EXECUTIVE SUMMARY

2007 Environmental Scan Committee

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**Trend 1:** The educational needs of under-prepared students will increasingly challenge the college’s financial and human resources.

Through the combined efforts and cooperation of its administration, faculty, staff and students, colleges must recognize and address those education trends that potentially impact student learning and the overall health of the institution. These trends include student academic under-preparedness, the ability of students to make appropriate social, ethical and behavioral decisions, as well as issues related to classroom and campus safety.

**Trend 2:** Funding for higher education will continue to decline while the demand for access to higher education and student support services will increase.

As a college education becomes increasingly imperative for economic and social success, access to higher education is challenged by decreases in national and state funding, rising tuition costs and the continued influence of state accountability and performance mandates. These factors and others are creating an affordability crisis for the increasing numbers of students who are seeking entry into college and diverting funding away from the core educational mission of educating students.

**Trend 3:** Creating new and continuing existing educational and workforce development partnerships will be necessary to meet community needs.

Community colleges will need to create sustainable partnerships with local school districts, businesses, other higher education institutions and the community to ensure improved access to higher education. Expanding and increasing partnerships with K-12 institutions encourages a shared responsibility toward improving educational access for all students and establishes a viable pathway toward earning a degree and/or obtaining gainful employment. Community colleges must work to improve partnerships with businesses to increase the potential for future internships, mentoring, and hiring of citizens in the community.

**Trend 4:** The shortage of workers needed to meet competitive workforce demands will require the college to assume a greater leadership role in educating a skilled workforce to advance the states economy.

While the economic outlook for the United States and South Carolina is good, employers will continue to be challenged by the educational level and availability of highly skilled workers. Employers will explore new options in their intensified efforts to recruit and retain qualified workers and expand educational certification programs to increase employee capabilities. Colleges must expand the diverse curriculum needed for workforce training, transfer, career and personal development programs to meet the continuing shortage of workers possessing the technical and soft skills needed by employers.
Trend 5: Meeting the needs of a diverse student population will impact the delivery of programs and services.

Community colleges must prepare to meet the instructional and student services challenges presented by varied populations within their communities. Minorities, scholars, first-generation students, students with disabilities, international students, non-traditional and at-risk student populations will bring to the college campus varying needs and abilities requiring creative and new educational approaches.

Trend 6: As the demand for campus-wide technologies increases, the resources and capabilities of the college will be challenged to maintain appropriate information technology services.

The college’s ability to creatively manage and implement new technology will be a struggle as innovations continue to arise. The deployment of wireless connectivity, the continued vigilant monitoring of security and network protection, enhanced delivery capabilities as well as the necessary training to utilize these new tools will have a significant impact on college resources and planning efforts. The approach to addressing this trend must be comprehensive and multi-faceted in order to accommodate human involvement, policy controls, funding and facilities.

Trend 7: The college will face challenges in the selection and application of instructional technology and its delivery to students.

Substantial resources will be needed to identify, obtain and deploy the best instructional technologies. Increased student experience with and usage of technology will bring pressure on higher education to use the latest technology in instructional delivery. Consideration must be given to the variety of issues including the available tools, costs, student expectations, effectiveness and faculty preparedness.

Trend 8: Faculty and staff retirements and the dependence on adjunct faculty and contract workers will increase.

No trend has changed the face of higher education more than the shift away from a corps of full-time faculty. As enrollments grow, campuses expand, and staffing needs increase, two-year colleges will have to deal with a variety of issues related to long-term employment of part-time faculty and contract employees. The pressures of increasing numbers of retiring employees will result in the need by two-year colleges to recruit and train a diverse workforce.
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Trend 1: The educational needs of under-prepared students will increasingly challenge the college’s financial and human resources.

FINDINGS:

1) College readiness is one of seven national education priorities established by the U.S. Department of Education in 2000. According to an August 2006 Alliance for Excellent Education brief, 42 percent of two-year college freshmen require at least some remediation in the subject areas of math, writing, and/or reading, as well as in study skills and critical thinking. “The Alliance for Excellent Education also reports that the nation’s colleges spend $1.4 billion annually on remedial courses for recent high-school graduates and that “Community colleges already bear the greatest share of the remediation burden, and trends indicate that their responsibilities in this arena are likely to grow”.

