goal is to recruit more minorities into the teacher education professoriate because one important

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component of recruiting more minority P-12 teachers is to have more minority faculty members at the university level.

**Clemson University** expanded its teacher education program by offering more programs at off-site locations and through distance technology. In addition, the institution added focus areas in science and mathematics at the elementary level and faculty encourage students to double-major, earning an undergraduate degree in education and in their discipline (history, biology, chemistry, mathematics, etc.). For current teachers, the institution has expanded the opportunity for graduates to major in their discipline through online programs such as the master's program in biological science.

**Francis Marion University's** (FMU) Center of Excellence to Prepare Teachers of Children of Poverty focuses on improving the achievement of children of poverty by enhancing the quality of undergraduate teacher preparation, graduate teacher preparation, and the professional development of in-service teachers. During 2010-11, the FMU Center of Excellence extended its activities and services to additional teachers and school districts in South Carolina and during 2011-12 continued efforts to expand its programs statewide.

In 2011, **Lander University's** Montessori Teacher Education program received \$167,000 from the Self Family Foundation to continue its efforts in bringing Montessori teacher preparation to school districts throughout SC. Lander works closely with area school districts to establish Montessori as a program of choice for families. Lander partnered with Edgefield County's Douglas Elementary school in 2010-11 to establish the first Montessori program in the district. A contract course with Lexington School District Four's Early Childhood Center enabled it to open 17 preschool level Montessori classrooms serving over 350 children ages 3-6 in Fall 2010.

**USC Aiken** has expanded its use of the Professional Development School model so that School of Education faculty deliver instruction in area schools rather than on the college campus.

**USC Columbia's** College of Education is a member in an Association of Public and Land-Grant Universities initiative to recruit and support candidates to teach in critical need areas, particularly mathematics and science. USC Columbia representatives also state the institution is committed to doubling the number of teacher candidates recommended for certification in middle or high school mathematics and science.

**Winthrop University** was awarded a \$13 million Teacher Quality Partnership grant from the US Department of Education. Winthrop is the only institution in South Carolina and one of only 28 institutions nationally to be chosen to participate in the five-year grant program. The program funded by the grant, Network of Sustained, Collaborative, Ongoing Preparation for Educators (NetSCOPE), will focus on five goals: improving student academic achievement in targeted high-need schools; improving professional learning for school-university faculty and teacher candidates; strengthening the pre-baccalaureate education of teacher candidates; increasing support for new teachers in the high-need districts; and implementing ongoing, accessible school leadership programs. With NetSCOPE, Winthrop will work with school districts in Cherokee, Chester, Fairfield, Lancaster, and Union counties, as well as other partners, including the statewide Center for Educator Recruitment, Retention, and Advancement headquartered at Winthrop.

In 2011, **Piedmont Technical College** offered a free 20-hour Technology Blitz camp for middle and high school teachers in the Greenwood School District to earn units toward recertification. This camp focused entirely on new technology and practical applications to take back to the classroom.

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### **1.24. Increase alternative delivery methods of appropriate courses and/or programs to reach underserved students, especially non-traditional students, and create greater flexibility as to the time and location of the learning process.**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

**CHE** regularly supports and approves programs using alternative delivery methods.

**Francis Marion University** is supporting faculty training to improve online instruction and blended delivery.

With the disappearance of the ETV satellite-assisted avenue for distance course delivery, some colleges at **USC Columbia** are experimenting with new technologies. For example, the Darla Moore School of Business at USC Columbia is piloting the use of “telepresence” for global course delivery in its Master of Human Resources program.

**USC Upstate** plans to offer several complete degree programs online. Currently, the institution offers the Bachelor of Science in Nursing completion program (RN to BSN) and Bachelor of Science in Criminal Justice program online. The institution plans to offer the Bachelor of Science in Healthcare Informatics online in the near future.

According to **Piedmont Technical College**, online and hybrid courses have more than doubled during the past three years. The College uses podcasting, Elluminate, Skype, and Desire 2 Learn so that students have many delivery possibilities. In addition, the Piedmont Educational Network (PEN) continues to reach seven centers and upgrades using Polycom are implemented each semester.

### **1.30. Create legislative incentives (tax credits, tuition rebates for degree completion, etc.) to encourage students to earn an academic certificate or degree, especially for students who remain in South Carolina for a certain period of time following degree completion.**

**Responsible: Legislature**

**See Also Related Recommendation: N/A**

**Action:**

### **1.32. Increase availability of applied baccalaureate degrees to meet workforce needs and increase available pathways in order to bolster educational attainment for associate degree holders.**

**Responsible: Colleges and Universities and CHE**

**See Also Related Recommendation: 1.38**

**Action:**

**Coastal Carolina University** established a Bachelor of Science in Nursing completion program in conjunction with Horry-Georgetown Technical College (HGTC). The three semester program is designed for nurses who have completed an associate degree in nursing and are licensed in the state. In addition, Coastal Carolina University received approval to offer the Bachelor of Science in Health Administration Program beginning in the fall 2011 semester. The purpose of the program is to provide advanced knowledge, values, and critical judgment skills needed to assume leadership and management roles in health care environments within the local area, region, and state.

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**Francis Marion University** entered into RN to BSN bridge agreements with Central Carolina Technical College and Northeastern Technical College.

**USC's** Palmetto College program provides students access to baccalaureate degree programs with courses offered through distance education to students whose family or employment obligations prevent them from relocating to complete a degree. Faculty members from USC Lancaster, USC Salkehatchie, USC Sumter, and USC Union, as well as Extended University at USC Columbia, use two-way interactive video and other technology-assisted delivery to teach students at multiple sites simultaneously. Two Palmetto College degrees are available: the Bachelor of Arts in Liberal Studies, which draws on multiple disciplines and allows students to choose their focal areas; and the Bachelor of Arts in Organizational Leadership, which focuses on preparing students for leadership roles in government, non-profit, and business settings.

### **1.38. Develop a coordinated set of blended online/on-campus degree programs delivered cooperatively through different institutions.**

**Responsible:** Colleges and Universities; CHE; and SCTCS

**See Also Related Recommendation:** N/A

**Action:**

**CHE** explored the possibility of implementing a statewide online degree program, *DegreeSC*, targeted mainly to adults aged 25 and older. A task force comprised of representatives from each four-year institution and a representative from the S.C. Technical College System Office was charged with planning and implementing *DegreeSC* and met regularly from September 2009 to July 2012. In July 2012, the task force decided to disband and discontinue efforts to implement the statewide collaborative program due to a lack of funding for the initiative coupled with fact that adult degree completion programs are being implemented individually at institutions in the state. During their meetings, the task force members considered many difficult aspects of the proposed program in detail. This consideration led to productive statewide discussion on topics such as general education requirements of interest to all of higher education and resulted in many meaningful conversations which helped institutions launch or improve planning for online and other programs targeted toward adults.

**USC's** Palmetto College program mentioned above provides students access to online baccalaureate opportunities and was shaped, in part, by the discussions of the *DegreeSC* Task Force.

As part of the ASSIST Consortium, **Aiken Technical College** is working to develop flexible delivery for the Industrial Maintenance Technology program.

### **1.39. Create a web portal that serves as a clearinghouse of information for adult learners.** **- COMPLETED**

**Responsible:** EEDA Coordinating Council; CHE; SCTCS; SCDE; and Colleges and Universities

**See Also Related Recommendation:** 3.24

**Action:**

The EEDA portal provides educational and career planning information and resources for adults.

### **1.42. Implement a cooperative, statewide initiative to reduce gaps in technological literacy among potential adult learners.**

**Responsible:** Colleges and Universities; CHE; SCTCS; and SCDE

**See Also Related Recommendation:** N/A

**Action:**

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### 1.43. Create multiple, diverse internships, cooperative work programs, and registered apprenticeship programs for students.

**Responsible:** Department of Commerce; Business and Industry; Colleges and Universities; SCTCS; and EEDA Coordinating Council

**See Also Related Recommendation:** 3.21

**Action:**

**Coastal Carolina University** has significantly increased the number and range of internship opportunities available to its students. During 2010-11, 1,111 students participated in internships at more than 250 locations. In addition, Coastal Carolina University has nine students enrolled in the SC Healthy Families AmeriCorps grant program. With the successful completion of the program, each student will have completed 300 hours of community service and receive a \$1,132 award to be used toward the cost of education. Furthermore, the GK-12 Program at Coastal Carolina University will team GK-12 Fellows from the Coastal Marine and Wetland Studies graduate program with cooperating middle and high school teachers and undergraduate science majors to build STEM-related partnerships between the university and local schools and to enhance the educational programs and experience for students at the middle school, high school, undergraduate, and graduate level.

Security Federal Bank of Aiken provides five banking fellowships to exceptional **USC Aiken** Business Administration students. Students participate in paid internships that allow them to gain applied experience in each of the principal areas of banking.

**The South Carolina Technical College System's Apprenticeship Carolina™** Division increases the number of employer-sponsored registered apprenticeship programs. For example, Northeastern Technical College has been a key player in the Apprenticeship Carolina program and has worked with INA with machine tool technology, Baldor with maintenance, Agape Senior with nursing assistant advanced training, and WIX with maintenance. In addition, Piedmont Technical College has expanded its apprenticeships in a number of area manufacturing and industrial companies.

### 1.46. Create a low cost online program to develop proficiency in at least four important foreign languages (e.g., Mandarin, Spanish, French, German, etc.) to promote economic development, cultural knowledge, and tolerance.

**Responsible:** CHE; Colleges and Universities; Business and Industry; and Chamber of Commerce

**See Also Related Recommendation:** N/A

**Action:**

### 1.47. Initiate new graduate programs to support new clusters and to attract talented individuals from other states and countries to South Carolina.

