

PERFORMANCE AUDIT

Implementation of the
Complete College Tennessee Act of 2010
May 2012



STATE OF TENNESSEE
COMPTROLLER OF THE TREASURY

Department of Audit
Division of State Audit



Arthur A. Hayes, Jr., CPA, JD, CFE
Director

Deborah V. Loveless, CPA, CGFM
Assistant Director

Dena Winningham, CGFM
Audit Manager

Sandra Tulloss
In-Charge Auditor

Janora Bryson
Gyasi Kellam
Suzanne Sawyers, CFE
Staff Auditors

Amy Brack
Editor

Comptroller of the Treasury, Division of State Audit
1500 James K. Polk Building, Nashville, TN 37243-1402
(615) 401-7897

Performance audits are available online at www.comptroller.tn.gov/sa/AuditReportCategories.asp.
For more information about the Comptroller of the Treasury, please visit our website at
www.comptroller.tn.gov.



STATE OF TENNESSEE
COMPTROLLER OF THE TREASURY
DEPARTMENT OF AUDIT
DIVISION OF STATE AUDIT

SUITE 1500
JAMES K. POLK STATE OFFICE BUILDING
NASHVILLE, TENNESSEE 37243-1402
PHONE (615) 401-7897
FAX (615) 532-2765

May 15, 2012

The Honorable Ron Ramsey
Speaker of the Senate
The Honorable Beth Harwell
Speaker of the House of Representatives
The Honorable Dolores Gresham, Chair
Senate Education Committee
The Honorable Richard Montgomery, Chair
House Education Committee
The Honorable Mike Bell, Chair
Senate Committee on Government Operations
The Honorable Jim Cobb, Chair
House Committee on Government Operations
and
Members of the General Assembly
State Capitol
Nashville, Tennessee 37243

Ladies and Gentlemen:

Transmitted herewith is the special performance audit of the Tennessee Higher Education Commission, the University of Tennessee Board of Trustees, and the Board of Regents concerning the implementation of the Complete College Tennessee Act of 2010. This audit was conducted pursuant to the requirements of Section 4-7-215, *Tennessee Code Annotated*.

This report is intended to aid the Senate Education Committee and House Education Committee in their review to determine whether the Complete College Tennessee Act of 2010 has been appropriately implemented.

Sincerely,

Arthur A. Hayes, Jr., CPA
Director

AAH/dww
11-055

State of Tennessee

Audit Highlights

Comptroller of the Treasury

Division of State Audit

Performance Audit
Implementation of the Complete College Tennessee Act of 2010
May 2012

AUDIT OBJECTIVES

The major objectives of the audit were to determine and assess the following: whether the Tennessee Higher Education Commission (THEC), the University of Tennessee Board of Trustees, and the Tennessee Board of Regents have implemented and/or are on schedule to implement all of the major provisions of the Complete College Tennessee Act of 2010 (the Act), including any challenges and unexpected implications resulting from the Act's implementation; the extent to which the three major governing boards are taking steps to eliminate unnecessary program and management duplication through (but not limited to) the institutional mission statement review, initial program initiation, and existing program termination processes; and the extent to which THEC properly uses the Act-mandated funding formula to develop budget requests and the extent to which steps are taken to ensure the data used in the formula are consistent and accurate across all governing boards.

FINDINGS

While the Tennessee Higher Education Commission, the University of Tennessee Board of Trustees, and the Tennessee Board of Regents Have Made Considerable Progress in Implementing the Complete College Act of 2010, Not All Required Transfer Pathways or Dual Agreements Are in Place

Tennessee's three main higher education boards, the Tennessee Higher Education Commission, the University of Tennessee Board of Trustees, and the Tennessee Board of Regents, have made noteworthy strides in implementing the Complete College

Tennessee Act of 2010 (the Act). However, additional steps can be taken to improve the Act, its implementation, and student outreach. First, transfer pathways (which are blocks of classes guaranteed to transfer between Tennessee public community colleges, colleges, and universities) need to be created for all currently offered majors, and/or the General Assembly may wish to adjust the Act's language to allow some difficult majors to be exempted from the Act. As of December 2011, pathways have only been created for 23 majors. Similarly, all institutions need to place more of an

emphasis on publicizing these transfer pathways via their own websites. Likewise, all community colleges and institutions need to comply with the Act by signing dual-admission agreements with each other. Dual-admission agreements allow students to be simultaneously registered with two institutions, allowing the student to use both schools' facilities and easily transfer credit hours between the two schools. As of December 2011, not all colleges and universities have signed dual-admission agreements with all other colleges and universities. Finally, there is an opportunity to further assist Tennessee's students by working toward extending common course-numbering to at least some of the classes at institutions awarding bachelor's degrees (page 7).

Additional Data Validation and Communication Are Needed to Ensure That the New Outcome-Based Funding Approach Achieves Its Goals

As mandated by the Complete College Tennessee Act of 2010 (the Act), the Tennessee Higher Education Commission (THEC) worked with higher education stakeholders to change the basis on which Tennessee public higher education institutions are funded. Previously, colleges and universities were funded primarily based on the number of students enrolled. In contrast, the new approach funds schools based on outcomes, such as the number of graduates. This new approach has been formally used twice to develop higher education budget requests for the Governor and once to allocate state appropriations to public higher education academic units as of December 2011. As the new outcome-based funding approach and process matures, some gaps in the funding process are becoming evident and need to be addressed. First, THEC needs to add additional detail to the data dictionary used by institutions and

governing boards to identify which specific data to submit to THEC for use in the formula. Second, the institutions and governing boards need to take additional steps to verify that the data they provide to THEC for use in the formula are accurate. Third, the formula, now only available in spreadsheet form, also needs to be documented in a narrative format to ensure it is readily understandable. Finally, the higher education community needs to maintain reasonable expectations about the availability of future state funding (page 12).

The Tennessee Higher Education Commission Is Taking Steps to Avoid and Address Unnecessary Program Duplication

The Tennessee Higher Education Commission (THEC) has made changes in order to improve statewide efficiencies by reducing unnecessary redundancies in academic program offerings. First, in compliance with the Complete College Tennessee Act of 2010, THEC worked with higher education institutions to develop new mission profiles for all the state's public community colleges and universities which will be used to identify institutions' unique areas of academic specialization. THEC will need to monitor how well this process, especially the mission profiles, works. Additionally, THEC strengthened the existing program review process. If these changes do not prove sufficient and unnecessarily duplicated programs are not eliminated in the future, the General Assembly may wish to consider whether THEC, rather than the Tennessee Board of Regents or University of Tennessee Board of Trustees, should be given statutory authority to terminate programs (page 18).

OBSERVATIONS AND COMMENTS

The audit also discusses (1) community colleges expanding the use of block scheduling and (2) key state policies that do not consistently encourage college students to graduate within four years (page 26).

ISSUES FOR LEGISLATIVE CONSIDERATION

The General Assembly may wish to consider whether transfer pathways should be created for all majors currently offered in Tennessee public higher education institutions as currently required by Section 49-7-202(d) and (e)(1), *Tennessee Code Annotated*, or whether it wishes to revise this section to allow a narrow exception for majors in those fields that, by their nature, are not consistent with transfer pathways.

Additionally, if it becomes clear in the future that the revised existing degree review process does not provide sufficient, meaningful results, the General Assembly may wish to consider whether the Tennessee Higher Education Commission, rather than the Tennessee Board of Regents and the University of Tennessee Board of Trustees, should be given statutory authority to terminate programs (page 29).

Performance Audit Implementation of the Complete College Tennessee Act of 2010

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
Purpose and Authority for the Audit	1
Objectives of the Audit	1
Scope and Methodology of the Audit	1
Public Higher Education in Tennessee	2
Complete College Tennessee Act of 2010	4
Related Prior Audits	6
 FINDINGS AND RECOMMENDATIONS	 7
1. While the Tennessee Higher Education Commission, the University of Tennessee Board of Trustees, and the Tennessee Board of Regents have made considerable progress in implementing the Complete College Tennessee Act of 2010, not all required transfer pathways or dual agreements are in place	7
2. Additional data validation and communication are needed to ensure that the new outcome-based funding approach achieves its goals	12
3. The Tennessee Higher Education Commission is taking steps to avoid and address unnecessary program duplication	18
 OBSERVATIONS AND COMMENTS	 26
Community Colleges Expanding the Use of Block Scheduling	26
Key State Policies Do Not Consistently Encourage College Students to Graduate Within Four Years	27
 RECOMMENDATIONS	 29
Legislative	29
Administrative	29

TABLE OF CONTENTS (CONT.)

	<u>Page</u>
APPENDICES	31
Appendix 1: Complete College Tennessee Act of 2010	31
Appendix 2: Joint Response from the University of Tennessee, the Tennessee Board of Regents, and the Tennessee Higher Education Commission	40

Performance Audit Implementation of the Complete College Tennessee Act of 2010

INTRODUCTION

PURPOSE AND AUTHORITY FOR THE AUDIT

This special performance audit of the Tennessee Higher Education Commission (THEC), the University of Tennessee Board of Trustees (UT Board), and the Tennessee Board of Regents (TBR) is conducted pursuant to Section 49-7-215, *Tennessee Code Annotated*. The Office of the Comptroller of the Treasury is authorized by this statute to focus on overlap in mission, cost inefficiencies, management practices, and the restructuring of higher education as stipulated in the Complete College Tennessee Act of 2010 (the Act).

OBJECTIVES OF THE AUDIT

The major objectives of this audit were

1. to determine whether THEC, the UT Board, and TBR have implemented and/or are on schedule to implement all of the major provisions of the Act, including any challenges and unexpected implications resulting from the Act's implementation;
2. to assess the extent to which the three major governing boards are taking steps to eliminate unnecessary program and management duplication through (but not limited to) the institutional mission statement review, initial program initiation, and existing program termination processes; and
3. to assess the extent to which THEC properly uses the Act-mandated funding formula to develop budget requests and the extent to which steps are taken to ensure the data used in the formula are/will be consistent and correct across all governing boards.

SCOPE AND METHODOLOGY OF THE AUDIT

The activities of THEC, the UT Board, and TBR related to the Act and efforts to generate efficiencies were reviewed for the period since the passage of the Act in 2010 through December 2011. We conducted this special performance audit in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Methods used included

1. review of applicable legislation and policies and procedures;
2. examination of the entities' records, reports, and information summaries;
3. interviews with higher education officials representing all three public higher education governing boards in Tennessee;
4. interviews with higher education officials representing community colleges, TBR-operated institutions, and UT Board-operated institutions;
5. interviews with national higher education experts and representatives of other states' higher education systems;
6. review of higher education management literature; and
7. interviews with legislators serving on the House and Senate Education committees and other legislative leadership positions.

The Comptroller of the Treasury is an ex-officio voting member of THEC, a major focus of this audit. In addition, the Comptroller sits on the State Building Commission, which reviews higher education building requests and was contacted in relation to this audit. We do not believe the Comptroller's service on these commissions affected our ability to conduct an independent audit.

PUBLIC HIGHER EDUCATION IN TENNESSEE

Public higher education in Tennessee is overseen by three major governing boards: the Tennessee Higher Education Commission (THEC), the University of Tennessee Board of Trustees (UT Board), and the Tennessee Board of Regents (TBR).