2) Two new studies suggest that under-prepared and minority students are more likely to succeed in college when they are engaged in their learning. Thus, more instructors are needed who have been trained to design “educationally purposeful activities” for this student population (Lederman).

3) As enrollment numbers increase, so do the number of students who are academically “at-risk.” It is imperative that techniques for advising under-prepared students be refined. Advisors must outline both the institution’s expectations of students and what students can expect from advisors throughout their academic careers. These expectations should be made available in a clear and concise way.

4) The 2006 SC State Report Card reveals a drop in statewide graduation rates from 77.3 percent to 74.3 percent for the three-year period ending in 2006. MTC’s district service area decline for the same period is 2.8 percent.

5) In 2007, South Carolina will begin, through the implementation of EEDA legislation, to address the pressing problem of school dropouts by defining criteria to identify at-risk students.

a. Implementation of EEDA will impose a new emphasis on life planning. All eighth grade students will be required to develop and amend Individual Graduation Plans (IGP). Students will be exposed to more career, educational and life choices then in the past and require articulation agreements among the state’s high schools, two-year colleges, and four-year colleges.

b. Because the drop-out problem is so pressing, the EEDA also requires that by July 2007, the State Board of Education define criteria for identifying students at risk of being poorly prepared for the next level of study or for dropping out of school. The board must also find evidence-based model programs for keeping at-risk students in school.
c. By 2010, the goal of EEDA is to have our student achievement ranked in the top half of the states nationally.

6) Plagiarism and other forms of academic dishonesty among college students will continue to increase. In order to maintain academic integrity with employers and senior institutions, College’s will be called upon to increase awareness of and efforts to prevent academic dishonesty. Studies of traditional cheating and plagiarism as well as electronic plagiarism show both are significantly rising and that nearly 50 percent of college students and faculty report knowing of plagiarism. Traditional plagiarism, “paper-mills” and the ease of web searches have all contributed to this rapid growth. Honor codes, educational programs, and detection software have all failed to impact the moral decision-making process to cheat, and students have access to the ready tools to do so.

7) Colleges will need to develop plans to address workplace and domestic violence safety on college campuses.

a. Violence in the workplace is a serious safety and health issue. Its most extreme form, homicide, is the fourth-leading cause of fatal occupational injury in the United States. According to the Bureau of Labor Statistics Census of Fatal Occupational Injuries (CFOI), there were 551 workplace homicides in 2004 in the United States, out of a total of 5,703 fatal work injuries.

b. In a College Planning & Management article, Michael S. Dorn, a campus safety expert, argues that colleges must take steps to ensure a safe environment. He writes, “Like the ostrich with its head buried in the sand while the lion lurks nearby, too many campus administrators have, for various reasons, failed to see the dangers that exist and periodically experienced tragic consequences. Unfortunately, innocent students, staff and faculty members are the ones who most often suffer the consequences of this lack of due diligence….Just how much handwriting must be on the wall before everyone opts to read it?”

c. Uncivil student behavior against faculty in higher education has gained increased media attention. According to recent reports, such behavior may be increasing, thus jeopardizing the welfare of faculty, students and the overall educational process. Uncivil student behavior can disrupt and negatively impact the overall learning environment for students who are uninvolved in the disruptive or inappropriate behavior and is a blatant violation of student rights.

Trend 2: Funding for higher education will continue to decline while the demand for access to higher education and student support services will increase.

FINDINGS:

1) Institution Support - The College has experienced declining contributions from the state of South Carolina in recent years. It is projected that the state will struggle with fiscal stress in the foreseeable future; therefore Institutions of Higher Education (IHE) cannot reasonably expect an increase in state support. It is also projected that growth in demand for other services such as K-12 Education, Medicaid, Social Services, etc., will compete with higher education for limited resources. As a result
of the under-funding from the state, it is necessary for IHE’s to look at options for providing needed programs and services, including increases in tuition, eliminating programs and services and managing enrollment. All the options have a negative impact on selected groups of citizens. The fiscal condition of the state has had the effect of limiting access to IHEs.

