

**Louisiana Tech University
University of Louisiana System**

**GRAD Act Annual Report
FY 2010-2011**

**Submitted to the
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**and to the
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1. Student Success

a. Implement policies established by the institution's management board to achieve cohort graduation rate and graduation productivity goals that are consistent with institutional peers.

Narrative Report:

• **Policy/policies adopted by the management board;**

The following minimum admission requirements for first-time freshmen were adopted by the Board of Supervisors for the University of Louisiana System in October 2009 to be effective Fall 2011. (See [ULS Board minutes](#)):

Completion of Regents CORE, and require no more than one developmental course, and have a minimum HS GPA of 2.0, and meet at least one of the following:

- High School GPA of 2.6 or greater **OR**
- ACT 24 or greater **OR**
- High school graduation rank top 25%

For Louisiana Tech University, the minimum ACT increased from 23 in Fall 2010 to 24 for Fall 2011. High school GPA increased from 2.5 in Fall 2010 to 2.6 for Fall 2011.

In August 2010, the Board of Supervisors for the University of Louisiana System amended the total number of credit hours required for a baccalaureate degree to 120 hours unless otherwise required for accreditation and/or professional certification purposes. In those cases where a degree program must exceed 120 hours, it shall first be submitted to the University of Louisiana System Office for review and approval. (See [ULS 120 hour rule](#).)

• **Subsequent policy/policies adopted by the institution;**

Louisiana Tech raised admission requirements for new freshmen effective Fall 2011 as required by the University of Louisiana System. In Fall 2012 admission requirements will again increase as required by the Board of Regents. Louisiana Tech closely monitors graduation rates, and the University will continue to consider raising admission requirements to meet enrollment and graduation rate goals as we did independently of the University of Louisiana System and Board of Regents in 1992, 2001, and 2002.

During the 2010-2011 academic year, Louisiana Tech University has reduced the required program hours to 120 hours for 46 degree programs. An additional 11 degree programs were already at 120 hours. The average reduction per degree program was 4.5 hours. This count is out of a total of 79 baccalaureate degree programs that were on the University CRIN PROG Active Degree Inventory (February 2011).

The Division of Basic and Career Studies (includes undeclared majors) formally moved from the Admissions Office to the Bulldog Achievement Resource Center (BARC) during 2010-2011. This change allows Admissions staff to spend more time recruiting and counseling prospective students. The goal is to recruit students who will be a good fit for Louisiana Tech and who will likely be retained and graduate from the University. Further, with academic advising taking place in the BARC, there is greater continuity in the advisor/advisee relationship which should positively impact graduation and retention rates.

The University Recruitment and Retention Council, initiated in Fall 2010, and Enrollment Management Council spent 2010-2011 reviewing policies and procedures and making recommendations that should positively impact retention and graduation rates. One example of a 2010-2011 policy change is the complete overhaul of how and when user IDs, passwords, Tech email accounts are assigned, set up, and communicated to

students. While this may seem like a small change on the surface, it was important to our students, and it involved changing to a system where students self-select their passwords, and changing from a U.S. Postal mail system to an email notification system which improved response time.

- **Timeline for implementing the policy/policies;**

During 2010-2011, 46 degree programs were reduced to 120-hour programs effective Summer 2011. Current degree seeking students may choose to follow the revised degree programs with reduced hours to graduation. The University Recruitment and Retention Council, initiated in 2010, and the Enrollment Management Council reviewed and implemented admission policies during 2010-2011; these councils are continuing to review practices that will be implemented as policies over the next year.

Basic and Career Studies began transitioning from Admissions to the BARC during 2010-2011; we plan to finalize this move during 2011-2012. This move involves where and by whom undeclared majors are advised.

The University has implemented new admission criteria effective for Fall 2011 and is on track for implementing Board of Regents admission criteria for Fall 2012.

- **Performance of entering freshmen students admitted by exception (4-year universities).**

An overarching consideration in the granting of admission exceptions is diversity within the student body. Because the better-prepared and highly motivated students tend to apply for admission early in the recruiting cycle, Louisiana Tech made it a policy to review admission exceptions on a first-come, first-reviewed basis by a review committee. However, the committee does not approve students who need two developmental courses or whose cumulative GPA is below a 2.00. Louisiana Tech determines the number of exceptions that are allowable each year by analyzing previous years of enrollment data and projecting the upcoming enrollment for each enrollment period. Allowable exceptions are calculated at 7% of the projected enrollment as prescribed in the *Master Plan Issues* document of March 2006. Beginning in Fall 2012, the allowable percentage and how it is calculated will change as prescribed by the Board of Regents.

During 2009-2010, there were 101 students admitted by exception which is 6.1% of the total of new entering freshmen. Of the 101 students who were admitted by exception, 59 (58.4%) were still enrolled in Fall 2010-2011, and 42 (41.6%) were not. The students that were still enrolled had an average GPA of 2.21 and an average of 34.02 hours earned per student. The data compare to an average GPA of 1.5 and 14.4 hours earned for students who were no longer enrolled in Fall 2010. Conversely, the 2009-2010 students who were not admitted by exception and who were still enrolled had an average GPA of 2.94 and average hours earned per student of 36.01. The students who were not admitted by exception and who did not return for Fall 2010 had an average GPA of 1.96 and 19.25 earned hours. See [Performance of Students Admitted by Exception](#) for additional information.

Further research is planned to see if identifiable characteristics or combinations of characteristics are present for students who have persisted compared to those who have not. Through a deeper understanding of these at-risk students, the University will explore additional intervention strategies as well as to whom (what profile of student) the individual strategies should be directed.

1.a.i.
Retention of first-time, full-time, degree-seeking students, 1st to 2nd Year Retention Rate (Targeted)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	Fall 08 to Fall 09	Fall 09 to Fall 10	Fall 10 to Fall 11	Fall 11 to Fall 12	Fall 12 to Fall 13	Fall 13 to Fall 14	Fall 14 to Fall 15
# in Fall Cohort	1506	1450					
# Retained to 2nd Fall semester	1118	1078					
Rate	74.2%	74.3%					
Target		74% - 78%	74.2% - 78.2%	74.4% - 78.4%	74.6% - 78.6%	74.8% - 78.8%	75.0% - 79.0%
Target Met?		YES					

1.a.ii.
Retention of first-time, full-time, degree-seeking students, 1st to 3rd year Retention Rate (Targeted)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	Fall 07 to Fall 09	Fall 08 to Fall 10	Fall 09 to Fall 11	Fall 10 to Fall 12	Fall 11 to Fall 13	Fall 12 to Fall 14	Fall 13 to Fall 15
# in Fall Cohort	1522	1506					
# Retained to 3rd Fall semester	938	978					
Rate	61.6%	64.9%					
Target		62.0% - 66.0%	62.2% - 66.2%	62.4% - 66.4%	62.6% - 66.6%	62.8% - 66.8%	63.0% - 67.0%
Target Met?		YES					

1.a.iv.

Graduation Rate: Same institution graduation rate as defined and reported by the NCES Graduation Rate Survey (Targeted)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	Fall 2002 cohort through Fall 2008	Fall 2003 cohort through Fall 2009	Fall 2004 cohort through Fall 2010	Fall 2005 cohort through Fall 2011	Fall 2006 cohort through Fall 2012	Fall 2007 cohort through Fall 2013	Fall 2008 cohort through Fall 2014
# in Fall Cohort	1936	1948					
# Graduated within 150% of time	916	887					
Rate	47.3%	45.5%					
Target		45.5% - 49.5%	46.0% - 50.0%	46.3% - 50.3%	46.7% - 50.7%	47.0% - 51.0%	48.0% - 52.0%
Target Met?		YES					

1.a.vii.

Graduation Rate: Statewide Graduation Rate Utilizing Board of Regents BRGRATERPT (Targeted)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	Fall 2002 cohort through Fall 2008	Fall 2003 cohort through Fall 2009	Fall 2004 cohort through Fall 2010	Fall 2005 cohort through Fall 2011	Fall 2006 cohort through Fall 2012	Fall 2007 cohort through Fall 2013	Fall 2008 cohort through Fall 2014
# in Fall Cohort	1969	1962					
# Graduated within 150% of time at any state public institution	1045	1043					
Rate	53.1%	53.2%					
Target		53.1% - 57.1%	53.2% - 57.2%	53.4% - 57.4%	53.6% - 57.6%	53.8% - 57.8%	54.0% - 58.0%
Target Met?		YES					

1.a.viii.

Percent of freshmen admitted by exception by term (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
# Freshmen Admitted (Summer)	202	190					
# Admitted by Exception	16	10					
Rate	7.9%	5.3%					
# in Freshmen Admitted (Fall)	1330	1432					
# Admitted by Exception	78	92					
Rate	5.9%	6.4%					
# in Freshmen Admitted (Winter)	58	63					
# Admitted by Exception	3	4					
Rate	5.2%	6.4%					
# in Freshmen Admitted (Spring)	59	61					
# Admitted by Exception	4	6					
Rate	6.8%	9.8%					
# in Freshmen Admitted (Total)	1649	1746					
# Admitted by Exception	101	112					
Rate	6.1%	6.4%					

1. Student Success

b. Increase the percentage of program completers at all levels each year.

Narrative Report:

Louisiana Tech's strategic plan, TECH 2020: Tomorrow's Tech Today, has three over-arching themes guiding the University's initiatives. One of those three themes is "Recruiting and retaining a model student body and university community." Of the five primary strategies driving this theme, four relate to recruitment, retention, and completion for undergraduate and graduate students. An increase of 1.1% in completers is shown on page 12 of this report. Following are some examples of Louisiana Tech's programs that support recruiting and retaining a model student body.

Undergraduate Level:

Every undergraduate degree program was involved in a curriculum review (completed in February 2011) resulting in a reduction of 46 degree programs to 120 hours (the total degree programs now at 120 hours is 57) with the average reduction in hours being 4.5 per program. Students currently enrolled in the 46 degrees will be given the choice to graduate with the 120-hour requirement thus reducing the time to degree completion.

Louisiana Tech continues to expand online course offerings now in 48 different disciplines with an increase in student enrollments up over 50% since 2008-09. The University is committed to providing online instructional access easier for students wherever they may be. (see section 3.b)

Engineering and Science's Freshman Enrichment Program (FrEP) was implemented in 2007 to help prepare and support students beginning their engineering or science college curriculum. If students experience a strong start, they are more likely to complete a degree. As of the 2010 Spring Quarter, 124 out of the 181 students (68.5%) who participated in FrEP have been retained in STEM disciplines. Historical graduation rates of comparable cohorts (Math ACT of 22-26) were approximately 30%. While it is too early to predict ultimate graduation rates for FrEP students, this current retention data is encouraging. Perhaps even more encouraging is a comparison of grades in engineering and mathematics classes. Approximately 68% of FrEP students made an A, B, or C in their first engineering class and calculus class as compared to approximately 53% for the comparable cohort not participating in FrEP. (A grade of C or higher is required in both engineering and calculus to proceed to the next course <http://frep.latech.edu/index.html>.)

All "undecided majors" were assigned to Bulldog Achievement Resource Center (BARC) advisors beginning in 2009 allowing for more student contact and guidance to students as they determine a college major – resulting in a retention rate for undecided majors Fall 2009 to fall 2010 of 73.1%, just slightly below the overall University retention rate of 74.3%.

While student personal and external factors certainly affect a student's degree completion, administrators, faculty and students all acknowledge that excellent student advising and frequent faculty contact are primary to student retention and degree completion. Departments have worked toward streamlining the advising process, updating student records, identifying and contacting students needing additional assistance, providing individual assistance, and making referrals to the Bulldog Achievement Resource Center (BARC) tutoring (math and English) sessions and to the Counseling Center's Smart Habits Academy. In 2010, the University Recruitment and Retention Council recommended that mandatory "refresher" advisor

training (two-session module of National Academic Advising Association webinars) be conducted for all faculty during the 2011-2012 academic year.