**Responsible:** Colleges and Universities and CHE

**See Also Related Recommendation:** N/A

**Action:**

Graduate programs approved since FY 2008-09 that support new clusters are:

- M.Engr., Industrial Education, Clemson
- M.I.B., Master of International Business, USC Columbia
- M.S., M.E., Aerospace Engineering, USC Columbia
- Ph.D., Health and Rehabilitation Service, MUSC
- Ph.D., Economics, Clemson
- M.A. and Ph.D., Photonic Science and Technology, Clemson

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### **2.4. Produce greater numbers of teachers in all critical needs areas, especially in Science, Technology, Engineering and Mathematics (STEM) disciplines, including more male and minority teachers.**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

Since FY 2008-09, several new teacher certification and advanced programs have been created:

- B.A., Modern Languages, New Concentrations in Teaching German, French and Spanish, Citadel
- B.A., Chemistry, New Concentration in Teaching Secondary Chemistry and Broad Field Science, Citadel
- B.S., Biology, New Concentration in Teaching Biology and Broad Field Science, Citadel
- B.A., Elementary Education, USC Beaufort
- B.S., Foreign Language Education, College of Charleston
- M.Ed., Secondary Education with New Concentrations in Mathematics, Science, English, and Social Studies, Clemson
- M.A.T., Secondary Education Mathematics and Science, Clemson
- M.A.T., Music Education with Specializations in Choral, Instrumental (Orchestra), and Instrumental (Band), USC-Columbia
- M.A.T., Middle Level Education, The Citadel and College of Charleston
- M.Ed., Teaching, Learning and Advocacy, College of Charleston
- M.Ed., Educational Leadership, Coastal Carolina
- M.Ed., Educational Leadership, Winthrop at Newberry and Charlotte
- M.Ed., Learning and Teaching with Specializations in Instructional Elementary Teaching Grades, Coastal Carolina
- M.Ed., Special Education, Winthrop at Charlotte
- M.Ed., Teaching and Learning with concentrations in Diverse Learners, Exercise and Sports Studies, and Instructional Technology, Lander University

**USC Columbia's** recently initiated B.S. in Engineering Science program has been approved as a preparatory major for the Master in Teaching certification degree for high school mathematics and science. In addition, the USC Columbia College of Education joined in a partnership with the Center for Enterprise Systems Management in an effort to improve computer science and information technology curriculum in middle and high schools. The College has also launched a partnership with the College of Engineering's "Project Lead the Way," to offer a Master of Education degree for currently certified teachers with an area of inquiry in engineering education.

### **2.5. Integrate entrepreneurship into curricula at colleges and universities (especially in programs in the liberal arts and STEM disciplines).**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

The mission of **Clemson's** Arthur M. Spiro Institute for Entrepreneurial Leadership is to support educational, research, and outreach programs that promote entrepreneurial activity and economic development of the region, state, and nation. The Spiro Institute promotes entrepreneurial leadership by:

- Assisting inventors and entrepreneurs with market analyses and business planning;
- Conducting a mentoring program to link entrepreneurs with experienced business executives;

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- Overseeing the development and administration of academic and executive education courses in entrepreneurship and new venture creation;
- Conducting the South Carolina Collegiate Entrepreneur Awards to recognize undergraduate students who start and operate businesses while in school;
- Collaborating with both on-campus and external organizations to support and promote entrepreneurial activities in the region through seminars and awards programs for inventors and entrepreneurs as well as sponsored grant programs to evaluate and stimulate entrepreneurial opportunities; and
- Providing research grants and supporting a working paper series to encourage high quality research in entrepreneurship topics.

In addition, an undergraduate minor in entrepreneurship for non-business majors is available for Clemson students and the Technology Entrepreneurship Certificate is available to graduate students in engineering and science disciplines across campus. The certificate is intended to serve those students who: envision an entrepreneurial career as their long range career goal, want to be involved in new product and new business activities within a corporate setting, or seek a better understanding of the process of commercializing inventions.

Through the Wall College of Business at **Coastal Carolina University**, the Investment Business Trading Center and lab offers students the opportunity to learn about financial markets in an engaging and hands-on learning environment offering state of the art technology with the use of real-time real world data in simulated and actual financial markets. In addition, the Each One Teach One Entrepreneurship Institute at Coastal Carolina University serves students who have the ideas and drive to start their own businesses by providing them with the tools needed to build prosperous, successful futures through education and business.

The **Lowcountry Partnership for Biomedical Innovation (LPBI)**, initially funded by the Partnerships for Innovation program at the National Science Foundation, is explicitly designed to increase cross-fertilization between the **College of Charleston's** business programs and the **Medical University of South Carolina's** science programs. The LPBI involves a formal agreement between the College of Charleston and the Medical University of South Carolina; the work takes place in the Charleston Innovation Center recently established by the South Carolina Research Authority, MUSC, and the City of Charleston. This program has both biomedical technology commercialization and workforce development elements.

In January 2009, **Francis Marion University** unveiled its Center for Entrepreneurship which was created to foster and promote new business opportunities, advance the teaching, study, and practice of entrepreneurship, and promote new venture creation.

Entrepreneurialism is a principal focus of the **Medical University of South Carolina's** strategic plan. The goal of this strategic initiative is to create and sustain a culture in which both pathways and infrastructure that will support University-wide entrepreneurialism. It seeks to cultivate opportunities to explore new portals and partnerships, public and private, while promoting an ethical framework for pursuits. This goal will be achieved by stimulating the spirit of entrepreneurialism and incorporating a system of incentives and by developing a Center for Innovation and Entrepreneurialism.

At **USC Upstate**, concepts of entrepreneurship have been integrated into many of the courses within the George Dean Johnson College of Business and are likewise integrated into coursework for the non-profit major.

### **2.17. Recruit and retain more students in the state's existing science, technology, engineering, and mathematics (STEM) programs to facilitate increased enrollment.**

**Responsible:** Colleges and Universities and Business and Industry

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**See Also Related Recommendation:** 2.14, 2.20, and 3.28.

**Action:**

One strategy to accomplish this goal has been implemented in the funding of LIFE and Palmetto Fellows scholarship enhancements. Reports are available and published on the Commission on Higher Education (CHE) website, [www.che.sc.gov/New\\_Web/Rep&Pubs/Schol\\_Stats.htm](http://www.che.sc.gov/New_Web/Rep&Pubs/Schol_Stats.htm) with the number of enhancements and the percentage of students who received the award. Baseline data will be produced for students enrolled in those programs designated as eligible for the enhanced awards.

The **College of Charleston's** School of Education, Health, and Human Performance received \$210,000 to improve science, technology, engineering and mathematics (STEM) instruction and student achievement in four Lowcountry school districts. The US Department of Education grant paid for 60 teachers in Berkeley County, Dorchester County District 2, Dorchester County District 4, and Georgetown County to earn graduate course credit toward a Masters in Education in Science and Mathematics at the College of Charleston.

In 2011, **Piedmont Technical College** was awarded a \$500,000 National Science Foundation scholarship grant for students underrepresented in the Automotive, Computer, and Engineering Technologies.

### **3.2. Develop or expand higher education programs to support cluster growth, especially in workforce shortage areas.**

**Responsible:** Colleges and Universities; Business and Industry; SCTCS; and CHE

**See Also Related Recommendation:** 3.1, 2.4, 2.14, and 1.47

**Action:**

**Aiken Technical College** received a \$2 million grant from the U.S. Economic Development Administration to help pay for a Center for Energy and Advanced Manufacturing that will train workers in growing industries, including nuclear technologies and alternative energy.

In July 2012, Wells Fargo awarded the **South Carolina Technical College System** a \$325,000 grant to support programs that promote local workforce development and job creation.

### **3.4. Develop sources of funding to hire additional and replacement faculty, especially in fields that produce graduates for occupations in key clusters and critical areas.**

**Responsible:** Legislature; Colleges and Universities; and Business and Industry

**See Also Related Recommendation:** 2.3 and 2.24

**Action:**

**Francis Marion University** receives funding from local partners that helps support its undergraduate and proposed graduate nursing programs.

Local hospitals continue to provide funding for some clinical nursing faculty at **USC Aiken**; however, the support was reduced in 2010 due to budget constraints. The Nursing School continues to receive donations of equipment.

**USC Upstate** has current health care organizational partners who help fund faculty positions in nursing, including Spartanburg Regional Hospital System and Mary Black Hospital.

### **3.5. Improve student recruitment into high demand occupations which support targeted clusters.**

**Responsible:** Colleges and Universities; K-12; and Business and Industry

**See Also Related Recommendation:** N/A

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### **Action:**

Each fall, **Francis Marion University** sponsors the South Carolina Physics Scholars Institute. The Institute allows thirty competitively-chosen, high-achieving science students from SC high schools to participate in a university-level program focusing on nuclear physics, astronomy, laser physics, and computational physics. The Institute is designed to recruit students into majors such as Health Physics, for which there is a high occupational demand.

In the fall of 2010, **Aiken Technical College**, in partnership with the Aiken County Public School District, implemented a pre-engineering academy for high school juniors and seniors.

### **3.6. Identify and implement ways for higher education and industry to communicate about workforce needs.**

**Responsible: Business and Industry; Colleges and Universities; CHE; SCTCS; SCICU; SCDE; Dept of Commerce; and SC Council on Competitiveness**

**See Also Related Recommendation: 2.12 and 2.13**

### **Action:**

The **College of Charleston**, through the Joseph P. Riley Center for Livable Communities, conducted a 2010 survey of regional employers on degree offerings addressing workforce needs not currently met locally. Advisory boards for the six academic schools at the College of Charleston regularly discuss workforce needs as appropriate.

The Chancellor of **USC Aiken** is an active member of the Nuclear Workforce Initiative (NWI). The NWI has over forty members representing nine nuclear employers, K-12 education, higher education, and economic developers and its goal is to determine the projected need for nuclear industry workers over the next ten years and develop a comprehensive plan for educating and training those workers. In addition, in Summer 2011, Aiken Technical College developed and implemented the NWI Academy, a six week summer intensive program that introduces recent high school graduates to the field of nuclear energy.

**Technical colleges** are required by policy to establish advisory committees for all approved curricula. Each advisory committee is comprised of representatives from businesses, industries, and other appropriate persons from a college's service area. Advisory committees provide appropriate input and advice to college administration and faculty regarding curricula and student preparation for the workforce. They also provide some input on local demand for that occupation, which is one tool for aiding colleges in aligning programs with changing industry requirements. These advisory committees meet at least once a year.

### **3.10. Implement fully the certificate system as proposed in the "New Front Door" CHE white paper for adults seeking to gain higher level employment skills.**

**Responsible: CHE; SCTCS; and Colleges and Universities;**

**See Also Related Recommendation:1.35**

### **Action:**

### **3.11. Implement fully the South Carolina Technical College System's Adult Pathways initiative.**

**Responsible: SCTCS**

**See Also Related Recommendation:3.12**

### **Action:**

**The South Carolina Technical College System (SCTCS)** continues to look for funding to implement this initiative. Due to the unusual economic climate, the SCTCS has not been successful to date in securing an appropriation for this program. However, there has been

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progress on implementing part of the QuickJobs Carolina program which is one aspect of Adult Pathways.

