



UNIVERSITY *of* NORTH TEXAS
HEALTH SCIENCE CENTER

Response to the Visiting Committee Report

Prepared for Submission to the
Southern Association of Colleges and Schools
Commission on Colleges

Dates of the On-Site Visit: March 9–11, 2010

Prepared by:

Vanneise Collins, PhD

Director, Center for Learning and Development

Vanneise.Collins@unthsc.edu

817-735-2970

University of North Texas Health Science Center

3500 Camp Bowie Boulevard

Fort Worth, Texas 76107

Table of Contents

Introduction 1
Response to Recommendations 3
 Recommendation #1 3
 Recommendation #2 8
 Recommendation #3: 13
 Recommendation #4: 19
Addendum: UNTHSC Higher Order Thinking (HOT) Program Assessment Plan

List of Tables and Figures

Table 1. QEP Goals Linked to UNTHSC Strategic Plan and Selected Core Competencies of Each School..... 4
Figure 1. Five Year Strategic Plan for UNTHSC: FY 2011–2015..... 5
Figure 2. UNTHSC 2011 Tactical Initiatives 7
Table 2. Higher Order Thinking Program Instructional Methodologies by School 11
Figure 3. Revised Logic Model for HOT Plan Intervention and Outcomes Assessment..... 12
Table 3. UNTHSC Higher Order Thinking (HOT) Program Implementation Plan 20

Introduction

The faculty, students, and staff of the University of North Texas Health Science Center (UNTHSC) express their sincere appreciation to members of the On-Site Review Committee for their insights and important feedback about the institution's Quality Enhancement Plan (QEP). As a result of the recommendations and the extensive work completed since the on-site review visit, the overall QEP program has been strengthened and improved.

Clear links exist between the QEP goals and 1) selected core competencies of each school and 2) the UNTHSC strategic plan. Furthermore, the QEP goals have been clearly integrated into two essential documents outlining UNTHSC's institutional intent—the Five-Year Strategic Plan for fiscal years 2011–2015 and the 2011 Academic Affairs Tactical Initiatives.

The goals and outcomes, teaching strategies, and educational philosophy of the QEP are defined more succinctly and clearly. The institution has developed a single statement that clearly states the purpose of UNTHSC's QEP, as follows: ***The focus of the UNTHSC QEP is to improve students' Higher Order Thinking (HOT) skills across the health sciences curricula through faculty development in curricular delivery methods and course redesign.*** This focus statement will be included in all QEP documents.

Assessment strategies have been reevaluated and clearly defined for each QEP goal. The Faculty Survey that was in development at the time of the On-Site Review Committee's visit was finalized, and faculty volunteers from across the schools completed a pilot version of the survey in the spring of 2010. The resulting feedback significantly improved the assessment tool, which was administered to UNTHSC classroom instructors in spring 2010. Baseline data was collected from 122 faculty.

Annual targets and benchmarks were set for each of the QEP goals, and the Assessment Plan for the QEP was revised based on suggestions from the On-Site Review Committee. The

University of North Texas Health Science Center
Response to the Visiting Committee Report

resulting assessment approach will provide meaningful formative and summative data for evaluating the success of the QEP. The revised Assessment Plan for the UNTHSC Higher Order Thinking (HOT) Program is included as an addendum to this report.

The following narrative specifically addresses each of the four recommendations cited in the Report of the Reaffirmation Committee regarding the institutional QEP.

Response to Recommendations

RECOMMENDATION #1

The committee recommends that the University link the goals of the Higher Order Thinking (HOT) program to the core competencies of each school/program and the strategic plan.

The two goals of UNTHSC's HOT program are to 1) improve and evaluate students' higher order thinking skills and 2) improve and evaluate faculty knowledge and practice in implementing instructional strategies and assessment tools that cultivate students' higher order thinking skills.

In response to Recommendation #1, each school has identified selected core competencies that require students to develop and/or demonstrate higher order thinking skills. The selected competencies are clearly linked to the first goal of the HOT program, which focuses on student learning. Since achievement of the competencies depends on the faculty's successful implementation of instructional strategies that cultivate students' higher order thinking skills, the competencies also are linked to the HOT program's second goal, which focuses on faculty development. Table 1 illustrates the link between the goals of the HOT program and selected core competencies identified by each school.

The link between the goals of the HOT program and UNTHSC's strategic plan is evident in two overarching documents outlining institutional intent. The first key document is UNTHSC's Five-Year Strategic Plan for fiscal years 2011 to 2015, which includes the mission, vision, and values for the institution (Figure 1). Five mission-centric areas are defined in the Five-Year Strategic Plan, as follows: 1) Academic Affairs, 2) Research, 3) Clinical Affairs, 4) Administration, and 5) Community Engagement. As seen in Figure 1, four primary strategies are defined in the area of Academic Affairs; two of these four strategies are clearly linked to the student learning and faculty development goals of the QEP, as highlighted in Figure 1 and illustrated in Table 1.

Table 1. QEP Goals Linked to UNTHSC Strategic Plan and Selected Core Competencies of Each School

QEP Focus Statement: The focus of the UNTHSC QEP is to improve students' Higher Order Thinking (HOT) skills across the health sciences curricula through faculty development in curricular delivery methods and course redesign.

