

# Unit Assessment Report - Four Column

## Texas Tech University

### Program - AS\_Mathematics (PHD)

**CIP Code:** 27.0101.00  
**Degree Program** Kent Pearce  
**Coordinator:**

Outcomes	Means of Assessment & Criteria / Tasks	Results	Action for Improvement & Documentation of Action for
<p>Program - AS_Mathematics (PHD) - Strategic Outcome 1 - Increase enrollment and promote student success: We will grow and diversify our student population in order to improve higher education participation and supply a well-equipped, educated workforce for the State of Texas. (TTU 2010-2020 Strategic Plan Priority 1)</p> <p><b>Outcome Types:</b> Strategic</p> <p><b>Start Date:</b> 09/01/2009</p> <p><b>Outcome Status:</b> Inactive</p>	<p><b>Assessment Method:</b> Total enrollment in the degree program.</p>		
	<p><b>Assessment Method:</b> Enrollment of new students in the degree program (new freshman, new transfer students, new graduate)</p>		
	<p><b>Assessment Method:</b> Mean Class Rank of entering freshmen (if available)</p>		
	<p><b>Assessment Method:</b> Mean ACT/SAT scores for entering freshmen majors (if available)</p>		
	<p><b>Assessment Method:</b> Ethnic diversity of the first-time entering freshman class in the major or degree</p>		
	<p><b>Assessment Method:</b> Mean GRE scores for entering graduate students (if applicable and available)</p>		
	<p><b>Assessment Method:</b> First-year retention rate for majors or degree seekers</p>		
	<p><b>Assessment Method:</b> Second-year retention rate for majors or degree seekers</p>		
	<p><b>Assessment Method:</b> Four- and Six-Year Graduation Rates in the major or degree program.</p>		

Outcomes	Means of Assessment & Criteria / Tasks	Results	Action for Improvement & Documentation of Action for
	<p><b>Assessment Method:</b> Master's Graduation Rate</p> <p><b>Assessment Method:</b> Doctoral Graduate Rate</p> <p><b>Assessment Method:</b> Doctoral Time to Degree Completion</p> <p><b>Assessment Method:</b> Total degrees awarded (annual Fall, Spring and Summer) in the major or degree</p> <p><b>Assessment Method:</b> For doctoral programs only, total number of Ph.D. awarded (Fall, Spring, and Summer) in the report year, number of other doctorates awarded (Ed.D.'s, DMA's, etc.).</p>		
<p>Program - AS_Mathematics (PHD) - Strategic Outcome 2 - Strengthen Academic Quality and Reputation: We will attract and retain the best faculty in the world in order to enhance our teaching excellence and grow our number of nationally recognized programs. (TTU 2010-2020 Strategic Plan Priority 2)</p> <p><b>Outcome Types:</b> Strategic</p> <p><b>Start Date:</b> 09/01/2009</p> <p><b>Outcome Status:</b> Inactive</p>	<p><b>Assessment Method:</b> Total enrollment in the degree program</p> <p><b>Assessment Method:</b> Enrollment of new students in the degree program (new freshman, new transfer students, new graduate)</p> <p><b>Assessment Method:</b> Mean Class Rank of entering freshmen (if available)</p> <p><b>Assessment Method:</b> Mean ACT/SAT scores for entering freshmen majors (if available)</p> <p><b>Assessment Method:</b> Ethnic diversity of the first-time entering freshman class in the major or degree</p> <p><b>Assessment Method:</b> Mean GRE scores for entering graduate students (if applicable and available).</p>		

Outcomes	Means of Assessment & Criteria / Tasks	Results	Action for Improvement & Documentation of Action for
	<p><b>Assessment Method:</b> First-year retention rate for majors or degree seekers.</p> <p><b>Assessment Method:</b> Second-year retention rate for majors or degree seekers.</p> <p><b>Assessment Method:</b> Four- and Six-Year Graduation Rates in the major or degree program.</p> <p><b>Assessment Method:</b> Master's Graduation Rate</p> <p><b>Assessment Method:</b> Doctoral Graduation Rate</p> <p><b>Assessment Method:</b> Doctoral Time to Degree Completion</p> <p><b>Assessment Method:</b> Total degrees awarded (annual Fall, Spring and Summer) in the major or degree</p> <p><b>Assessment Method:</b> For doctoral programs only, total number of Ph.D.'s awarded (Fall, Spring, and Summer) in the report year, number of other doctorates awarded (Ed.D.'s, DMAs, etc.).</p>		
<p>Program - AS_Mathematics (PHD) - High Quality Research - Students will demonstrate the ability to do high quality mathematical research.</p> <p><b>Outcome Types:</b> Student Learning</p> <p><b>Start Date:</b> 07/01/2006</p> <p><b>Outcome Status:</b> Active</p>	<p><b>Assessment Method:</b> Students will publish the research contained in their dissertations in refereed journals prior to graduation</p> <p><b>Assessment Method Category:</b> Professional Development Activities</p> <p><b>Criterion:</b> 90% of the students will publish the research contained in their dissertations in refereed journals prior to graduation</p>	<p>09/14/2011 - In 2010-11, 78% of the PhD graduates published results from their dissertations.</p> <p><b>Result Type:</b> Criterion Not Met</p> <p><b>Action Status:</b> Action In Progress</p> <p>05/31/2010 - In 2009-10, 100% of the PhD graduates published results from their dissertations.</p>	