### **3.12. Implement fully both components of the South Carolina Technical College System's competeSC initiative: QuickJobs Carolina and Retool Carolina.**

**Responsible: SCTCS**

**See Also Related Recommendation: N/A**

**Action:**

**The South Carolina Technical College System (SCTCS)** has made significant progress in implementing QuickJobs Carolina because of a \$4 million grant from the State Workforce Investment Board that funds the establishment of QuickJobs Programs at most, if not all, of the technical colleges. For example, Midlands Technical College and Fairfield County received funds to build a QuickJobs training center in Fairfield County. However, SCTCS continues to look for additional and permanent funding to fully implement the entire competeSC initiative. SCTCS submitted funding requests at both the state and federal levels, but due to the unusual economic climate, the SCTCS has not been successful to date in securing an appropriation for this program.

### **3.13. Support the timely implementation of the Kuder Journey system. - **COMPLETED****

**Responsible: SCDE; SCTCS; and SC Student Loan Corp.**

**See Also Related Recommendation: N/A**

**Action:**

Kuder Journey was implemented on the EEDA portal ([www.scpathways.org](http://www.scpathways.org)) to allow users to identify occupational background and current needs; plan for educational options; connect with local employers and career opportunities; and save and share career history, progress, and accomplishments.

### **3.14. Develop and implement a comprehensive statewide education plan to facilitate the reentry into society and the workforce of those who have been incarcerated.**

**Responsible: Legislature; SCTCS; CHE; Department of Corrections; Probation, Pardon and Parole; and Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

### **3.15. Support the statewide implementation of the Department of Commerce's WorkReadySC, including the WorkKeys credentialing program.**

**Responsible: Department of Commerce and SCTCS**

**See Also Related Recommendation: N/A**

**Action:**

### **3.16. Determine whether the state's higher education institutions have the necessary capacity to satisfy the expanding need for adult career counselors.**

**Responsible: CHE and Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

**USC Columbia** recently established a Graduate Certificate in Counselor Education with a focus on Career Development Facilitation.

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- 3.18. Construct a model indicating categories of students entering postsecondary education and the types of training that they will need to meet the state's workforce demands.**

**Responsible: CHE; SCTCS; SCDE; WIA Boards; Vocational Rehab; SC Student Loan Corp.; and Others**

**See Also Related Recommendation: N/A**

**Action:**

- 3.24. Develop a central website which interested persons or employers may use to find higher education programs, providers, instructions, links to helpful sites and other information relevant to workforce needs. **COMPLETED****

**Responsible: EEDA Coordinating Council / SCDE; CHE; SCTCS; SCICU; and Colleges and Universities**

**See Also Related Recommendation: N/A**

**Action:**

The EEDA portal ([www.scpathways.org](http://www.scpathways.org)) is a central website that provides educational and career planning information as well as resources for students, parents, adults, and businesses.

- 3.26. Develop an innovative and flexible mathematics curriculum that makes it easier for undergraduate students and entering adults to consider scientific and technical majors.**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: 1.13**

**Action:**

**USC Beaufort** hired a mathematics professor/consultant in Fall 2010 to review and restructure its mathematics curriculum.

- 3.28. Increase the participation of underrepresented populations in science and technology fields.**

**Responsible: Colleges and Universities; CHE; SCTCS; and SCAMP**

**See Also Related Recommendation: 2.14, 2.17, 2.19, and 2.20**

**Action:**

**The Citadel** sponsors Women in Science and Engineering (WISE), a group that supports and encourages women who major in Math, Science, and Engineering.

Underrepresented student populations within the College of Science at **Coastal Carolina University** increased 63.8% from 265 students in Fall 2008 to 434 students in Fall 2011.

At the **College of Charleston**, Howard Hughes Medical Institute and National Science Foundation grants target increased participation by minorities in undergraduate research projects in the biomedical fields. The College also receives funding from the National Science Foundation to administer the South Carolina Alliance for Minority Participation, a program to increase the success of minority students interested in pursuing a degree in science or mathematics. The College's US Department of Education-funded McNair Scholars Program mentors and supports a number of science and mathematics minority students in summer research experiences and workshops toward the goal of increased success in pursuing graduate degrees.

From 2006 to 2011, **Francis Marion University** sponsored a Women and Minorities in Science and Mathematics initiative to encourage women and minority students to pursue majors

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in Biology, Chemistry, Physics, Health Physics, and Mathematics. This initiative was absorbed by activities of the Quality Enhancement Plan.

### **Economic Development**

#### **2.1. Create opportunities for communication and “cross-fertilization” between and among institutions of higher education and the state's major industries to encourage idea sharing, on-site explorations, and formal partnership agreements.**

**Responsible:** Business and Industry and Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

The Lowcountry Partnership for Biomedical Innovation has both biomedical technology commercialization and workforce development elements (see Recommendation 2.5 for more information about this program).

**The Citadel's** Department of Biology is part of The Cooperative Ecosystem Studies Units (CESU) Network, a national consortium of federal agencies, tribes, academic institutions, state and local governments, nongovernmental conservation organizations, and other partners working together to support informed public trust resource stewardship. The Piedmont South Atlantic Coast (PSAC) is the regional group [<http://psaccesu.uga.edu/>] which facilitates collaboration among universities, non-governmental organization and federal/state partners in education and technical assistance for stewardship of cultural and natural resources. Additionally, The Citadel School of Business Administration offers a community (as well as national) outreach initiative: The Citadel Directors' Institute (CDI). In its fourth year, The Citadel Directors' Institute is an intensive one-day program offering seasoned perspectives on best boardroom practices, with a focus on practical, real-life solutions essential to the board member's role. The program has featured sessions such as:

- Best Governance Practices — A wide ranging overview of practices being used effectively at the best-run public companies;
- The Legal, Regulatory and Political Environment — The latest on governance initiatives from Congress and the Administration;
- Compensation Structure — Advice from experts on “reasonable” compensation packages that effectively motivate and retain executives;
- Board Strategic Value — Insights from directors with both Board and CEO experience on securing strategic value from the Board of Directors;
- Audit Committees — Advice for Audit Committee Chairs and members on effectively performing their roles;
- Risk Management — Expert and director advice on anticipating and managing business risk; and
- Governance Committee and Board Management — advice for directors and officers supporting the activities of the Board of Directors.

**Coastal Carolina University, Clemson University,** and North Carolina State University, in cooperation with Santee Cooper and the South Carolina Energy Office, are studying alternative and green energy sources off of the South Carolina coast with a viability study of establishing wind energy production farms.

**Coastal Carolina University's** Clay Brittain Jr. Center for Resort Tourism conducts tourism research and supporting outreach programs that create linkages between Coastal's Resort Tourism Management program, the tourism industry and the resort destination area. Through its ongoing Tourism Economy Study, the center tracks lodging industry supply and demand along

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South Carolina's Grand Strand. The center also provides ad hoc tourism research services to private corporations, destination marketing organizations, as well as city, county and state governments. In addition, the Burroughs and Chapin Center for Marine & Wetland Studies Environmental Educator serves as the Coordinator for the Coastal Waccamaw Stormwater Education Consortium (CWSEC). Educational and training workshops and presentations on stormwater runoff and its effects on regional waterways are offered to local municipalities' officials and staff as well as citizen and school groups from the Education Providers of the Consortium. Additionally, Coastal Carolina University is assisting in the effort to develop wind energy along the coast in conjunction with Savannah River National Laboratory. Also partnering in this consortium are the utility provider Santee Cooper, the Clemson University Restoration Institute, the Center for Hydrogen Research, and the US Coast Guard.

The **College of Charleston's** Computer Science Department has hosted numerous programs designed to facilitate interactions between the academic realm and the private sector. The charter of the College of Charleston/The Citadel Joint Industrial Advisory Board for Computer Science specifically targets cross-fertilization. In addition, the College of Charleston and the Medical University of South Carolina continue to participate in the operation and use of the Hollings Marine Laboratory with the National Oceanic and Atmospheric Administration, the National Institute of Standards and Technology, and the South Carolina Department of Natural Resources under the terms of a Joint Project Agreement. Furthermore, the Global Logistics and Transportation Program in the School of Business at the College of Charleston interacts closely with the waterfront businesses in Charleston to include idea-sharing on curricular content for both undergraduate and professional courses. A formal agreement was recently signed between the School and Michelin North America to create an online professional development program for the company's employees working in the logistics area. Initial collaboration has also begun with the Clemson University Restoration Institute to address logistics issues related to the location of wind turbines off-shore. In addition, a key aim of the College of Charleston's School of Business' Global Business Resource Center (GBRC) is to contribute to SC's economic competitiveness through Global Business education. The GBRC has many partnerships and memoranda of understanding with state, federal, and regional international agencies, of which the most significant is with the SC International Trade Coalition. The College of Charleston, through the GBRC, is one of only three universities in the US to have earned the US EX-IM Bank City-State partner designation and, together with the SC Department of Commerce and US Commercial Service, the GBRC sponsors Trade Finance seminars for state businesses. The GBRC is also extremely active with NASBITE International, the primary educational and professional association for the global business community. Last year, through the GBRC, the College of Charleston became one of only a handful of US universities to offer a NASBITE-accredited Certified Global Business Professional™ training program.

Technology/Innovation is a principal component of **MUSC's** Strategic Plan. The goal is to provide an environment that promotes the application, development, and transfer of technology, fosters and rewards innovation, cultivates human capital, and responds to emerging priorities to advance health care, education, and research. This goal will be achieved through four objectives:

- 1) Maximize the use of resources and technologies to advance health care, education, and research at MUSC and throughout South Carolina;
- 2) Create and nurture an environment that fosters innovation;
- 3) Accelerate and capitalize the transfer of new technologies and research advances; and
- 4) Identify and sustain new revenue streams that adapt to changing biomedical economic environments.

### **2.10. Establish Enterprise Campuses at technical colleges statewide.**

**Responsible:** Legislature and SCTCS

**See Also Related Recommendation:** N/A

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### **Action:**

Legislation has been enacted to provide select technical colleges with Enterprise Campus Authority at Midlands Technical College, Trident Technical College, Aiken Technical College, Greenville Technical College, York Technical College, Orangeburg-Calhoun Technical College, and Spartanburg Community College. During 2010, Technical College of the Lowcountry and Horry-Georgetown Technical College were also given the authority to create Enterprise Campus Authorities.

### **2.11. Increase communication, shared programs, and formal partnerships among institutions of higher education.**

**Responsible: Colleges and Universities**

**See Also Related Recommendation: N/A**

### **Action:**

Many of the public institutions have shared programs and formal partnerships. The Citadel and the College of Charleston offer a few joint programs including the M.A.T. in Middle Level Education. Coastal Carolina University's Bachelor of Science in Nursing completion program is offered in conjunction with Horry-Georgetown Technical College through a collaborative agreement and classes are held on Horry-Georgetown Technical College's Grand Strand campus.