To promote student engagement and retention, departments have provided opportunities for increased student involvement in student organizations, service learning activities, field trips, study abroad programs and internships. Increasingly departments are using Facebook and other internet, e-mail contacts to provide program information to students. Departments utilize external advisory boards (22 departmental and 2 college advisory boards) and graduating senior exit exams to determine modifications to degree programs

Post-Baccalaureate Certificate (Graduate) level:

The University continues to increase the number of post-baccalaureate certificates to address primarily workforce needs – most recently in teacher certification areas (add-ons) with certificates, including some very specialized and critical shortage areas. The certificates provide an option for teachers to enhance career opportunities. Through a partnership with CenturyLink in Monroe, a PBC in Communications Systems has been recently developed to serve the needs of the company employees and has been submitted for Board of Regents approval. At some point, this program can be expanded to other interested companies or individuals. Making more PBC's available online will attract students who have access restrictions because of location, health, family and work requirements.

Master's Level:

Four master's programs were made available on line in 2009-2010. In 2010-2011, coursework for the MS in Engineering and Technology Management has been transitioned to an online format. This degree program has been designed to meet the graduate-level needs of engineers across North Louisiana. The M.Ed. in Educational Leadership, leading to SLAA certification, is a program with increased interest and increased completers who will fill leadership positions in Louisiana. The University promotes its concurrent admission policy – where qualified seniors may begin taking graduate courses to be applied to a master's degree. A number of master's degree programs have added a non-thesis track. The advent of the non-thesis tracks has given faculty the ability to advise students to do coursework that not only broadens their exposure to the multiple disciplines they need for their research but also gives the students encouragement in that the MS degree becomes a milestone and indicator of success they might achieve in doctoral work.

Doctoral Level:

The PhD in Organizational Psychology (recently added to the inventory) should have graduates by 2012-13. Each doctoral program has been reviewing the progress of doctoral students to determine what can be done to encourage completion of the program within program time limits.

Note: When reviewing the statistics for bachelor's completers on page 11 of this report: The number of completers at the bachelor's level is projected to be less than the number of completers in the 2008-2009 baseline year until 2014-2015 (reporting year 6). This projection is primarily due to declining numbers of first-time freshmen in the 6 years leading up to 2014-2016. However, during these same years, the University anticipates higher graduation rates. The academic profile of the entering freshmen, as measured by average ACT score, increased every year from 22.5 for the cohort reported in 2008-2009 to 23.63 for the group that will be reported in 2014-2015. Lower freshman enrollment is attributed to higher admission standards and declining qualified high school students.

1.b.i. Percentage change in number of completers, from baseline year, all award levels (Targeted)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of Completers, Baccalaureate	1306	1261					
% Change		-3.4%					
Target		-3.4%	-5.1 - -1.1%	-4.3 - -.3%	-3.0 - +1.0%	-2.0 - +2.0%	0% - +4%
Target Met?		YES					

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of Completers, Post-Baccalaureate	19	25					
% Change		31.5%					
Target		31.5%	54% - 58%	66 - 70%	74%- 78%	83% - 87%	83% - 87%
Target Met?		YES					

Note: Data in the first two tables excludes associate degree completers.

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of Completers, Masters	352	411					
% Change		16.7%					
Target		16.7%	14% - 18%	14% - 18%	16% - 20%	16% - 20%	18% - 22%
Target Met?		YES					

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of Completers, Doctoral	37	36*					
% Change		-2.7%					
Target		-2.7%	-2.7% - +1.3%	-1.0% - +3.0%	-1.0% - +3.0%	-1.0 - +3.0%	0.0% - +4.0%
Target Met?		YES					

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of Completers, TOTAL All Degrees	1714	1733					
% Change		1.1%					

**The total includes 5 Doctor of Audiology graduates. The AuD degree was reclassified to a professional CIP during the academic year 2010-2011.*

1. Student Success

c. Develop partnerships with high schools to prepare students for postsecondary education.

Narrative Report:

- examples of newly created partnerships:** Louisiana Tech added eight new high schools to the University's Early Start/dual enrollment program this year, increasing the number of partner schools from 34 schools in 2009-2010 to 42 schools in 2010-2011. The College of Engineering & Science's NASA Threads project-based high school physics curriculum was launched in 2010-2011. Funded by NASA, Louisiana Tech faculty, with involvement from three high schools, developed the curriculum. During the Summer of 2010, teachers from 15 high schools attended a two-week workshop on Tech's campus to prepare them for teaching the curriculum. Also see item 4b in this report for information about the Regional Cyber Education Center that involves a partnership between Louisiana Tech, Bossier Parish Community College, the Cyber Innovation Center (a public-private partnership) and high schools. Dual enrollment helps prepare students for postsecondary education by exposing them to college-level work and expectations while still enrolled in high school. Through teaching dual enrollment courses and being mentored by Louisiana Tech faculty members, the high school teachers who teach dual enrollment courses are directly impacting the level of preparation that students will have upon graduation from high school. The NASA Threads project helps prepare students for postsecondary education by equipping their teachers with the tools, techniques, and skills they need to successfully prepare students to pursue STEM degrees.

- examples of strengthening existing partnerships:** Many of the University's existing dual enrollment partner schools added additional course offerings to their dual enrollment programs in 2010-2011. A menu of 30 course offerings is posted at [dual enrollment course offerings](#). In addition to the posted courses, a few of our partner high schools offer dual enrollment music and physics courses.

Louisiana Tech's College of Engineering & Science has three programs with strong high school partnerships. Since 2005, 74 teachers from 19 high schools have participated in our STEM outreach programs. Although the primary focus of these programs is to build lasting relationships with area teachers, over 350 high school students have been directly impacted by attending one of our on campus programs. An additional 1,500 (estimate) students have been indirectly impacted by being taught by a high school teacher who has participated in a program with Tech. The three programs are TechSTEP, Cyber Discovery Camp, and NASA Threads. TechSTEP, funded by the National Science Foundation, teaches teachers how to connect math and science to engineering. Each TechSTEP project lasts one year and includes three Teacher Workshops, each one of which is followed by a Discovery Weekend for students. The participating teachers and students come to the University's campus for each workshop. Cyber Discovery Camp is an intensively immersive one-week residential program for rising freshmen and sophomore high school students and their teachers. This multidisciplinary program involves University faculty from mathematics, engineering, computer science, history, political science, and architecture. The integration of these topics is critical to the understanding of cyber security issues around which this program is built. This camp was first offered in 2008 and has continued each summer thereafter. **There has been a 39% increase in the number of students enrolling in STEM majors at Louisiana Tech from participating high schools.**

- examples of feedback reports to high schools:** During 2010-2011, University personnel met with dual enrollment partner and feeder high

schools to determine what data they think will be most beneficial to include in formal feedback reports which are planned for distribution during 2011-2012 or early in 2012-2013. Further, in 2010-2011 Tech added a permission signature to the dual enrollment applications which will allow the University to provide student specific feedback on dual enrollment student participants while meeting FERPA guidelines. So far, it has been determined that annual reports will be sent for entering cohorts of freshmen from individual high schools that include high school GPA, ACT/SAT test scores, college major, Tech cumulative GPA, and possibly GPAs in specific math, English, or science courses, and graduation date and/or exit term. Personally identifiable information will not be provided for students who did not give permission to do so.

In the Engineering STEM partnerships, there is significant reciprocal feedback between high school teachers and Tech faculty. This open, honest dialog during teacher workshops has included topics that are critical to student success, including University expectations of high school math preparation, cultural shifts among students in response to “smart” phones and social networking, helicopter parent issues, and appropriate use of technology in the classroom. These discussions are invaluable.

- **examples of the types of progress that will be tracked to evaluate the partnerships and demonstrate student readiness (e.g. increase in the number of students participating in dual enrollment opportunities, increase in the number of students taking a high school core curriculum, reduction in need for developmental courses, increase in ACT scores):** For incoming high school freshmen, Louisiana Tech tracks and has a goal of annually increasing the average H.S. GPA, ACT/SAT scores, percent of students who have taken a high school core curriculum, and percent of TOPS recipients.

For dual enrollment, Tech annually tracks the number of students participating, the number of high school partners, the number of unique course offerings (i.e. ENGL 101/102, MATH 101/112 ...), Student Credit Hours, and grades generated by this enrollment. Further, we track the number and percent of students who participated in dual enrollment and in our STEM programs and then enrolled as Louisiana Tech University students. The numbers have grown each year, and much of this data is posted on our dual enrollment web site at [dual enrollment statistics](#).

In the area of performance after dual enrollment, a recent study shows that students who participated in dual enrollment math courses with Tech (College Algebra and Trigonometry) and went on to take higher-level math classes as University students did just as well in the higher level courses as did students who took the lower level classes on Tech’s campus. Further, we are tracking the length of time to graduation for students who participated in dual enrollment with Tech. One student graduated with a BS in Biology on February 26, 2011, after two years and two quarters with a 3.9+ GPA. This “success” is shared with high school administrators and teachers at our annual meetings.

- **Other:** Louisiana Tech strongly supports student access through dual enrollment. Many of our partner high schools have dual enrollment course sections where some of the students are dually enrolled and some are not. And, some of these high schools require their non-dual enrolled students to complete the same work as dual enrolled students. Using Psychology as an example, the non-dual enrolled students complete the same work as the dual enrolled students, and Tech’s faculty Course Coordinator grades all of the exams for all of the students, which are the same exams that regular on-campus students take. If, later in the academic year, a non-dual enrolled student earns a qualifying ACT score, Tech is able to enroll the student in a subsequent quarter. For the students who are not able to earn college credit, there is at least the opportunity to be exposed to college-level material. In addition, Tech provides a tuition “match” for dual enrollment students. The Board of Regents funds two courses (6 credit hours) per year, per student, and Tech will fund an additional two courses (6 credit hours). Students may enroll in additional courses (more than 12 credit hours) at a discounted rate.

1.c.i. Number of high school students enrolled at the postsecondary institution while still in high school (as defined in Board of Regents' SSPS, student level "PR"), by semester/term (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
Summer	52	17					
Fall	584	755					
Winter	308	20					
Spring	199	565					
TOTAL	1143	1357					

1.c.ii. Number of semester credit hours in which high school students enroll, by semester/term (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
Summer	327	99					
Fall	2875	3611					
Winter	1044	77					
Spring	704	2229					
TOTAL	4950	6016					

1.c.iii. Number of semester credit hours completed by high school students with a grade of A,B, C, D, F or P, by semester/term (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
Summer	288	93					
Fall	2832	3570					
Winter	1036	77					
Spring	699	2219					
TOTAL	4855	5959					

Note: Data for 1.c.i., 1.c.ii., and 1.c.iii includes Summer Terms for 2008-09 and 2009-10. For item 1.c.iii Tech is showing a higher number of completers than does the SSPS data. This difference occurs because some dual enrollment courses are taught all year long and Tech reported the grades as incomplete at the time the SSPS reports were submitted. Letter grades have now replaced the incomplete grades in Tech's system.

1. Student Success

d. Increase passage rates on licensure and certification exams and workforce foundational skills.

Narrative Report:

Administrators, faculty, and students recognize the importance of successful completion of licensure and certification exams. Best practices to increase or maintain passage rates on licensure and certification exams are utilized in all disciplines with certification/licensure requirements.

PRAXIS Exams for teacher preparation completers – 100%: PRAXIS workshops are provided for students on a regular basis. Also, individual consultations are made available to students who are unsuccessful on a PRAXIS exam. In addition to the PRAXIS test preparation materials available in the College's Larson Test Preparation Center, a PRAXIS Resource Center has been added as an online component of the Office of Field & Clinical Experience's website. The College of Education and faculty in content areas review Praxis materials and test results to determine if subject matter coverage should be modified. PRAXIS Test eBooks and study guides are made available to initial certification program students to help them prepare for PRAXIS exams.

Medical Laboratory Technology completers – 100%: Louisiana Tech subscribes to a continuing education website that provides tutorials and exams in all the areas of medical technology. Each med tech major has access to these materials during his/her entire program. Before the end of the senior year, students are given a graduate assessment exam to help them assess any areas of weakness before they take the certification exam. There is a comprehensive two-day student review session each Spring at the Annual Med Tech meeting. Exam review books are provided to students to help them prepare for the certification exam.