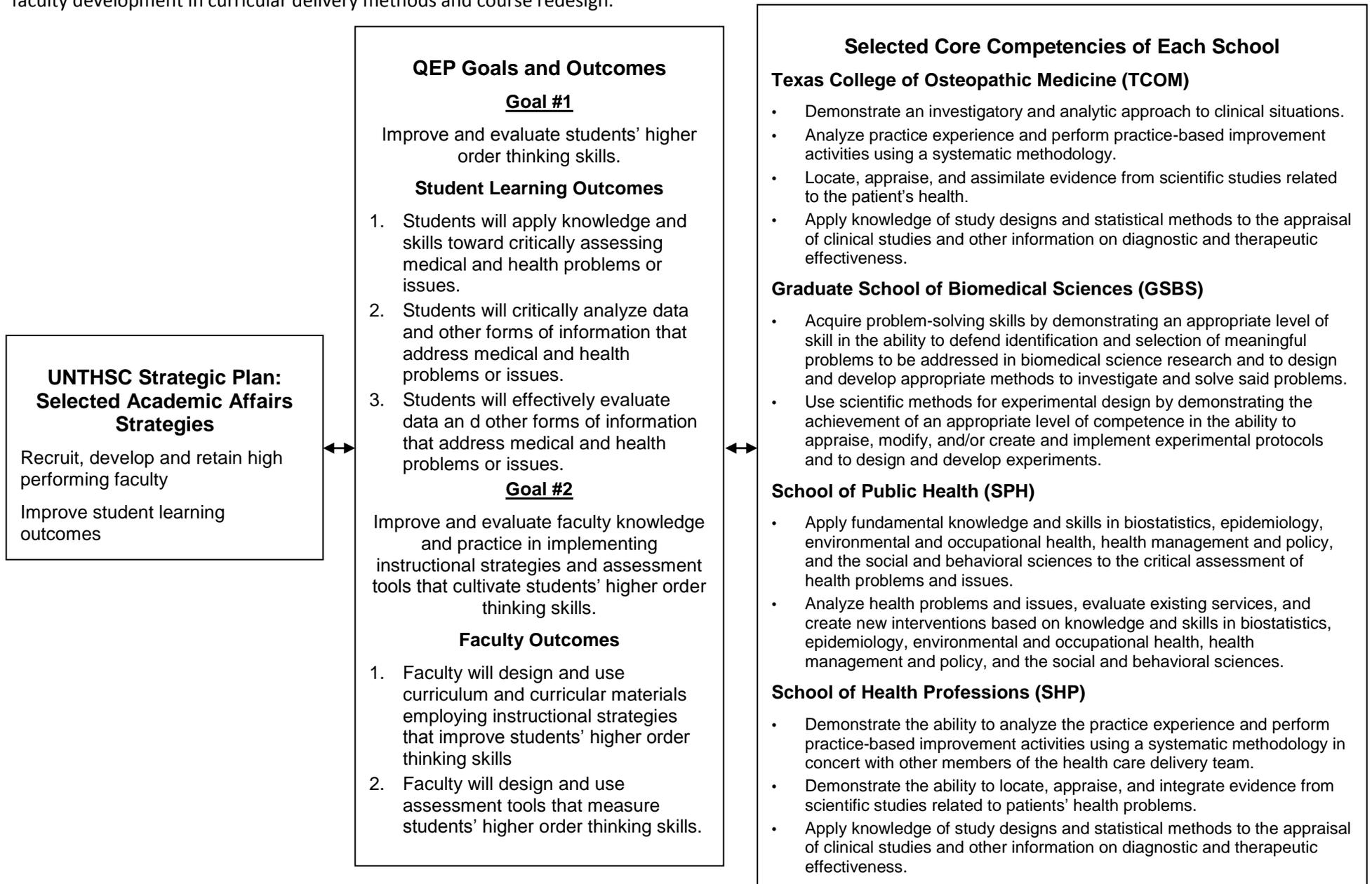


Figure 1.

UNT HEALTH SCIENCE CENTER FIVE YEAR STRATEGIC PLAN FOR UNTHSC: FY 2011 - 2015

Mission	Vision	Values		
<i>To improve the health and quality of life for the people of Texas and beyond through excellence in education, research, clinical care, and community engagement and to provide national leadership in primary care</i>	<i>To become a top 10 health science center</i>	<i>Compassion Integrity</i>	<i>Excellence Pride</i>	<i>Innovation Teamwork</i>
<p><u>Academic Affairs</u></p> <p>Enhance quality, grow and diversify academic programs</p> <p>Optimize academic support and academic technology</p> <p>Recruit, develop and retain high performing faculty</p> <p>Improve student learning outcomes</p>	<p><u>Research</u></p> <p>Recruit, develop and retain high performing faculty</p> <p>Enhance facilities and infrastructure</p> <p>Invest in translational research capacity</p> <p>Enhance and develop partnerships</p>	<p><u>Clinical Affairs</u></p> <p>Continuously improve quality of care, access, service excellence, and patient satisfaction leading to a patient-centered competitive clinical practice</p> <p>Ensure UNTHHealth is well positioned to optimize market and partnership opportunities, to maximize utilization of resources, and to ensure financial viability</p> <p>Pursue an interdisciplinary and integrated approach to health care delivery that positions UNTHHealth to take advantage of provisions in the Affordable Care Act</p>		
<p><u>Interdisciplinary Academic, Research, and Clinical Centers of Excellence</u></p> <p>Primary Care and Prevention Aging/Alzheimer's Investigative Genetics</p>				
<p><u>Administration</u></p> <p>Strategically support and enhance our culture of excellence, performance improvement and accountability</p> <p>Ensure facilities support our mission and promote community image</p> <p>Optimize financial resources</p> <p>Optimize institutional information resources and infrastructure</p> <p>Promote diversity among faculty and staff</p> <p>Enhance the institution's human capital management</p>		<p><u>Community Engagement</u></p> <p>Continue to grow and build UNTHSC's reputation as a world-class institution</p> <p>Rapidly expand and strengthen strategic alliances and partnerships internally and externally</p> <p>Diversify and strengthen philanthropic and other revenue channels</p>		

The second key document outlining institutional intent is the 2011 Tactical Initiatives chart, which defines annual goals, performance measures, and tactical initiatives for each of the mission-centric areas of the strategic plan (Figure 2). Of the eight Academic Affairs Tactical Initiatives defined for 2011, initiatives 4 and 5 specifically relate to the QEP, as highlighted in Figure 2.

In summary, in response to Recommendation #1, clear linkages between the QEP goals and the core competencies of each school have been established. Additionally, the QEP goals are clearly linked to the Academic Affairs strategies identified in the UNTHSC Five-Year Strategic Plan and are explicitly integrated into the Academic Affairs Tactical Initiatives for 2011.