### **2.12. Create or use existing local higher education/industry advisory boards to identify potential research, collaboration, and consulting opportunities.**

**Responsible: Colleges and Universities; Business and Industry; and other Economic Development Entities**

**See Also Related Recommendation: N/A**

### **Action:**

**Clemson's** five colleges have Advisory Boards composed of industrial and community partners who serve to assist the deans, chairs, and faculty in identifying opportunities for research, education, and service. Through these Boards, Clemson works closely with industry partners and seeks advice as appropriate. Industry partners provide opportunities for service learning, community service, co-operative experiences, internships, and field work in a variety of settings as well.

Under the guidance of The Wall College of Business advisory board at **Coastal Carolina University**, the BB&T Center for Economic and Community Development has conducted research projects including numerous surveys, assessments, feasibility studies, and impact studies. The Center also provides both faculty and students with opportunities to conduct applied research projects for local businesses, organizations, and government agencies. The Center uses the faculty and resources of the university to enhance the community's economic development.

The **College of Charleston's** graduate and academic schools have advisory boards drawing from industry and the professional community that meet regularly to discuss strategic directions in curricula and degree offerings, external funding opportunities, outreach to the community, and potential collaborations utilizing student and faculty expertise. In addition, the College of Charleston's Department of Music collaborates with the Charleston Symphony Orchestra, Spoleto Festival USA, and the City of Charleston's Department of Cultural Affairs.

**USC Beaufort's** academic programs each have an advisory board that meets regularly with the program chair and faculty in a consulting capacity to give advice on education, internships, employment opportunities, trends in the field, new curricula to support changes in the field, education, and community service.

**MUSC** has community and industry advisory boards for each of its six colleges.

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### **2.13. Provide creative incentives to industries to collaborate with SC research institutions.**

**Responsible:** Legislature; Dept. of Commerce; Research Institutions

**See Also Related Recommendation:** 3.6

**Action:**

### **2.14. Expand existing and/or develop new STEM programs which reflect the economic needs of the state.**

**Responsible:** Colleges and Universities and CHE

**See Also Related Recommendation:** 2.17, 2.20, and 3.28

**Action:**

New STEM programs approved since FY 2008-09 are:

- A.I.T., Mechatronics Technology, Piedmont Technical College
- B.S.E., Engineering Science, USC Columbia
- B.S., Environmental Science, USC Columbia
- B.S., Electrical Engineering Technology, South Carolina State University extended to Aiken Technical College
- B.S., Mathematics, New Concentration in Statistics, College of Charleston
- B.S., Biochemistry, Coastal Carolina University
- B.S., Computational Science, USC Beaufort
- B.S., Environmental Engineering, Clemson
- B.S., Biochemistry and Molecular Biology, USC Columbia
- B.S., Health Administration, Coastal Carolina
- M.Engr., Industrial Engineering, Clemson
- M.E., Systems Engineering, Clemson University
- M.S., Engineering Management, University of South Carolina Columbia
- M.S., M.E., Aerospace Engineering, University of South Carolina Columbia
- M.S., and Ph.D., Photonic Science and Technology, Clemson

In September 2010, the SC Department of Education signed a formal agreement to work with technical colleges and public universities to promote engineering and mechatronics education after receiving a Rigorous Programs of Study grant from the US Department of Education to establish two pathways designed to positively impact the education of Science, Technology, Engineering, and Mathematics (STEM) professionals in the state. The partners include Aiken Technical College, Denmark Technical College, Orangeburg-Calhoun Technical College, Piedmont Technical College, Spartanburg Community College, and Tri-County Technical College for Project Lead the Way, and Aiken Technical College, Central Carolina Technical College, Orangeburg-Calhoun Technical College, Piedmont Technical College, Tri-County Technical College, and Williamsburg Technical College for mechatronics. The University of South Carolina College of Engineering and Computing serves as the Project Lead the Way (PLTW) University Affiliate for the state for the grant. Both PLTW and mechatronics are programs that begin in high school and allow students to take classes in which they receive dual credit. PLTW focuses on engineering or engineering technology, biomechanics, manufacturing, and other applied math and science areas. PLTW is nationally recognized and students can continue their studies at technical colleges as well as at The Citadel, Clemson University, the University of South Carolina, and South Carolina State University. For mechatronics, students can continue their studies at a technical college or at South Carolina State University.

In December 2010, ten of the state's colleges and universities were awarded a \$16 million federal grant to improve biomedical research from the National Center for Research Resources, a division

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of the National Institutes of Health. The institutions participating in the grant include: The Medical University of South Carolina, The College of Charleston, Clemson University, Claflin University, Francis Marion University, Furman University, South Carolina State University, USC Columbia, USC Beaufort, and Winthrop University. The grant funds will be used to support researchers at these institutions with researchers at the state's three research universities serving as mentors to those at the other institutions. Many of the researchers will also train undergraduates as they conduct their own research.

During the 2010-11 school year, **Clemson University's** College of Engineering and Science partnered with schools in seven school districts (Spartanburg, Greenville, Orangeburg 3 and 4, Marion 7, Chester, and Sumter) to find new ways to teach math and science for a generation of students entering an increasingly technological workplace. For example, students at Spartanburg County's George Washington Carver Junior High School studied the case of the Pacolet River Flood and used math, science, history, and English classes to recreate the Spartanburg County of their ancestors, including a working model of the Pacolet River and the structures it swept away in the catastrophe 108 years ago. The project allowed students and teachers to weave what they studied across the curriculum along a single thread. English students wrote poetry commemorating the catastrophe; math students designed exhibits on the geometry used in early 20th century architecture; and history students described life in the mill villages of the period. The most elaborate project was a scale model of the flood itself that was built to simulate the force of the flowing water and included mill buildings being washed away.

Building on existing Master of Science in Environmental Studies and Master of Public Administration degrees, The **College of Charleston** has developed a joint program which addresses the environmental needs of the state.

In June 2012, **Spartanburg Community College** announced it is expanding workforce development offerings at its Cherokee County campus to accommodate the growing manufacturing industry. The campus launched a new LEGO Robotics program with an emphasis on science, technology, engineering and math. Additionally, the Cherokee County campus is expanding its curriculum offerings to include the Mechatronics Technology I Certificate program. Mechatronics refers to an interdisciplinary field involving control systems, electronic systems, computers and mechanical systems that integrates product design and automated manufacturing processes. Many positions now require mechatronics skills and problem-solving abilities for professionals who design, implement, manufacture, service and repair a wide array of equipment. SCC's Cherokee County campus will begin offering the mechatronics certificate program in the fall 2012 semester. The one-year program trains students for positions as maintenance technicians, entry-level mechatronics technicians and manufacturing associates with wages for these jobs starting at \$20 an hour.

### **2.15. Encourage businesses, colleges, and universities to apply for more Small Business Innovation Research (SBIR) and Small Business Technology Transfer Program (STTR) grants through the South Carolina Department of Commerce.**

**Responsible:** Colleges and Universities; Dept. of Commerce; Business and Industry

**See Also Related Recommendation:** N/A

**Action:**

### **2.16. Establish a South Carolina Energy Independence Consortium to promote collaboration and the sharing of energy-related expertise and to research and develop innovative energy systems through the South Carolina Energy Office.**

**Responsible:** Legislature; Colleges and Universities; and SC Energy Office

**See Also Related Recommendation:** N/A

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### **Action:**

Bills were introduced during the 2009 session (S.208 and a companion bill H.3147) that would create an Energy Advisory Committee for the Office of State Energy. The bills were not passed as of the end of 2010. Legislation to restructure the State Department of Energy was introduced again in 2011 (S.152 and companion bill H.3412). The legislation did not pass as of the end of the 2012 session of the General Assembly and must be reintroduced for consideration in the upcoming session.

Also, of possible interest relating to state energy issues is a report released by a Senate Committee that studied energy issues; this report is available at:

[www.scstatehouse.gov/citizensinterestpage/EnergyIssuesAndPolicies/EnergyIssues.html](http://www.scstatehouse.gov/citizensinterestpage/EnergyIssuesAndPolicies/EnergyIssues.html)

(see the last link on the webpage for the Energy Policy Report).

### **2.18. Revitalize and expand the universities' research infrastructure.**

**Responsible:** Legislature; Research Institutions

**See Also Related Recommendation:** 1.20, 3.3, and 4.2

**Action:**

### **2.22. Build upon the SC Centers of Economic Excellence (CoEE) Program to stimulate research and innovation.**

**Responsible:** Legislature; CoEE Review Board; Colleges and Universities

**See Also Related Recommendation:** 2.7, 2.8, and 2.20

**Action:**

In May 2011, the SmartState Review Board acted to rebrand the CoEE Program as the SmartState Program, so references to CoEE have been changed to SmartState as appropriate.

In November 2008, the Kauffman Institute 2008 State New Economy Index revealed that between 2007 and 2008, South Carolina increased its overall national rank from 39th to 34th place. South Carolina also ranked highly in many categories that reflect positively on the state's knowledge-based economic development. (The study measures 29 different indicators, including factors for knowledge jobs, technological innovation and globalization. The index is regarded as one of the top national benchmarks for state economic transformation.) SmartState Review Board Chair at the time, Paula Harper Bethea, commented, "As South Carolina builds its knowledge economy, I am thrilled for what it means to the people of our state—the creation of well-paying jobs and enhanced economic opportunities...South Carolina's Centers of Economic Excellence [SmartState] Program, which enables our state to recruit top scientists and establish cutting-edge research centers, has been a major factor in knowledge-economy growth. Through the Centers of Economic Excellence [SmartState] Program and similar proactive efforts, South Carolina can reinvent its economy, improve quality of life, and become nationally and globally competitive."

Health Sciences South Carolina representatives discussed a variety of SmartState-related organizational initiatives at the April 2009 CHE meeting. Health Sciences South Carolina leverages the SmartState Endowed Chairs with Duke Endowment funds to promote additional initiatives such as the South Carolina Healthcare Quality Trust, a voluntary, statewide hospital and research university performance partnership that employs research to identify causes of and solutions to preventable healthcare-associated infections and then share the results with all 65 of the state's acute care hospitals.

In March 2009, the City of Columbia sponsored the National Hydrogen Association Conference at which two prominent USC SmartState Endowed Chairs were keynote speakers. In April 2009, the SC Academy of Science held its annual meeting, including a Biomedical Symposium, at which SmartState biomedical researchers presented.