Outcomes	Means of Assessment & Criteria / Tasks	Results	Action for Improvement & Documentation of Action for
		<b>Result Type:</b> Criterion Met <b>Action Status:</b> No Action Needed	
		05/31/2009 - In 2008-09, 100% of the PhD graduates published results from their dissertations. <b>Result Type:</b> Criterion Met <b>Action Status:</b> No Action Needed	
		05/31/2008 - In 2007-08, 75% of the PhD graduates published results from their dissertations. <b>Result Type:</b> Criterion Not Met <b>Action Status:</b> Action To Be Defined	
		05/31/2007 - In 2006-07, 45% of the PhD graduates published results from their dissertations. <b>Result Type:</b> Criterion Not Met <b>Action Status:</b> Action To Be Defined	
Program - AS_Mathematics (PHD) - Oral and Written Communication Skills - Students will demonstrate effective oral and written communication skills. <b>Outcome Types:</b> Student Learning <b>Start Date:</b> 07/01/2006 <b>Outcome Status:</b> Active	<b>Assessment Method:</b> Assessment will utilize surveys of the thesis and report advisory committees <b>Assessment Method Category:</b> Post-Evaluation <b>Criterion:</b> 80% or higher of identified students in the surveys will be characterized as having effective oral and written communications.	09/14/2011 - The advisory committees were surveyed as to their students competency. See attached document "Graduate Communication Skills 2011" for results. <b>Result Type:</b> Inconclusive <b>Action Status:</b> Action To Be Defined <b>Related Documents:</b> <a href="#">Graduate Communication Skills</a> 05/31/2010 - The advisory committees were surveyed as to their students competency. See attached document "Graduate Communication	

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		<p>Skills 2010" for results.  <b>Result Type:</b>            Criterion Met  <b>Action Status:</b>            No Action Needed  <b>Related Documents:</b>  <a href="#">Graduate Communication Skills</a></p>	
		<p>05/31/2009 - The advisory committees were surveyed as to their students competency. See attached document "Graduate Communication Skills 2009" for results.  <b>Result Type:</b>            Criterion Not Met  <b>Action Status:</b>            Action To Be Defined  <b>Related Documents:</b>  <a href="#">Graduate Communication Skills</a></p>	
		<p>05/31/2008 - The advisory committees were surveyed as to their students competency. See attached document "Graduate Communication Skills 2008" for results.  <b>Result Type:</b>            Criterion Met  <b>Action Status:</b>            No Action Needed  <b>Related Documents:</b>  <a href="#">Graduate Communication Skills</a></p>	
		<p>05/31/2007 - The advisory committees were surveyed as to their students competency. See attached document "Graduate Communication Skills 2007" for results.  <b>Result Type:</b>            Criterion Not Met  <b>Action Status:</b>            Action To Be Defined  <b>Related Documents:</b>  <a href="#">Graduate Communication Skills</a></p>	

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<p>Program - AS_Mathematics (PHD) - Trends of Industry, Govt, and Research - Students will demonstrate knowledge of mathematical materials that reflect the needs and trends in industrial, governmental, and academic research environments.</p> <p><b>Outcome Types:</b> Student Learning</p> <p><b>Start Date:</b> 07/01/2006</p> <p><b>Outcome Status:</b> Active</p>	<p><b>Assessment Method:</b> Assessment will be based on surveys of employers conducted 1 year after graduation.</p> <p><b>Assessment Method Category:</b> Employer Survey</p> <p><b>Criterion:</b> 90% of the surveyed employers will report satisfaction with the training in the foundations of mathematics required for their employment.</p>		
	<p><b>Assessment Method:</b> Assessment will utilize a final program student self efficacy survey and interviews with randomly chosen graduates.</p> <p><b>Assessment Method Category:</b> Survey - Student</p> <p><b>Criterion:</b> Post-graduate surveys will report a 95% success rate for graduates seeking professional or academic employment</p>	<p>05/31/2010 - In 2009-10, 83% of the PhD graduates were successful in obtaining employment.</p> <p><b>Result Type:</b> Criterion Not Met</p> <p><b>Action Status:</b> Action In Progress</p>	<p>11/04/2010 - Revised the assessment method to measure the effectiveness of the preparation of graduates for needs and trends in employment by assessing the perspectives of the employers about the preparation of our graduates</p> <hr/> <p>11/04/2010 - a. Provide funding for travel to present papers at research conferences b. Encourage students to publish research from their dissertations prior to graduation</p> <hr/>
		<p>05/31/2009 - In 2008-09, 100% of the PhD graduates were successful in obtaining employment.</p> <p><b>Result Type:</b> Criterion Met</p> <p><b>Action Status:</b> No Action Needed</p>	
		<p>05/31/2008 - In 2007-08, 75% of the PhD graduates were successful in obtaining</p>	