THEC – The General Assembly created THEC in 1967 to coordinate and achieve unity among the state's public education institutions. Under Section 49-7-202, Part c, *Tennessee Code Annotated*, THEC's major responsibilities related to public higher education include (but are not limited to)

- developing a statewide master plan for future development of public universities, community colleges, and technology centers with input from the other governing boards;
- approving institutional mission statements;

- making recommendations to the governing boards, Governor, and General Assembly on the implementation of the Master Plan;
- developing policies for the fair and equitable distribution and use of public funds among the state's public higher education institutions, in consultation with the UT Board and TBR;
- studying the need for programs, departments, academic divisions, branch operations, extension services, adult education, public service, and work programs among the higher education institutions;
- reviewing and approving/disapproving all proposals for new degrees or degree programs, or for the establishment of new academic programs or divisions, including new locations for existing programs;
- informing the public about higher education, including technology centers, within Tennessee;
- studying the need for as well as the potential standards, location, function, financing, and governance of potential new higher education institutions;
- submitting biennial reports to the Governor and General Assembly;
- advising the Governor and General Assembly of the potential impacts of the Governor's annual proposed budget on higher education; and
- establishing and ensuring that all postsecondary institutions cooperatively provide for an integrated system of postsecondary education, including guarding against inappropriate and unnecessary conflict and duplication by promoting transferability of credits and easy access of information among institutions.

THEC is composed of nine lay members appointed by the Governor for six-year terms, representing specific congressional districts; three constitutional officers (the Comptroller of the Treasury, State Treasurer, and Secretary of State), who serve as ex-officio voting members; two ex-officio student members, who serve two-year terms, and the State Board of Education's Executive Director, who serves as an ex-officio non-voting member.

UT Board – The 24-member Board of Trustees governs the University of Tennessee System, which encompasses

- the University of Tennessee at Knoxville;
- the University of Tennessee at Chattanooga;
- the University of Tennessee at Martin;

- the Health Science Center at Memphis;
- the Space Institute at Tullahoma;
- the Institute of Agriculture, headquartered in Knoxville with locations statewide; and
- the Institute for Public Service, headquartered in Knoxville with locations statewide.

As the state's land-grant higher education institution, the University of Tennessee system enrolled approximately 50,000 students during the fall 2011 semester.

Under Section 49-9-209, *Tennessee Code Annotated*, the UT Board oversees the university operations, including purchasing real estate; appointing and removing the system president, professors, and officers and setting their salaries; and making rules and regulations related to the university's operation. However, while the UT Board can advise the faculty, the latter is ultimately responsible for awarding academic degrees.

TBR – The 18-member TBR oversees 46 higher education institutions with a combined annual enrollment of approximately 191,000 students during the fall 2011 semester, reportedly making it the sixth largest public higher education system. Member institutions include

- 6 state universities: Austin Peay State University (headquartered in Clarksville), East Tennessee State University (headquartered in Johnson City), Middle Tennessee State University (headquartered in Murfreesboro), Tennessee State University (headquartered in Nashville), Tennessee Technological University (headquartered in Cookeville), and the University of Memphis (headquartered in Memphis);
- 13 community colleges: Chattanooga, Cleveland, Columbia, Dyersburg, Jackson, Motlow, Nashville, Northeast, Pellissippi, Roane, Southwest, Volunteer, and Walters State Community Colleges; and
- 27 technology centers, spread throughout the state, which are not a focus of this audit.

Under Section 49-8-203, *Tennessee Code Annotated*, TBR oversees the universities' operations, including selecting and employing the institutions' executive officers, including fixing their pay; prescribing curricula, diploma, and degree requirements; approving operating and capital budgets; and establishing policies and procedures.

COMPLETE COLLEGE TENNESSEE ACT OF 2010

Several factors came together to promote passage of the Complete College Tennessee Act of 2010 (the Act) as a part the special education session in January 2010. (See Appendix 1 for the entire text of the Act.) First, a funding crisis emerged as higher education enrollment dramatically increased at the same time as state appropriations were decreasing. Second, K-12

education reforms, including the state's use of federal Race to the Top dollars, passed, thus suggesting a need to align state higher education with overall state education policy and budget. Finally, the federal government and other groups raised awareness of the need to increase the quality of higher education and/or the number of college graduates to promote American competitiveness and future preparedness.

The Act contains multiple provisions intended to improve the delivery and cost of public higher education in Tennessee, including mandating the development of the following:

- A new master plan to hold higher education institutions accountable for increasing the education attainment levels in Tennessee.
- New institutional mission statements consistent with the new master plan.
- A new funding formula for public higher education based on an outcomes-based model. Prior to the Act's passage, funding was primarily based on student enrollment counts. With the Act's passage, universities became funded based on outcome factors such as student retention, timely progress toward degree completion, and productivity measures consistent with the new master plan.
- Universally transferrable common general education and pre-major coursework.
- Information to make it easier for students who are considering transferring between community colleges and four-year institutions, including a common course-numbering system within the community colleges and a listing of courses which will and will not transfer between colleges.
- Dual-admission policies so that any student who satisfies the admissions requirements to a community college and any four-year college may be admitted to both institutions.
- Prohibitions against any four-year institution offering remedial or developmental education.
- A comprehensive statewide community college system.
- A University of Tennessee academic unit for interdisciplinary research and education with the Oak Ridge National Laboratory.
- Creation of the Memphis Research Consortium in Memphis, including the University of Memphis, the University of Tennessee Center for Health Sciences, and the St. Jude Children's Research Hospital.

RELATED PRIOR AUDITS

Because the Complete College Tennessee Act of 2010 (the Act) is relatively new, this is the first performance audit concerning the Act. However, as a part of this special audit, auditors reviewed prior performance and financial audits related to public higher education in Tennessee to identify prior findings which would have direct impact on the Act's implementation. One audit, the August 2007 Sunset Performance Audit of the Tennessee Higher Education Commission (THEC), contained one directly relevant finding. Specifically, auditors reported that THEC needed to develop better documentation supporting its Student Information System. Since this system is now used to collect information for the outcome-based funding formula, we reviewed actions that THEC has taken to implement the previous recommendations. Auditors determined that THEC has developed additional documentation for the Student Information System and contracted with an external reviewer to ensure its quality.

FINDINGS AND RECOMMENDATIONS

1. While the Tennessee Higher Education Commission, the University of Tennessee Board of Trustees, and the Tennessee Board of Regents have made considerable progress in implementing the Complete College Tennessee Act of 2010, not all required transfer pathways or dual agreements are in place

Finding

The Tennessee Higher Education Commission (THEC), the University of Tennessee Board of Trustees (UT Board), and the Tennessee Board of Regents (TBR) have made noteworthy strides in implementing the groundbreaking Complete College Tennessee Act of 2010 (the Act), but additional steps can be taken to improve the Act, its implementation, and student outreach. Specifically, transfer pathways need to be created for all currently offered majors, and/or the General Assembly may wish to adjust the Act's language to allow some difficult majors to be exempted from the Act. Similarly, all institutions need to appropriately publicize the Tennessee Transfer Pathways program and its components via their own websites. Likewise, all community colleges and institutions need to comply with the Act by signing dual-admission agreements with each other. Finally, there is an opportunity to further assist Tennessee's students by working toward extending common course-numbering to at least some of the classes at institutions awarding bachelor's degrees.

Substantial Implementation Progress

THEC, TBR, and the UT Board have taken significant steps to implement the Act's key provisions. For example the three governing boards have worked to

- create a new statewide, public higher education master plan known as the Public Agenda 2010-2015 (rather than serving as a broad statewide plan, the Public Agenda focuses exclusively on how the governing boards will implement this Act and achieve greater educational achievement among Tennessee citizens);
- develop institutional mission profiles for every community college, college, and university which attempt to make distinctions between the institutions for purposes of minimizing unnecessary program duplication and redundancies (as discussed in Finding 3);
- create and implement an outcomes-based funding model including variables such as the number of degrees awarded by each institution (as discussed in Finding 2);
- negotiate a core of general education classes and over 20 baccalaureate pre-major pathways to facilitate student transfers between the schools;

- establish a common course-numbering system for the community colleges;
- discontinue funding of developmental and remedial courses on university campuses, while enhancing related community college offerings;
- sign agreements between the University of Tennessee and Oak Ridge National Laboratory to start a collaboratory interdisciplinary academic unit;
- sign agreements between the University of Memphis, the University of Tennessee Center for the Health Sciences, and St. Jude Children’s Research Hospital as lead collaborators in the Memphis Research Consortium, whose goal is to promote long-term economic development and job creation; and
- start the process of creating a unified, statewide community college system under TBR by creating and filling the new position of Vice Chancellor of Community Colleges.

Not All Transfer Pathways or Dual-Admission Agreements in Place

The Act requires the development of university tracts, also referred to as “transfer pathways,” by the fall 2011 semester. Sections 49-7-202(d) and (e)(1), *Tennessee Code Annotated*, mandate creation of two types of pathways. First, the general education core consists of 41 hours of general education courses, which all Tennessee public higher education institutions are to accept at full credit value when a student transfers. The second type of pathway is agreed-upon blocks of major-related coursework that a student typically completes at a community college, which then must be accepted at full-credit value when the student transfers into a college awarding bachelor’s degrees. The Act requires that pathways be the same for all schools, except for students transferring into the University of Tennessee at Knoxville (UT-K). UT-K specifies additional or different coursework because of its competitive admission status. The additional specifications are available on the same website where the traditional pathways are published.

TBR and the UT Board-governed schools worked together and complied with the Act by creating the 41-hour general education core pathway, but major-related pathways were not created for all the majors offered in the state by fall 2011, as required by the Act. Specifically, TBR and the UT Board started by negotiating pathways for the top 23 most transferred into majors. TBR and UT Board institutional representatives were appointed and successfully negotiated all but one of the top 23 pre-major pathways: they did not come to agreement on the economics/liberal arts pathway. As of the time of this audit’s fieldwork, no efforts were underway to address this impasse. Additionally, no attempts have been made to create pathways beyond the initial 23 majors, although the Act required that pathways be created for all programs by the fall 2011 semester.

While the Act required pathways for all programs by the fall 2011 semester, there may be some majors for which creating a pathway may not be reasonable due to the nature of the program. For example, some performance arts and/or music performance majors in bachelor’s

degree programs work with a coach over their entire college career and, therefore, need to start working with that coach and major-related coursework in their first years. This runs contrary to the Act-inspired framework of students first completing the general education core and then moving on to major-related work. As a result, the General Assembly may wish to consider whether a pathway must be developed for all currently offered majors, or whether Section 49-7-202(d) and (e)(1), *Tennessee Code Annotated*, should be revised to allow a narrow exception for those programs for which it is not feasible to develop a pathway due to the nature of the program.

Pathways and related information not always publicized appropriately through institutions' websites – In order for the pathways to be successful in creating a transparent and easily understood method for students transferring between institutions, pathways must be clear and well publicized. The governing boards and some schools have made the information more readily available than others. For example, a statewide Tennessee Transfer Pathways website (www.tntransferpathway.org) has been created, which provides basic information on all created pathway content, and multiple press releases have been issued. Likewise, some institutions have created flyers, videos, and hallway monitor presentations on the pathways.