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In July 2009, MUSC announced that it received a highly coveted, five-year \$20 million Clinical Translational Science Award (CTSA) grant awarded by the National Center for Research Resources at the National Institutes of Health (NIH). MUSC President Ray Greenberg noted that this grant would not have been possible without the SmartState Program and that many of the key scientists in the application were recruited through the SmartState Program. MUSC leads the research efforts of a statewide collaboration involving all three research universities, Health Sciences South Carolina, and other partners. The award provides infrastructure support, better training for researchers, and greater access to top clinical trials and promising new treatments.

At its meeting on September 14, 2009, the SmartState Review Board awarded one new SmartState proposal in the amount of \$3 million for the 2008-09 proposal cycle: Healthful Lifestyles (USC/MUSC, \$3 million). This award brought the 2008-09 award total to \$14 million. The other 2008-09 awards include Tissue Systems Characterization (Clemson, \$3 million); Lipidomics, Pathobiology and Therapy (MUSC, \$5 million); and Nuclear Science Strategies (USC, \$3 million).

In October 2009, the Health Care Quality Center of Economic Excellence (USC/MUSC/Clemson) announced it received a two-year, \$4.8 million National Institutes of Health grant to establish a statewide, internet-based network for seriously ill patients looking for help through clinical trials. According to *The State*, "Patients will be able to volunteer for clinical trials, get notification of new research related to their condition and give consent to have their tissue used for research. The network, expected to be available in two years at no cost to patients, will have built-in security checks to protect patient privacy."

In October 2009, the first Centers of Economic Excellence Council of Chairs convened on the USCColumbia campus. This conference included private and public sessions devoted to topics such as economic development, SmartState Program objectives (including technology transfer) and the consideration of a Centers of Economic Excellence Council of Chairs Charter.

According to its FY 2009 annual report released in December 2009, highlights of the SmartState Program include:

- National Cancer Center designation of MUSC's Hollings Cancer Center; MUSC's president stated that the designation could not have occurred without SmartState Endowed Chair participation.
- SmartState Endowed Chairs were instrumental in helping MUSC win two \$20 million grants, one from the National Science Foundation and the other from the National Institutes of Health.
- SmartState Endowed Chair Dr. Kenneth Reifsnider and his team were awarded USC's single largest federal grant ever, a \$12.5 million US Department of Energy award for advanced energy research; the grant will create one of 31 national Energy Frontier Research Centers (EFRC).
- Global medical giant Smith & Nephew announced a \$5 million investment in USC's Rehabilitation and Reconstruction Science Center of Economic Excellence to develop tissue-engineered materials and implantable devices.
- The Healthcare Quality Center of Economic Excellence partnered with IBM and Siemens to develop information technology infrastructure across South Carolina; this infrastructure is designed to improve health care, increase research, enhance access to clinical trials, and ultimately reduce medical costs. In addition, the Healthcare Quality Center of Economic Excellence partnered with Columbia-based Collexis Holdings to form the nation's first biomedical research database.
- American Titanium Works (ATW) announced it would invest hundreds of millions of dollars in the Upstate to locate facilities near Clemson's four SmartState Endowed Chairs in automotive engineering. The company is building a world-class titanium mini-mill in

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Laurens County and will invest an estimated \$422 million, creating 320 new jobs. ATW also announced it will establish its applications development and engineering technical center at the Clemson University International Center for Automotive Research (CU-ICAR) campus that will create 40 additional engineering jobs.

- Scientists at Clemson's Optical Materials Center of Economic Excellence developed a practical optical fiber, which could have a profound impact on efficiency in electronic devices worldwide.
- Because of the SmartState Program and CU-ICAR, Clemson was the first institution of higher education in the nation to offer a Ph.D. in Automotive Engineering. In FY2009, that program graduated its first class. Since its creation, the program has doubled in size every year and currently includes students from across the nation and countries such as China, India, Italy, Germany, and Malaysia.
- Also at CU-ICAR, SmartState Endowed Chairs have been involved in creating an innovative educational concept called Deep Orange that will allow CU-ICAR graduate students to create a vehicle from scratch over the course of two years.

In December 2009, California-based fuel cell generator company Trulite announced the relocation of its manufacturing and administration operations to Columbia. The company created 100 jobs in 2010, and could create several hundred additional jobs during the next few years. USC's four fuel cell-related Centers of Economic Excellence were major selling points for Trulite. Trulite's president stated that one of the principal reasons for the relocation is the opportunity to work closely with SmartState Endowed Chairs Dr. Brian Benicewicz (Polymer Nanocomposites Center of Economic Excellence) and Dr. Kenneth Reifsnider (Solid-Oxide Fuel Cells Center of Economic Excellence).

In February 2010, automotive manufacturer Proterra announced that it will employ at least 1,300 people developing and manufacturing buses and electric/battery drive systems at Clemson University's International Center for Automotive Research. The company made its decision to relocate to South Carolina in part because of SmartState Program research at Clemson University and the University of South Carolina.

In February 2010, the Center of Economic Excellence Council of Chairs released an its action plan that includes the goal of the SmartState Endowed Chairs becoming a recognized science and technology advisory board which will provide leadership to the state and to South Carolina industry on economic growth through academic research and technology transfer.

In March 2010, German company The IMO Group announced it was locating a new facility in Dorchester County which will result in the creation of 190 jobs and \$47 million in investment in the state economy. IMO manufactures parts for wind turbines, construction machinery, and tunneling equipment. Company officials say that the SmartState Program was a key factor in the decision to develop a South Carolina presence.

On June 23, 2010, the South Carolina Economic Development Competitiveness Act was signed into law. The law enacts revisions to the South Carolina Research Centers of Economic Excellence Act, the authorizing statute for the SmartState Program, and assigns one-quarter of all future SmartState Program appropriations and accrued program interest for endowed professorship awards at the three research institutions to be made in concert with the South Carolina Department of Commerce. Such SmartState Commerce Awards do not require matching funds if a significant capital investment is made by a qualified project or industry sector. The revisions became effective on January 1, 2011.

At its meeting on June 7, 2010, the SmartState Review Board awarded three new SmartState proposals in the amount of \$11 million for the 2009-10 proposal cycle: Sustainable Development

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(Clemson, \$5 million); Data Analysis (USC, \$2 million); and Inflammation and Fibrosis Research (MUSC, \$5 million).

The Centers of Economic Excellence Council of Chairs convened a second Centers of Economic Excellence Council of Chairs Forum in October 2010 and voted to host a SmartState Program national conference in Charleston in December 2011.

On December 13, 2010, the SmartState Review Board published the *2009-2010 CoEE Program Audit*, which by statute was submitted to the South Carolina General Assembly and the South Carolina Budget & Control Board. The SmartState Program received an eighth consecutive unqualified audit.

In May 2011, MUSC SmartState Endowed Chairs Dr. Richard Swaja and Dr. Louis Guillette visited the Governor's School in Science and Mathematics (GSSM) to present to the student body and announce a new summer internship program with GSSM. Four GSSM rising seniors were selected to participate in Summer 2011 research internships in SmartState Endowed Chair laboratories representing all three senior research institutions.

In June 2011, representatives of the SmartState Program participated in the BIO International Convention in Washington DC. CHE staff and USC SmartState Endowed Chair Dr. Jay Moskowitz accompanied staff from the South Carolina Department of Commerce, Health Sciences South Carolina, USC Innovista, and several other South Carolina biomedicine-related organizations and companies as representatives of the State of South Carolina at the world's largest annual biomedical conference. More than 15,000 individuals attended the conference. CHE staff and Dr. Moskowitz spoke with hundreds of biomedical industry members the world over about the many successes of the SmartState Program, and also promoted the December 2011 SmartState Program National Conference.

In June 2011, CHE staff and USC SmartState Endowed Chair Dr. Jay Moskowitz accompanied representatives from Innovate Anderson and the Upstate Alliance to a meeting at the Washington office of Senator Lindsey Graham. CHE staff and Dr. Moskowitz supplied the Senator's staff with information about the SmartState Program and the many knowledge-based economic development successes and collaborations taking place through the work of the SmartState Program.

From January 2011 to June 2011, the three research institutions appointed five new SmartState Endowed Chairs: Dr. Gavin Naylor as the SmartState Endowed Chair in Marine Genomics at MUSC (January 2011); Dr. Patrick Woster as the SmartState Endowed Chair in Cancer Drug Discovery at MUSC (March 2011); Dr. Igor Roninson as the SmartState Endowed Chair in Translational Cancer Therapeutics at USC (April 2011); Dr. Chris Rorden as the SmartState Brain Endowed Chair in Brain Imaging at USC (May 2011); and Dr. John Regalbuto as the SmartState Endowed Chair in Renewable Fuel Cells at USC (June 2011).

On November 30, 2011, the SmartState Review Board published the *SmartState Program 2010-2011 Annual Report to the South Carolina General Assembly and the South Carolina Budget & Control Board Report* (referred to as the *2011 SmartState Program Annual Report*). According to the *2011 SmartState Program Annual Report*, the SmartState Program has resulted in more than \$1.2 billion in non-state investment in the state's economy and has led to the creation of nearly 6,900 high-paying jobs. The SmartState Program has also resulted in 17 start-up companies and 42 awarded patents. Other FY 2011 SmartState Program highlights include:

- MUSC SmartState Endowed Chair Dr. Louis Guillette of the Marine Genomics Center of Economic Excellence was the recipient of a prestigious Heinz Award.

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- MUSC SmartState Endowed Chair Dr. Marc Chimowitz published a landmark study in the *New England Journal of Medicine* which is expected to revolutionize post-stroke patient care.
- USC SmartState Endowed Chair Dr. SouvikSen and his team received Joint Commission Certification (considered the gold standard in stroke national certification) for the USC portion of the Stroke Center of Economic Excellence.
- San Diego-based General Atomics announced a \$900,000 non-state match investment in the USC General Atomics (formerly Nuclear Science Strategies) Center of Economic Excellence Nuclear SmartState Program.
- The SmartState Program and the Governor's School in Science and Mathematics (GSSM) announced a summer internship program partnership. In June 2011, seniors participated in research internships in SmartState Endowed Chair laboratories representing all three senior research institutions.
- In 2011, Clemson and CU-ICAR SmartState Endowed Chair Dr. Paul Venhovens and his team completed the Deep Orange pilot project, during which CU-ICAR graduate students created a vehicle from scratch over the course of two years.
- In 2011, SimTunes, a commercial spinoff company cofounded by MUSC SmartState Endowed Chair Dr. John Schaefer of the Clinical Effectiveness and Patient Safety Center of Economic Excellence, joined with Swedish company Laerdal Corporation to open SimStore©, which offers over 600 individual health care simulation scenarios and 84 scenario sets available for annual licensing.