2) **Student Support** – More of the cost of public higher education is becoming the responsibility of students and their families. Tuition costs are rising far faster than inflation, making the dream of a college education unreachable for many American students. The United States, which at one time lead the world in the number of students attending college, now ranks 13th in affordability and 4th in accessibility among European and North American countries. The average student debt burden in 2004 was almost 60 percent higher than the mid-1990’s and is projected to continue to rise.

   a. **State Funding** – In 2005-06, MTC received approximately 30.3 percent of the revenue needed based on the State’s funding formula. The percentage of the formula funded by the State is expected to continue to decline, although not as dramatically as it has in the immediate past. The college anticipates the funding for the Merit Nursing Program to remain stable at approximately $0.6 million for the foreseeable future.

   b. **Federal and State mandates** - State accountability and performance mandates will continue to drive higher education funding. Higher education in the United States is primarily a state and local function, however, the federal government plays an important role. The tax cuts in the current Federal Administration’s 2007 fiscal year budget are projected to cause state governments to lose an additional $38 billion over the next decade. South Carolina stands to lose $693 million as a result of federal tax cuts.

   c. **Federal Grants and Student Loans**– Federal support of higher education has not kept pace with the increasing cost of education. Pell grants, the basic federal grant on which many low-income students rely on to finance postsecondary education, have not kept up with college price increases. The maximum Pell grant award has not increased over the past four years and is worth less in real dollars than 30 years ago. Recent changes were made in the Pell Grant formula for determining students’ eligibility, therefore, some students who were once eligible for the Pell grant may become ineligible or will receive less funding. Over the years, Congress has cut $12 billion from federal student loan programs and raised loan interest rates for students and their parents.

   d. **Grants and Supplemental Funding** – Federal funding in the next five years will focus on healthcare, K-12 education, science and technology, foreign languages (Arabic, Chinese, Japanese, and Korean), workforce development, security training, security technology, and biological defense.

**Trend 3:** Creating new and continuing existing educational and workforce development partnerships will be necessary to meet community needs.

**FINDINGS:**
1) Studies show that 65 percent of workers need something less than a baccalaureate degree. Two-year institutions are uniquely suited, and in South Carolina, charged with workforce development.

2) Close collaboration of secondary and postsecondary institutions is necessary to engage and motivate students and provide them with the “rigorous preparation that will equip them for a lifetime of learning and productive, rewarding work.” The South Carolina High School Redesign Commission, comprised of education and business leaders across the state, put forth recommendations for future state actions to address the needs of SC students.

3) An intensive four-year study of workplace needs resulted in the passage of the **Education and Economic Development Act** (EEDA) of 2005. The goal of the program is to personalize high school coursework to match each student’s career interest, provide intensive guidance and counseling, provide real-world learning experiences and provide structure to ease a student’s transition from high school to college or a career.

4) New legislation called Personal Pathways, demands that higher education and K-12 institutions partner better to provide career goals for students. Educational courses and programs that feature mentoring, internships, career counseling and introductory elective career courses will be best received by the local high schools. These high schools cannot and will not alter their required curricula which is tied to achievement tests; but most South Carolina high school students have a significant number of electives they can take --- and it is in this elective area where creative career courses, internships and the like offer opportunity.

5) Articulated transfer agreements are becoming more critical and more complex. According to one study, two-year colleges can play a more important role in Engineering and Science education—but will not graduate such students—rapid transfer is the goal. Enrollment in these fields (including of minority students) is increasing. Statistics also reveal an increasing number of “Non-Degree Completers.” The Society for College and University Planning reports that only 55 percent of American students complete a college degree within six years and that only 41 percent of Black and Hispanic students complete. Trends also show that admission standards at USC, Clemson and other colleges are increasing. This creates opportunities for community colleges (often referred to as “Back Door Admissions,” or bridge admissions) where universities formally admit a student but delay enrollment while referring the student to the local community college.

**Trend 4:** The shortage of workers needed to meet competitive workforce demands will require the college to assume a greater leadership role in educating a skilled workforce to advance the states economy.