Dietetic Internship Program completers – 100%: During the Dietetic Internship at Louisiana Tech University, students participate in various learning activities to prepare them to take the national registration exam to become a registered dietitian. Content for the exam is reviewed through graduate course work, practicum competencies, and participation in a three-day registration exam preparation workshop. Students also must successfully pass a practice registration exam to fulfill all of the requirements of the dietetic internship.

NCLEX for Nursing (RN) for nursing completers – 84%: The 84% passage rate in 2009-2010 was below the norm for nursing completers. In addition to the continuing support outlined in this section, other changes have been made in the program progression and assessments. The nursing program utilizes formative ATI benchmarking (Assessment Technologies, Inc., exams) in all nursing courses. Benchmarks are established for each course. After an assessment is completed, faculty meet with students to review results and plan additional study as needed. In the nursing capstone course, Nursing 216, the ATI Comprehensive Exam is given twice to graduating students. Remediation, if needed, is prescribed. Online resources and activities are abundant in the nursing courses at all levels. The licensing exam is a computer-adapted exam to include math calculations and alternative questions. Every class is required to include questions such as these to prepare students for the exam. Practice questions in the NCLEX-style are provided by the instructor. Students are encouraged to take a review course for the NCLEX-RN exam, and a majority of the students complete such a course prior to taking the exam.

Health Information completers- 100%: To prepare students for the AHITMA RHIT Exams, the following activities are included in their studies - (1) participation in Exam Review Workshop provided by the state associations; (2) required comprehensive exams in all HIM core courses; (3) required comprehensive exam review as a part of all clinicals; and (4) completion of a mock exam before graduation. In addition, students are encouraged to utilize available resources to study and prepare on their own.

1.d.i. Passages rates on licensure exams (Tracked)

DISCIPLINE	EXAM THAT MUST BE PASSED UPON GRADUATION TO OBTAIN EMPLOYMENT	ENTITY THAT GRANTS REQUIRED LICENSURE/CERTIFICATION (source for reporting)	BASELINE YEAR	# Students who took exam	# Students who met standards for passage	Calculated Passage Rate
Clinical Laboratory Sciences/Medical Laboratory Technology	American Society for Clinical Pathology Board of Certification (ASCP BOC)	Louisiana State Board of Medical Examiners (LSBME)	2009-2010	9	9	100%
Dietician	Commission on Registration (CDR) National Registered Dietitian Exam	Commission on Dietetic Registration of the American Dietetics Association	2009-2010	14	14	100%
Education	All 3 PRAXIS exams	Louisiana State Department of Education				
Early Childhood PK-3	Elementary Education: Content Knowledge (0014) and Principles of Learning and Teaching: Early Childhood (0521)	Louisiana State Department of Education	2009-2010	32	32	100%
Elementary Ed Gr 1-5	Elementary Education: Content Knowledge (0014) and Principles of Learning and Teaching: Grades K-6 (0522)	Louisiana State Department of Education	2009-2010	44	44	100%
Middle Gr 4-8 Math	Middle School Mathematics Content (0069) and Principles of Learning and Teaching: Grades 5-9 (0523)	Louisiana State Department of Education	2009-2010	4	4	100%

Middle Gr 4-8 Science	Middle School Science Content (0439) and Principles of Learning and Teaching: Grades 5-9 (0523)	Louisiana State Department of Education	2009-2010	1	1	100%
Agriculture Ed Gr 6-12	Vocational Ed – Agriculture (0700) and Principles of Learning and Teaching: Grades 7-12 (0524)	Louisiana State Department of Education	2009-2010	3	3	100%
Biology Ed Gr 6-12	Biology: Content Knowledge (0235) and Principles of Learning and Teaching: Grades 7-12 (0524)	Louisiana State Department of Education	2009-2010	8	8	100%
Business Ed Gr 6-12	Principles of Learning and Teaching: Grades 7-12 (0524) and Vocational-Business Education: Content Knowledge (0101)	Louisiana State Department of Education	2009-2010	4	4	100%
Earth Science Ed Gr 6-12	No PRAXIS Content Test for this area Principles of Learning and Teaching: Grades 7-12 (0524)	Louisiana State Department of Education	2009-2010	1	1	100%
English Ed Gr 6-12	Principles of Learning and Teaching: Grades 7-12 (0524) and English Language, Literature, and Composition: Content	Louisiana State Department of Education	2009-2010	9	9	100%

	Knowledge (0041) and English Language, Literature, and Composition: Pedagogy (0043)					
Family & Consumer Sciences Ed Gr 6-12	Principles of Learning and Teaching: Grades 7-12 (0524) and Vocational -Family and Consumer Sciences (0121)	Louisiana State Department of Education	2009-2010	2	2	100%
Mathematics Ed Gr 6-12	Principles of Learning and Teaching: Grades 7-12 (0524) and Mathematics: Content Knowledge (0061)	Louisiana State Department of Education	2009-2010	8	8	100%
Physics Ed Gr 6-12	Principles of Learning and Teaching: Grades 7-12 (0524) and Physics: Content Knowledge (0061)	Louisiana State Department of Education	2009-2010	1	1	100%
Social Studies Ed Gr 6-12	Principles of Learning and Teaching: Grades 7-12 (0524) and Social Studies: Content Knowledge (0081) and Social Studies: Interpretation of Materials (0083)	Louisiana State Department of Education	2009-2010	12	12	100%
Spanish Ed Gr 6-12	Spanish: World Language (5195) and Principles of Learning and Teaching: Grades 7-12 (0524)	Louisiana State Department of Education	2009-2010	1	1	100%

Art Ed Gr K-12	Principles of Learning and Teaching: Grades K-6 (0522) or Principles of Learning and Teaching: Grades 5-9 (PDF) (0523) or Principles of Learning and Teaching: Grades 7-12 (0524)	Louisiana State Department of Education	2009-2010	4	4	100%
Health & Physical Ed Gr K-12	Principles of Learning and Teaching: Grades K-6 (0522) or Principles of Learning and Teaching: Grades 5-9 (PDF) (0523) or Principles of Learning and Teaching: Grades 7-12 (0524) and Physical Education: Content Knowledge (0091)	Louisiana State Department of Education	2009-2010	10	10	100%
Music Ed, Instrumental, Gr K-12	Principles of Learning and Teaching: Grades K-6 (0522) or Principles of Learning and Teaching: Grades 5-9 (PDF) (0523) or Principles of Learning and Teaching: Grades 7-12 (0524) and Music: Content Knowledge (0113)	Louisiana State Department of Education	2009-2010	3	3	100%
Special Ed Gr 1-12	Principles of Learning and Teaching: Grades	Louisiana State Department of Education	2009-2010	5	5	100%

	K-6 (0522) or Principles of Learning and Teaching: Grades 5-9 (PDF) (0523) or Principles of Learning and Teaching: Grades 7-12 (0524) and Special Education: Core Knowledge and Mild to Moderate Applications (PDF) (0543)					
Special Ed, Visually Impaired	Special Education: Core Content Knowledge and Applications (0354) and Elementary Education: Content Knowledge (0014)	Louisiana State Department of Education	2009-2010	1	1	100%
Health Information Technology	AHIMA Registered Health Information Technology (RHIT) Exam	AHIMA: American Health Information Management Association	2009-2010	10	10	100%
Nursing (RN)	NCLEX-RN	Louisiana State Board of Nursing	2009-2010	49	41	84%

2. Articulation and Transfer

a. Phase in increased admission standards and other necessary policies by the end of the 2012 Fiscal Year in order to increase student retention and graduation rates for transfer students.

Narrative report:

- **policy/policies adopted by the management board;**

As reflected in the [ULS Board minutes](#) from the October 23, 2009, meeting of the Board of Supervisors for the University of Louisiana System (ULS), the Board voted to “. . . increase admission standards, tighten admission exceptions, and strengthen transfer student exceptions.” Posted at the following site are the [ULS admission policies](#). Both the University of Louisiana System and Tech immediately began preparations for the transition, and on April 22, 2010, the Board of Regents released their policy which will supersede ULS policy.

- **subsequent policy/policies adopted by the institution;**

Louisiana Tech adopted the guidelines as set forth by the University of Louisiana System and is transitioning to the new 2012 Board of Regents requirements.

The University hosts Transfer Orientation at the beginning of each quarter, and requires students to meet face-to-face with academic advisors prior to registration. Online transfer students are advised over the telephone and via email. An online orientation was developed in the Spring of 2011. The University has a student success course, University Seminar (U.S.) that is offered each quarter and transfer students are encouraged to enroll. An online version of U.S. is being developed and should be completed by Fall 2011. A U.S. class specifically for transfer students is also being developed and will be available in Fall 2012. Transfer focus groups, transfer student interviews, and networking with peer institutions through the Consortium for Student Retention Data Exchange (CSRDE), are helping shape the content of the transfer student U.S. class.

New in 2010-2011 is the opportunity for community college students who intend to transfer to Louisiana Tech to be assigned an advisor in the Bulldog Achievement Resource Center (BARC) for early advising and to help ensure that they are taking the courses that will transfer to their programs of study at Louisiana Tech. Students are referred to the BARC by the Admissions Counselor for Transfer Student Enrollment. There are many examples of policies at the individual program level that are geared toward increasing retention and graduation rates. One example is the School of Art where the secretary pulls information from the Student Information System to show which students have and have not advised or registered from one quarter to the next. Names of students who have not advised or registered are given to their advisors who then contact them to inquire if there is a problem that could be addressed. The School of Art feels that this type of personal contact over and above what is normally required helps them retain a high percentage of their students. For example, from Winter Quarter 2010-2011 to Spring 2011, only 3 students (1.4%) out of 222 did not return. Through the Tech 2020 Working Groups, initiated in Fall 2011, best practices such as this are being shared for other colleges and departments to implement.

- **timeline for implementing the policy/policies;**

Transfer Orientation, mandatory advising, and U. S. have already been implemented. Tech implemented the ULS admission requirements for Fall 2011, and the University is on track for implementing the Board of Regents' 2012 admission requirements. Transfer student advising began in the BARC during 2010-2011, the online U. S. class will be developed by Fall 2011, and the Transfer Student University Seminar will begin in Fall

2012. The University Recruitment and Retention Council and Enrollment Management Council are continuing to review practices that will be put implemented as policies over the next year.

- **performance of entering transfer students admitted by exception (4-year universities).**

During 2009-2010, a total of 697 new transfer students enrolled at Louisiana Tech, and 50 of the 697, or 7.2% were admitted by exception. Of the 50 who were admitted by exception, 29, or 58% were still enrolled at the beginning of the following academic year which was Fall 2010. These 29 students had earned an average of 70 semester credit hours each with an average GPA of 2.4. Conversely, 21 students, or 42% of those admitted by exception, were not enrolled at the beginning of the following academic year. These 21 students had earned an average of 59 semester hours each with an average GPA of 2.0. Comparing the performance of these students to students who were not admitted by exception reveals that the 2009-2010 students who were not admitted by exception and who were still enrolled had an average GPA of 2.9 and average hours earned per student of 81.00. The students who were not admitted by exception who did not return for Fall 2010 had an average GPA of 2.49 and 50.57 earned hours. See [Performance of Students Admitted by Exception](#) for additional information.

Further research is planned to see if identifiable characteristics or combinations of characteristics are present for students who have persisted compared to those who have not. Through a deeper understanding of these at-risk students, the University will explore additional intervention strategies as well as to whom (what profile of student) the individual strategies should be directed.

- **Other**

While additional programming is still necessary, we have seen an improvement in the retention rate of transfer students. Student services available through the BARC (the University's student success center) such as supplemental advising, tutoring, and writing assistance are believed to be contributing positively to improved retention rates. Tech recently implemented a [Faculty Concern Form](#) that can be submitted to the Director of Co-curricular Programs for follow up with perceived academic or non-academic concerns. Submissions increased from 9 in Fall 2009-10 to 15 in Fall 2010-11, and while the numbers are not large, this "intervention" positively impacted the retention of these students.