On November 11, 2011, the CBS Evening News aired a lead story about the SmartState Program™ on its evening national broadcast. CHE staff worked closely with the program producer to coordinate this story.

The Centers of Economic Excellence Council of Chairs hosted the inaugural SmartState Program National Conference in Charleston from December 4-6, 2011. The theme of the conference was "Realizing a Knowledge-Based Economy." Several hundred conference attendees, which included SmartState Endowed Chairs and personnel from all 48 Centers of Economic Excellence, attended presentations and panel discussions from an international array of knowledge-based economy leaders from organizations such as the U.S. Navy, American Medical Association, U.S. Department of Commerce, Harvard University, Government of Australia, General Electric, Federal Reserve, National Center for Manufacturing Sciences, and numerous others. South Carolina Speaker of the House Bobby Harrell and South Carolina Secretary of Commerce Bobby Hitt also provided key conference presentations as well as Consul General of Israel to the Southeast OpherAviran; the Honorable Peter D. Beattie, former premier of Queensland, Australia; and Saul Singer, co-author of *Start-up Nation: The Story of Israel's Economic Miracle*. The conference also featured a special session during which the SmartState Endowed Chairs and SmartState researchers presented special posters and engaged conference attendees in face-to-face discussion.

As of the date of this report, 40 of 86 SmartState Endowed Chairs have been appointed. From July 2011 to July 2012, the three research institutions appointed eight new SmartState Endowed Chairs: Dr. Eric Johnson as the SmartState Endowed Chair in Optoelectronics at Clemson (August 2011); Dr. Richard Drake as the SmartState Endowed Chair in Proteomics at MUSC (July 2011); Dr. Gavin Naylor as the SmartState Endowed Chair in Marine Genomics at MUSC; Dr. Chris Rorden as the SmartState Endowed Chair in Brain Imaging at USC (August 2011); Dr. John Regalbuto as the SmartState Endowed Chair in Renewable Fuel Cells at USC (November 2011); Dr. ZorhanFilipi as the SmartState Endowed Chair in Automotive Design & Development at Clemson University (January 2012); Dr. Dan Gabriel Cacuci as the SmartState Endowed Chair in Nuclear Science and Energy at USC (January 2012); Dr. Chanita Hughes-Halbert as the SmartState Endowed Chair in Cancer Disparities at MUSC (April 2012); and Dr. Jamie Lead as the SmartState Endowed Chair in Environmental Nanoscience and Risk at USC (July 2012).

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In addition, as of the date of this report, the SmartState Review Board had awarded a total of \$191.6 million in SmartState grants and the institutions have received \$188.9 million in non-state matching pledges, of which \$175.5 million has been received. To date, state funds totaling \$174.8 million have been drawn down by the institutions.

### Marketing

#### **1.7. Create outreach programs to target ninth graders.**

**Responsible:** CHE; SCTCS; SCDE

**See Also Related Recommendation:** N/A

**Action:**

#### **1.10. Restore matching funding and expand services for HEAP, GEAR UP, and other related early awareness and readiness programs.**

**Responsible:** Legislature; CHE; Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

Additional state funding has not been provided for the HEAP and GEAR UP programs. With the downturn of state funding at the end of FY2007-08, state program funding has been reduced significantly. As of FY2011-12, funding for the HEAP program was lost when the Governor vetoed the HEAP program funding and the veto was sustained.

CHE applied for and was awarded its third federal GEAR UP grant from the US Department of Education. The seven year grant for 2011 – 2018 provides academic assistance for 3,689 low-income students in 24 middle schools along the I-95 corridor in preparation for postsecondary education.

#### **1.40. Develop coordinated outreach programs that focus on adults without college degrees.**

**Responsible:** Colleges and Universities

**See Also Related Recommendation:** 1.32 and 1.35

**Action:**

**USC Beaufort** offers weekend programs in Business to attract adults without college degrees. USC Beaufort also implemented an aggressive Spring 2011 schedule at the Historic Beaufort Campus with course offerings that catered to the military student, the nontraditional student, and the working student.

**USC Columbia** has several programs focused on easing the transition for adults, including the Palmetto College described earlier in the report and the *Back to Carolina* program, which is an online degree completion program targeting former USC students who failed to complete their degree.

**USC Upstate** launched a “Return to Learn” marketing campaign aimed at having adults with some higher education courses returning to college to complete baccalaureate degrees.

**Midlands Technical College** launched the “Learn to be Competitive” outreach campaign to focus on career preparation. In a comprehensive marketing campaign that included electronic media, billboards, print outlets, and college publications, Midlands Technical College advanced the theme “Learn to be Competitive.” The compelling and timely message reinforced the need to pursue education that leads to careers. The visual component of the campaign incorporated

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diverse individuals engaged in jobs made possible by programs at the technical college level. Response mechanisms were included so that the college can continue communicating with interested prospective students.

**Northeastern Technical College (NETC)** formed a partnership with Coker College to offer Coker College courses at the NETC Cheraw Campus so that students who remain in Cheraw after completing their two-year degree at NETC may continue to take selected courses that will fulfill requirements for a bachelor's degree.

**Piedmont Technical College** launched a REACH marketing campaign to attract working individuals who want to complete an associate's degree in Business in the evening in two years.

### **2.19. Develop or expand programs to increase the number of women and minorities in engineering, math, and science.**

**Responsible:** Colleges and Universities

**See Also Related Recommendation:** 2.14, 2.17, 2.20, and 3.28

#### **Action:**

The Ruth Patrick Science Education Center at **USC Aiken** offers the Traveling Science program which distributes kits to teachers with expendable supplies for science demonstration lessons. Volunteer scientists and engineers from Savannah River Site are available to make in-class presentations on the lessons. The availability of these popular resources is especially promoted to rural schools and schools with a high population of students from economically underprivileged families. Programs for school groups and home-schooled children are offered at the Science Education Center throughout the academic year, on Saturdays, and through summer camps. A number of programs target female and minority students, for example a Saturday event designed to interest middle school girls in pursuing careers in engineering.

### **3.7. Implement an aggressive public relations and communications plan targeted to both the policymakers who would support and fund the Action Plan and the citizens who would benefit directly from the successful implementation of the Action Plan.**

**Responsible:** CHE; SCTCS; SCICU; Colleges and Universities; SC Council on Competitiveness; External Marketing Agency

**See Also Related Recommendation:**1.6

#### **Action:**

See the status report entry for Recommendation 1.6.

### **3.8. Develop a compelling united message from all institutions of higher education to the targeted stakeholders to ensure broad understanding of the critical relationship between education and the state's economic future.**

**Responsible:** CHE; SCTCS; SCICU; Colleges and Universities; SC Council on Competitiveness; External Marketing Agency

**See Also Related Recommendation:**1.6

#### **Action:**

See the status report entry for Recommendation 1.6.

### **3.25. Create a branding/marketing plan for the purpose of attracting citizens and employers to the workforce and for communicating the direct and indirect value of these services to communities and a strong workforce.**

**Responsible:** External Marketing Agency

**See Also Related Recommendation:** N/A

#### **Action:**

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### Policy Development/ Planning

#### **1.18. Create a P-20 council.**

**Responsible:** Governor's Office; Legislature; SCDE; CHE; SCTCS; SCICU; K-12; Colleges and Universities; EOC; Chamber of Commerce; Others

**See Also Related Recommendation:** N/A

**Action:**

While no statewide P-20 council has been created to date, the Charleston Metro Chamber of Commerce's Education Foundation, in collaboration with local secondary and postsecondary partners and area stakeholders, established a regional P-16 council which is working to help students navigate key transition paths from middle to high school and subsequently to postsecondary education and the workforce. The Lowcountry P-16 Council is focusing its initial efforts on the lack of curriculum alignment between the secondary and postsecondary levels as well as the level of rigor and the quality of assessments which often differ significantly between secondary and postsecondary institutions. The group is currently engaged in developing strategies on how best to address problems of curricular alignment locally. Toward this end, the Lowcountry P-16 Council hosted a symposium at Trident Technical College on June 17, 2009, organized around the theme of bringing the "two cultures" of secondary and postsecondary education together in order to discuss how the benefits of curriculum alignment can help ease students' transitions from high school to college and to the world of work.

As part of its FY 12-13 budget/legislative priorities, the Education Oversight Committee (EOC) recommended legislative action for the creation of a P-16 council. The EEDA Coordinating Council and groups such as the Chamber are also supportive of a P-16 or -20 council. As of the end of the 2012 session, there were no provisions passed to implement a P-16 council.

#### **1.25. Promote timely degree completion by establishing appropriate credit hour maximums.**

**Responsible:** Legislature; Colleges and Universities; CHE

**See Also Related Recommendation:** N/A

**Action:**

#### **1.26. Promote additional options for timely degree completion such as expanding the use of test-out provisions (including College Level Examination Program examinations) and awarding credit based on life experience.**

**Responsible:** Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

#### **1.37. Create statewide policies for assessing prior knowledge, on-campus residency requirements, and course credit expiration.**

**Responsible:** CHE; SCTCS; and Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

#### **1.49. Develop a system scale-up plan.**

**Responsible:** CHE

**See Also Related Recommendation:** N/A

**Action:**

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**2.8. Review and/or revise industry-institutional technology transfer models based upon successful models in other states (e.g., University of California Technology Transfer System) and at other research institutions (e.g., Emory University).** [The text of Recommendation 2.8 was changed by approval of the oversight committee on September 2, 2009.]

**Responsible: Colleges and Universities**

**See Also Related Recommendation: 2.7, 2.20, 2.22**

**Action:**

In May 2011, the SmartState Review Board acted to rebrand the CoEE Program as the SmartState Program so all references to CoEE have been changed to SmartState as appropriate.

Representatives from all three research institutions, including research vice presidents and technology transfer management, convened for a SmartState Program Technology Transfer Forum on May 13, 2009. Forum representatives pointed out that faculty-institution IP agreements are not within the administrative purview of the technology transfer offices. Based on staff suggestions, Recommendation 2.8 has been modified to reflect an emphasis on successful state technology transfer models similar to ones in California and at Emory University.

In February 2010, the Centers of Economic Excellence Council of Chairs released its action plan which includes the goal of the SmartState Endowed Chairs becoming a recognized science and technology advisory board which will provide leadership to the state and to South Carolina industry on economic growth through academic research and technology transfer.