Figure 2. UNTHSC 2011 Tactical Initiatives

Mission		Vision		Values		
To improve the health and quality of life for the people of Texas and beyond through excellence in education, research, clinical care, and community engagement and to provide national leadership in primary care		To become a top 10 health science center		Compassion Integrity	Excellence Pride	Innovation Teamwork
<p>Goals What do we expect to achieve?</p> <p>Administration Optimally support and facilitate the creation of a top 10 health science center devoted to developing knowledge and creating professionals to maximize health and quality of life</p> <p>Institutional Performance Measures</p> <ol style="list-style-type: none"> Administration costs as a percentage of total expenditures Institutional reserves Denison Survey - Team orientation rating UNT System Costs <p>Tactical Initiatives – Processes to accomplish long-term goals</p> <ol style="list-style-type: none"> Continue to optimize academic support units to provide quality services efficiently and effectively across the organization Enhance strategic use of financial reporting to ensure alignment of budget with strategic goals Align use of educational and research facilities with institutional strategy Enhance exterior aesthetics through existing and new green spaces Optimize effective UNT System support Optimize sources of funding Implement diversity awareness training across the institution Improve staff recruitment, retention, and performance through faculty/staff development, evaluation, and compensation Enhance technology to support our mission 	<p>Goals What do we expect to achieve?</p> <p>Academic Affairs Create knowledge, scientists and healthcare professionals devoted to meeting the critical health needs of the state of Texas and the nation</p> <p>Institutional Performance Measures</p> <ol style="list-style-type: none"> Number of enrolled students <ul style="list-style-type: none"> Headcount FTEs Student Satisfaction <ul style="list-style-type: none"> Quality of education Quality of teaching Percent of Student Diversity Percent of target courses which have implemented QEP <p>Tactical Initiatives – Processes to accomplish long-term goals</p> <ol style="list-style-type: none"> Expand/diversify enrollment and increase services/academic support and recruit faculty for the increased student numbers Increase offerings of educational programs to meet the needs of a diverse student population Develop a new LCME-accredited, medical school and consider branch campus osteopathic medicine program in Texas Train faculty in teaching approaches needed to increase student higher order thinking skills in targeted QEP courses Incorporate QEP higher order thinking skills approaches in five courses across the various programs in the HSC Fully implement comprehensive faculty compensation plan Expand academic assessment program to include institutes and centers Work collaboratively with UNT System to optimize academic programs 	<p>Goals What do we expect to achieve?</p> <p>Research To become the leading health science center devoted to collaborative and translational research focused on critical health needs of Texas and the nation</p> <p>Institutional Performance Measures</p> <ol style="list-style-type: none"> Dollar value of grants awarded Dollar value of proposals submitted Average extramural funding per faculty member Total number of unduplicated, peer-reviewed publications published / in press <p>Tactical Initiatives – Processes to accomplish long-term goals</p> <ol style="list-style-type: none"> Targeted faculty recruitment of high potential investigators Research development efforts through mentorship and formal training experiences such as workshops and seminars for faculty and staff Assess and optimize core laboratory capabilities and prioritize additional needs Further develop the Health Institutes of Texas Establish Phase 1 clinical trials capabilities Strengthen clinical and community based research capacity through workshops and training forums Assess/join regional consortia focused on collaborative research 	<p>Goals What do we expect to achieve?</p> <p>Clinical Affairs To become the preeminent multispecialty medical practice in Tarrant County and the health care partner of choice in our communities</p> <p>Institutional Performance Measures</p> <ol style="list-style-type: none"> Overall visit score Time to next third new appointment UNTHHealth Administrative Costs Total Revenues Total Patient Encounters UNTHHealth cash reserves Percent adherence to CMS PQRI Diabetes and Preventative Medicine measures groups <p>Tactical Initiatives – Processes to accomplish long-term goals</p> <ol style="list-style-type: none"> Participate in the CMS Physician Quality Reporting Initiative (PQRI) Enhance patient access & expand care delivery models Targeted recruitment of clinically productive providers Develop new clinical sites, at the Golden Triangle/Alliance Corridor and the Ben Hogan Center Position UNTHHealth as a key member of a local accountable care organization Pursue full integration of the electronic medical record and enterprise practice management system 	<p>Goals What do we expect to achieve?</p> <p>Community Engagement To create and maintain a partnership based environment in the internal, external and professional communities</p> <p>Institutional Performance Measures</p> <ol style="list-style-type: none"> Alumni donors (number, percent of population) Employee donors (number, percent of population) Total amount of gifts Pledges for new program and Fund for Excellence <p>Tactical Initiatives – Processes to accomplish long-term goals</p> <ol style="list-style-type: none"> Cost-effectively launch rebranding internally and externally Prioritize marketing support to UNT Health, research, fundraising Proactively promote primary care and prevention, aging and Alzheimer's, and investigative genetics Formalize and publish policies, schedules and scope of campus tours Strengthen community partnerships through increased outreach and volunteer activity with strategically aligned external organizations Develop robust civic councils toward engaging civic leadership in public health, aging/Alzheimer's, and investigative genetics Utilize the momentum of the MD School campaign and the increased connectors to expand and solidify new core list relationships 		

RECOMMENDATION #2

The committee recommends that the University clearly and consistently define the goals, outcomes, and andragogy (teaching strategies and educational philosophy) of the QEP.

In response to Recommendation #2 and the observation of the On-Site Review Committee that the original QEP document contained similar but inconsistent focus statements, the institution developed one focus statement that clearly and concisely describes the purpose of the HOT program, as follows: *The focus of the UNTHSC QEP is to improve students' higher order thinking skills across the health sciences curricula through faculty development in curricular delivery methods and course redesign.* This focus statement is supported by the following set of unifying goals and respective outcomes, which will guide the faculty's implementation of the HOT program in ten targeted courses across the four schools of the health science center:

Goal 1: Improve and evaluate students' higher order thinking skills

Student Learning Outcomes—In their role as developing health professionals and researchers:

1. Students will apply knowledge and skills toward critically assessing medical and health problems or issues.
2. Students will critically analyze data and other forms of information that address medical and health problems or issues.
3. Students will effectively evaluate data and other forms of information that address medical and health problems or issues.

Goal 2: Improve and evaluate faculty knowledge and practice in implementing instructional strategies and assessment tools that cultivate students' higher order thinking skills.

Faculty Outcomes—In their roles as instructors:

1. Faculty will design and use curriculum and curricular materials employing instructional strategies that improve students' higher order thinking skills.
2. Faculty will design and use assessment tools that measure students' higher order thinking skills.