During the Fall of 2010, Louisiana Tech created a new transfer website that includes a single point of contact for transfer students, transfer admission requirements, links to the Board of Regents' Transfer Credit Equivalency Guide, links to catalogs for all Louisiana public colleges and universities (the catalogs include lists of courses required for each major), lists of general education courses by major, advising guides/templates for the Louisiana Transfer degrees (AALT/ASLT), invitations to visit the campus, and more. This transfer website was specifically designed to provide 24/7 self-service support to prospective transfer students. Since this site went live in October 2010, there have been 7,063 hits on the general [transfer web page](#) and 340 hits on the [Louisiana Transfer Degree](#) site.

As a member of the Consortium for Student Retention Data Exchange (CSRDE) where there is an increasing focus on transfer student retention, Louisiana Tech networks with other universities to identify best practices. For example, one CSRDE conference presentation by the University of North Carolina at Charlotte (UNC-C) entitled, *Improving the Experience of New Transfer Students through Collaborative Research and Integrated Program Development*, revealed that attending orientation positively impacts transfer retention. This affirmed Tech's program and lead to increased efforts to encourage students to attend Transfer Orientation. Another session led by DePaul, Roosevelt, and the U. of Minnesota, entitled *Data and Decisions to Support Student Success* presented ways to track new transfer students, and Louisiana Tech is implementing a similar model.

2.a.i. 1st to 2nd year retention rate of baccalaureate degree-seeking transfer students (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# enrolled	620	689					
# retained to next Fall semester	368	435					
Rate	59.4%	63.1%					

Note: Data includes transfer students entering Summer – Spring Terms, 2008-09, that returned Fall 2009, and transfer students entering Summer – Spring Terms, 2009-10, that returned Fall 2010.

2.a.ii. Number of baccalaureate graduates that began as transfer students (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of bacc completers	1306	1261					
# who began as transfers	302	292					
Percentage who began as transfers	23.12%	23.16%					

Note: Files of 2008-09 and 2009-10 baccalaureate graduates (minus duplicates) were matched with datawarehouse student files (going back to 2002) to determine "transfer" entry code status. Those students entering prior to 2002, were then matched against the transcript file in the Student Information System to determine entry code status.

2.a.iii. Percent of transfer students admitted by exception (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
# Transfers Admitted (Summer)	77	88					
# Admitted by Exception	5	2					
Rate	6.5%	2.3%					
# Transfers Admitted (Fall)	364	375					
# Admitted by Exception	29	24					
Rate	8%	6.4%					
# Transfers Admitted (Winter)	80	118					
# Admitted by Exception	5	8					
Rate	6.3%	6.8%					
# Transfers Admitted (Spring)	176	167					
# Admitted by Exception	11	8					
Rate	6.3%	4.8%					
# Transfers Admitted (TOTAL)	697	748					
# Admitted by Exception	50	42					
Rate	7.2%	5.6%					

2. Articulation and Transfer

b. Provide feedback to community colleges and technical college campuses on the performance of associate degree recipients enrolled at the institution.

Narrative report:

- **examples of new or strengthened feedback reports to the college(s)**

This is a new area of focus for Louisiana Tech University. During 2010-2011, Louisiana Tech developed a feedback report that will begin implementation in the Summer Quarter of 2011. Louisiana Tech will track and report on the success of students who transfer to Louisiana Tech with associate degrees from Louisiana's community or technical colleges. An annual report will be generated at the close of each Fall Quarter that tracks students who first enrolled at Louisiana Tech during Summer Quarter 2011 and beyond. The report will show the entry quarter, GPA, major, and current enrollment status. The first reports will be generated and distributed at the close of Fall Quarter 2012-2013. This timeline is consistent with other retention reporting timelines currently being tracked and reported for the GRAD ACT. Specifically, students entering in Summer 2011, Fall 2011, Winter 2011-2012, and Spring 2012 will be reported at the close of Fall 2012-2013. One report will be generated for each community college, and the purpose of the report will be to show how many students transferred to Louisiana Tech and how those students are performing at Tech. Examples given at Consortium for Student Retention Data Exchange (CSRDE) presentations helped shape Tech's report format (sample [Feedback report](#)).

- **processes in place to identify and remedy student transfer issues**

Starting with the application for admission, there is a single point of contact in the Admissions Office, the Admissions Counselor for Transfer and Nontraditional Student Enrollment. This Transfer Counselor spends 100% of his/her time working with transfer students to facilitate admission, advising/registration, transcript evaluation, referral of students to academic advisors for the various majors, referral of students to financial counselors, and more. If there are issues encountered that are not easily resolved, the Transfer Counselor contacts the Dean of Enrollment Management, who is also the Chief Articulation Officer, for assistance. As a member of the Council for Academic Deans, the Dean of Enrollment Management can easily facilitate referrals to the academic areas if there are issues with transfer credits or other academic concerns.

The Admissions Counselor for Transfer and Nontraditional Student Enrollment also works closely with her counterparts at both Louisiana Delta Community College and Bossier Parish Community College. Almost daily there are telephone calls and emails exchanged between Tech and the community colleges to assist transfer students. These relationships are invaluable, especially during peak processing times when a phone call and a faxed transcript can assist with getting a new transfer student properly placed in classes for his/her first quarter at Tech.

Both the College of Business and the College of Engineering & Science have full-time Academic Support Specialists on staff whose entire job responsibilities revolve around recruiting and retaining students in their respective colleges. Student relationships with the Academic Support Specialists begin building with the first visit to the Louisiana Tech campus. The Academic Support Specialists coordinate the program of study

portion of the campus visit and facilitate transfer transcript evaluation as it pertains to individual programs of study. For students who matriculate, these Specialists also assist with academic advising and help ensure that new students are able to navigate Louisiana Tech's registration and fee payment process successfully. This program has been so successful that, in 2011, the College of Engineering and Science hired a second Academic Support Specialist to assist in increasing transfer and articulation needs.

Students in the other colleges, where individual majors are much more diverse than they are in Engineering and Business, receive assistance from their academic advisors, program chairs, faculty members, departmental staff, and BARC staff members. An example of this diversity is the College of Liberal Arts where majors range from Fine and Performing Arts, to Architecture, Professional Aviation, and History. All of these programs are small enough and specialized enough that faculty and staff members in each area tend to know and support students very well. Evidence of this can be seen in the College's first time freshmen retention rates which were 80.2% in Fall 2009, and 80.4% in Fall 2010. These rates compare to 74.2% and 74.3%, respectively, for the University. Still, should it be determined that Academic Support Specialists are needed, priority will be given to those positions in the future.

2.b.i. 1st to 2nd year retention rate of those who transfer in with an associate degree from any two-year institution. (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# transfers in	60	79					
# retained to next Fall semester	37	59					
Rate	62.7%	74.7%					

2.b.ii. Number of baccalaureate graduates that began as transfer students with associate degrees from any two-year institution. (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of bacc completers	1306	1261					
# who began as transfers w assoc degree	40	29					
Percentage who began as transfers w assoc degree	3.1%	2.3%					

2. Articulation and Transfer

c. Develop referral agreements with community colleges and technical college campuses to redirect students who fail to qualify for admission into the institution.

Narrative report:

- **examples of the agreements with Louisiana institutions**

As provided in the Memorandums of Understanding with Louisiana Delta Community College (May 15, 2008), and Bossier Parish Community College (November 12, 2010), students sign Intent to Participate agreements that will expedite program progression and allow seamless record transferability and data sharing in compliance with the Family Educational Rights and Privacy Act (FERPA). These agreements can be initiated by either the community college or by Louisiana Tech University and shared with the partner school.

In addition, Louisiana Tech has the following program-specific articulations agreements:

Biology – Louisiana Delta Community College.

Business (all majors: Accounting, Business Administration, Economics, Finance, Computer Information Systems, Management, and Marketing) – Louisiana Delta Community College and Bossier Parish Community College.

Early Childhood Education – Louisiana Delta Community College.

Engineering & Science – Bossier Parish Community College.

Health Informatics and Information Management – Bossier Parish Community College, Delgado Community College, Southern University – Shreveport, and South Arkansas Community College.

Psychology – Louisiana Delta Community College.

Students who do not qualify for admission to Louisiana Tech are advised that they can follow these degree plans, or others, at the community colleges and transfer back to Tech once they have obtained an associate's degree.

The agreement with Louisiana Delta Community College (LDCC) provides a dual admission program for students who sign Intent to Participate Agreements whereby students who are admitted into LDCC and who choose an approved common degree plan will receive automatic admission to Louisiana Tech upon satisfactorily completing an associate degree.

The agreement with Bossier Parish Community College (BPCC) establishes an Associate of Science to a Bachelor of Science in Engineering Progression Program. Students sign an Intent to Participate Agreement, and in exchange are provided advisors who are available by phone, online, and on-site appointments. Louisiana Tech advisors will encourage students to complete the Associate of Science prior to progressing to the Bachelor of Science program at Louisiana Tech, and they will encourage BPCC students to become engaged in professional student organizations at Tech.

- **processes in place to identify and refer these students.**

The above referenced memorandums of understanding provide a foundation for sharing student data that can be initiated by either Louisiana Tech University or by the community college. This process will depend on which institution the student first contacts and to which institution the student first applies for admission.

Students who apply to Louisiana Tech and who do not meet our admission requirements are sent a letter informing them of their options. This letter was modified in 2011 to include the option of obtaining an Associate of Arts or Associate of Science Louisiana Transfer Degree and being pre-admitted to Louisiana Tech upon completion of the associate degree program. The letter informs students about the Intent to Participate Agreement and invites them to become a part of the program. Further, the letter outlines the benefits of the program including the fact that this option allows them to enter Louisiana Tech as juniors with all of the privileges provided to current Tech students as well as being provided access to a Louisiana Tech Advisor while they are earning their Louisiana Transfer Degree.

In addition, Louisiana Tech utilizes a **Referral Form** to redirect students who fail to qualify for admission to Louisiana Tech University to community colleges. This referral form goes directly to the community college to allow them to recruit the students proactively. This process is facilitated by the Admissions Counselor for Transfer and Nontraditional Student Enrollment. This Counselor reviews all applications for admission and determines if a student will not meet Louisiana Tech's admission criteria, the Counselor completes the above-mentioned referral form and emails or faxes it to the community college(s) nearest the student's home address. Students are also informed about the various transfer agreements that are in place for the various 2 + 2 programs and are invited to sign Intent to Participate Agreements.

2.c.i. Number of students referred at anytime during the given academic year to two-year colleges and technical colleges. (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
# of students referred	23	49					

2. Articulation and Transfer

d. Demonstrate collaboration in implementing articulation and transfer requirements provided in R.S. 17:3161 through 3169.

Narrative report:

- **examples of collaboration in implementing all aspects of the transfer degree programs, Louisiana Transfer Associate Degree (AALT, ASLT)* and Associate of Science in Teaching (AST) programs**

Louisiana Tech faculty members have contributed significantly to the statewide efforts in articulation. A Louisiana Tech faculty member was appointed to the Statewide Articulation and Transfer Council at its inception to represent the University of Louisiana System. He provided leadership in particular for the general education component of the transfer degrees. Currently a Tech Engineering and Science faculty member serves on this committee. The Dean of our College of Business serves on Business Transfer Committee, and the Chair of Tech's Department of Journalism is chair of the Mass Communications Transfer Committee.

Bossier Parish Community College is currently offering 5 new cyber degree programs in Cyber Information Technology (CIT). We are currently working with them to establish the Associate of Science Louisiana Transfer degree template for Physical Sciences to develop a pathway into Louisiana Tech for the BS in Computer Science. Louisiana Tech's Articulation and Transfer Council representative has collaborated extensively with the BPCC CIT representatives to promote articulation and recently submitted a major research proposal to the National Science Foundation to support a formal program that would create more extensive articulation pathways between BPCC and Louisiana Tech.