On March 2-3, 2010, Health Sciences South Carolina hosted the Health Economy Advancement Legacy (HEAL) SC 2010 Conference devoted to “the discovery, development and delivery of new concepts, new sciences and new products emanating from the endowed chairs and SmartState scientific research of the HSSC-sponsored SmartState programs.” The HEAL SC Conference included sessions on technology transfer and research commercialization from numerous healthcare SmartState Endowed Chairs and principal investigators, as well as from several prominent national technology transfer experts and venture capitalists.

On April 11, 2011, the SmartState Program held a second Technology Transfer Forum, at which representatives from the three research institutions, the SmartState Review Board, and CHE staff convened to discuss the types of technology transfer information and other program data which should be submitted annually by the institutions in order to track the successes of the SmartState Program.

The Centers of Economic Excellence Council of Chairs participated as a planning partner for a SBIR/STTR small business conference hosted by Innoventure and the USC Technology Transfer Office in Columbia in November 2011.

The *2011 SmartState Program Annual Report* announced the cumulative technology transfer data for the SmartState Program from FY 2002-03 to FY 2010-11: 364 scientific disclosures (increased from 271 the previous year), 321 U.S. and international patent applications (increased from 241 the previous year), 42 U.S. and international patents issued (increased from 24 the previous year), and 66 commercial licenses (increased from 22 the previous year). In addition, the report states that the three research institutions have collected more than \$800,000 in license income through the SmartState Program through FY 2010-11.

**2.9. Broaden the scope of the South Carolina Research Authority (SCRA) and SC Launch! to encourage and support research and technology transfer across all South Carolina institutions of higher education.**

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**Responsible:** Legislature and SCRA

**See Also Related Recommendation:** N/A

**Action:**

### 2.21. Ensure that faculty entrepreneurial activities and industry-related research are recognized in the tenure and promotion process.

**Responsible:** Colleges and Universities and CHE

**See Also Related Recommendation:** N/A

**Action:**

As part of its strategic plan, MUSC is examining its promotion and tenure policies to be more inclusive of entrepreneurial activities.

### 2.23. Enact a statutory change to authorize tuition relief for faculty dependents and tuition reciprocity with peer institutions in order to increase competitiveness in recruiting and retaining faculty.

**Responsible:** Legislature and CHE

**See Also Related Recommendation:** N/A

**Action:**

Specific legislation on this recommendation has not been filed. The regulatory reform legislation ultimately passed in 2011 had included provisions that would increase an institution's ability to provide for waivers of tuition and expand authority to do so to include graduate students. However, these provisions were not included in the final legislation. For more information about the regulatory relief bill, see recommendation 2.2.

### 2.24. Improve faculty pay and compensation.

**Responsible:** Legislature and Colleges and Universities

**See Also Related Recommendation:** 3.4

**Action:**

### 3.9. Allow the state's technical colleges to provide an additional path for adults seeking to obtain a General Education Development (GED®) diploma.

**Responsible:** Legislature; SCTCS; Technical Colleges; SCDE

**See Also Related Recommendation:** N/A

**Action:**

## Data Resources/ Information Sharing

### 1.9. Increase the amount of information shared with high schools concerning how their students perform in college.

**Responsible:** Colleges and Universities

**See Also Related Recommendation:** N/A

**Action:**

Several academic departments at **USC Aiken**—most notably English and Languages—host workshops with area high school teachers in the appropriate discipline. The workshops offer opportunities for in-depth discussions of high school/college course alignment and for feedback on how students from surrounding schools perform when they enroll at USC Aiken.

### 1.19. Create a longitudinal data system.

**Responsible:** SCDE; CHE; SCTCS; K-12; and Colleges and Universities

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**See Also Related Recommendation:** N/A

**Action:**

The South Carolina Department of Education (SCDE) staff and CHE staff collaborated to apply for a second longitudinal data system (LDS) grant. In May 2010, the US Secretary of Education Arne Duncan announced that South Carolina was awarded \$14.9 million for the design and implementation of a statewide longitudinal data system. The statewide longitudinal data systems (SLDS) grant, funded through the American Recovery and Reinvestment Act (ARRA) of 2009, supports the development and implementation of data systems to enable the state to examine student progress from early childhood into career, including matching teachers to students, while protecting student privacy and confidentiality consistent with applicable privacy protection laws. In 2010, Congress expanded the program to include not only K-12 data systems, but also to provide links with pre-K, postsecondary, and workforce data. This grant also requires that the state provide an assurance that it will establish a longitudinal data system that includes the 12 elements described in the America COMPETES Act, which are:

1. An unique identifier for every student that does not permit a student to be individually identified (except as permitted by federal and state law);
2. The school enrollment history, demographic characteristics, and program participation record of every student;
3. Information on when a student enrolls, transfers, drops out, or graduates from a school;
4. Students' scores on tests required by the Elementary and Secondary Education Act;
5. Information on students who are not tested, by grade and subject;
6. Students' scores on tests measuring whether they are ready for college;
7. A way to identify teachers and to match teachers to their students;
8. Information from students' transcripts, specifically courses taken and grades earned;
9. Data on students' success in college, including whether they enrolled in remedial courses;
10. Data on whether K-12 students are prepared to succeed in college;
11. A system of auditing data for quality, validity, and reliability; and
12. The ability to share data from preschool through postsecondary education data systems.

CHE has been working in collaboration with SCDE to develop a longitudinal data system that will include all required elements. As part of the initiative, CHE has been working with SCDE to create a process to match students' K-12 data with their higher education data. SCDE creates a unique student identifier for each student in the k-12 system, but higher education institutions use Social Security numbers to identify students. The Office of Research and Statistics, a division of the Budget and Control Board, has been engaged to match the k-12 and higher education student identifiers. The first initiative utilizing this matched data will be for CHE to assist SCDE with federal reporting requirements.

### **1.41. Create a centralized transcript repository.**

**Responsible:** CHE

**See Also Related Recommendation:** N/A

**Action:**

### **3.23. Develop a comprehensive listing of credit and non-credit academic programs, services, and resources of South Carolina higher education institutions that assist in addressing the diverse needs of a developing workforce.**

**Responsible:** Colleges and Universities; CHE; SCTCS; and SCICU

**See Also Related Recommendation:** N/A

**Action:**

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### LIST OF RECOMMENDATIONS BY CATEGORY

Rec #	Recommendation	Related Rec #	Last Updated
<b>High Priority - No Cost Recommendations:</b>			
2.2	Enact appropriate regulatory relief to enhance innovation and promote research.		10/4/2012
3.1	Align higher education programs to support statewide and regional clusters.		10/4/2012
1.2	Use and promote the Knowledge and Skills for University Success standards as a common standard of college readiness. - COMPLETED		10/4/2012
3.21	Increase opportunities for relevant work experience as part of instructional programs.	1.43	10/4/2012
2.7	Establish a network of programs to encourage statewide technology transfer of South Carolina-derived technologies/patents (e.g., Maryland technology transfer consortium). [The text of Recommendation 2.7 was changed on September 2, 2009.]	2.22	10/4/2012
4.3	To maintain a more accurate picture of higher education funding, state data reporting should clearly distinguish between restricted funds (e.g., funding which is limited to a specific auxiliary activity or by donors or external agencies to a specific purpose) and unrestricted funding (e.g., funding derived primarily from state appropriations for Educational and General [E&G] support and student tuition and fees).		10/4/2012
<b>CostReduction</b>	CHE Cost Reduction Committee described under Goal Four		10/4/2012
<b>High Priority – With Cost Recommendations</b>			
1.21	Ensure affordability of higher education through increased state funding.	4.1	10/4/2012
3.3	Fund a bond bill to support necessary infrastructure and facilities renovation, maintenance and expansion.		10/4/2012
4.4	Fund the Partnership Among South Carolina Academic Libraries (PASCAL) fully because it is a critically important partnership among South Carolina’s academic libraries.		10/4/2012
1.1	Implement compulsory high school attendance until the age of 18 or high school graduation.		10/4/2012
1.6	Develop a marketing campaign to promote college attendance and completion.	1.4, 1.40, 3.8	10/4/2012
1.35	Create a “New Front Door” that makes the transition to higher education vastly easier for adults.	2.14, 3.10, 3.21	10/4/2012
4.1	Fund higher education at the SREB average or above.	1.21	10/4/2012
4.2	Support routine and predictable capital funding of colleges and universities with a portion of funding directed at eliminating accumulated maintenance needs.	1.21, 3.3	10/4/2012
1.4	Create a South Carolina College Access Network (SC CAN) as a statewide network of local community-based college access programs.		10/4/2012
1.20	Expand statewide college application and financial literacy initiatives for high school students to assist in the preparation for college and the transition from high school to postsecondary education.		10/4/2012
<b>Other - Student Financial Aid/ Funding</b>			
1.33	Explore how the higher education funding mechanism could be structured better to support student success more effectively.		10/4/2012
1.34	Add a new component in the higher education funding model to increase support of college readiness services such as tutoring, coaching, math and reading labs, academic success/learning success centers, computer and technology labs, mentoring, and other supplemental instruction.		10/4/2012
1.36	Provide state financial aid and/or state grants targeted to adult learners.	3.19	10/4/2012

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Rec #	Recommendation	Related Rec #	Last Updated
1.44	Create a Fulbright-like scholarship program to attract international students in knowledge-based clusters.		10/4/2012
1.45	Increase higher education operating funding to allow institutions to offer graduate student stipends that are nationally competitive.		10/4/2012
1.48	Increase opportunities for loan-forgiveness programs.		10/4/2012
2.20	Create innovative scholarship programs and pathways to attract and retain top-notch graduate students.	1.41, 1.42, 1.43, 1.45, 1.46, 2.14, 2.17, 3.28	10/4/2012
3.17	Conduct a comprehensive analysis of financial pathways and barriers.		10/4/2012
3.19	Enact legislation to close financial aid gaps in order to make relevant education and training available for all adults.	1.35	10/4/2012
<b>Other – Alignment/ Preparation-</b>			
1.3	Identify a common, statewide assessment that high school students can take to identify and remedy gaps in their preparation for college.	1.19	10/4/2012
1.5	Develop a funding mechanism to expand and enhance offerings for college credit during high school.		10/4/2012
1.11	Continue to support EEDA initiatives, including dual/concurrent enrollment, transfer and articulation, college course alignment, and other related projects.		10/4/2012
1.12	Promote more rigorous high school coursework.		10/4/2012
1.13	Align college course prerequisites with high school graduation requirements and sequence undergraduate general education requirements so that they are linked with appropriate high school senior-year courses.	1.17, 3.26	10/4/2012
1.14	Improve high school course-taking patterns and monitor results.		10/4/2012
1.15	Expand and enhance student transition programs to reduce repetition of courses or course content and attrition.		10/4/2012
1.16	Develop statewide policies for assessing college readiness levels.	1.19	10/4/2012
1.17	Foster a college-going culture in high school by developing and implementing activities such as senior seminars.		10/4/2012
<b>Other - College Teaching/ Learning</b>			
2.3	Engage more undergraduates in research.		10/4/2012
2.6	Develop a system of "Research Sabbaticals" for faculty from comprehensive teaching institutions.		10/4/2012
3.20	Encourage further use of best practices in learning-centered teaching including community and problem-based research, service learning, interdisciplinary course models, study abroad integration, intensive writing, and creative inquiry.		10/4/2012
3.29	Develop a statewide undergraduate minor in computational science.		10/4/2012
<b>Other - Transfer/ Articulation</b>			
1.22	Create incentives and requirements for seamless student transitions between and among two		10/4/2012
1.23	Implement the state		10/4/2012
3.22	Develop a reverse bridge pathway from four	1.21	10/4/2012
<b>Other – Retention</b>			
1.27	Redesign academic programs to improve student results while reducing costs through the exploration of course redesign initiatives.		10/4/2012
1.28	Provide more effective developmental education	1.2, 1.3, 1.12, 1.14, 1.16	10/4/2012
1.29	Develop and monitor institutional retention plans for student success.		10/4/2012
1.31	Create an early warning system at institutions of higher education to prevent student withdrawal during first semester of first year.		10/4/2012