Other schools have not publicized the pathways as widely as possible. For example, auditors identified several schools that do not provide any links to the main website, or the links they do provide to the Tennessee Transfer website are not easily identified and/or clear. In response to auditor inquiries about the lack of obvious links, TBR administration directed all of its institutions (which would include all of the state's community colleges) to prominently feature links to the Tennessee Transfer Pathways website on their home web pages.

Dual-admission agreements not in place between all applicable institutions – Similar to transfer pathways, dual-admission agreements had not been signed between all public higher education institutions within Tennessee by fall 2011 as required by the Act and have not been signed subsequently. Specifically, Section 49-7-202(g), *Tennessee Code Annotated*, requires THEC to create policies under which any person who satisfies the admissions requirements of any public two-year institution and any public four-year institution may be admitted to both institutions. Such arrangements help students who intend to transfer by providing access to the resources of both campuses, especially academic advising. THEC has not created such a mandated statewide policy. Rather, THEC staff helped to create a template, or model agreement, that individual institutions could use to draw up their own agreements with other institutions to fulfill this mandate. THEC did not issue a directive or policy that all two-year institutions must use the template or otherwise sign an agreement with every four-year school (or vice versa), which is required if THEC intends for the model agreement to serve as the Act-mandated statewide policy.

Agreements have not been signed between all applicable institutions, but rather those signed often seem to have focused on institutions that are located in the same geographic area or that have previously standing relationships. For example, Nashville State Community College and Tennessee State University (both located in Nashville) signed a dual-admission agreement. While THEC failed to meet the statutory mandate by adopting a statewide policy, this did not

release the individual four-year institutions from meeting the law's requirements by signing dual-admission agreements with all two-year institutions (or vice versa).

Memphis Consortium Attempted to Comply with Reporting Law

While most of the major Act mandates have been met, there were minor problems with the Memphis Consortium's reporting. Due to what appears to be a genuine misunderstanding of the Tennessee legislative process, a mandated status report was not provided to all mandated parties. Specifically, Section 49-8-1401(c), *Tennessee Code Annotated*, states:

(c) It is further declared to be the legislative intent that the University of Memphis, the University of Tennessee Center for Health Sciences and other collaborators shall report progress toward developing such strategies and plans [creation and implementation of the Memphis Consortium] to the standing committees on education no later than February 1, 2011.

As a result, a presentation was scheduled and held before the Senate Education Committee. Apparently due to a lack of understanding that the hearing was only before the Senate Education Committee and was not a Joint committee, a hearing before the House Education Committee was never scheduled. This does not appear to have been intentional, and information about the Consortium's progress was widely available. In response to auditor inquiries, Memphis Consortium management reported that they would be in contact with the House of Representatives in the future to address this problem. Also, the Senate hearing did not occur by the deadline because it was postponed by the Committee Chair, and the postponing of the hearing was outside the Consortium's control.

Working Toward Common Course-Numbering in All Institutions Would Assist Students

While the Act and the higher education community's efforts are noteworthy steps to help provide a more citizen- and student-friendly, cost-effective, and transparent higher education system, even more steps should be considered to assist students. As required by the Act, TBR created a common course-numbering system among the community colleges. While the system is not required by the Act, students would benefit from THEC, TBR, and the UT Board expanding these efforts by working toward adoption of common course-numbering in all Tennessee public higher education institutions over time. Although this would be helpful for students, it is a very complex undertaking and cannot be achieved immediately.

Under common course-numbering, multiple institutions use the same course number to refer to classes that have the same or equivalent content, regardless of any course title differences. This creates a simpler and more transparent system for students wishing to transfer between institutions.

As required by the Act, a common course-numbering system has been developed among the community colleges. Seeing the potential benefit, TBR management suggested expanding these efforts beyond what was required by the Act to extend common course-numbering to other institutions. University chief academic officers voiced concerns, however, and the expansion did

not occur. As a result, discrepancies remain between parallel courses' numbering at universities and community colleges. In the absence of universal common course-numbering, the governing boards have, however, taken some steps to assist students. For example, TBR created and implemented a labeling method to more clearly identify parallel courses among its institutions.

Other states are working toward common course-numbering. For example, the voluntary Texas Common Course Numbering System is a rubric intended to facilitate transfer of freshman- and sophomore-level general academic courses among state and private institutions in Texas. One hundred and eighteen public and private organizations participate, including all public community college districts, all public universities, all state technical colleges, 21 private institutions, and three health science education institutions. Similarly, Florida has developed a common course system, from the remedial through the graduate level. Florida's system may be difficult to duplicate because it is based on and its implementation was greatly eased by the state's historical emphasis on an integrated community college and university system.

Governing boards' leaders stated to auditors that common course-numbering across all institutions would be theoretically ideal for students. It would be difficult to attain, however, due to a lack of funding and differing traditional course-numbering practices among the institutions, which in turn impact their computer systems and transcripts. Therefore, adopting common course-numbering could not be easily or cost-effectively achieved at this time. Still, as the higher education community works more closely together and the creation of a unified community college system is realized, the goal of a common course-numbering system in the future should be pursued.

Recommendation

The Tennessee General Assembly may wish to consider whether transfer pathways should be created for all majors currently offered in Tennessee public higher education institutions as currently required by Section 49-7-202(d) and (e)(1), *Tennessee Code Annotated*, or whether it wishes to revise this section to allow a narrow exception for majors in those fields that, by their nature, are not consistent with transfer pathways. Regardless of the General Assembly's decision, the Tennessee Higher Education Commission should ensure that all transfer pathways required by the Complete College Tennessee Act of 2010 are developed as soon as possible, given that they were required by fall 2011.

The Tennessee Board of Regents and University of Tennessee Board of Trustees should ensure that all their institutions and campuses give significant attention to the Tennessee Transfer Pathways information on their home websites, including clearly and explicitly linking to the statewide website.

The Tennessee Higher Education Commission should take all steps necessary, including promulgating a formal policy, to require the adoption of dual-admission agreements between all public community colleges and four-year institutions to ensure that Section 49-7-202(g), *Tennessee Code Annotated*, is met so that any person who satisfies the admissions requirements of any public two-year institution and any public four-year institution may be admitted to both

such institutions. In addition, the Tennessee Higher Education Commission should ensure that the policy is fully implemented by institutions governed by both the Tennessee Board of Regents and the University of Tennessee Board of Trustees.

Finally, as the higher education community becomes more closely integrated, it should work toward the goal of adopting a statewide common course-numbering system.

(See page 40 for a joint response from the University of Tennessee, the Tennessee Board of Regents, and the Tennessee Higher Education Commission.)

2. Additional data validation and communication are needed to ensure that the new outcome-based funding approach achieves its goals

Finding

As mandated by the Complete College Tennessee Act (the Act), the Tennessee Higher Education Commission (THEC) worked with higher education stakeholders to change the basis on which Tennessee public higher education institutions are funded. Previously, colleges and universities were funded primarily based on the number of students enrolled. In contrast, the new approach funds schools based on outcomes, such as the number of graduates. This new approach has been formally used twice to develop higher education budget requests for the Governor and once to allocate state appropriations to public higher education academic units as of December 2011. Additional steps are needed to ensure that the new funding approach is based on accurate outcome data provided by the institutions, the mathematical calculations are clearly understood by major stakeholders, and the higher education community's future funding expectations are reasonable.

Funding Now Based on Outcomes, Not Enrollment

One of the Act's most significant reforms was the mandate to develop a completely new higher education funding allocation approach based on outcomes, rather than the prior approach's emphasis on enrollment. Specifically, Section 49-7-202(c)(4), *Tennessee Code Annotated*, directs THEC to

(4) Develop, after consultation with the board of regents and the University of Tennessee board of trustees, policies and formulae or guidelines for fair and equitable distribution and use of public funds among the state's institutions of higher learning that are consistent with and further the goals of the statewide master plan. The policies and formulae or guidelines shall result in an outcomes-based model. In developing an outcomes-based model, the commission shall consider factors unique to community colleges. The model shall emphasize outcomes across a range of variables that shall be weighted to reinforce each institution's mission and provide incentives for productivity improvements consistent with the state's higher education master plan. These outcomes shall include end of term enrollment for each term, student retention, timely progress

toward degree completion and degree production and may also include, but not necessarily be limited to, student transfer activity, research and student success, as well as compliance with transfer and articulation principles...

THEC met this mandate by creating a Formula Review Committee consisting of representatives from universities, community colleges, constitutional officers, General Assembly staff, and THEC itself to advise THEC staff on the new approach's development. The final result was an approach that intends to provide financial incentives to higher education institutions to achieve more clearly articulated state expectations while giving the institutions flexibility in how they meet those expectations. Tables 1 and 2 provide examples of the outcomes and other variables rewarded in the new allocation approach.

Table 1
New Tennessee Higher Education Commission Funding Allocation Approach
Example Community College Outcomes

Community College Outcomes	Description
Students Accumulating 12 Hours	The number of students reaching a benchmark of completing 12 credit hours during the academic year.
Students Accumulating 24 Hours	The number of students reaching a benchmark of completing 24 credit hours during the academic year.
Students Accumulating 36 Hours	The number of students reaching a benchmark of completing 36 credit hours during the academic year.
Transfers Out With 12 Hours	The number of students who earned a minimum of 12 credit hours and then transferred to another institution.
Degrees and Certificates per 100 FTE	The total number of certificates and associate degrees awarded per 100 year-round end-of-term students at the end of an academic year.
Remedial and Developmental Success	The number of students who were previously enrolled in a remedial or developmental course at a university and successfully complete a college level course within the first three years of enrollment.
Dual Enrollment	The number of students enrolled in a dual enrollment program at any time during an academic year.
Job Placements	The number of students obtaining a job in a related field by June 30 th of the following year after they graduate.
1 to 2 Year Certificates	The total number of certificates awarded during an academic

	year that require 24 credit hours or more to complete.
Less than 1 Year Certificates	The total number of certificates awarded during an academic year that require less than 24 credit hours to complete.
Associates	The number of associate degrees awarded during an academic year.

Table 2
New Tennessee Higher Education Commission Funding Allocation Approach
Example University Outcomes

University Outcomes	Description
Transfers Out With 12 Hours	The number of students who earn a minimum of 12 credit hours and transfer to another institution.
Degrees and Certificates per 100 FTE	The total number of certificates, associate degrees, and bachelor's degrees awarded per 100 year-round end-of-term undergraduate students at the end of an academic year.
Student Accumulating 24 Hours	The number of students reaching a benchmark of completing 24 credit hours during the academic year.
Students Accumulating 48 Hours	The number of students reaching a benchmark of completing 48 credit hours during the academic year.
Students Accumulating 72 Hours	The number of students reaching a benchmark of completing 72 credit hours during the academic year.
Bachelors and Associates	The total number of bachelor's and associate degrees awarded during an academic year.
Doctoral/ Law Degrees	The total number of law degrees and doctoral degrees awarded during an academic year.
Master's/Ed. Specialist Degrees	The total number of master's and education specialist degrees awarded during an academic year
Research and Service	External funding for research, service, or instruction.
Six-Year Graduation Rate	The number of students who graduate within six years of their enrollment date.