- **processes in place to remedy any articulation and transfer issues as they relate to the AALT, ASLT, or AST degrees.**

Starting with the application for admission, there is a single point of contact in the Admissions Office, the Admissions Counselor for Transfer and Nontraditional Student Enrollment. In addition to this Counselor, Louisiana Tech has identified a 'transfer ombudsman' and a dedicated financial aid counselor for the LT transfer degree candidates/recipients. This transfer ombudsman is the director of the Bulldog Achievement Resource Center (BARC), whose background includes that of full-time professor and major academic advisor at Louisiana Tech University. After making initial contact with the Transfer Admissions Counselor, who is listed as the primary contact on the University's web pages; students will be referred to the BARC for early advising. This model should help ensure a smooth transition from the community colleges to the University. BARC staff members work with all academic and administrative areas on campus on a regular basis to help ensure student success. The BARC also serves as a supplemental advising office for students who need help with a myriad of academic, administrative, and personal issues making the office ideally suited to assist the LT transfer degree students.

Louisiana Tech University launched an updated transfer website on October 11, 2010, that contains information and advising guides for the Louisiana Transfer Degree. The general [transfer web page](#) links to the [Louisiana Transfer Degree](#) web page. Since the site went live there have been 7,063 hits on the transfer page and 340 hits on the Louisiana Transfer Degree page.

Advising guides are available on the web site for students planning to major in

- Art
- Biology
- Business
- Chemistry
- English
- Geography
- History
- Political Science
- Sociology
- Speech (concentration in Speech Communication)

The advising guides provide lists of General Education Required courses and other lower-division courses that students could take at a community college and transfer to Louisiana Tech to fulfill major-specific requirements. Most of the guides contain 60 or more credit hours allowing students to transfer to Tech as juniors with the ability to progress toward obtaining a bachelor's degree in approximately two additional years.

In order to provide maximum flexibility, many of the guides contain more than 60 credit hours of potential transfer coursework. This flexibility will help ensure that each student will be able to complete 60 transfer course hours even if the particular community college he/she is transferring from does not offer all of the courses on the advising guide. In these cases, students could choose the 60 hours that are available at their community college and/or transfer to Louisiana Tech with more than 60 hours. This flexibility will help ensure that students transfer to Louisiana Tech as college juniors in their individual programs of study. BARC advisors are available to oversee student progression prior to transfer.

Next steps include plans to add additional advising guides for other popular transfer majors and to prepare institution-specific transfer guides beginning with Bossier Parish Community College and Louisiana Delta Community College as they are the closest geographically to Louisiana Tech.

The College of Business and the College of Engineering and Science both employ Academic Support Specialists as discussed in item 2.b. above. In summary, there is an excellent team in place to work with these transfer students. Additional policies and procedures have been put in place to ensure that the transfer students will be assimilated into the University community with all of the privileges, rights, and responsibilities provided to on-campus students. Examples include access to early advising and registration on the same schedule as on-campus students.

Louisiana Tech anticipates that, as this program is implemented and grows, further adjustments may need to be made. The University remains committed to being flexible and open to doing whatever is necessary to ensure program and student success.

2.d.iii. 1st to 2nd year retention rate of those who transfer with AALT, ASLT, or AST degrees (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of transfer degree students enrolled	0	0					
# retained to next Fall semester	N.A.	N.A.					
Rate	N.A.	N.A.					

2.d.iv. Number of degree graduates that began as transfer students with AALT, ASLT, or AST degrees (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of completers who began as transfer degree students	0	0					

3. Workforce and Economic Development

a. Eliminate academic programs offerings that have low student completion rates as identified by the Board of Regents or are not aligned with current or strategic workforce needs of the state, region, or both as identified by the Louisiana Workforce Commission.

Narrative Report:

- **a description of the institution's current review processes to identify academic programs that have low student completion rates or are not aligned with current or strategic workforce needs**

Individual academic departments and the academic dean and the Office of Academic Affairs closely monitor program enrollment, retention, and completer data provided by our IR office on a quarterly and annual basis. Such reviews have resulted in additional recruiting efforts, curriculum modifications, and program eliminations. As part of the **2011 Regents review of low completer programs**, Louisiana Tech faculty and administration completed a thorough review of each program and submitted to the Board of Regents a request **to terminate 7 programs and to terminate/consolidate 20 degree programs**. External members of Advisory Boards are also actively engaged in addressing workforce issues and curriculum improvements. In 2010-2011, 22 departmental and 2 college-wide advisory councils held 34 different meetings on our campus. The major curriculum modifications for 2009-2010 and 2010-2011 are listed on page 38.

The University's Coordinator of Professional & Workforce Development, using LWC and other agency data, assesses the current and strategic workforce needs of the region and State to ensure that Tech's academic and professional education programs are congruent with Louisiana's development goals and Workforce Investment Priorities. The Coordinator has made over 30 invited presentations to companies such as Gardner Denver Thomas, Mid South Extrusion, St. Cobain, Frymaster, and CenturyLink. The Coordinator provides workforce data and specific industry feedback to colleges and departments on a regular basis as they discuss program development and modifications.

- **a description of the institution's collaboration efforts with the LWC and LED to identify academic programs that are aligned with current or strategic workforce needs**

The University has identified collaborations with industry partners as a niche-specific activity to complement its primary mission of academics enhanced by deliberate and mission-specific research specialties. These collaborations are catalyzed by direct collaborations with many corporations in targeted sectors to develop partnerships for training existing employees, customizing training materials to meet specific needs, assisting in developing well-defined career ladders tied to training, and creating an environment of continuous improvement to meet changing workforce needs. Tech has several examples of programs that meet the targeted sector requirement, including collaborations and partnerships with MurphyUSA, CenturyLink, Frymaster, Gardner Denver, Georgia Pacific, and state and regional cyber initiatives. The linkages of these programs to *FIRST Louisiana* and LED's Blue Ocean Target areas are reinforced in Section 3.c.

Louisiana Tech University and Bossier Parish Community College (BPCC) signed a Memorandum of Understanding in November 2010, approved by the Board of Regents that established an Associate of Science in Engineering program for BPCC students who intend to continue their studies and

pursue a bachelor's degree in one of seven engineering bachelor's degrees offered at Louisiana Tech. This initiative will impact several of the high growth target industries and core industry S&T sectors identified in the *FIRST Louisiana Framework* and the Workforce Investment Priorities in Advanced Manufacturing.

- **a description of how the institution has worked to modify or initiate new programs that meet current or strategic future workforce needs of the state and/or region**

In the Fall 2010, the University formalized its Education & Innovation Partnership program which places a priority for the institution to promote education, innovation, and economic development within the traditional curricula and beyond into the corporate sector. These partnerships, the first formed with Murphy USA, a Fortune 125 company, build on Tech's areas of academic and research excellence, contribute to the development of the region's workforce, and establish responsive and productive collaborations focused on economic innovation and growth. Murphy USA is directly linked to the LED Workforce Investment Priorities in the Oil and Gas Energy Sector. The University has modified programs (such as the Bachelor of General Studies and the Master of Business Administration) to meet Murphy USA's targeted needs. With Murphy USA's stated intention to establish a presence in Louisiana Tech's Enterprise Campus, Tech will host the only major oil and gas R&D center in the State of Louisiana. The College of Business has responded to workplace needs by implementing its cohort-based Executive MBA in Shreveport and Monroe at the CenturyLink facility. Through a cooperative endeavor agreement with LED and CenturyLink, in 2010-11, Louisiana Tech developed a Graduate Post-Baccalaureate Certificate in Communications Systems to be offered at the CenturyLink facilities in Monroe.

The University has also assessed workforce needs over the past several years and, based on targeted input from local and regional entities, developed and implemented several certificate and certification programs to meet demands for training and skills-based academic content. These certificates include Graduate Post-Baccalaureate Certificates in Dietetics (LWC Industry Sector #62), Dynamics of Domestic and Family Violence (LWC Industry Sector #62), Information Assurance (LWC Industry Sector #51), Rural Development (LWC Industry Sector #81), Communications Systems (LWC Industry Sector #54), and Technical Writing and Communications (LWC Industry Sector #51). A number of certificate programs have been added to meet demand for certified teachers in specialized and sometime critical shortage areas, such as English as a Second Language (ESL), Academically Gifted, and Special Education (LWC Industry Sector #61).

3.a.i. Number of programs eliminated as a result of institutional or Board of Regents review (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
# of eliminated programs	0	0					

3.a.ii. Number of programs modified or added to meet current or strategic workforce needs, as identified by the institution in collaboration with LWC and LED (Descriptive)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
# of programs modified or added	9*	17**					

**2009-2010 -- Added 2 Graduate Post Baccalaureate Certificates (PBC) in Rural Development and Dietetics, expanded the Executive MBA program to the Monroe area, added 6 degree programs to online delivery format.*

***2010-2011 -- Added 14 Graduate Post Baccalaureate Certificates in Education certification areas, placed M.S. in Engineering Technology in online format, terminated the "dairy concentration" in agriculture, developed a PBC in Communications Systems designed to meet the needs of industry partner CenturyLink.*

3. Workforce and Economic Development

b. Increase use of technology for distance learning to expand educational offerings.

Narrative Report:

- **description of current initiatives to improve technology for distance learning**

In 2010, Louisiana Tech entered into a major academic partnership with Murphy Oil USA to provide online education tailored to the needs of their 8,000+ employees. The additional funding provided through this partnership has enabled the University to expand its course delivery infrastructure, hire an IT Coordinator, develop a web portal with enhanced communications features, and establish a 24/7 help desk, systems which are being leveraged to enhance the online experiences for students outside the Murphy USA cohort.

During 2010-2011, The University enhanced its infrastructure and software by making Camtasia Studio, Snagit, Camtasia Relay, and Mediasite available for distance learning and has funded enhancements to these systems. Louisiana Tech has also begun using web cams and Skype for advising and tutoring distance learners. The Global_Campus serves as a one-stop information and assistance portal for distance learners, providing links to academic, student-support, and related sites. Fully online applications and admissions processes and procedures have been implemented in 2009-2010, providing all students, whether on campus or at a distance, with the capability of applying for admission, paying application fees, and being admitted electronically. All students, once admitted, use the University's BOSS (Bulldog Online Student System), an internet web portal, to connect to the Student Information System located on the University mainframe computer.

A web portal was developed in 2009-2010 to provide faculty with resources for eLearning course development, management, and support services which enhances services provided through the University's Center for Instructional Technology and the Center for Professional and Academic Development. Faculty have access to the Global_Campus' course, Introduction to the Global_Campus. The University provides an Instructional Design Mentor Team consisting of nine faculty with experience developing and teaching online courses. The University has also adopted Quality Matters, a faculty-centered peer review process that is designed to certify the quality of online and hybrid courses and has eight faculty who are Certified Peer Reviewers.

- **description of current initiatives to create and expand educational offerings by distance education**

The number of enrollees in online courses and programs offered at Louisiana Tech increased by 50% from 2008-09 to 2009-2010 (see page 41). In 2010-2011, online courses were offered in 48 disciplines with enrollments totaling 6,572, up 2% over 2009-2010. The University anticipates continued growth in online enrollments as we expand online courses and degree programs and expand industry partners for online course delivery.

In addition to the academic partnership with Murphy Oil, the University is also working closely with CenturyLink to develop distance education programs to meet their rapidly growing needs. Also as new initiatives in 2010-2011, the University will certify its first 16 completers of the online

Graduate Post Baccalaureate Certificate (PBC) in Dietetics this spring, has taught all coursework for the PBC in Rural Development online, and was approved to deliver the Master of Science in Engineering Technology and Management online.

Tech was invited to join the Louisiana-based CALL consortium and continues to work with the University's seven sister institutions in the UL System to develop a consortia online bachelor's degree in business administration to serve the well-documented needs (ref: <http://yourcallla.org/about>) of non-traditional returning students in the State.