Educational Philosophy and Teaching Strategies of the HOT Program

The above goals and outcomes are supported by the overarching educational philosophy and specific teaching strategies of the HOT program, which are shaped by the following two conceptual frameworks:

- **Bloom's taxonomy**—Bloom's taxonomy (revised) defines six hierarchical levels of the cognitive domain—remember, understand, apply, analyze, evaluate, and create. As implied by the hierarchy, each level requires higher order thinking skills than the previous level. For all courses in the HOT program, faculty will define student learning outcomes that specifically target one or more of the top four cognitive levels of Bloom's taxonomy.
- **Andragogy**—Andragogy is a theory of learning or educational philosophy focused on the needs of adult learners. Based on the understanding that adults are self-directed learners, andragogy emphasizes student-centered and process-oriented teaching strategies, rather than traditional teacher-centered and content-oriented strategies. Each UNTHSC school has selected an instructional methodology for its HOT program courses that is in keeping with this philosophy, as illustrated and defined in Table 2.

In summary, in response to Recommendation #2, the focus statement, goals and outcomes, and the educational philosophy and teaching strategies of the HOT program have been clarified and are clearly identified on the Revised Logic Model for HOT Plan Intervention and Outcomes Assessment (Figure 3).

Table 2. Higher Order Thinking Program Instructional Methodologies by School

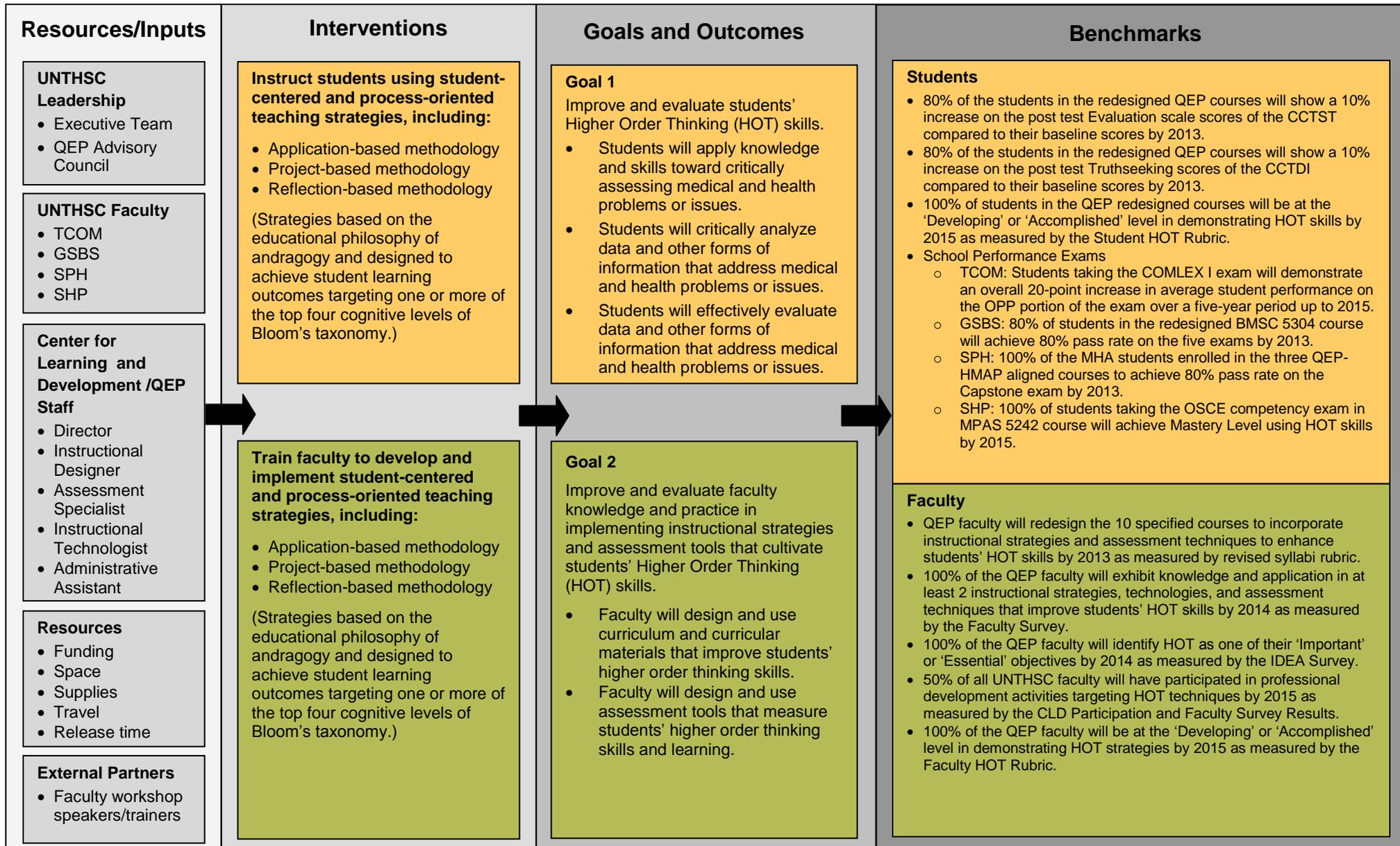
QEP Focus Statement: The focus of the UNTHSC QEP is to improve students' Higher Order Thinking (HOT) skills across the health sciences curricula through faculty development in curricular delivery methods and course redesign.

School	Class	Instructional Methodology		
		Application-based Methodology ^a	Project-based Methodology ^b	Reflection-based Methodology ^c
Texas College of Osteopathic Medicine	MEDE 7410 (OMM 1)	X		
	MEDE 7314 (OMM 2)	X		
	MEDE 7421 (OMM 3)	X		
	MEDE 7320 (OMM 4)	X		
Graduate School of Biomedical Sciences	BMSC 5304	X		
School of Public Health	HMAP 5300		X	
	HMAP 5328		X	
	HMAP 5324		X	
School of Health Professions	MPAS 5241			X
	MPAS 5242			X

- ^a Application-based Methodology: An instructional methodology that is problem-focused and application-driven. Specific teaching strategies include case-based studies, class discussions, and interactive questioning designed to help students apply conceptual knowledge to specific diagnostic or research problems.
- ^b Project-based Methodology: An integrated instructional methodology in which students are required to practice and demonstrate higher order thinking skills and discipline-specific competencies by engaging in real work tasks and processes appropriate to the health care setting.
- ^c Reflection-based methodology: A discussion-facilitated instructional methodology focused on students' observation, thinking, and problem-solving skills. In small group meetings, students present cases they have observed during clinical experiences in real world settings and discuss the cases relevant to the clinical reasoning that has been used to develop the patient's diagnosis and treatment.