Annual Funding Process

The annual funding process begins with individual institutions submitting outcome data about their students to their respective governing boards. In turn, the governing boards aggregate the data before submitting it to THEC. The institutions and governing boards decide which specific outcome data to extract from their computer systems to provide to THEC based on a data dictionary provided by THEC.

THEC staff then take the outcome data and enter the data into a spreadsheet program, typically referred to as the “formula,” to run the data through the formula set up by the Formula Review Committee. The calculation’s result is a total dollar amount that each institution has theoretically earned for the next budget year according to the formula.

THEC uses this spreadsheet result in two ways. First, the spreadsheet result is used to help generate the higher education community’s annual budget request for the Governor. In theory and when resources are abundant, THEC would simply use the formula, without any adjustments, to identify and then request a specific dollar amount earned by the institutions based on their outcomes. Due to statewide budget constraints, however, the state is unlikely to be able to afford to fund the complete formula results in the foreseeable future. In addition, the Governor has issued specific instructions to THEC and other state agencies to reduce their budget requests in recent years. Therefore, for the two budget cycles the funding formula has been in place to date (fiscal years ending June 30, 2012, and 2013), THEC staff have started with the spreadsheet results and then adjusted the request considering several variables such as the Governor’s directives, state budget priorities, and phase-in considerations, while also attempting to ensure the institutions receive sufficient appropriations to encourage desired outcomes.

Once the legislative budget process is complete, THEC also uses the spreadsheet to decide how to distribute appropriated funds. Specifically, the formula’s unadjusted results, which are basically a dollar amount earned by each institution based on its outcomes, would be totaled, and then each institution’s contribution to that total would be converted into a percentage. The percentages, or pro-ratios, would then be applied to the actual, total amount received to determine how much actual funding would be allocated to each institution.

This process was used to distribute actual funding for the budget year ending June 30, 2012, and is expected to be used again for the budget year ending June 30, 2013.

Improvements Needed in Funding Process

As the new outcome-based funding approach and process matures, some gaps in the system are becoming evident and need to be addressed. First, the institutions and governing boards need additional THEC guidance and controls in place to ensure they provide both the correct outcome data and that the data are accurate. Second, the formula, now only available in spreadsheet form, also needs to be documented and described in a narrative format to ensure that it is readily understandable.

Data dictionary needs additional detail – The current version of the data dictionary does not appear to be meeting users’ needs. As described previously, the institutions and governing boards decide which specific data to extract from their systems to provide to THEC based on a data dictionary provided by THEC. The data dictionary technically defines and describes the various data elements the governing boards submit to THEC. Therefore, it is critical that this dictionary be clear to ensure that the data ultimately used by THEC in the funding allocation formula are accurate and the same across all institutions.

Users, however, have not found the current version of data dictionary to be as useful as possible. For example, a university chancellor reports that the institutions need more instruction and better definitions on how to pull data used in the formula. He was especially concerned because his institution had reviewed THEC’s figures and had not been able to produce the same results. Similarly, a governing board representative reports that the current data dictionary is not as complete as other states, and is very vague. As a result, the Tennessee Board of Regents is in the process of developing its own data dictionary to provide to its institutions.

Data used in formula subjected to limited checks – Additionally, the institutions and governing boards need to take additional steps to verify that the data they provide to THEC for use in the formula are both consistent with the THEC data dictionary and based on fact. For example, concerning the latter, more needs to be done to ensure that if an institution reports that 1,000 students graduated, 1,000 students actually did graduate as opposed to 900. Because the formula is the primary method through which higher education institutions’ academic units are funded, it is imperative that the data run through the formula are accurate. While THEC and governing boards take some steps to review the data, those data are essentially unaudited.

As previously discussed, data used in the funding formula originate from a variety of sources, including individual institutions’ databases. Currently, the governing boards, including THEC, take some steps, but not extensive ones, to ensure that the institutions’ data are as accurate as possible. For example, THEC’s computer system is programmed to conduct edit checks, which are automated reviews of the data to look for illogical or impossible data entries. Such an edit check might flag data stating that a student was born in a future year. Also, THEC staff report that they compare data from year to year to ensure there are not any unexpected or unusual changes in reported data and follow up on any anomalies detected to identify the correct information.

While these systems and other checks are important, more needs to be done to ensure that the institutional data are as accurate and consistent with the data dictionary as possible. Specifically, the University of Tennessee Board of Trustees (UT Board) and the Tennessee Board of Regents (TBR) need to start conducting full audits on the institutions’ outcome data. Such audits could include independently comparing data entries to any hard-copy records to ensure the underlying data are supportable and that the system correctly extracts and calculates totals in accordance with THEC guidance.

As of November 2011, none of the governing boards conducted audits focusing on the outcome data. Although the UT Board’s and TBR’s internal auditors acknowledge the need to audit this information, the formula represented such a dramatic change from the prior funding

system and was so complex that audit work could not start immediately upon the Act's passage. Rather, internal auditors worked with each other, THEC staff, and their respective governing boards' staff for the first year to understand the formula and how it would be used. TBR's internal auditor anticipates auditing the data in 2012 and 2013. The UT Board's interim internal auditor reports that plans to audit the data beginning in 2012 will likely be put on hold because of audit staff vacancies.

Spreadsheet-based formula needs to be further documented – Currently, THEC does not have any written, narrative documentation describing how the spreadsheet works. Rather, the full formula is only available through a series of unusually complex Microsoft Excel workbooks on THEC's website. While disclosing a copy of the spreadsheets on the website attempts to provide some transparency to the institutions and the public, the spreadsheet is complex enough that the average spreadsheet user is unlikely to understand it.

A lack of easily understandable documentation can lead to misunderstandings about the formula and its operations. For example, there was initially confusion among the higher education community about whether community college certificates requiring less than 24 credit hours would be counted in the formula. THEC staff's understanding was that these certificates would not be counted. Because THEC staff are responsible for writing and running the actual formula spreadsheets, these certificates were not included in the formula's first use for the fiscal year ending June 30, 2012, budget. However, numerous community college representatives had understood that these certificates would be counted. In part, the discrepancy may not have been noticed earlier by the community college community because the online spreadsheet is so complex. Once the issue was identified and raised, THEC resolved the discrepancy by notifying the General Assembly in October 2011 that it would adjust the formula spreadsheets to count these certificates in the future.

Funding Expectations Need to Be Reasonable

While THEC can take steps to improve how the formula is implemented and communicated, the higher education community also needs to ensure that its expectations for future funding based on the allocation formula are reasonable. Several key higher education community members expressed to auditors that while the higher education community was willing to accept changes brought by the Act, this support was dependent on institutions receiving full funding in the future under the new funding formula. These expectations are unlikely to be met given the state's recent past, current, and likely ongoing fiscal constraints. Yet the need for ongoing changes will likely continue. Therefore, as with all state agency stakeholders, the higher education community needs to ensure that future state funding expectations are reasonable despite a changing and challenging environment.

Recommendation

The Tennessee Higher Education Commission needs to work with the Tennessee Board of Regents, the University of Tennessee Board of Trustees, and their component institutions to identify how it needs to improve its funding formula component data dictionary and make revisions as necessary. The revised data dictionary will need to be widely distributed to the individual institutions and governing boards.

The University of Tennessee Board of Trustees and the Tennessee Board of Regents need to start conducting full audits of their higher education institutions' data used in the funding allocation formula. These audits are necessary to ensure that the Tennessee Higher Education Commission's budget request and funding allocations for the state's higher education institutions are accurate and fair.

The Tennessee Higher Education Commission needs to improve its funding formula and related data components' documentation. Specifically, the Tennessee Higher Education Commission should write and widely publish an understandable narrative of the funding formula, which can be used by institutions and other key stakeholders to ensure the formula functions as expected.

(See page 40 for a joint response from the University of Tennessee, the Tennessee Board of Regents, and the Tennessee Higher Education Commission.)

3. The Tennessee Higher Education Commission is taking steps to avoid and address unnecessary program duplication

Finding

The Tennessee Higher Education Commission (THEC) has made changes in order to improve statewide efficiencies by reducing unnecessary redundancies in academic program offerings. First, in compliance with the Complete College Tennessee Act of 2010 (the Act), THEC worked with higher education institutions to develop new mission profiles for all the state's public community colleges and universities, which will be used to identify institutions' unique areas of academic specialization. Additionally, THEC strengthened the existing program review process.

New Mission Profiles Developed

Consistent with the Act, THEC directed all state colleges and universities to develop new mission profiles. Section 49-7-202(c)(2), *Tennessee Code Annotated*, specifically directs THEC to

In consultation with the respective governing boards, approve institutional mission statements concurrent with the adoption of each revised statewide master plan. An institutional mission statement shall characterize the institution by

stating its distinctiveness in degree offerings by level and focus and student characteristics, including, but not limited to, nontraditional students and part-time students, and shall address institutional accountability for the quality of instruction, student learning and, where applicable, research and public service to benefit Tennessee citizens. Nothing contained in this section shall prohibit any institution from pursuing research and related activities that are consistent with the institution's mission;

The new mission statements are primarily intended to identify each institution's areas of specialization. In turn, THEC uses these stated specializations when deciding which proposed programs should be approved in order to avoid unnecessary program duplication (as discussed later in this finding). While each institution may have had its own mission statement in the past, the Act provided first time authority for THEC to be involved at the statewide oversight level.

THEC worked with the Tennessee Board of Regents (TBR) and the University of Tennessee Board of Trustees (UT Board), who in turn worked with their individual institutions and campuses, to develop the new mission profiles. Specifically, THEC initiated the process by compiling and providing consistent data about each institution, such as the number of types of degrees granted, the amount of research activity conducted, the average freshman student's standardized testing score, and the percent of adult and part-time students. Additionally, THEC provided and the resulting mission profiles focused heavily on the institution's Carnegie Classification, which is a nationally recognized method of describing and categorizing higher education institutions based on factors such as the type and number of degrees awarded, amount of research performed, and the nature of the community where the institution is located (such as rural or urban).

Based on this information, the institutions drafted mission profiles, which were reviewed and ultimately approved by their respective governing boards. In turn, the UT Board and TBR submitted the profiles to THEC for its review. THEC officials report that THEC staff actively reviewed the profiles and worked with governing boards and institutions to make needed changes. Ultimately, THEC approved all the profiles in November 2010. Examples of approved mission profiles are located on Exhibits 1-3.

Exhibit 1
An Example of a Tennessee Public Higher Education Institution's Mission Profile
As of Fall 2011

Southwest Tennessee Community College

Southwest Tennessee Community College is a comprehensive public two-year college that serves the diverse population of Memphis and the surrounding Mid-South region at two main campuses, four centers, and smaller instructional sites located across its service area of Shelby and Fayette counties. Southwest prepares students for transfer to universities through the offering of Associate of Arts, Associate of Science, and Associate of Science in Teaching degrees and for immediate career entry and advancement through twenty-six (26) Associate of Applied Science degrees and twenty-one (21) Technical Certificates. Located in a major medical and commercial center, Southwest emphasizes nursing, allied health, business and technology programs while also offering a strong university parallel curriculum. In response to emerging areas of community need, Southwest has initiated new programs such as Homeland Security Assessment and Biotechnology and has also infused Green and Sustainability instruction in existing curricula. The majority of Southwest's 13,000+ students are females, minorities, low income, and academically unprepared. Southwest offers a comprehensive program of developmental education to support the 90% of entering freshmen who need remediation before taking college-level courses. More than 70% of degree-seeking new freshmen and 50% of all students receive need-based financial aid. Public service activities at Southwest include Service Learning activities across the curriculum, the Upward Bound program for high school students, a Gear-Up program for middle school students, an Educational Opportunity Center for adult learners, and sponsorship of a Tennessee Small Business Development Center. In partnership with the Memphis Regional Chamber, Southwest has established the Mid-South Quality-Productivity Center which provides services to businesses and organizations at the regional, national and international levels.