**FINDINGS:**

1) The US Department of Labor predicts a shortage of 10 million workers by 2008. This shortage is expected to decrease race, gender and age-based discrimination.
2) Education and skills are seen as important determinants of the employability and income potential of workers. The aging workforce will require that younger workers quickly get up-to-speed. “As the baby boom generation slowly exits the US workplace, a new survey of leaders from a consortium of business research organizations finds the incoming generation sorely lacking in much needed workplace skills --- both basic academic and more advanced “applied” skills. “Workforce planning will always remain a challenging endeavor. There is an ever present need to match the workforce with agencies’ missions. For college and university continuing education units, therefore, helping the public sector with workforce planning and development offers potentially significant opportunities.”

3) As the economy grows, more jobs will be created. An increasing number of employees will be motivated to change jobs, often responding to attractive incentive packages offered by employers seeking to attract and retain qualified employees. The need for better trained skilled workers and managers will also drive increased investment in corporate training.

4) The country must address the lack of interest in science and engineering degrees by American undergraduate students. Only 32 percent of American undergraduates receive degrees in science and engineering, compared to 66 percent in Japan and 59 percent in China.

5) Workforce demographics will change the way we do business. Younger, more technically savvy employees will demand heightened flexibility in work arrangements, growth in telecommuting, and changes in leadership styles to include more participative and team approaches.

Trend 5: Meeting the needs of a diverse student population will impact the delivery of programs and services.

FINDINGS:

1) According to the College Board, high school graduates in the South will increase from 660,000 in 2008 to well over 800,000 by 2018. Hispanic graduates comprise a major growth sector in this cohort. Spanish speaking youth going to postsecondary institutions increased 14 percent from 1996 to 2001 according to the Pew Hispanic Center. Senior institutions as well as employers will increasingly look to the community and technical colleges as a significant source of Latino students.

2) The SREB predicts that in 2018, 50 percent of high school graduates will be Black (30 percent) or Hispanic (20 percent). Trends also show that more global and international students will be attracted to low-cost institutions of higher education. Senior institutions as well as employers will increasingly look to the community colleges as future sources of minority students.

3) Growth in the Spanish-speaking population will bring new opportunity for Spanish speaking businesses who take the initiative to understand the basics of the Spanish language.
4) The 2000 U.S. Census estimated South Carolina’s Hispanic population to be about 100,000 and also found that 2.9 percent of South Carolina’s populations speak Spanish at home. South Carolina was one of six states where the Hispanic population has more than tripled between the 1990 and 2000 Censuses.

5) One of the greatest challenges facing community colleges is how to keep black male students long enough for them to obtain a degree or the preparation necessary to transfer to a four-year school.

6) Community colleges face widely varying needs related to their diverse student populations. Rendon (2000) maintains that community colleges ought to view themselves as unique institutions functioning for the purpose of providing access to a range of students. In this way, these institutions focus on educating and encouraging students to become active and responsible citizens.

7) An estimated 681,000 people in South Carolina have a disability, or 17.7 percent of the population age 5 and over. (2005)

8) Many students with disabilities choose community colleges over four-year colleges as their first or only postsecondary education experience (Savukinas, 2003). Data from the U.S. Department of Education suggests that nearly 60 percent of students with disabilities, who attend postsecondary institutions, attend those institutions with two-year programs or less than two-year programs (U.S. Department of Education, 2002).

9) Recent research indicates that two-year institutions tend to offer more varied, specialized services for educating students with disabilities while maintaining stronger community linkages than do four-year institutions (Chang and Logan, 2002).

10) The percentage of the population in SC under18 years of age is expected to decline from 25.2 percent in 2000 to 22.2 percent in 2030. The percentage of the population 65 years and older is expected to increase from 12.1 percent in 2000 to 22.0 percent in 2030.

**Trend 6:** As the demand for campus-wide technologies increases, the resources and capabilities of the college will be challenged to maintain appropriate information technology services.

**FINDINGS:**

1) Wireless technologies represent a fast-emerging area of growth and importance for providing “everywhere” access to the network for the college. Students and faculty progressively want more unrestrained network access from classrooms and social meeting rooms (i.e., cafeterias). Wireless technology can support the college’s mission and provide commercial solutions.

2) The deployment and management of wireless technology will become more crucial.

3) Information technology security and protection involves identifying potential security risks and taking steps to minimize the damage or prevent attacks. As software is enhanced and updated, numerous vulnerabilities may be introduced, which can be
exploited by both internal and external sources. The college must continually maintain and prepare for the possibility for such attacks.