- **description of any efficiencies realized through distance education**

While distance education courses increased in number by 34% (287-384) from 2008-2009 to 2009-2010, the number of students served increased by 50% (4,225-6,340) indicating increased efficiency of resources as our online programs and course offerings developed. The University also changed its online course management system from Blackboard to an open source (Moodle), resulting in recurring annual savings of \$100,000 for licensing fees. Other efficiencies include an online University Seminar, an online introduction to distance learning, a 24/7 help line, fully electronic FERPA-compliant registration and enrollment capabilities (including transmission of campus-wide IDs; passwords to BOSS; the student information system; and access to Moodle, the University's platform for online course management; additions to the electronic collections to the University's Library (funded by the University and by the Student Technology Fee Board) and sustained membership in LOUIS; acquisition of MediaSite and Camtasia delivery systems; additions to server storage capabilities; and customized web portals for corporate distance learners. The strategic partnerships with major regional companies such as Murphy Oil USA and CenturyLink enable the University to focus efforts on more effective delivery and to minimize the expense of marketing to broader audiences.

- **Other – unique opportunities realized through distance education**

In addition to Tech's major commitment to distance learning in its corporate partnership program with Murphy USA and CenturyLink, the University is a charter member of the New Century Learning Consortium (NCLC), founded at the University of Illinois-Springfield in 2007. In 2010-2011, NCLC membership provided the University with access to seven Faculty Forum professional development webinars related to instructional techniques and technologies, guidance and resources as Tech transitioned from Blackboard to Moodle, and IT assistance (University of Illinois-Springfield) with development of an online evaluation process.

3.b.i. Number of course sections with 50% and with 100% instruction through distance education (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of course sections that are 50-99% distance delivered	16	24					
# of course sections that are 100% distance delivered	287	384					

3.b.ii. Number of students enrolled in courses with 50% and with 100% instruction through distance education, duplicated headcount (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
# of students enrolled in courses that are 50-99% distance delivered	204	272					
# of students enrolled in courses that are 100% distance delivered	4225	6340					

3.b.iii. Number of programs offered through 100% distance education by award level (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
Associate	1	1					
Baccalaureate	1	2					
Post-Baccalaureate	2	3					
Masters	1	5					
Doctoral	0	0					
Professional	0	0					
TOTAL	5	11					

Associate: Associate of Science in Health Information Management (traditional and online format)

Baccalaureate: (1) B.S. Health Information Management and (2) Bachelor of General Studies in 2009-2010 (both traditional and online format)

Post-Baccalaureate Certificate (graduate): (1) Dynamics of Domestic and Family Violence and (2) Technical Writing and Communications; and (3) Information Assurance in 2009-2010. (all three in online format only)

Master's: (1) Masters of Health Information (online format only); and, in 2009-10, added (2) M.A. in English, (3) M.A. in History, (4) M.S. in Family and Consumer Sciences and (5) M.S. in Nutrition and Dietetics (traditional and online formats)

3. Workforce and Economic Development

c. Increase research productivity especially in key economic development industries and technology transfer at institutions to levels consistent with the institution's peers.

Narrative Report:

- **a description of current and prospective research productivity and technology transfer as it relates to Louisiana's key economic development industries**

Most of the institution's externally funded research activities are focused in interdisciplinary science and engineering research centers that are closely aligned with *FIRST Louisiana* (See Figure 1¹). The institution has focused on increasing federal research funding with some measure of success as reflected by a doubling of annual federal research expenditures from \$5.5M in FY 2005 to \$10.8M in FY 2010. Total annual research expenditures have increased from \$18.6M to \$26.0M over the same period. There has also been an increased focus on research productivity as measured by high quality journal publications. Success has been demonstrated through higher numbers of publications, citations, and prestigious journal covers by our faculty. The increasing research activities have also spurred a high level of innovation as reflected in reports of invention, patents, licenses, start-up companies, and industry partnerships as described later in this narrative.

The Institute for Micromanufacturing (IfM) is our largest research center in terms of facilities as well as faculty, staff, and student involvement. The IfM has built strong research programs in *materials science and nanotechnology* with linkages to *computational science* and *biotechnology*, all core areas of *FIRST Louisiana*. Dr. Yuri Lvov, Chief Scientist, is an international leader in the area of Layer-by-Layer (LbL) nanoassembly. LbL assembly is a Core Enabling S&T Research area as defined by *FIRST Louisiana*. Dr. Lvov and other IfM researchers have applied LbL to translational research areas of importance to Louisiana and have led to several start-up companies and industry partnerships. For example, LbL has been applied with private sector partners to drug delivery systems (*biomedical*), pulp & paper technologies (*agricultural*), and corrosion-inhibitor paints (*coastal*). Several IfM alternative energy technologies have recently received international interests, such as a nanocatalyst used by two start-up companies to convert natural gas into diesel fuel (*energy*) and a nanomaterial featured on CNN and later licensed to a shoe company for energy generation for portable devices (*renewable energy*). Four IfM faculty have recently received prestigious NSF CAREER awards. One of them, Dr. Long Que, recently announced the successful fabrication and testing of a microcantilever-based device for harvesting waste energy from microscale electronic devices. This invention was selected as one of Ecofriend's Top 10 renewable energy breakthroughs for 2010.²

¹ References to linkages to *FIRST Louisiana's* Framework are noted in italics

² <http://www.ecofriend.com/entry/10-breakthroughs-in-renewable-energy-technology-in-2010/>

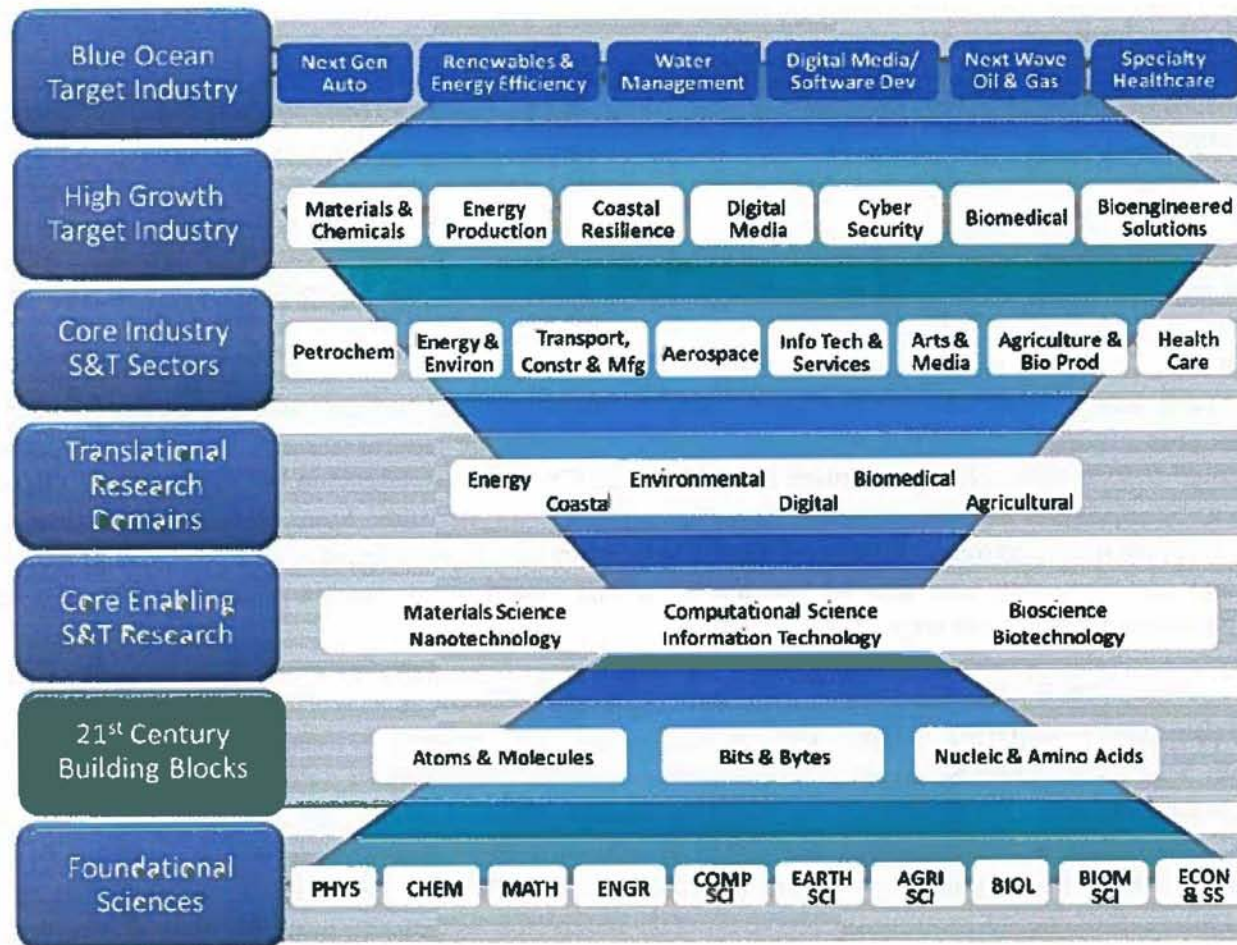


Figure 1 FIRST Louisiana Framework

The Center for Biomedical Engineering and Rehabilitation Science (CBERS) is physically connected to the IfM and intellectually connected through research and education activities. With research focuses in bionanotechnology and neural engineering, CBERS has been able to contribute to scientific and technological advancements that impact the *biomedical* and *healthcare industries* in Louisiana. CBERS faculty have numerous research collaborations with the LSU Health Sciences Center in Shreveport. One of those collaborations led to a seizure defibrillator device that was licensed to a company that received funding from a Louisiana venture capital group. The company is now developing the device for commercial use. CBERS also has a special rehabilitation engineering systems group that conducts research and supports Louisiana Rehabilitation Services in providing assistive technologies and services for the disabled across the State of Louisiana (*specialty healthcare*).

The Trenchless Technology Center (TTC) has had very strong connections to the nation's construction and manufacturing industries since 1989. The TTC's research focus has been guided by an Industry Advisory Board representing 30 national and international companies and municipalities. These connections have led to many research advancements that are positively impacting municipalities and companies in Louisiana and across the nation. For example, the TTC is in the midst of a \$6M three-year R&D project funded by the National Institute of Standards and Technology (NIST) that, in partnership with two major companies, is resulting in the development of a robotic system for inspecting sewer pipes (*environmental*). A Louisiana-based start-up company is supporting the project. Computational tools developed by faculty and students in one of our other research centers, the Center for Applied Physics Studies, have played a major role in the successful development of these technologies (*computational science*).

The Center for Secure Cyberspace (CSC) was established in 2007 to support an emerging Louisiana industry and an area of urgent national need related to *cyber security*. The CSC is a collaborative research effort with LSU that was established through the Regents' Post-Katrina Support Fund Initiative. In a short period of time, the CSC has received 27 grants representing \$30M in funding. The faculty have had over 150 publications and 6 patents since 2007. Technologies from the Center have been licensed to the private sector and are also being developed for use by the DoD. Another Louisiana based company is currently evaluating one of the technologies for licensing. The College of Business has established a Center for Information Assurance that is conducting cyber research and delivering a National Security Agency certified academic program to support cyber workforce development needs.

Faculty from Louisiana Tech play important roles in a five-year \$20 million grant from NSF to the Board of Regents' EPSCoR program (*materials and computational science*). The grant established the Louisiana Alliance for Simulation-Guided Materials Applications, or LA-SiGMA, a virtual organization for materials science research and education that includes faculty from Louisiana Tech, LSU, Tulane, UNO, Southern, Xavier, and Grambling. LA-SiGMA expects to benefit the public through the development of faster and energy-efficient computers, better and cheaper industrial catalysts and energy storage materials, and precisely targeted drug delivery systems. The recent investments by the State in the LONI and the Board of Regents in the LONI Institute played an important role in making LA-SiGMA possible. LA-SiGMA will also make substantial contributions to the creation of a diverse and technologically sophisticated workforce in Louisiana through summer programs aimed at K-12 and two-year college students and teachers. Dr. Bala Ramachandran of Louisiana Tech is a co-PI of the LA-SiGMA grant.