Source: Tennessee Higher Education Commission.

Exhibit 2
An Example of a Tennessee Public Higher Education Institution's Mission Profile
As of Fall 2011

Austin Peay State University

Austin Peay State University is a moderately selective institution in Clarksville, northwest of Nashville. Having reached enrollment of over 10,000 undergraduate students in 2009 Austin Peay continues to be the fastest-growing university among the Tennessee Board of Regents' institutions. With a Carnegie Classification of a Master's Medium Institution, Austin Peay also has the fastest-growing graduate student population in the state. Austin Peay combines a solid foundation in the liberal arts with strong professional programs. The university emphasizes disciplines in the arts but also emphasizes professional disciplines in business, education, health sciences, and STEM [science, technology, engineering, and mathematics] fields. It predominantly serves undergraduate students throughout Middle Tennessee and provides additional programming and services focusing on adult, first-generation, low socio-economic, military, minority, and high- performing students.

Source: Tennessee Higher Education Commission, except bracketed information provided for clarification.

Exhibit 3
An Example of a Tennessee Public Higher Education Institution's Mission Profile
As of Fall 2011

The University of Tennessee - Knoxville

The primary mission of the University of Tennessee, Knoxville, is to move forward the frontiers of human knowledge and enrich and elevate the citizens of the state, the nation, and the world. As the preeminent research-based land-grant university in the state of Tennessee, UTK embodies the spirit of excellence in research, teaching, and engagement attained by the nation's finest public research institutions. The UTK Carnegie Classification is: Research University (very high research activity). Most undergraduates are full-time and admission is selective with a fairly low transfer-in rate. Admission to graduate programs is also competitive. Graduate offerings range from professional master's to doctoral programs focused both on research and on practice. Nationally ranked graduate programs in supply chain management and logistics, business administration, print making, social work, law, and nuclear engineering combined with partnerships at Oak Ridge National laboratories are among the unique characteristics of graduate study at UTK. Undergraduate programs in business and engineering are also nationally ranked. The governor has challenged UTK to become a top 25 public research university, and we are developing a strategic plan to reach that goal.

Source: Tennessee Higher Education Commission.

Mission profiles critical to help avoid creating unnecessarily redundant academic programs – These revised mission statements are key to improving state efficiency because they define each institution’s specialization(s). THEC uses these stated specializations when deciding which proposed programs should be approved. If the mission statements are not meaningful or distinctive, it will be more difficult for THEC to screen program proposals and avoid unnecessary academic program duplication.

Specifically, THEC revised policies in July 2011 to require that any institution that requests permission to begin the process of formally exploring the possibility of proposing a new program must explain how the potential program is consistent with its THEC-approved mission profile. Revised THEC Academic Policy A1.0.50 states:

. . . Programs that institutions intend to develop should be consistent with and reference institutional mission, the state master plan for higher education, and campus master plan or the academic plan. A thorough early assessment of program justification is necessary for programs requiring Commission approval in order to identify issues relative to the need for the program, program duplication, accessibility through collaboration or alternative means of delivery (distance education), source of start-up funds, and the need for reviews by external consultants.

Similarly, Academic Policy A1.1.20A states, “Proposed new programs must adhere to the role and scope as set forth in the approved mission of the institution.”

Once approved by THEC, the institution can then develop a formal, thorough plan for the proposed program, which must be approved by the institution’s governing board before submission to and review by THEC for final approval. All new programs are specially monitored for their first three or five years in operation, based on whether they are associate or higher degree, respectively.

Questions remain about the quality of the mission profiles and their role in the new program approval – While THEC ultimately approved all of the new mission profiles and the process used to develop the mission profiles appears to have been reasonable, not all local institutional leaders found the process and/or its outcome to be meaningful. For example, auditors interviewed presidents, chancellors, or their designees from eight randomly selected public higher education institutions across Tennessee, including institutions governed by both the UT Board and TBR, as well as community colleges institutions awarding bachelor’s degrees. Six of the eight reported that their institution’s mission profile had not changed dramatically, if at all.

Not enough time has elapsed to evaluate whether the mission profiles have been useful for THEC in considering whether to approve new proposed academic programs. The mission profiles have only been in place since November 2010. Also, THEC policy requiring institutions to articulate how new proposed programs fit within their mission profile has only been in place since July 2011.

As the implementation of the mission profile requirement continues, THEC will need to be especially vigilant in monitoring the usefulness and appropriateness of these mission profiles and take appropriate steps if they prove to be unhelpful, especially as it relates to avoiding the creation of duplicated academic programs. If THEC ever determines that the mission profiles need to be updated, it may specifically wish to consider contacting other states to determine whether they use any other potentially helpful mission differentiation tools. For example, rather than focusing on Carnegie Classification, the State of Oklahoma's process asks institutions to define their top functions, such as type of program, research work, and services they provide, and articulate how those functions relate to economic development. Mission statements are then developed around those functions.

Existing Degree Programs Will Be Reviewed More Frequently

As with the new program approval process, THEC has taken steps to increase the frequency of scrutiny on existing programs, which theoretically should increase the likelihood that unnecessarily duplicated programs are eliminated. The number of graduates is the primary outcome measure used to identify struggling, including unnecessarily duplicated, academic degree programs which need to be reviewed for potential termination. Specifically, THEC staff use a THEC database to identify programs which graduated fewer than the following average number of students during the past five years:

- bachelor's degree programs: ten graduates;
- master's degree programs: five graduates; and
- doctoral degree programs: three graduates.

THEC reports that these thresholds have been in place for over 30 years and are consistent with other states' practices.

Prior to January 2011, THEC's practice was to have its staff identify such degree programs for review every three to ten years depending on the type of degree. Starting in January 2011, THEC staff began to annually examine graduation data, which will result in annual reviews of low-producing programs. For the January 2011 review, THEC staff identified which programs had previously qualified for review, examined their more recent graduation rates, and subjected those programs which were continuing to miss the graduation benchmarks to review as a part of the January 2011 review. For the January 2012 review and for future years, THEC will review all programs' average five-year graduation rates in order to identify which programs should be subject to review.

THEC provides the lists of those degree programs which do not meet the graduation benchmarks and a THEC-prescribed form to TBR and the UT Board. The boards then work with their respective institutions to review these programs and propose whether each program will be terminated, inactivated, consolidated, or retained. Sometimes low-producing programs need to be continued because they are in core fields of study and their classes are needed by students seeking other degrees, such as math.

While the completed forms, including justifications for program dispositions, are returned to THEC, THEC has no legal authority to terminate existing degree programs. Rather, the governing boards make the final determination. Still, the THEC manager overseeing the 2012 process reports that the institutions, the UT Board, and TBR appear to be reviewing programs in a meaningful manner and he expects several programs to be proposed for termination, based on information and feedback he has received as of January 2012. While initial feedback is positive, not enough time has elapsed to evaluate whether the revamped process will be adequate to ensure that existing programs are also thoroughly examined with an eye toward maximizing state efficiency and effectiveness.

In the future, if the existing degree review program proves insufficient, the General Assembly may wish to consider whether THEC, rather than TBR and the UT Board, should be given statutory authority to terminate programs. The purpose of this authority change would be to provide an additional level of oversight from a statewide perspective. Additionally, it would make the process more consistent with the new degree proposal creation process. Oklahoma and Texas both assign this authority to their statewide higher education coordination board. Similarly, while individual institutions in Indiana currently have the final authority to terminate existing programs, legislation has been filed in their current legislative session to expand their statewide coordinating board's authority to terminate programs.

Recommendation

The Tennessee Higher Education Commission should monitor the results of the institutional mission profiles process. If the Tennessee Higher Education Commission determines in the future that the mission profiles need to be more modified to make them more useful, it will need to take specific steps to appropriately improve their quality and meaningfulness. If this is the case, the Tennessee Higher Education Commission should consider the experiences of other states to determine if they are using any different, but potentially useful, mission differentiation tools.

If it becomes clear in the future that the revised mature degree review process does not provide sufficient, meaningful results, the General Assembly may wish to consider whether the Tennessee Higher Education Commission, rather than the Tennessee Board of Regents and the University of Tennessee Board of Trustees, should be given statutory authority to terminate programs.

(See page 40 for a joint response from the University of Tennessee, the Tennessee Board of Regents, and the Tennessee Higher Education Commission.)

OBSERVATIONS AND COMMENTS

The topics discussed below did not warrant a finding but are included in this report because of their effect on Tennessee public higher education operations and on the citizens of Tennessee.

Community Colleges Expanding the Use of Block Scheduling

The Tennessee Board of Regents (TBR) and its member community colleges are taking numerous steps to expand their use of block scheduling. Specifically, Section 49-8-101(c)(4), *Tennessee Code Annotated*, requires TBR to “. . . incorporate the use of block scheduling and cohort programming as a means of delivering education programs within the Tennessee community college system.”

Block scheduling in this context refers to scheduling classes not on a one-by-one basis, but rather together as a group. For example, a block might be scheduled every Monday through Thursday from 8am to 1pm. Additionally, the same students attend classes together for the program’s duration, forming a cohesive cohort, which has been found to deepen and accelerate student learning. Block scheduling and/or cohort schedules are also thought to improve outcomes by making programs more predictable for students, clearly identifying student costs up-front, allowing clearer curriculum integration, providing a built-in student support group, and allowing for easier work and family scheduling.

The Tennessee Technology Centers, which widely use block scheduling among other components, are generally considered highly successful. For example, 75% of enrolled students completed their programs, and 83% found employment in their training field according to a 2010 report by Complete College America. Complete College America, a national non-profit focused on increasing the number of college graduates in America, commissioned a study and reported that the block scheduling is key to this success rate. There are other factors besides block scheduling that may contribute greatly to the Centers’ success. Notably, over 70% of the Center’s students qualify for Wilder-Naifeh Student Scholarships, which are designed to cover a significant portion of tuition, encouraging students to remain in school.

Tennessee’s community colleges are currently expanding their use of block scheduling. TBR management reports that prior to passage of the Complete College Tennessee Act of 2010 (the Act), several Tennessee community colleges already offered some form of block scheduling, including Walters State, Pellissippi State, and Motlow State Community Colleges. Similarly, many community colleges offered nursing programs and some early childhood education programs via block schedules.

Since the Act’s passage, TBR and community colleges have expanded these efforts. For example, TBR received a three-year grant from the Lumina Foundation for Education with the goal of increasing the number of degrees and certificates produced within existing resources.