Figure 3. Revised Logic Model for HOT Plan Intervention and Outcomes Assessment

QEP Purpose Statement: The focus of the UNTHSC QEP is to improve students' Higher Order Thinking (HOT) skills across the health sciences curricula through faculty development in curricular delivery methods and course redesign.



Color Key: Gold = Student, Green = Faculty

RECOMMENDATION #3:

The committee recommends that the university reevaluate their assessment strategies in order to identify and implement assessments that are more consistent with the QEP goals and outcomes.

In response to Recommendation #3, each assessment measure identified in the original QEP was reevaluated to determine its relevance to the stated QEP goals and outcomes. The institution then identified those strategies that are most consistent with the HOT program's goals and outcomes and prepared a detailed assessment plan that defines each assessment measure, provides a rationale for its selection, outlines its implementation in the HOT program, and establishes related baseline data, annual targets, and long-term benchmarks. The detailed assessment plan is provided as an addendum to this report, and the selected assessment measures for each goal of the HOT program are briefly defined below.

Assessment Measures for Goal 1

The first goal of the HOT program is to improve and evaluate students' higher order thinking skills. The institution will use the following assessment measures to evaluate its progress in achieving this goal and associated student learning outcomes:

California Critical Thinking Skills Test (CCTST)—The CCTST is a standardized instrument designed to assess overall students' critical thinking skills in three areas: Analysis, Evaluation, and Inference. UNTHSC will use the instrument to identify strengths and weaknesses in its students' higher order thinking skills and determine which areas to target for improvement.

California Critical Thinking Disposition Inventory (CCTDI)—The California Critical Thinking Disposition Inventory (CCTDI) is a standardized instrument designed to measure students' overall disposition to use higher order thinking skills as an approach to analyzing and resolving high stakes or time-limited problem situations. The instrument measures students' disposition toward higher order thinking in seven specific areas—truthseeking, open-mindedness,

analyticity, systematicity, critical thinking self confidence, inquisitiveness, and maturity of judgment. UNTHSC will use the instrument to identify strengths and weaknesses in students' disposition toward using higher order thinking skills and to determine areas for improvement.

Student Higher Order Thinking (HOT) Rubric—The Student HOT Rubric is a locally developed instrument designed by faculty to evaluate students' higher order thinking skills in the following areas: application, analysis, evaluation, and creation. Mastery levels of these skills are defined by criteria outlining whether the student falls below (*Emerging*), meets (*Developing*), or exceeds (*Accomplished*) identified expectations. This rubric allows faculty to gauge student usage of higher order thinking skills and to make modifications accordingly to the course design, delivery, or content. (The Student HOT Rubric is provided as Appendix I of the attached assessment plan.)

School Performance Exams—In addition to the above measures, which will be used with all students in the targeted QEP courses, each of the four UNTHSC schools will use discipline-specific performance exams to measure its students' application of higher order thinking skills, as follows:

- *Texas College of Osteopathic Medicine*—TCOM will use results of the first part of the Comprehensive Osteopathic Medical Licensing Examination (COMLEX I) to measure improvement in students' HOT skills. The exam itself requires students to demonstrate history taking and physical examination skills, integrated differential diagnosis and clinical problem solving, written communication and synthesis of clinical findings, and osteopathic principles and/or osteopathic manipulative treatment. Although UNTHSC students have historically achieved great success on the COMLEX I exam, the lowest scores have been in the Osteopathic Principles and Practices (OPP) section of the test. The OPP section is directly related to TCOM's Osteopathic Manipulative Medicine

(OMM) curriculum. The OMM courses, which are among the ten courses targeted for the HOT program, previously used a lecture-based format for a portion of the OMM curriculum but have been redesigned using an application-based curriculum that is in keeping with the educational philosophy of the HOT program.

- *Graduate School of Biomedical Sciences*—The GSBS course targeted for inclusion in the HOT program is the Integrative Biomedical Sciences IV: Physiology course (BMSC 5304). This course, which has traditionally been lecture-based, is being redesigned to use an application-based approach that is in keeping with the educational philosophy of the HOT program. The course has previously used four formative multiple choice exams to measure students' integrated knowledge of biomedical sciences in the following systems: nervous, cardiovascular, pulmonary and gastrointestinal, and renal. Another formative exam of the endocrine and reproductive system has now been added to allow for integration of the application-based approach into the curriculum. The five multiple choice exams are being retooled to assess students' higher order thinking skills with application-based questions.
- *School of Public Health*—The SPH has chosen to integrate the HOT program into its Master of Health Administration (MHA) program, which uses a summative competency capstone project to measure students' application of higher order thinking skills. The capstone project is a newly created, collaboratively designed, problem-based exam being developed by the SPH faculty and an SPH advisor. Project guidelines will be based on Bloom's taxonomy to facilitate measurement of students' knowledge, application, analysis, and evaluation skills within the health administration program. A rubric will be constructed to determine students' mastery level in each competency area as defined by criteria outlining unsatisfactory, satisfactory, and exemplary expectations. The rubric score will be averaged as part of the overall project score.

- *School of Health Professions*—The SHP will use a locally developed Objective Structure Clinical Examination (OSCE) at the conclusion of the Supervised Practice II (MPAS 5242) course to measure student success in using higher order thinking skills to collect and analyze data in addressing medical and health problems or issues as they pertain to the role of the physician assistant in general clinical practice. Evaluation criteria are based on course objectives and student learning activities and a rubric has been designed to measure students' competency in the specified area of concentration.

Assessment Measures for Goal 2

The second goal of the HOT program is to improve and evaluate faculty knowledge and practice in implementing instructional strategies and assessment tools that cultivate students' higher order thinking skills. The institution will use the following assessment measures to evaluate its progress in achieving this goal and associated faculty outcomes:

Revised QEP Course Syllabi Rubric—UNTHSC faculty have developed syllabi for the ten targeted courses in the HOT program, and each syllabus is scheduled to be revised to include instructional strategies, technologies, and assessments that foster students' higher order thinking skills. The Revised QEP Course Syllabi Rubric will be used to evaluate the syllabi of the redesigned courses in the areas of Course Description, Student Learning Outcomes, Assessment and Grading, Course Requirements, and Schedule. (The Revised QEP Course Syllabi Rubric is provided as Appendix II of the attached assessment plan.)