It is important to note that Louisiana Tech faculty have active R&D projects and industry partnerships associated with almost every industry sector and every research focus area identified in *FIRST Louisiana*. Our R&D programs are aligned well with State of Louisiana needs and national interests. We are building new collaborations that will enable the institution to contribute more significantly to economic development of the State in the future.

- **a description of how the institution has collaborated with Louisiana Economic Development, Louisiana Association of Business and Industry, industrial partners, chambers of commerce, and other economic development organizations to align Research & Development activities with Louisiana's key economic development industries**

The institution has had extensive involvement with Louisiana Economic Development (LED), state-wide associations, regional economic development organizations, municipalities, and the private sector in support of economic development. Recently, we have hosted economic development meetings of the Committee of 100 (C100), the Council for a Better Louisiana (CABL), and the North Louisiana Economic Partnership (NLEP), among others, in our R&D facilities. Recently, Louisiana Tech worked with LED and the C100 to host a GE Aviation regional supplier and vendors meeting on campus (*aerospace*). The institution has also organized and hosted research conferences related to *Energy Systems*, *Sustainable Infrastructure Systems (environmental)*, and *cyber security* in Shreveport to engage the private sector in our R&D and economic development programs. As evidence of their support of Louisiana Tech's economic development leadership, the cities of Bossier City, Monroe, and Ruston have all made substantial financial contributions to our research and economic development programs.

Louisiana Tech has worked very closely with the Cyber Innovation Center (CIC) in Bossier City and LED to attract *cyber*-related companies and government agencies to Louisiana. Our faculty have had almost daily collaborations with the CIC through a variety of research and workforce development activities. For example, our faculty piloted a Cyber Discovery Workshop for ninth-grade students and teachers that has served as a model for cyber science programs and curricula in other higher education institutions and the K-12 community. These programs recently received positive encouragement from the Department of Homeland Security and are being considered for possible national deployment.

Louisiana Tech has also had extensive collaborations with major employers across North Louisiana, such as a new graduate certificate curriculum in Communications Systems for CenturyLink in Monroe (in a cooperative effort with LED), and an innovative research project with Frymaster Corporation in Shreveport. With the rapid growth of CenturyLink through their acquisitions of Embarq and Qwest, there are tremendous education and training needs for existing employees. Likewise, Frymaster-, the world's largest manufacturer of restaurant equipment, has a need to attract and retain an engineering workforce as well as to enhance their product lines through research and innovation (*energy and manufacturing*). A team of Tech faculty is working with Frymaster in the use of computational modeling and experimental research to solve a technical problem of tremendous economic and environmental importance (*materials science, computational science*).

One of the most significant collaborations that our faculty have had over the past year is with the electric utility company CLECO of Pineville. Dr. Erez Allouche of the TTC has developed a novel geopolymer concrete that is made from the waste fly ash produced by CLECO's coal-burning power plant (*energy and environmental*). CLECO has supported Dr. Allouche's research program, and that has resulted in several innovations that make the geopolymer commercially viable. We are currently negotiating with a major international cement manufacturer to establish a geopolymer product line and manufacturing facility in Louisiana. The facility could be operational within the next year.

- **a description of any business innovations and new companies (startups) and companies formed during previous years and continuing (surviving startups) resulting from institutional research and/or partnerships related to Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) awards**

Since 2003, Louisiana Tech has had 13 companies that have started up for the purpose of licensing and commercializing Louisiana Tech technologies. Each of these start-ups has involved our faculty or their graduate students in the company development, and each has received some government or private sector funding to develop the business. Of those 13 companies, nine are still surviving and are listed in Table 1. Those that have received SBIR or Federal/State technology transfer grants are noted. There are some other prospective Louisiana Tech start-up companies that

have not yet obtained a license or funding and, therefore, are not included in Table 1. For example, Shua Tech (mentioned later) is competing in the Rice University Business Plan competition and if it should obtain funding there or from other investors it would be considered a start-up company.

Table 1 Louisiana Tech Surviving Start-up Companies

Company Name	Founded	Affiliated Faculty	Grant Funding
Artificial Cell Technologies	2003	D. Haynie, Y. Lvov	NIH SBIR
Advanced Aerospace Reconnaissance	2009	S. Forrest	
Beyond Vision	2008	E. Allouche	NIST TIP
BrainVital	2006	W. Besio	NIH SBIR
Carbon Capture Energy Technologies	2009	C. Wilson, J. McDonald	BoR Indust. Ties
Nano Pulp & Paper	2006	Y. Lvov, G. Grozdits	USDA SBIR
Network Foundation Technologies	2003	M. O'Neal	NSF SBIR
Plutonyx	2007	E. Allouche	
Red Box Technologies	2009	C. Wilson, V. Kaajakari	

It should be noted that there are several other start-up or young companies that have licensed our technologies but were not started as a direct result of those innovations and, therefore, are not considered as a "University" start-up for this report. AdmitOne, Holochip, and Nemucore are three such companies that are currently using the University's technologies as a central part of their business plans.

It should also be noted that some companies have been formed by our students under the guidance and support of our faculty and staff, but, because they are not using Louisiana Tech technologies, they are not considered "University" start-ups for this report. Some of these are discussed below. We also have some companies that have moved into our incubators to capitalize upon the institution's intellectual property, but they are not considered start-ups. For example, Radiance Technologies, headquartered in Huntsville, AL, has offices in our Enterprise Center and is expanding operations into the University's new multi-tenant facility in our research park, Enterprise Campus. Other defense, information technology, software development, and telecommunications companies have visited the campus as they consider establishing operations at Louisiana Tech, and all of these companies are depending upon Louisiana Tech for R&D and workforce support.

Louisiana Tech has spun out a significant digital communications start-up company, called Network Foundation Technologies (NiFTy), which is located in our Enterprise Center. NiFTy was founded by one of our computer science professors and currently employs approximately 40 students and graduates of the University. NiFTy was recognized as the 2010 Governor's Technology Company of the Year, and in February 2011 received the prestigious U. S. Small Business Administration's Tibbetts Award, the only company headquartered in Louisiana to be so recognized. The Tibbetts Award was established to recognize outstanding small businesses that have received SBIR funding. NiFTy aligns closely with *FIRST Louisiana* and *LED's Blue Ocean initiative (Digital Media)*.

Carbon Capture Energy Technologies (CCET) was founded by an Engineering/IfM faculty member, Dr. Chester Wilson. The company has built a small plant that uses a special catalyst for converting natural gas into diesel fuel. The company plans to capitalize upon the large Haynesville shale

field for diesel production. CCET is drawing significant interests from major investors. CCET aligns closely with *FIRST Louisiana (Energy Production)* and *LED's Blue Ocean initiative (Next Wave Oil and Gas)*.

Nano Pulp & Paper (NP&P) was established by Dr. Yuri Lvov. NP&P is currently partnering with a small North Louisiana company to develop a "green" roofing material that uses LbL nanoassembly. NP&P uses a core *nanotechnology* that will benefit Louisiana's timber industry (*agriculture*).

Since 2005, Louisiana Tech partner companies have received approximately 25 SBIR awards from NSF, NIH, DoD, and USDA. Several of those awards have been Phase 2 awards indicating significant progress that the companies have achieved in partnership with the institution.

The institution's considerable success in technology commercialization can be attributed in part to the investments made in support activities. In 2002, the Center for Entrepreneurship and Information Technology (CEnIT) was formed to serve as a catalyst for entrepreneurial activities across the campus and region. Through external funds provided by the NSF, the University developed courses on technology commercialization that have served to accelerate the licensing and venture creation surrounding the University's research programs. Those courses have also provided motivation and support for entrepreneurship development with faculty and students. CEnIT has initiated Idea Pitch and Business Plan competitions that have spurred student-led business formation. One of our early business plan winning teams has now established a company in Bastrop, called Macon Ridge Foods, for production of a specialty food targeting Louisiana's sweet potato industry (*agriculture*). Their product, Dezzie Dough, is now distributed throughout Northeast Louisiana and rapidly spreading to other areas. Another student-led company, S2S Tutor, has established operations in our Enterprise Center and has hired 80 full-time and part-time employees to provide tutoring services to students at multiple universities, K-12 schools, and service organizations. Another student-led business, ShuaTech, was recently selected as the ONLY Louisiana business plan in Rice University's prestigious business plan competition that includes other universities such as MIT, Texas-Austin, Georgia Tech, and Michigan.³

The success of these student businesses and other new ventures throughout the region depends upon their access to counseling and support services. Louisiana Tech established a Technology Business Development Center (TBDC) to provide such support. The TBDC provides information, counseling services, and educational opportunities for beginning entrepreneurs, emerging business ventures, and existing businesses. Emphasis is placed on enterprises with an innovative business model that demonstrates high growth potential and the ability to generate high quality jobs. The TBDC counsels SBIR applicants and award recipients.

- **a description of how the institution's research productivity and technology transfer efforts compare to peer institutions.**

In the 2009 NSF national survey, Louisiana Tech ranks 245 of 697 universities and colleges in research expenditures. LSU-all campuses (43), Tulane (106) and ULL (158) are Louisiana institutions in the survey that are ranked higher than Louisiana Tech. It should be noted that many of the higher ranking institutions in the NSF survey have large medical schools, land-grant agricultural programs, and federal or state-funded research laboratories.

³ http://www.alliance.rice.edu/alliance/Competing_Teams.asp?SnID=1099879632

A summary of Louisiana Tech's intellectual property outcomes for the years Jan 2006-Dec 2010:

- 132 Reports of Invention (ROI)
- 76 Patent Applications
- 25 Patents Issued
- 25 Licenses and Options Executed
- 9 Start-up Companies
- 23 Small Business Innovation Research (SBIR) Awards with partner companies
- Averaged between 12 and 23 ROIs per \$10 million in research expenditures, well above the national average of 4.

The Association for University Technology Managers (AUTM) annually produces national statistics based upon a survey of research and technology transfer data for all institutions. To compare institutional performance, the data are frequently normalized by dividing the respective measures by the size of each institution's research program as reflected by annual research expenditures. According to a recently published paper that assessed technology transfer performance based on AUTM 2007 survey data,⁴ Louisiana Tech University ranked high in several technology transfer measures:

- Ranked 2nd in the nation in terms of Reports of Invention per \$10 million R&D expenditures
- Ranked 2nd in terms of start-up companies formed per \$100 million R&D expenditures
- Ranked 5th in the number of licenses/options executed.

In addition, *Small Times Magazine*, the top trade magazine for micro- and nano-technologies, has acknowledged Louisiana Tech's commercialization efforts by

- ranking Louisiana Tech in the top 10 for commercialization activities in 2007 and 2008
- recognizing IfM Professor Yuri Lvov as its 2008 Innovator of the Year.

• Other

Louisiana Tech was recently notified by the Carnegie Foundation that the institution has been classified as a Research University with High Research Activity (RU/H). Prior to that, the institution was classified as a Doctoral Research University. That elevation in classification is a result of the growth in our doctoral and research programs. Other RU/H institutions in the region include ULL, UNO, the University of Mississippi, and Baylor University. LSU Baton Rouge is classified as a Research University with Very High Research Activity (RU/VH). The Carnegie Foundation's reclassification of Louisiana Tech is an objective measure of Louisiana Tech's increased research productivity. The higher classification significantly enhances our ability to recruit top faculty, students, and industry partners. It will also enhance the institution's and the State's image as a major player in the national research enterprise.

Louisiana Tech recently entered into a major partnership with Murphy Oil USA, a Fortune 125 company in Southern Arkansas, to provide on-line education to their employees across 22 states, including Louisiana. In addition to the workforce development effort, Murphy USA is planning to

⁴ Kordal, R and L. Guice, Assessing Technology Transfer Performance, *Research Management Review*, 16 (2008), pp 45-56.

establish a physical presence at our Enterprise Campus which could play a significant role in enhancing Louisiana's oil and gas industry. This partnership offers an innovative approach for collaborations between academia and industry that can have major impacts in the region.