Tennessee's plan for the grant is to develop a statewide approach and adoption of block scheduling programs throughout the state's community colleges. As of November 2011, the grant was in its second of three years and was being used to pilot several new block-scheduled programs across the state in fields such as general education and pre-health. TBR is in the process of designing additional block programs in industry-related topics, such as logistics, which will be able to be implemented in community colleges statewide.

There are no well-known or well-regarded studies that examine the success of block scheduling in Tennessee community colleges. However, the Lumina grant includes funding for an evaluation examining the success of the block-scheduled programs piloted using the grant's funding in Tennessee.

Key State Policies Do Not Consistently Encourage College Students to Graduate Within Four Years

Major state policies and statutes passed by the Tennessee Higher Education Commission (THEC), the Board of Regents (TBR), the University of Tennessee Board of Trustees (UT Board), and the General Assembly do not consistently encourage public higher education institutions to graduate the maximum number of bachelor's-degree-seeking students within four years of admission. Some key policies, including parts of the Act-mandated, outcome-based higher education funding formula, encourage universities to focus on longer periods, such as six years. For example, as explained in Finding 2, two key elements in the outcome-based funding formula for universities are the six-year graduation rate and the number of students completing increments of 12 credit hours. Students need to complete approximately 15 hours per semester in order to graduate in four years—equivalent to passing five 3-credit-hour courses per semester. THEC officials report that THEC staff selected these elements, rather than those predicated on four-year graduation rates, for inclusion in the funding formula because the factors are consistent with national standards. Other elements of the funding formula do encourage institutions to graduate students quickly but do not explicitly mention four years. For example, institutions are rewarded when students graduate.

Other key state policies also do not encourage graduation within four years. For example, state universities often set their tuition fees in a way that encourages students to progress towards a bachelor's degree at a rate slower than would be required to graduate in four years. For example, the University of Tennessee at Knoxville's fall 2011 semester undergraduate tuition fees were capped at \$4,198 for in-state students and \$12,769 for out-of-state students at and above 12 credit hours. This may be due in part to national federal student aid guidelines, which define full-time as 12 credit hours. However, as mentioned previously, full-time students need to earn approximately 15 credit hours per semester in order to graduate in four years. Similarly, HOPE Scholarship eligibility requirements in place as of fall 2011, as set forth throughout Section 49-4-913, *Tennessee Code Annotated*, allow students to receive the scholarship for up to five years although how the five-year period is defined differs based on the type of student and when the student first received the scholarship.

Complete College America, a non-profit organization that provided considerable impetus for the passage of the Act, released a study in September 2011, which found that bachelor's degree students ideally should graduate within four years because less than a quarter of part-time students ever graduate (as measured at eight years), and students that attend college beyond the traditional four-year period statistically do not significantly increase their likelihood of graduation. Other current higher education reform efforts also focus on moving students toward graduation in a timely manner. For example, the State of Tennessee was one of 10 states that received a Bill and Melinda Gates Foundation grant in July 2011 to increase graduation rates and reduce students' time to earn their degree. Specifically, this grant will be used to increase access to technology-based student advising tools, develop additional tools to help institutions evaluate and award credit for prior learning, and fund efforts to help institutions develop additional strategies to meet completion targets.

Although higher education institutions' efficiency would likely benefit from more bachelor's-degree-seeking students earning their degrees within four years, not all students can attend full-time. Students are often limited by finances, work commitments, family commitments, or health. Additionally, some students may need more time to explore multiple academic fields.

RECOMMENDATIONS

LEGISLATIVE

This performance audit identified areas in which the General Assembly may wish to consider statutory changes to improve the efficiency and effectiveness of the operations of the state's public higher education system.

1. The Tennessee General Assembly may wish to consider whether transfer pathways should be created for all majors currently offered in Tennessee public higher education institutions as currently required by Section 49-7-202(d) and (e)(1), *Tennessee Code Annotated*, or whether it wishes to revise this section to allow a narrow exception for majors in those fields that, by their nature, are not consistent with transfer pathways.
2. If it becomes clear in the future that the revised existing degree review process does not provide sufficient, meaningful results, the General Assembly may wish to consider whether the Tennessee Higher Education Commission, rather than the Tennessee Board of Regents and the University of Tennessee Board of Trustees, should be given statutory authority to terminate programs.

ADMINISTRATIVE

The Tennessee Higher Education Commission should address the following areas to improve the efficiency and effectiveness of its operations.

1. The Tennessee Higher Education Commission should ensure that all transfer pathways required by the Complete College Tennessee Act of 2010 are developed as soon as possible, given that they were required by fall 2011.

The Tennessee Higher Education Commission should take all steps necessary, including promulgating a formal policy, to require the adoption of dual-admission agreements between all public community colleges and four-year institutions to ensure that Section 49-7-202(g), *Tennessee Code Annotated*, is met so that any person who satisfies the admissions requirements of any public two-year institution and any public four-year institution may be admitted to both such institutions. Additionally, the Tennessee Higher Education Commission should ensure that the policy is fully implemented by both the Tennessee Board of Regents and the University of Tennessee Board of Trustees governed institutions.

2. The Tennessee Higher Education Commission needs to work with the Tennessee Board of Regents, the University of Tennessee Board of Regents, and their

component institutions to identify how it needs to improve its funding formula component data dictionary and make revisions as necessary. The revised data dictionary will need to be widely distributed to the individual institutions and governing boards.

3. The Tennessee Higher Education Commission needs to improve its funding formula and related data components' documentation. Specifically, the Tennessee Higher Education Commission should write and widely publish an understandable narrative of the funding formula that can be used by institutions and other key stakeholders to ensure the formula functions as expected.
4. The Tennessee Higher Education Commission should monitor the results of the institutional mission profiles process. If the Tennessee Higher Education Commission determines in the future that the mission profiles need to be modified to make them more useful, it will need to take specific steps to appropriately improve their quality and meaningfulness. If this is the case, the Tennessee Higher Education Commission should consider the experiences of other states to determine if they are using any different, but potentially useful, mission differentiation tools.

The University of Tennessee Board of Trustees should address the following areas to improve the efficiency and effectiveness of its operations.

1. The University of Tennessee Board of Trustees should ensure that all its institutions and campuses give significant attention to the Tennessee Transfer Pathways information on their home websites, including clearly and explicitly linking to the statewide website.
2. The University of Tennessee Board of Trustees needs to start conducting full audits on its higher education institutions' data used in the funding allocation formula. These audits are necessary to ensure that the Tennessee Higher Education Commission's budget request and funding allocations for the state's higher education institutions are accurate and fair.

The Tennessee Board of Regents should address the following areas to improve the efficiency and effectiveness of its operations.

1. The Tennessee Board of Regents should ensure that all its institutions and campuses give significant attention to the Tennessee Transfer Pathways information on their home websites, including clearly and explicitly linking to the statewide website.
2. The Tennessee Board of Regents needs to start conducting full audits on its higher education institutions' data used in the funding allocation formula. These audits are necessary to ensure that the Tennessee Higher Education Commission's budget request and funding allocations for the state's higher education institutions are accurate and fair.

Appendix 1
Public Acts 2010, Public Chapter No. 3
Complete College Tennessee Act of 2010

AN ACT to amend Tennessee Code Annotated, Title 49, Chapter 7, Chapter 8, Chapter 9, relative to higher education.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF TENNESSEE:

SECTION 1. This act shall be known and may be cited as the "Complete College Tennessee Act of 2010".

SECTION 2. Tennessee Code Annotated, Section 49-7-202, is amended by deleting subdivision (c)(3)(C) in its entirety.

SECTION 3. Tennessee Code Annotated, Section 49-7-202, is amended by deleting subdivisions (c)(1) and (c)(2) in their entireties and by substituting instead the following language:

(1) Develop a statewide master plan for future development of public universities, community colleges and technology centers with input from the board of regents and the University of Tennessee board of trustees. The commission shall engage public universities, community colleges and technology centers for input during the creation of the master plan. The commission shall construct a statewide master plan that directs higher education to be accountable for increasing the educational attainment levels of Tennesseans. This master plan shall be reviewed and revised as deemed appropriate by the commission. This plan shall include, but not be limited to, the consideration of the following provisions:

(A) Addressing the state's economic development, workforce development and research needs;

(B) Ensuring increased degree production within the state's capacity to support higher education; and

(C) Using institutional mission differentiation to realize statewide efficiencies through institutional collaboration and minimized redundancy in degree offerings, instructional locations and competitive research;

(2) In consultation with the respective governing boards, approve institutional mission statements concurrent with the adoption of each revised statewide master plan. An institutional mission statement shall characterize the institution by stating its distinctiveness in degree offerings by level and focus and student characteristics including, but not limited to, non-traditional students and

part-time students, and shall address institutional accountability for the quality of instruction, student learning and, where applicable, research and public service to benefit Tennessee citizens. Nothing contained in this act shall prohibit any institution from pursuing research and related activities that are consistent with the institution's mission;

(3) Make recommendations to the governing boards of the various institutions and the governor, as well as the general assembly, through the Education Committees of the Senate and the House of Representatives on the implementation of the master plan. Funding recommendations made by the commission shall reflect the priorities of the approved master plan. In developing the master plan, the commission shall engage regional and statewide constituencies to ensure that the document supports the development of a public agenda to provide higher education opportunities to benefit Tennessee citizens. In doing so, the commission shall establish a master plan that requires a broad degree of regional cooperation between postsecondary institutions with secondary institutions and business, civic and community leaders;

(4) Develop, after consultation with the board of regents and the University of Tennessee board of trustees, policies and formulae or guidelines for fair and equitable distribution and use of public funds among the state's institutions of higher learning that are consistent with and further the goals of the statewide master plan. The policies and formulae or guidelines shall result in an outcomes-based model. In developing an outcomes-based model, the commission shall consider factors unique to community colleges. This model shall emphasize outcomes across a range of variables that shall be weighted to reinforce each institution's mission and provide incentives for productivity improvements consistent with the state's higher education master plan. These outcomes shall include end of term enrollment for each term, student retention, timely progress toward degree completion and degree production and may also include, but not necessarily be limited to, student transfer activity, research, and student success, as well as compliance with transfer and articulation principles in subsection (e) of this section;

(A) The policies and formulae or guidelines as are developed by the commission shall include provisions for capital outlay programs and operating expenses, and shall be utilized to determine the higher education appropriations recommendation. The commission shall submit the revised higher education funding formula to the office of legislative budget analysis and the comptroller of the treasury no later than December 1 of each year. The commission shall also report any projected tuition increases for the next academic year to the office of legislative budget analysis and the comptroller of the treasury no later than December 1 of each year. The office of legislative budget analysis and the comptroller of the treasury shall each provide comments on the higher education funding formula to the chairs of the education and finance,

ways and means committees of both houses of the general assembly;

(B) Additionally, the policies and formulae or guidelines shall provide for the consideration of the impact of tuition, maintenance fees and other charges assessed by each institution in determining the fair and equitable distribution of public funds as required by this subdivision (4). The commission shall therefore review tuition, maintenance fees and other charges assessed by each institution and make recommendations to the governing boards of the various institutions regarding adjustments;

(C) In the implementation of this function, the commission, in cooperation with the Commissioner of Finance and Administration and the comptroller of the treasury, shall establish uniform standards of accounting, records and statistical reporting systems in accordance with accepted national standards, which standards shall be adhered to by the various institutions in preparing for submission to the commission statistical data and requests for appropriations;

(D) The commission shall have no authority for recommending individual technology centers' operating budgets nor in approving or disapproving the transfer of any funds between technology centers deemed necessary by the board of regents to carry out the provisions of Acts 1983, Ch. 181. For fiscal years ending on and after June 30, 2013, the commission shall have no authority for recommending individual community colleges operating budgets or in approving or disapproving the transfer of any funds between community colleges as may be determined necessary by the board of regents;

(E) Before any subsequent amendment or revision to the formulae or guidelines for fair and equitable distribution and use of public funds SECTION 4. Tennessee Code Annotated, Section 49-7-202, is amended by deleting subsections (e) and (f) in their entireties and by substituting instead the following:

(e)(1) The commission shall develop a university tract program within the University of Tennessee and the Tennessee board of regents systems consisting of sixty (60) hours of instruction that can be transferred and applied toward the requirements for a bachelor's degree at the public universities. The tract shall consist of forty-one (41) hours of general education courses instruction and nineteen (19) hours of pre-major courses instruction, or elective courses instruction that count toward a major, as prescribed by the commission, which shall consider the views of chief academic officers and faculty senates of the respective campuses. Courses in the university tract program shall transfer and apply toward the requirements for graduation with a bachelor's degree at all public universities.