Outcomes	Means of Assessment & Criteria / Tasks	Results	Action for Improvement & Documentation of Action for
		<p>employment.  <b>Result Type:</b>            Criterion Not Met  <b>Action Status:</b>            Action To Be Defined</p> <hr/> <p>05/31/2007 - In 2006-07, 91% of the PhD graduates were successful in obtainng employment.  <b>Result Type:</b>            Criterion Not Met  <b>Action Status:</b>            Action To Be Defined</p>	
<p>Program - AS_Mathematics (PHD) - Teaching Skills - Students employed as GTAs will identify and practice good teaching skills required for both academic and industrial employment.</p> <p><b>Outcome Types:</b>            Student Learning</p> <p><b>Start Date:</b>            07/01/2006</p> <p><b>Outcome Status:</b>            Active</p>	<p><b>Assessment Method:</b>            Each semester the department will conduct faculty classroom observations of each GTA assigned to teach an undergraduate class. The qualitative and quantitative reports from the classroom observations will be reviewed and discussed with the GTAs. Each semester the university student evaluations will be administered to each undergraduate course to which a GTA is assigned.</p> <p><b>Assessment Method Category:</b>            Course Level Assessment</p> <p><b>Criterion:</b>            Of the GTAs surveyed, 80% of them will have a score of 4.0 or higher (out of 5.0) on both the faculty observation reports and the student evaluations.</p> <hr/> <p><b>Assessment Method:</b>            All GTA's without prior mathematics teaching experience (at least one year) at</p>	<p>09/14/2011 - Student evaluation scores for GTAs for 2006 -2010.  <b>Result Type:</b>            Criterion Not Met  <b>Action Status:</b>            Action In Progress</p> <p><b>Related Documents:</b>  <a href="#">GTA Evaluation Scores 2010</a></p> <hr/> <p>01/31/2010 - Student evaluation scores for GTAs for 2006 -2009.  <b>Result Type:</b>            Criterion Not Met  <b>Action Status:</b>            Action To Be Defined</p> <p><b>Related Documents:</b>  <a href="#">GTA Evaluation Scores 2009</a></p> <hr/> <p>12/31/2009 - In 2009-10, 100% of the students enrolled in Math 5360: Special Topics in Pedagogy passed the course with a B or higher.</p>	<p>09/16/2011 - Meet with each student each semester for whom the previous semester student evaluation scores are below 3.0 to discuss concerns, problems, needs and goals for improvement.</p> <hr/> <p>11/04/2010 - Revise the faculty evaluation procedures to add a quantitative component to the faculty classroom observations</p> <hr/> <p>11/04/2010 - Meet with each student each semester for whom the previous semester student evaluation scores are below 3.0 to discuss concerns, problems, needs and goals for improvement.</p> <hr/>

Outcomes	Means of Assessment & Criteria / Tasks	Results	Action for Improvement & Documentation of Action for
	<p>either secondary or college levels will take Math 5360L: Special Topics in Pedagogy. 80% will pass with a grade of B or higher. Assessment will utilize results from pre- and post-course surveys.</p> <p><b>Criterion:</b> B or higher</p>	<p><b>Result Type:</b> Criterion Met <b>Action Status:</b> No Action Needed</p> <p>12/31/2008 - In 2008-09, 100% of the students enrolled in Math 5360: Special Topics in Pedagogy passed the course with a B or higher. <b>Result Type:</b> Criterion Met <b>Action Status:</b> No Action Needed</p> <p>12/31/2007 - In 2007-08, 100% of the students enrolled in Math 5360: Special Topics in Pedagogy passed the course with a B or higher. <b>Result Type:</b> Criterion Met <b>Action Status:</b> No Action Needed</p> <p>12/31/2006 - In 2006-07, 100% of the students enrolled in Math 5360: Special Topics in Pedagogy passed the course with a B or higher. <b>Result Type:</b> Criterion Met <b>Action Status:</b> No Action Needed</p>	
<p>Program - AS_Mathematics (PHD) - Group Activity - Students will learn to work in group environments and with other disciplines both within and exterior to mathematics.</p> <p><b>Outcome Types:</b> Student Learning</p> <p><b>Start Date:</b> 07/01/2006</p> <p><b>Outcome Status:</b> Inactive</p>	<p><b>Assessment Method:</b> Assessment will utilize surveys of the thesis and report advisory committees</p> <p><b>Assessment Method Category:</b> Post-Evaluation</p>		