4) Peer-to-peer file sharing makes students vulnerable to litigation and causes college resources to be over utilized for non-essential activity and carries a certain amount of liability on the part of the college to prevent it.

5) All technology trends involve both financial and human resource outlays. Whether it be increasing network bandwidth, meeting the demand for campus-wide wireless connectivity, improving security and protection with improved crisis management and business-continuity procedures, offering and supporting the latest web services, paying licensing fees of new software and operating systems, providing more efficient document imaging systems, considering electronic textbooks and alternatives to traditional textbooks in the classroom, offering new technology certifications or constantly improving our own employees’ skill sets. All of these costs will need to be properly managed in order for MTC to continue to be a leading technical college.

6) The convergence of voice and data communications onto the same infrastructure facilities will offer more flexibility and cost savings.

7) Business Continuity and the technological and human support required to ensure that the college functions optimally 24/7 is of utmost importance in our ability to remain a leader in providing technical education.

8) Web Services-XML, Java and .NET continue to be big in new system development. Web services are programs that run on Application servers and are accessed by client web browsers. You can access web services from anywhere you can get a network connection. Programming is very modular, meaning that it needs to be written only once and can be accessed everywhere, making maintenance, upgrading and controlling very easy.

9) Podcasting, Vodcasting, access to iTunes University, Blogging, Live and On-demand streaming content and full lecture recording are new technology opportunities available for use in instruction and campus-wide communication.

10) Increase offerings for online degrees to address increased competition in this arena of education and to permit those students who may not wish or be able to attend traditional classes. Investment in online infrastructure would be required to accommodate these actions. This would aide in allowing more students to obtain a degree, diploma or certificate and make MTC more competitive in the global educational network as student enrollment increases.

**Trend 7:** The college will face challenges in the selection and application of instructional technology and its delivery to students.

**FINDINGS:**

1) Two-year colleges will have a growing number of technology-related issues that will be difficult to address without significant increases in funding:
a. computer training for older students  
b. access for those students who do not have computers at home  
c. retraining for those students whose technology expertise is limited to communication and entertainment  
d. replacing outdated, slow computer systems with those capable of handling the increasing demands of faculty, staff, and students  

2) Instructional Technology will become more media-rich, mobile, wireless, and personal. The adoption of the newest and latest technological products for use among K-12 students including cell phones, blogs, My Space, and the Internet among many others will lead to pressure in the future to incorporate many of these formats into the higher education process as these students reach college campuses. The Apple iPod is now dramatically influencing education and training. Stanford University has become a partner with iPod through Apple’s free “iTunes University”—making lectures, announcements and more available to students who download a podcast and listen to it anywhere anytime (Midlands Technical College is currently studying this option). 

Data-driven content on web pages will dramatically increase making personalized student web pages, diagnostics, assessments, assignments, reminders, due dates, etc. much easier. A good example is the number of web sites that produce images such as maps or charts from sophisticated sets of data—a significant trend in geographic information systems (GIS) and scientific applications. Instructional gaming is becoming more acceptable and holds great promise for engaging students at risk as well as others. Technology, and therefore Instructional Technology, will become more and more “demand-pull” rather than “producer-push.” Students will pick “learning slices”…it is the era of “rip, re-mix, and burn” as youngsters select what they want from the World Wide Web. 

Other trends include high band width via wireless connections like the proposed 802.11n standards for data transfer. Increased blending of technologies will make corresponding applications ubiquitous. 

3) Both online and hybrid educational deliveries will grow dramatically. The SREB publication, “Growing By Degrees Online Education in the United States, 2005,” indicates that online education is growing rapidly; has become mainstream; and has delivered on high standards. Online courses/programs in associate degree granting institutions is one of the most highly concentrated levels of higher education offering online education. Problems identified by academic leaders included the difficulty of teaching and taking such courses; as well as the increased support costs of such programs. This study also reported that 56 percent of colleges considered online education part of their “critical long term strategy.” 

Hybrid courses, according to one North Carolina study, are also growing quickly and being embraced by college officials as not only good instruction (blending online and face-to-face); but also as a clear opportunity to maximize the use of costly physical spaces dedicated to instruction. The president of Penn State University has called hybrids the greatest “unrecognized trend” in education. 