QEP Faculty Survey— The QEP Faculty Survey was created in collaboration with the UNTHSC Executive Committee, QEP team, School Directors, and teaching faculty to evaluate faculty knowledge and practice in implementing instructional strategies that cultivate students' higher order thinking skills. In addition to establishing baseline data, the survey will be used to identify

areas for improvement and corresponding faculty development opportunities. (The QEP Faculty Survey is provided as Appendix III of the attached assessment plan.)

Individual Development and Educational Assessment Survey—The Individual Development and Educational Assessment (IDEA) Survey is a nationally normed assessment instrument aimed at providing feedback on teacher effectiveness in achieving designated teaching goals, including those pertaining to promoting students' higher order thinking. Students rate instructors on their use of particular instructional strategies and methods, and course instructors identify the 'Essential' and 'Important' objectives of the course. The IDEA Center customizes reports according to instructors' identified objectives and suggests actions for improvement based on comparisons with ratings for classes of similar size and level of student motivation on a national basis. This assessment tool will allow UNTHSC to identify and implement primary and secondary instructional strategies, technologies, and assessment techniques that improve students' higher order thinking skills. Best practices among the QEP courses will be identified and shared with all UNTHSC teaching faculty in order to initiate implementation of effective HOT teaching strategies in other courses on campus.

Center for Learning and Development Participation Results—The Center for Learning and Development offers professional development opportunities for all UNTHSC faculty, staff, and students throughout the year. In support of the HOT program, the Center will provide professional development activities focused on instructional strategies, technologies, and assessment techniques that improve students' higher order thinking skills. The Center collects data on participants' school representation, title, and contact information to provide ongoing measures of usage, topic coverage, and duration of the Center's services. These data, along with feedback from the QEP Faculty Survey, will be used to identify areas for improvement and to adjust professional development offerings to address faculty needs related to improving

students' higher order thinking skills. (A Center for Learning and Development Workshop Participation Sign-In sheet is provided as Appendix IV of the attached assessment plan.)

Faculty Higher Order Thinking (HOT) Rubric—The Faculty HOT Rubric is designed to measure the level of faculty expertise in demonstrating higher order thinking strategies through teaching. Based on peer observation, the rubric measures the following areas: application, analysis, evaluation, and creation. Mastery levels of higher order thinking skills are defined by criteria outlining whether the faculty member falls below, meets, or exceeds identified expectations. The instrument was collaboratively designed and developed by faculty members across all four schools with an interdisciplinary emphasis. (The Faculty HOT Rubric is provided as Appendix V of the attached assessment plan.)

RECOMMENDATION #4:

The committee recommends that the university establish baseline data and annual targets for each of its QEP goals and outcomes.

In conjunction with identifying appropriate assessment strategies that are consistent with the HOT program's goals and outcomes, the institution prepared a detailed assessment plan that defines each assessment measure, provides a rationale for its selection, outlines its implementation in the HOT program, and establishes related baseline data, annual targets, and long-term benchmarks. The detailed assessment plan is provided as an addendum to this report. In response to Recommendation #4, the institution summarized key information from the assessment plan in the following UNTHSC Higher Order Thinking (HOT) Program Implementation Plan (Table 3), which outlines the timeline for implementing the assessment plan and identifies the annual targets and long-term benchmarks for each of the QEP goals and associated outcomes. As shown in Table 3, incremental annual targets were identified over a five-year period to allow students and faculty time to acquire knowledge and competence related to developing and teaching higher order thinking skills.

Table 3. UNTHSC Higher Order Thinking (HOT) Program Implementation Plan

QEP Purpose Statement: The focus of the UNTHSC QEP is to improve students' Higher Order Thinking (HOT) skills across the health sciences curricula through faculty development in curricular delivery methods and course redesign.

GOAL 1: Improve and evaluate students' higher order thinking skills

Student Learning Outcomes: 1) Students will apply knowledge and skills toward critically assessing medical and health problems or issues. 2) Students will critically analyze data and other forms of information that address medical and health problems or issues. 3) Students will effectively evaluate data and other forms of information that address medical and health problems or issues.

Implementation Schedule and Annual Targets ^a						
Baseline	Benchmark	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
California Critical Thinking Skills Test (CCTST) —A standardized instrument designed to assess students' overall critical thinking skills that will allow UNTHSC to compare its student scores with national performance scores. It also provides detailed information regarding students' strengths and weaknesses in different areas of higher order thinking. Pre and post tests will be given to students at the start and end of the QEP courses.						
Baseline data collected in fall 2009 and spring 2010 indicated a need to improve students' higher order thinking skills, with an emphasis in the area of Evaluation.	80% of the students in the redesigned QEP courses will show a 10% increase on the post test Evaluation scale scores of the CCTST compared to their baseline scores by 2013.	Pre test given to all students in 10 QEP courses in August 2010. Post test BMSC 5304 students. 80% of the students in BMSC 5304 will show a 10% increase on the post test Evaluation scale scores of the CCTST compared to their baseline scores.	Post test HMAP 5300, 5328, 5324 students 80% of the students in HMAP 5300, 5328, 5324 will show a 10% increase on the post test Evaluation scale scores of the CCTST compared to their baseline scores.	Post test *MPAS 5242, * MEDE 7320 students 80% of the students in MPAS 5242, MEDE 7320 will show a 10% increase on the post test Evaluation scale scores of the CCTST compared to their baseline scores.	Continuation of benchmark in 10 QEP courses.	Continuation of benchmark in 10 QEP courses.
				<i>*Post test scores are collected from MPAS 5242 and MEDE 7320 as they represent completion of courses MPAS 5241 and MEDE 7410, 7314, 7421.</i>		