(A) An associate of science or associate of arts degree graduate from a Tennessee community college shall be deemed to have met all general education and university parallel core requirements for transfer to a Tennessee public university as a junior. Notwithstanding this subdivision (A), admission into a particular program, school or college within the university; or into the University of Tennessee, Knoxville shall remain competitive in accordance with generally applicable policies.

(i) The forty-one (41) hour lower division general education core common to all state colleges and universities shall be fully transferable as a block to, and satisfy the general education core of, any public community college or university. A completed subject category (for example, natural sciences or mathematics) within the forty-one (41) hour general education core shall also be fully transferable and satisfy that subject category of the general education core at any public community college or university.

(ii) The nineteen (19) hour lower division AA/AS area of emphasis articulated to a baccalaureate major shall be universally transferable as a block satisfying lower division major requirements to any state university offering that degree program major.

(2) It is the legislative intent that community college students who wish to earn baccalaureate degrees in the state's public higher education system be provided with clear and effective information and directions that specify curricular paths to a degree. To meet the intent of this section, the commission, in consultation with the board of regents and the University of Tennessee board of trustees, shall develop, and the board of regents and the University of Tennessee board of trustees shall implement the following:

(A) A common course numbering system, taking into consideration efforts already undertaken, within the community colleges to address the requirements of subdivision (e)(1) of this section; and

(B) Listings of course offerings that clearly identify courses that are not university parallel courses and therefore not designed to be transferable under the provisions of subdivision (e)(1) of this section.

(3) The provisions of this subsection (e) shall be fully implemented no later than the fall 2011 semester. Beginning with the fall 2010 semester and continuing until this subsection is fully implemented, prior to the beginning of each semester, the commission shall report to the chairs of the Education and Finance, Ways and Means Committees of both the House of Representatives and the Senate on the progress made toward completion of the nineteen (19) pre-major course blocks provided in subsection (e)(1)(A)(ii) of this section.

(f) The commission shall have ongoing responsibility to update and revise the plans implemented pursuant to subsections (d) and (e) and report to the chairs of the Education and Finance, Ways and Means Committees in both the House of Representatives and the Senate no later than October 1 of each year on the progress made toward full articulation between all public institutions.

SECTION 5. Tennessee Code Annotated, Section 49-7-202(h), is amended by deleting the last sentence in its entirety and by substituting instead the following:

The committee shall prepare an annual report on its recommendations and shall make that report to the governor, the select oversight committee on education and the members of the Senate and House Education and Finance Committees by November 1 of each year.

SECTION 6. Tennessee Code Annotated, Section 49-7-202, is amended by adding the following language as a new subsection (g):

(g) Notwithstanding any law or rule to the contrary, the commission in consultation with the board of regents and the University of Tennessee board of trustees, shall develop policies under which any person who satisfies the admissions requirements of any two-year institution governed by the board of regents and any four-year institution governed by the board of regents or the University of Tennessee board of trustees may be admitted to both such institutions. These policies shall be adopted and implemented by the board of regents and the University of Tennessee board of trustees no later than July 1, 2010.

SECTION 7. Tennessee Code Annotated, Title 49, Chapter 7, Part 1, is amended by adding the following language as a new section:

Section 49-7-147. Notwithstanding any law to the contrary, after July 1, 2012, four-year institutions governed by the board of regents and the University of Tennessee board of trustees shall not offer remedial or developmental courses, as those terms are defined by the higher education commission, to any student. However, any such four-year institution may coordinate efforts with any two-year institution governed by the board of regents so that the two-year institution may provide the remedial or developmental courses.

SECTION 8. Tennessee Code Annotated, Section 49-8-101, is amended by adding the following language as a new subsection (c):

(c) Notwithstanding any provision of law to the contrary, the board of regents, in consultation with the Tennessee Higher Education Commission, shall establish a comprehensive statewide community college system of coordinated programs and services to be known as the Tennessee community college system.

(1) It is the legislative intent that the Tennessee community college system operate as a unified system with individual campuses, teaching centers and teaching sites as necessary to maximize the effectiveness of the system in enhancing student success and increasing the numbers of college degrees held by Tennesseans.

(2) In order to carry out the provisions of this subsection (c), the board shall develop a plan to transition from the existing system of thirteen (13) independently managed institutions to a comprehensive statewide community college system managed as a unified system. Such plan shall identify any statutory changes needed to accomplish the transition.

(3) As part of its plan, the board shall identify and implement consolidation of services among institutions and standardization of processes between institutions in order to improve efficiency and effectiveness in all functional areas, including, but not limited to, student services, academic support and institutional support.

(4) The plan shall also incorporate the use of block scheduling and cohort programming as a means of delivering educational programs within the Tennessee community college system. Programs developed pursuant to this provision shall be developed in a manner that results in the opportunity for more rapid and significantly higher rates of program completion through structured degree programs that incorporate fixed course offerings that meet the requirements for the degree being offered on a pre-determined schedule.

(5) In carrying out the provisions of this subsection (c), the Tennessee community college system shall pursue strategies to create mutually beneficial relationships with technology centers such that certificate programs may be offered at community college sites and community college courses may be offered at technology centers.

(6) The provisions of this subsection (c) shall be fully implemented no later than July 1, 2012.

SECTION 9. Tennessee Code Annotated, Title 49, Chapter 9, is amended by adding the following language as a new part:

Section 49-9-1501. The purpose of this part is to accomplish the following:

(1) Foster economic growth by significantly increasing the number of science, technology, engineering and mathematics doctoral students produced at the University of Tennessee, Knoxville and other state universities;

(2) Accelerate the state's economic and workforce development efforts in the field of energy sciences and engineering;

(3) Support the continued development of clean energy technologies and jobs in Tennessee;

(4) Leverage for the purposes set forth herein the existing capabilities of the University of Tennessee, Knoxville and Oak Ridge National Laboratory;

(5) Elevate the status of the University of Tennessee, Knoxville as a top tier national research institution through expanded collaboration with the Laboratory;

(6) Encourage and facilitate the development of an interdisciplinary program in energy science and engineering at the University of Tennessee, Knoxville that shall provide students an opportunity to undertake transformative research activities;

(7) Promote and develop support for collaborative research and development by interdisciplinary teams of University of Tennessee, Knoxville, and other state university faculties and the Oak Ridge National Laboratory in energy-related fields;

(8) Foster and promote research in science, technology, engineering and mathematics that encourages entrepreneurial opportunities in Tennessee; and

(9) Expand the number of University of Tennessee, Knoxville graduate students conducting their graduate research and education at the Oak Ridge National Laboratory working with laboratory scientific staff and using the unique facilities of the laboratory.

Section 49-9-1502.

(a) The University of Tennessee is authorized to establish an academic unit of the University of Tennessee, Knoxville for interdisciplinary research and education in collaboration with the Oak Ridge National Laboratory.

(b) The chancellor of the University of Tennessee, Knoxville and the director of the Oak Ridge National Laboratory are authorized to enter into an agreement concerning collaboration in interdisciplinary research and education designed to accomplish the purposes of this part. The provisions of this agreement shall address matters including, but not limited to, the appointment and oversight of graduate students, the appointment of ORNL staff as faculty, and the development of interdisciplinary curricula between the two (2) institutions. Nothing in this part shall limit in any way the authority of the United States Department of Energy with regard to the ownership and operation of Oak Ridge National Laboratory.

SECTION 10. Notwithstanding any law to the contrary, nothing in this part shall be deemed or construed to abrogate in any way the applicability of federal law relative to the Oak Ridge National Laboratory, its management and operation.

SECTION 11. Tennessee Code Annotated, Title 49, Chapter 8, is amended by adding the following language as a new part:

Section 49-8-1401.

(a) Recognizing the potential leverage and synergy that can be achieved by collaboration among the public and private entities, it is hereby declared that the University of Memphis, the University of Tennessee Center for the Health Sciences and St. Jude Children's Research Hospital are lead collaborators in the Memphis Research Consortium.

(b) The Memphis Research Consortium, a collaborative venture with other leading research and business entities in Memphis created to promote long-term economic development and job creation, shall explore and develop strategies and plans for establishing and enhancing opportunities for research and development in industries including public health, medical devices, medical and healthcare, bio-based products and chemical manufacturing, logistics and supply chain, computational and computer sciences, and learning technologies and related fields. Such strategies and plans, and the development thereof, may include, but not be limited to, participation by other institutions of higher education, hospitals and other health services providers, organizations engaged in

the promotion of public health, medical devices, medical and healthcare, bio-based products and chemical manufacturing, logistics and supply chain, computational and computer sciences, learning technologies, bioscience, and bioengineering and related business and research, as well as industrial and commercial enterprises engaged in business activities related to these areas.

(c) It is further declared to be the legislative intent that the University of Memphis, the University of Tennessee Center for the Health Sciences, and other collaborators shall report progress toward developing such strategies and plans to the standing committees on education no later than February 1, 2011.

SECTION 12. On or before December 1, 2010, the Tennessee Higher Education Commission shall submit to the chairs of the education and finance, ways and means committees of both houses of the general assembly a side-by-side comparative analysis of the funds projected to be received by each public institution of higher education for the 2011-2012 fiscal year under both the revised funding formula and the old formula, as if the old formula were still in effect for the 2011-2012 fiscal year.

SECTION 13. An audit of the Tennessee Higher Education Commission, the University of Tennessee board of trustees and the board of regents may be conducted by the comptroller of the treasury. If such audit is conducted, the audit shall specifically focus on overlap in mission, cost inefficiencies, management practices and the restructuring of higher education stipulated by the implementation of this act. If such audit is conducted, the audit shall be submitted to the Education Committees of the House of Representatives and the Senate for review and recommendation.

SECTION 14. If any provision of this act or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the act which can be given effect without the invalid provision or application, and to that end the provisions of this act are declared to be severable.