4) MTC will need to invest in the technology infrastructure to position itself as the premier choice for students in the Midlands.
With 802.11n, students and professors will more easily graduate from wireless e-mail, text, and voice to full-blown videoconferencing, which requires bandwidth. As more and more students embrace video chats and lectures, universities will be forced to regularly evaluate, adjust and enhance their wireless network designs. But for truly intense multimedia applications, universities will need to stick with high-speed wired connections (like gigabit Ethernet) or eventually switch to 802.11n wireless, according Ed Golod, president of Revenue Accelerators, a technology consulting firm in New York.

5) There is substantial movement toward standardization of platforms for e-course content creation and delivery among major stakeholders. Major publishers, academic institutions, and other entities with interest in this issue are creating a consortium workgroup called Common Cartridge to address this. When carried to completion, it will be easier for academics to develop and deliver digital course content to students from a broader selection of sources in a much shorter and easier time frame.

6) Global and non-traditional competitive drivers, (i.e. the Internet and online for profit institutions of higher learning) will force changes in instructional delivery methods and course offerings. There is a lack of leadership in ensuring continuing collective excellence in American institutions of higher ed that may create a decline in competitiveness if not addressed.

7) The textbook will become increasingly irrelevant over a period of years as more innovative ways of digital content instructional delivery are developed and implemented, according to a number of different sources. Studies show that as one format declines and the others increase, there will be some middle ground where they reach equilibrium in use and importance. Alternatives will provide more customized digital (native) and digitized (non-native) material options for higher learning. This development will have implications for library and bookstore structures on campuses. Both may become leaders in distribution and advocacy of e-content in academic courses. This will also cause shifts in expenditures of resources and savings in resources not yet clearly defined. Further, this will create campus reflection and debate among academics about access to these new formats by non-traditional students.

Trend 8: Escalating faculty and staff retirements and increasing dependence on adjunct faculty and contract workers will challenge the college.

FINDINGS:

1) Two-year colleges will have to recruit and train a diverse faculty to replace an increasing number of retiring faculty members. MTC currently has 135 faculty members who will be eligible for retirement over the next 10 years.

2) As enrollments grow, campuses expand, and staffing needs increase, two-year colleges will have to deal with a variety of issues related to long-term employment of part-time faculty. Adjunct dependence has grown so much that Maricopa Community
College has started professional growth funds just for adjunct. MCC also has an active adjunct faculty association that provides input. Florida Community College at Jacksonville sees so many adjuncts in online courses that they developed a model program for adjunct faculty development supported by the Sloan Foundation. Tallahassee Community College also has a program for adjuncts. As a testament to the growing trend, the world wide web is now home to two global web sites dedicated to connecting adjuncts and institutions—“Adjunct Nation” and “Adjunctopia.”

3) No trend has changed the face of higher education more than the shift away from a corps of full-time, tenure-track faculty to a contingent instructional workforce. That workforce includes part-time/adjunct faculty, full-time, non-tenure track faculty, and graduate employees. Together these employees now make up 70 percent of the 1.3 million employee instructional workforce in higher education. Fall 2006 data for MTC indicates that adjunct instructors comprise approximately 69 percent of the total instructors. (MTC HRM Office)

4) As the boomers age and begin to retire in the coming years, they will leave a sizable hole in the labor market. An estimated 6,000 jobs in post-secondary education administration will have to be filled annually between 2004 and 2014, the result of the field's growth and the retirement of current workers, according to the Bureau of Labor Statistics.

5) Two studies by the American Association of Community Colleges in 2001 showed that 79 percent of community-college presidents planned to retire within the next decade, and senior administrators who traditionally replaced them were aging as well.

6) In its 2003-04 Accountability Report, the South Carolina Technical College System (SCTCS) estimates that “there is the potential turnover across the System of 11 presidents, 28 vice presidents and 161 program directors over the next five years.” The system has devised two programs to build new leadership as a result of these findings.

7) At Midlands Technical College, 25 percent (96 of 363) of its full-time staff members will be eligible to retire in the next five years. To address this issue, the college has created its own Leadership Development Program to assist faculty and staff in preparing themselves for future leadership opportunities along with nominating candidates to participate in the SCTCS programs.