Implementation Schedule and Annual Targets^a

Baseline	Benchmark	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
<p>California Critical Thinking Disposition Inventory (CCTDI)—A standardized instrument designed to measure students’ overall disposition to use HOT skills as an approach to analyzing and resolving high-stake, time-limited or novel problem situations. Pre and post tests given to students at the start and end of the QEP courses.</p>						
<p>Baseline data collected in fall 2009 and spring 2010 indicated a need to improve students’ disposition toward using higher order thinking skills, with an emphasis in the area of Truthseeking.</p>	<p>80% of the students in the redesigned QEP courses will show a 10% increase on the post test Truthseeking scores of the CCTDI compared to their baseline scores by 2013.</p>	<p>Pre test given to all students in 10 QEP courses in August 2010.</p> <p>Post test BMSC 5304 students.</p> <p>80% of the students in BMSC 5304 will show a 10% increase on the post test Truthseeking scale scores of the CCTDI compared to their baseline scores.</p>	<p>Post test HMAP 5300, 5328, 5324 students</p> <p>80% of the students in HMAP 5300, 5328, 5324 will show a 10% increase on the post test Truthseeking scale scores of the CCTDI compared to their baseline scores.</p>	<p>Post test *MPAS 5242, *MEDE 7320 students</p> <p>80% of the students in MPAS 5242, MEDE 7320 will show a 10% increase on the post test Truthseeking scale scores of the CCTDI compared to their baseline scores.</p> <p><i>*Post test scores are collected from MPAS 5242 and MEDE 7320 as they represent completion of courses MPAS 5241 and MEDE 7410, 7314, 7421.</i></p>	<p>Continuation of benchmark in 10 QEP courses</p>	<p>Continuation of benchmark in 10 QEP courses</p>

Implementation Schedule and Annual Targets^a

Baseline	Benchmark	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
Student Higher Order Thinking (HOT) Rubric —A locally developed rubric used to assess HOT skills of students. Aggregate results provided on annual basis.						
The rubric was created at the Annual QEP Retreat in August 2010, and baseline data will be collected with initial use of the instrument in 2010–2011.	100% of students in the QEP redesigned courses will be at the ‘Developing’ or ‘Accomplished’ level on the Student Higher Order Thinking Rubric in demonstrating HOT skills by 2015.	20% of students in the QEP redesigned courses will be at the ‘Developing’ or ‘Accomplished’ level on the Student Higher Order Thinking Rubric in demonstrating HOT skills.	40% of students in the QEP redesigned courses will be at the ‘Developing’ or ‘Accomplished’ level on the Student Higher Order Thinking Rubric in demonstrating HOT skills.	60% of students in the QEP redesigned courses will be at the ‘Developing’ or ‘Accomplished’ level on the Student Higher Order Thinking Rubric in demonstrating HOT skills.	80% of students in the QEP redesigned courses will be at the ‘Developing’ or ‘Accomplished’ level on the Student Higher Order Thinking Rubric in demonstrating HOT skills.	100% of students in the QEP redesigned courses will be at the ‘Developing’ or ‘Accomplished’ level on the Student Higher Order Thinking Rubric in demonstrating HOT skills.
School Performance Exams						
Texas College of Osteopathic Medicine: Comprehensive Osteopathic Medical Licensing Examination I (COMLEX I) Osteopathic Principles and Practices (OPP) Section —A National Board of Osteopathic Medical Examiners exam consisting of two parts. The OPP part of the exam incorporates the application-based strategies that require students to demonstrate knowledge of clinical concepts and medical decision-making. Aggregate results are collected at the end of the second year of the student’s educational program.						
Baseline data from previous years indicate a need to improve student scores on the OPP part of the COMLEX I exam.	Students taking the COMLEX I exam will demonstrate an overall 20-point increase in average student performance on the OPP portion of the exam over a five-year period up to 2015.	Students taking the COMLEX I exam will demonstrate an overall 4-point increase in average student performance on the OPP portion of the exam from the 2009-2010 results.	Students taking the COMLEX I exam will demonstrate an overall 8-point increase in average student performance on the OPP portion of the exam from the 2009-2010 results.	Students taking the COMLEX I exam will demonstrate an overall 12-point increase in average student performance on the OPP portion of the exam from the 2009-2010 results.	Students taking the COMLEX I exam will demonstrate an overall 16-point increase in average student performance on the OPP portion of the exam from the 2009-2010 results.	Students taking the COMLEX I exam will demonstrate an overall 20-point increase in average student performance on the OPP portion of the exam over a five-year period up to 2015.

Implementation Schedule and Annual Targets ^a						
Baseline	Benchmark	2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
Graduate School of Biomedical Sciences: Five Exams in the Integrative Biomedical Sciences IV Physiology Course —Case-based formative exams designed using Bloom’s taxonomy of HOT skills to assess students’ integrated knowledge of biomedical science. Aggregate results are obtained at the end of the two-year educational program.						
Baseline data indicate an average pass rate of 70%.	80% of students in the redesigned BMSC 5304 course will achieve 80% pass rate on the five formative exams by 2013.	40% of students in the redesigned BMSC 5304 course will achieve 80% pass rate on the five formative exams.	60% of students in the redesigned BMSC 5304 course will achieve 80% pass rate on the five formative exams.	80% of students in the redesigned BMSC 5304 course will achieve 80% pass rate on the five formative exams.	Continuation of benchmark based on revisions.	Continuation of benchmark based on revisions.
School of Public Health: Master of Health Administration Program HMAP Capstone Project —A problem-based competency exam designed using Bloom’s taxonomy of HOT skills. Aggregate results obtained at the end of the two-year educational program.						
The Capstone Project is a new assessment instrument. Baseline data will be collected in 2010–2011.	100% of the MHA students enrolled in the three QEP-HMAP aligned courses to achieve 80% pass rate on the Capstone exam by 2013.	50% of the MHA students enrolled in the three QEP-HMAP aligned courses to achieve 80% pass rate on the Capstone exam.	75% of the MHA students enrolled in the three QEP-HMAP aligned courses to achieve 80% pass rate on the Capstone exam.	100% of the MHA students enrolled in the three QEP-HMAP aligned courses to achieve 80% pass rate on the Capstone exam.	Continuation of benchmark based on revisions.	Continuation of benchmark based on revisions.
School of Health Professions: Objective Structured Clinical Examination (OSCE) —Locally developed summative exam designed to measure student ability to collect and analyze data. Given at the conclusion of the Supervised Practice II (MPAS 5242) course.						
The current indicator of student mastery is 70% pass rate.	100% of students taking the OSCE competency exam in the MPAS 5242 course will achieve 80% pass rate by 2015.	20% of students taking the OSCE competency exam in the MPAS 5242 course will achieve 80% pass rate.	40% of students taking the OSCE competency exam in the MPAS 5242 course will achieve 80% pass rate.	60% of students taking the OSCE competency exam in the MPAS 5242 course will achieve 80% pass rate.	80% of students taking the OSCE competency exam in the MPAS 5242 course will achieve 80% s pass rate.	100% of students taking the OSCE competency exam in the MPAS 5242 course will achieve 80% pass rate by 2015.