SECTION 15. This act shall take effect upon becoming a law, the public welfare requiring it.

PASSED: January 21, 2010
APPROVED: January 26, 2010

Appendix 2
Joint Response from the University of Tennessee, the Tennessee Board of Regents,
and the Tennessee Higher Education Commission



RICHARD G. RHODA
Executive Director

STATE OF TENNESSEE
HIGHER EDUCATION COMMISSION
PARKWAY TOWERS, SUITE 1900
NASHVILLE, TENNESSEE 37243-0830
(615) 741-3605
FAX: (615) 741-6230

BILL HASLAM
Governor

April 27, 2012

Mr. Arthur A. Hayes, Jr., CPA
Director, Division of State Audit
Suite 1500, James K. Polk Building
Nashville, TN 37243-0261

Dear Mr. Hayes,

Thank you for sharing with us a draft copy of the performance audit, *Implementation of the Complete College Tennessee Act of 2010*, and providing us the opportunity to respond to its findings.

The Complete College Tennessee Act (ACT) was landmark legislation that provided a unifying theme for all of Tennessee higher education – namely, increasing the educational attainment level of Tennessee and its citizens within available resources, and with no decrease in academic quality. Implementing the Act has been a massive undertaking requiring engagement by every aspect of each campus community in a relatively short period of time. We congratulate the administration and the General Assembly for having the foresight and the fortitude to enact such legislation, and we applaud the institutions for the manner in which they are responding to the mandate for increased degree and certificate productivity and efficiency.

As stated in the report, one of the major objectives of the audit was to assess the provisions of the Act to determine "...any challenges and unexpected implications that resulted from the Act's implementation" (draft audit report, page 1). We are pleased to report that Tennessee's institutions have risen to the challenges posed by the Act, and we appreciate the opportunity to respond to the findings and recommendations contained in the audit.

Finding #1: ***While the Tennessee Higher Education Commission, the University of Tennessee Board of Trustees, and the Tennessee Board of Regents have made considerable progress in implementing the Complete College Tennessee Act of 2010,***

not all required transfer pathways or dual agreements are in place.

Transfer pathways need to be created for all currently offered majors and/or the General Assembly needs to adjust the Act's language to allow some difficult majors to be exempted from the Act.

We concur with this finding in that we agree that the language of the Act should be adjusted to exempt certain majors from the development of transfer paths. Over 430 UT and TBR faculty members have worked extremely hard to establish specific course requirements for 49 pathways in 28 academic disciplines. More will likely be added when the articulation council meets again in May of 2012. However, practicality and best practice have necessitated the exclusion of certain programs from the development of transfer paths. Even so, a strict reading of the law as currently written does indicate that transfer pathways are to be developed for every major offered by any public institution in the state. Therefore, we will work with the General Assembly to revise the statutory language so that certain majors are exempted from the pathway requirement as appropriate.

All institutions need to appropriately publicize the Tennessee Transfer Pathways and its components via their own websites.

We concur with this finding. Awareness of the transfer paths should be pervasive, and the institutions have an important role to play in achieving this, primarily by linking to the official Tennessee Transfer Pathway website developed by the TBR and UT. Having all institutions link to the central website is preferable to having institutions develop transfer information web pages individually. When all institutions are linked to the Transfer Pathway site, institutions' websites will always be accurate and updated. TBR and UT will take steps to ensure the appropriate web presence is in place at all institutions.

All community colleges and institutions need to comply with the Act by signing dual admission agreements with each other.

We concur in part with this finding. To comply with the Act, each university has entered into a dual admissions agreement with at least one community college. In each instance, the university and the community college were in physical proximity to each other. Best practice dictates this to be appropriate. A robust dual admissions agreement extends beyond simply admitting qualified students into a community college and a university simultaneously. Strong dual admissions programs, which UT and TBR institutions have sought to develop, include many, if not all, of the following components:

- Admission to both institutions;
- Seamless academic and financial aid advising from both institutions;

- Access to the libraries at both institutions;
- Including the student in activities at both institutions (speaker series, clubs, etc.); and
- Tickets to athletic events and concerts at both institutions.

It is not realistic to expect a student to take advantage of these components if the two institutions are not situated close together. Campuses have been directed to continue to explore the possibility of extending the dual admissions agreements with additional community colleges within reasonable geographic proximity.

There is an opportunity to further assist Tennessee's students by working towards extending common course numbering to at least some of the bachelor-degree awarding institutions' classes.

We concur with this finding. As noted in the audit, the Act's requirement to enact common numbering in the community colleges was fulfilled. Further, in the TBR System, common numbers currently apply to 144 general education and foreign language courses applicable to both community colleges and universities. Adopting more comprehensive common numbering will require study, time, resources, and a certain amount of infrastructure. The first step, determining feasibility, will begin in the fall of 2012, when we will assemble a task force of academic officers and faculty to consider feasibility. The work of this group will guide future work as warranted.

Response to recommendations

The audit recommends that: 1) THEC should ensure that all transfer pathways required by the Complete College Tennessee Act of 2010 are developed as soon as possible given that they were required by Fall 2011; 2) THEC should promulgate a formal policy to require the adoption of dual admission agreements between all public community colleges and four year institutions; and 3) THEC should ensure that the policy is fully implemented by both TBR- and UT-governed institutions.

Regarding the first recommendation, we prioritized Pathway development based on the most popular degree programs for transfer students, accounting for the great majority of degrees earned annually by transfer students. Our position is that we should continue to develop pathways for additional programs that are less trafficked by transfer students, but that we should exclude certain programs, guided by principles of best practice.

Regarding the second and third recommendations, we argue that development of these agreements should be selective, dictated by the proximity of the institutions involved. Dual admission is not, in fact, achieved if the institutions are across the state from each other. THEC asserts that the template it developed to guide all institutions in the formulation of their dual admission agreements constituted a formal policy. It agrees, however, that the policy could be revised to define what constitutes a reasonable

distance between the partner institutions. We look forward to working with the General Assembly to revise the relevant statutory language so that it better serves the needs of Tennessee students.

Finding #2: ***Additional data validation and communication are needed to ensure that the new outcome based funding approach achieves its goals.***

We concur with this finding. The Funding Formula Review Committee went to great lengths to gather input and ensure understanding of representatives from constituent groups inside and outside the higher education community; the Funding Formula Data Committee undertook an iterative process that has resulted in improved definitions for the performance metrics; and data providers at all levels have made strides in the area of data quality. Still, more can be done. We recognize the formula's inherent complexity and the ongoing need to ensure that widespread understanding and buy-in is maintained, especially as new stakeholders arrive on the scene.

The finding that campus data personnel cannot replicate all funding formula outcomes is to be expected. Certain indicators such as the graduation rate, the transfer-out rate, and students' eligibility for Pell grants may require the tracking of students over time or across sectors, and campus data systems do not have access to the full universe of eventual outcomes for their students. THEC, however, is uniquely positioned to do so. Even so, we acknowledge that THEC must continue to work with the governing boards and their institutions to devise mutually agreeable ways of showing how formula outcomes are derived.

Response to recommendations

The audit recommends that: 1) THEC needs to work with the TBR and UT to identify needed improvements to the funding formula component data dictionary and make revisions as necessary; 2) the revised data dictionary should be widely distributed to the individual institutions and governing boards; 3) the TBR and UT boards should start conducting full audits on their institutions' data used in the funding formula; and 4) THEC should improve documentation related to its funding formula and the related data components. Specifically, THEC should write and publish an understandable narrative of the funding formula to be used by institutions and other key stakeholders to ensure the formula functions as expected.

Regarding the first and second recommendations, while THEC has a data dictionary for its Student Information System, from which the funding formula metrics are compiled, we see the value in developing a Funding Formula Data Dictionary, which defines each metric in precise terms, identifies the dataset(s) and academic term(s) involved, and provides the SQL Server computer code used to generate the outcome data.

Regarding the third recommendation, we concur that this is a necessary step to instill confidence that the outcomes funded are in fact accurate. The existence of a clear, comprehensive set of outcome data definitions is critical to establishing the standard against which an audit of outcomes can be undertaken. As noted earlier, the development of such a set of operational definitions is underway. Once completed, audits of outcome data will be a priority for our offices of internal audit.

Regarding the fourth recommendation, THEC has a detailed PowerPoint presentation about the inner workings of the funding formula on its website. However, we see the value in developing a written narrative so that the information is available in multiple formats.

Finding #3: *The Tennessee Higher Education Commission is taking steps to avoid and address unnecessary program duplication.*

We concur with this finding. While we agree that the mission profiles developed to guide funding formula development did not result in a substantive change in the mission statement for most institutions, mission is now at the forefront of academic program approval, program review, and even funding allocation. THEC has strengthened its guidelines for the development of new academic program proposals and has strengthened the program preview process. The data-based mission profiles provided to institutions and the statements developed by the institutions guided institutions' assigning of weights to their performance metrics. This tangible and direct link between mission and funding makes institutions accountable for adhering to their missions as never before.

Response to recommendations

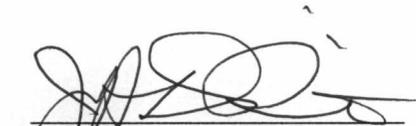
The audit recommends that: 1) THEC should monitor the results of the institutional mission profiles process, considering the experiences of other states to determine if they are applying potentially useful mission differentiation tools; and 2) the General Assembly may wish to consider shifting the statutory authority to terminate programs from the governing boards to THEC.

Regarding the first recommendation, the Carnegie Classification system that served as the starting point for Tennessee's mission differentiation system has the benefit of being national, longitudinal, empirical, and universally accepted. Other states and regional compacts have developed other schema for differentiating institutions, but these have not been shown to be superior to the Carnegie system. We would argue that our process of institutional self-examination, followed by self-assignment of unique weights to agreed-upon performance metrics, differentiates between institutions in a manner that promotes accountability while recognizing institutional context.

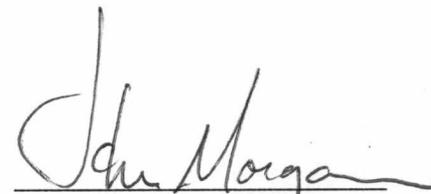
Regarding the second recommendation, the current system of program termination is working well, whereby THEC *recommends* program closures based on a biennial analysis of low-producing programs. The most recent analysis shows that the governing boards are responsive to these recommendations – they terminated 37 programs in 2010. Additionally, in response to the CCTA, THEC has delegated program approval authority for community college programs to the TBR. This allows for timely program approval and termination as local conditions warrant. Since the greatest number of program approvals and terminations occurs in the community colleges, it would not make sense to have THEC terminate programs it does not initially approve.

The Complete College Tennessee Act is a major reform effort, and everyone involved - - from the Governor to the General Assembly to the higher education community -- has accomplished much in a short period of time. Admittedly, some aspects of implementation are a work in progress. We found your review to be informative and helpful for keeping us on course. We look forward to continuing to work with you as we seek to implement the Act in a way that honors legislative intent and has a fundamental impact on the future of Tennessee.

Sincerely,



Joe DiPietro, President
University of Tennessee



John Morgan, Chancellor
Tennessee Board of Regents



Richard Rhoda, Executive Director
Tennessee Higher Education Commission