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Rec #	Recommendation	Related Rec #	Last Updated
<b>3.27</b>	Increase the productivity of gateway science and mathematics courses.	<b>1.26</b>	10/4/2012
<b>Other - Workforce Development</b>			
<b>1.8</b>	Produce more and better prepared teachers in all critical needs areas, including more male and minority teachers.	<b>2.4</b>	10/4/2012
<b>1.24</b>	Increase alternative delivery methods of appropriate courses and/or programs to reach underserved students, especially non-traditional students, and create greater flexibility as to the time and location of the learning process.		10/4/2012
<b>1.30</b>	Create legislative incentives (tax credits, tuition rebates for degree completion, etc.) to encourage students to earn an academic certificate or degree, especially for students who remain in South Carolina for a certain period of time following degree completion.		10/4/2012
<b>1.32</b>	Increase availability of applied baccalaureate degrees to meet workforce needs and increase available pathways in order to bolster educational attainment for associate degree holders.	<b>1.38</b>	10/4/2012
<b>1.38</b>	Develop a coordinated set of blended online/on-campus degree programs delivered cooperatively through different institutions.		10/4/2012
<b>1.39</b>	Create a web portal that serves as a clearinghouse of information for adult learners. - COMPLETED	<b>3.24</b>	10/4/2012
<b>1.42</b>	Implement a cooperative, statewide initiative to reduce gaps in technological literacy among potential adult learners.		10/4/2012
<b>1.43</b>	Create multiple, diverse internships, cooperative work programs, and registered apprenticeship programs for students.	<b>3.21</b>	10/4/2012
<b>1.46</b>	Create a low cost online program to develop proficiency in at least four important foreign languages (e.g., Mandarin, Spanish, French, German, etc.) to promote economic development, cultural knowledge, and tolerance.		10/4/2012
<b>1.47</b>	Initiate new graduate programs to support new clusters and to attract talented individuals from other states and countries to South Carolina.		10/4/2012
<b>2.4</b>	Produce greater numbers of teachers in all critical needs areas, especially in Science, Technology, Engineering and Mathematics (STEM) disciplines, including more male and minority teachers.		10/4/2012
<b>2.5</b>	Integrate entrepreneurship into curricula at colleges and universities (especially in programs in the liberal arts and STEM disciplines).		10/4/2012
<b>2.17</b>	Recruit and retain more students in the state's existing science, technology, engineering, and mathematics (STEM) programs to facilitate increased enrollment.	<b>2.14, 2.20, 3.28</b>	10/4/2012
<b>3.2</b>	Develop or expand higher education programs to support cluster growth, especially in workforce shortage areas.	<b>3.1, 2.4, 2.14, 1.47</b>	10/4/2012
<b>3.4</b>	Develop sources of funding to hire additional and replacement faculty, especially in fields that produce graduates for occupations in key clusters and critical areas.	<b>2.3, 2.24</b>	10/4/2012
<b>3.5</b>	Improve student recruitment into high demand occupations which support targeted clusters.		10/4/2012
<b>3.6</b>	Identify and implement ways for higher education and industry to communicate about workforce needs.	<b>2.12, 2.13</b>	10/4/2012
<b>3.10</b>	Implement fully the certificate system as proposed in the "New Front Door" CHE white paper for adults seeking to gain higher level employment skills.	<b>1.35</b>	10/4/2012
<b>3.11</b>	Implement fully the South Carolina Technical College System's Adult Pathways initiative.	<b>3.12</b>	10/4/2012
<b>3.12</b>	Implement fully both components of the South Carolina Technical College System's competeSC initiative: QuickJobs Carolina and Retool Carolina.		10/4/2012

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Rec #	Recommendation	Related Rec #	Last Updated
3.13	Support the timely implementation of the Kuder Journey system. - COMPLETED		10/4/2012
3.14	Develop and implement a comprehensive statewide education plan to facilitate the reentry into society and the workforce of those who have been incarcerated.		10/4/2012
3.15	Support the statewide implementation of the Department of Commerce's WorkReadySC, including the WorkKeys credentialing program.		10/4/2012
3.16	Determine whether the state's higher education institutions have the necessary capacity to satisfy the expanding need for adult career counselors.		10/4/2012
3..18	Construct a model indicating categories of students entering postsecondary education and the types of training that they will need to meet the state's workforce demands.		10/4/2012
3.24	Develop a central website which interested persons or employers may use to find higher education programs, providers, instructions, links to helpful sites and other information relevant to workforce needs. - COMPLETED		10/4/2012
3.26	Develop an innovative and flexible mathematics curriculum that makes it easier for undergraduate students and entering adults to consider scientific and technical majors.	1.13	10/4/2012
3.28	Increase the participation of underrepresented populations in science and technology fields.	2.14, 2.17, 2.19, 2.20	10/4/2012
<b>Other - Economic Development</b>			
2.1	Create opportunities for communication and "cross-fertilization" between and among institutions of higher education and the state's major industries to encourage idea sharing, on-site explorations, and formal partnership agreements.		10/4/2012
2.10	Establish Enterprise Campuses at technical colleges statewide.		10/4/2012
2.11	Increase communication, shared programs, and formal partnerships among institutions of higher education.		10/4/2012
2.12	Create or use existing local higher education/industry advisory boards to identify potential research, collaboration, and consulting opportunities.		10/4/2012
2.13	Provide creative incentives to industries to collaborate with SC research institutions.	3.6	10/4/2012
2.14	Expand existing and/or develop new STEM programs which reflect the economic needs of the state.	2.17, 2.20, 3.28	10/4/2012
2.15	Encourage businesses, colleges, and universities to apply for more Small Business Innovation Research (SBIR) and Small Business Technology Transfer Program (STTR) grants through the South Carolina Department of Commerce.		10/4/2012
2.16	Establish a South Carolina Energy Independence Consortium to promote collaboration and the sharing of energy-related expertise and to research and develop innovative energy systems through the South Carolina Energy Office.		10/4/2012
2.18	Revitalize and expand the universities' research infrastructure.	1.20, 3.3, 4.2	10/4/2012
2.22	Build upon the SC Centers of Economic Excellence (CoEE) Program to stimulate research and innovation.	2.7, 2.8, 2.20	10/4/2012
<b>Other – Marketing</b>			
1.7	Create outreach programs to target ninth graders.		10/4/2012
1.10	Restore matching funding and expand services for HEAP, GEAR UP, and other related early awareness and readiness programs.		10/4/2012
1.40	Develop coordinated outreach programs that focus on adults without college degrees.	1.32, 1.35	10/4/2012

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Rec #	Recommendation	Related Rec #	Last Updated
2.19	Develop or expand programs to increase the number of women and minorities in engineering, math, and science.	2.14, 2.17, 2.20, 3.28	10/4/2012
3.7	Implement an aggressive public relations and communications plan targeted to both the policymakers who would support and fund the Action Plan and the citizens who would benefit directly from the successful implementation of the Action Plan.	1.6	10/4/2012
3.8	Develop a compelling united message from all institutions of higher education to the targeted stakeholders to ensure broad understanding of the critical relationship between education and the state's economic future.	1.6	10/4/2012
3.25	Create a branding/marketing plan for the purpose of attracting citizens and employers to the workforce and for communicating the direct and indirect value of these services to communities and a strong workforce.		10/4/2012
<b>Other - Policy Development/ Planning</b>			
1.18	Create a P-20 council.		10/4/2012
1.25	Promote timely degree completion by establishing appropriate credit hour maximums.		10/4/2012
1.26	Promote additional options for timely degree completion such as expanding the use of test-out provisions (including College Level Examination Program examinations) and awarding credit based on life experience.		10/4/2012
1.37	Create statewide policies for assessing prior knowledge, on-campus residency requirements, and course credit expiration.		10/4/2012
1.49	Develop a system scale-up plan.		10/4/2012
2.8	Review and/or revise industry-institutional technology transfer models based upon successful models in other states (e.g., University of California Technology Transfer System) and at other research institutions (e.g., Emory University). [The text of Recommendation 2.8 was changed by on September 2, 2009.]	2.7, 2.20, 2.22	10/4/2012
2.9	Broaden the scope of the South Carolina Research Authority (SCRA) and SC Launch! to encourage and support research and technology transfer across all South Carolina institutions of higher education.		10/4/2012
2.21	Ensure that faculty entrepreneurial activities and industry-related research are recognized in the tenure and promotion process.		10/4/2012
2.23	Enact a statutory change to authorize tuition relief for faculty dependents and tuition reciprocity with peer institutions in order to increase competitiveness in recruiting and retaining faculty.		10/4/2012
2.24	Improve faculty pay and compensation.	3.4	10/4/2012
3.9	Allow the state's technical colleges to provide an additional path for adults seeking to obtain a General Education Development (GED®) diploma.		10/4/2012
<b>Other - Data Resources/ Information Sharing</b>			
1.9	Increase the amount of information shared with high schools concerning how their students perform in college.		10/4/2012
1.19	Create a longitudinal data system.		10/4/2012
1.41	Create a centralized transcript repository.		10/4/2012
3.23	Develop a comprehensive listing of credit and non-credit academic programs, services, and resources of South Carolina higher education institutions that assist in addressing the diverse needs of a developing workforce.		10/4/2012