GOAL 2: Improve and evaluate faculty knowledge and practice in implementing instructional strategies and assessment tools that cultivate students' higher order thinking skills.

Faculty Outcomes: 1) Faculty will design and use curriculum and curricular materials employing instructional strategies that improve students' higher order thinking skills. 2) Faculty will design and use assessment tools that measure students' higher order thinking skills.

Baseline	Benchmark	Implementation Schedule and Annual Targets ^a				
		2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
Revised QEP Course Syllabi Rubric —Locally developed rubric designed to evaluate the syllabi of QEP courses in the areas of Course Description, Student Learning Outcomes, Assessment and Grading, Course Requirements, and Schedule. Syllabi are reviewed on an annual basis.						
The Revised QEP Course Syllabi Rubric is a new assessment instrument. Baseline data will be collected in 2010–2011.	100% of the QEP faculty will reach the 'Meets' or 'Exceeds Expectations' 'level on the Revised QEP Course Syllabi Rubric in including higher order thinking elements into their syllabi by 2013.	100% of the QEP faculty will reach the 'Meets' or 'Exceeds Expectations' 'level on the Revised QEP Course Syllabi Rubric in including higher order thinking elements into their syllabi. Revised syllabi submitted for: MEDE 7421, 7320 BMSC 5304 HMAP 5300 MPAS 5241	100% of the QEP faculty will reach the 'Meets' or 'Exceeds Expectations' 'level on the Revised QEP Course Syllabi Rubric in including higher order thinking elements into their syllabi. Revised syllabi submitted for: MEDE 7410, 7314 HMAP 5328 MPAS 5242	100% of the QEP faculty will reach the 'Meets' or 'Exceeds Expectations' 'level on the Revised QEP Course Syllabi Rubric in including higher order thinking elements into their syllabi. Revised syllabi submitted for: HMAP 5324	Continuation of benchmark for integration into other courses.	Continuation of benchmark for integration into other courses.

Baseline	Benchmark	Implementation Schedule and Annual Targets ^a				
		2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
QEP Faculty Survey —Locally developed instrument designed to measure faculty knowledge and application of HOT instructional strategies, technologies, and assessment techniques. Data collected from all faculty annually via online survey form.						
Baseline data collected in spring 2010 indicate a need to improve faculty knowledge and application of instructional strategies, technologies, and assessment techniques that improve students' HOT skills.	100% of the QEP faculty will exhibit knowledge and application of at least 2 instructional strategies, technologies, and/or assessment techniques that improve students' HOT skills by 2014.	Identify primary instructional strategy, technology, and/or assessment technique that improves students' HOT skills.	Implement the identified primary instructional strategy, technology, and/or assessment technique that improves students' HOT skills.	Identify secondary instructional strategy, technology, and/or assessment technique that improves students' HOT skills.	Implement the identified secondary instructional strategy, technology, and/or assessment technique that improves students' HOT skills.	Continuation of benchmark based on revisions.
Individual Development and Educational Assessment (IDEA) Survey —Nationally normed assessment instrument designed to provide feedback on designated teaching goals, especially those related to improving students' HOT skills. Given to students and faculty to complete near the end of each QEP course.						
Baseline data will be collected with initial administration of the instrument in 2010–2011.	100% of the QEP faculty will identify HOT as one of their 'Important' or 'Essential' objectives by 2014.	Administer baseline IDEA in all QEP courses.	100% of the QEP faculty will identify HOT as one of their 'Important' or 'Essential' objectives on the IDEA survey in the following courses: MEDE 7421, 7320 BMSC 5304 HMAP 5300 MPAS 5241	100% of the QEP faculty will identify HOT as one of their 'Important' or 'Essential' objectives on the IDEA survey in the following courses: MEDE 7410, 7314 HMAP 5328 MPAS 5242	100% of the QEP faculty will identify HOT as one of their 'Important' or 'Essential' objectives on the IDEA survey in the following courses: HMAP 5324	Continuation of benchmark based on revisions

Baseline	Benchmark	Implementation Schedule and Annual Targets ^a				
		2010–2011	2011–2012	2012–2013	2013–2014	2014–2015
Center for Learning and Development (CLD) Participation Results —Locally assembled participation regarding CLD faculty development activities. Participation report produced quarterly.						
Baseline participation data will be collected in 2010–2011 for professional development activities targeting HOT techniques.	50% of all UNTHSC classroom teaching faculty will have participated in professional development activities targeting HOT techniques by 2015.	10% of UNTHSC classroom teaching faculty will have participated in professional development activities targeting HOT techniques.	20% of UNTHSC classroom teaching faculty will have participated in professional development activities targeting HOT techniques.	30% of UNTHSC classroom teaching faculty will have participated in professional development activities targeting HOT techniques.	40% of UNTHSC classroom teaching faculty will have participated in professional development activities targeting HOT techniques.	50% of UNTHSC classroom teaching faculty will have participated in professional development activities targeting HOT techniques.
Faculty Higher Order Thinking (HOT) Rubric —Locally developed assessment tool designed to measure the level of faculty expertise in demonstrating HOT strategies based on peer observation. Given each time QEP redesigned courses are taught.						
The rubric was created at the Annual QEP Retreat in August 2010, and baseline data will be collected with initial use of the instrument in 2010–2011.	100% of the QEP faculty will be at the ‘Developing’ or ‘Accomplished’ level on the Faculty Higher Order Thinking Rubric in demonstrating HOT strategies by 2015.	20% of the QEP faculty will be at the ‘Developing’ or ‘Accomplished’ level on the Faculty Higher Order Thinking Rubric in demonstrating HOT strategies.	40% of the QEP faculty will be at the ‘Developing’ or ‘Accomplished’ level on the Faculty Higher Order Thinking Rubric in demonstrating HOT strategies.	60% of the QEP faculty will be at the ‘Developing’ or ‘Accomplished’ level on the Faculty Higher Order Thinking Rubric in demonstrating HOT strategies.	80% of the QEP faculty will be at the ‘Developing’ or ‘Accomplished’ level on the Faculty Higher Order Thinking Rubric in demonstrating HOT strategies.	100% of the QEP faculty will be at the ‘Developing’ or ‘Accomplished’ level on the Faculty Higher Order Thinking Rubric in demonstrating HOT strategies.

^a Year timeframes are displayed for academic years starting September 1 and ending August 31.