Louisiana Tech has five academic colleges. All colleges have faculty who are actively engaged in doctoral level research and produce high quality peer-reviewed publications. However, many of our faculty are in programs that have few, if any, external funding sources. Therefore, most external funding is generated by the College of Engineering and Science, which has approximately 25% of the institution's tenure-track faculty who are eligible to serve as PI or co-PI of grants. The percentages of faculty at the institution holding research grants as reflected in Tables 3.c.i and 3.c.ii are relatively high.

3.c.i. Percent of research/instructional faculty (FTE) at the institution holding active research and development grants/contracts. (Tracked)

	Baseline	Year 1*	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
Total number of research/instructional faculty (FTE)	332	317					
Total number of research/instructional faculty (FTE) holding active research and development grants/contracts	131	115					
Percentage of faculty holding active research and development grants/contracts	39.5%	36.3%					

* The numbers reported are as of March 2011, and are subject to change at the end of the annual reporting period.

3.c.ii. Percent of research/instructional faculty (FTE) holding active research and development grants/contracts in Louisiana's key economic development industries. (Tracked)

	Baseline	Year 1*	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
Total number of research/instructional faculty (FTE)	332	317					
Total number of research/instructional faculty (FTE) holding active research and development grants/contracts in Louisiana's key economic development industries	94	96					
Percentage of faculty holding active research and development grants/contracts in Louisiana's key economic development industries	28.3%	30.3%					

* The numbers reported are as of March 2011, and are subject to change at the end of the annual reporting period.

3.c.iii. Dollar amount of all research and development expenditures reported annually, based on a five-year rolling average, by source (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	FY 05 – FY 09	FY 06 – FY 10	FY 07 – FY 11	FY 08 – FY 12	FY 09 – FY 13	FY 10 – FY 14	FY 11 – FY 15
Federal	\$6,406,000	\$7,204,000					
State and local governments	1,567,000	1,741,000					
Industry	450,000	426,000					
Institution funds	11,148,000	11,694,000					
All other sources	53,000	41,000					
TOTAL	\$19,625,000	\$21,106,000					

3.c.iv. Dollar amount of research and development expenditures in Louisiana's key economic development industries (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	FY 05 – FY 09	FY 06 – FY 10	FY 07 – FY 11	FY 08 – FY 12	FY 09 – FY 13	FY 10 – FY 14	FY 11 – FY 15
Federal	\$5,938,000	\$6,813,000					
State and local governments	1,397,000	1,542,000					
Industry	449,000	420,000					
Institution funds	8,714,000	8,494,000					
All other sources	50,000	37,000					
TOTAL	\$16,548,000	\$17,307,000					

3.c.v. Number of intellectual property measures (patents, disclosures, licenses, options, new start-ups, surviving start-ups, etc.) which are the result of the institution's research productivity and technology transfer efforts (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 08-09	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15
Patents awarded	5	5					
Disclosures	24	25					
Licenses awarded	2	1					
Options awarded	1	1					
New companies (start-ups) formed	1	1					
Surviving start-ups	9	10					

4. Institutional Efficiency and Accountability

a. Eliminate remedial education course offerings and developmental study programs unless such courses or programs cannot be offered at a community college in the same geographical area.

Narrative Report:

- **demonstration of collaboration efforts with the two-year college(s) in the region**

Louisiana Tech has been collaborating with Louisiana Delta Community College (LDCC) to offer remedial courses and other lower division General Education Required courses to students that apply to Louisiana Tech University and who do not meet the University's admission requirements. LDCC will deliver courses in Ruston as well as at Delta's campus in Monroe, and other technical college locations including Farmerville, Bastrop, Winnsboro, and others where LDCC will offer remedial and college-level classes taught by SACS qualified faculty members.

The University has an excellent working relationship with LDCC, and through our referral process and our process for inviting non-qualifying students to sign Intent to Transfer Agreements with Louisiana Tech, we believe there is an excellent system in place to serve these students. Students who sign Intent to Transfer Agreements will be provided early advising opportunities and will be encouraged to participate in other Louisiana Tech campus organizations and activities. Students that complete a Louisiana Transfer Degree will be able to enter Louisiana Tech as juniors with all of the privileges provided to current Tech students.

The University is exploring a similar arrangement with Bossier Parish Community College for students from northwestern Louisiana.

- **timeline for elimination of developmental course offering**

Beginning in Fall 2012, Louisiana Tech will no longer offer developmental courses. The reason for phasing out developmental course offerings over the 2011-2012 academic year is to be able to serve the 117 currently enrolled students (as of 2/25/11), as well as new students who will enter the University in 2011-2012 in need of developmental coursework.

Also beginning in Fall 2012, and in accordance with the Board of Regents' 2012 admission criteria, only students who do not require a developmental course will be admitted to Louisiana Tech University. Students who require a developmental course will be referred to the community college closest to their home towns.

4.a.i. Number of developmental/remedial course sections offered at the institution (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
Course sections in mathematics	15	15					
Course sections in English	8	9					
Other developmental course sections	0	0					
TOTAL	23	24					

4.a.ii. Number of students enrolled in developmental/remedial courses, duplicated headcount (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
Enrollment in dev mathematics	546	535					
Enrollment in dev English	152	158					
Enrollment in other developmental courses	0	0					
TOTAL	698	693					

Note: Data provided includes students enrolled in developmental courses, Summer – Spring Terms, 2009-10 and 2010-11.

4. Institutional Efficiency and Accountability

b. Eliminate associate degree program offerings unless such programs cannot be offered at a community college in the same geographic area or when the Board of Regents has certified educational or workforce needs.

Narrative Report:

- **demonstration of collaboration with two-year college(s) in the region**

For many years, the Louisiana Tech University Department of Health Informatics and Information Management faculty have scheduled annual meetings at both Southern University in Shreveport and Delgado Community College in New Orleans to discuss Tech's baccalaureate program in HIIM. Tech faculty meet first with the faculty and then present information to interested students at these institutions. While articulations to transfer associate degree credit from these community colleges to Tech's HIIM baccalaureate degree program will continue, annual meetings and articulations will now include discussions regarding Louisiana Tech referrals to the two-year programs and then transfer back to Tech should the student plan to pursue a baccalaureate degree. The Department of Health Informatics and Information Management will refer students interested in an associate degree in Health Information Technology to both Southern and Delgado Community colleges. The Referral Form will be completed by the HIIM department for each student expressing interest in an associate degree and forwarded to both institutions. A record of referrals will be maintained by the department and reconciled at the annual meetings held with each institution. A copy of the form will be forwarded to the Admissions Transfer Counselor to include with university-wide efforts, reporting, and follow up. Associate degree seeking students who have applied for the fall term at Louisiana Tech will be provided with prompt notice of program discontinuation and referred to these schools for immediate follow up and recruitment.

- **timeline for elimination of associate degree programs**

Louisiana Tech University currently offers three associate degree programs: Health Information Technology (HIT), Nursing, and General Studies. The University will not request new associate degree programs but plans to continue the associate degrees in Nursing and General Studies based on workforce needs.

The Associate degree in Health Information Technology was identified by Board of Regents criteria as a low completer program for the 2011 review cycle. The program will be terminated and new students will not be accepted into the degree program as of summer 2011.

The Associate Degree in Nursing leading to the RN certification is a robust program and is very important to address the local and state need for nurses, as the demand for nurses to fill new positions and those created by retirements continues to grow. As reported in the *Nursing Education Capacity & Nursing Supply in Louisiana*, LA Center for Nursing, 2009 Report, over 40% of the RN workforce received initial RN preparation at the AD level. As shown in Louisiana Workforce Commission forecasts for RMLA 7 (Shreveport) through 2018, registered nurses will continue to be in short supply; indeed the LWC states that the aging population may actually accelerate the need for trained health professionals. Since the Tech program was established in 1972, it has been a primary source of nursing graduates for our region. Given that

both local community colleges have waiting lists to enroll in associate degree nursing programs (as does Tech), Louisiana Tech has not yet engaged in conversations to eliminate this degree. The negative impact on the region would be substantial.

The Associate Degree in General Studies is used primarily by military personnel as a degree to enhance their career and workforce opportunities. The degree is a part of the Memorandum of Understanding with Barksdale Air Force Base, a federal installation and as such is not required to use a Louisiana institution to provide educational offerings. The University has offered this degree at the request of the Air Force since 1973. The RMLA 7 section of the Louisiana Workforce Commission states that the Barksdale facility is expecting increased employment through 2018 in federal jobs. The offering of this associate degree is a contractual obligation to meet the needs of the Air Force and Barksdale employees seeking workforce advancement. The program tracks into the four-year general studies degree and other degree programs offered at Tech-Barksdale and on the main campus. Further, the Barksdale education program plays a critically important role in enhancing the University's role with the USAF in supporting the education and R&D needs of the nation and the economic development needs of the region. Barksdale AFB is a key strategic partner of Louisiana Tech University.

4.b.i. Number of active associate degree programs offered at the institution (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
Number of associate degree programs	3	3					

4.b.ii. Number of students (headcount) enrolled in active associate degree programs (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
Number of students enrolled	367	370					

Note: Data provided is an unduplicated count of students in associate degree programs for Summer – Spring Terms, 2009-10 and 2010-11.

4. Institutional Efficiency and Accountability

c. Upon entering the initial performance agreement, adhere to a schedule established by the institution's management board to increase nonresident tuition amounts that are not less than the average tuition amount charged to Louisiana residents attending peer institutions in other Southern Regional Education Board states and monitor the impact of such increases on the institution.

Narrative Report:

- **annual plan for increasing non-resident tuition amounts**

Louisiana Tech University's six-year plan to increase out-of-state tuition and fees to the SREB regional average for institutions in the Doctoral 2 category was approved by the University of Louisiana System's Board of Supervisors on August 27, 2010. The University with the assistance of the ULS System Office has revised the six-year plan for comparability within the System and the SREB from a basis of 12 semester hours to 8 semester hours. For FY 2010-11, the minimum full-time tuition and fees for out-of-state students attending Louisiana Tech were \$10,077 per academic year versus the SREB average of \$16,586. For the upcoming year, the out-of-state tuition and fees will rise by 14% to \$11,489 with additional similar increases to be made each year over the next four years. Baseline data were provided by the University of Louisiana System Office. The University projects that by FY 2015-2016, out-of-state tuition and fees at Louisiana Tech University will reach or exceed the SREB average at an estimated cost of \$20,448 per academic year.

- **impact on enrollment and revenue**

The percentage of out-of-state enrollment for FY 2010-11, including international student enrollment, is approximately 12% at the undergraduate level and approximately 22% at the graduate level. We believe that increasing out-of-state fees will, to a certain degree, negatively impact students' decisions to attend Louisiana Tech University, particularly at the undergraduate level. This is especially true in light of the fact that many of these high quality students will have lucrative scholarship offers in their home states as well as in-state tuition rates.

For FY 2010-11, out of state enrollment at the undergraduate level increased by 7 students (less than 1%) and enrollment at the graduate level increased by 56 students (2.7%) as compared to FY 2009-10. Out of state fee revenue is projected to increase by \$548,000 for FY 2010-11.

Based on a higher tuition and fee structure, we anticipate up to a 4% decrease in out-of-state student enrollment by 2015-16. There is already a downward trend at the undergraduate level. Since 2006, undergraduate out-of-state enrollment, not including international student enrollment, has decreased from approximately 11% to 9%. Higher tuition rates at Louisiana Tech, and better scholarship opportunities in their home states, are believed to have contributed to these losses. In an effort to mitigate losses, we have increased our out-of-state recruiting efforts and closely monitor this enrollment. We may also experiment with different levels of needs-based scholarships for out-of-state students. Currently, in-state and out-of-state students receive scholarship offers based on the same competitive academic profile including, but not limited to, standardized test scores and GPA. While we acknowledge that out-of-state students will still be attracted to Louisiana Tech University, competition for outstanding students at the undergraduate and graduate level is a national as well as a global challenge. Recruiting and retaining an outstanding teaching and research

faculty are predicated upon having the highest quality students at the undergraduate and graduate levels. (See Table 4.c.ii which can be found at the following URL link: <http://www.ltadm.latech.edu/vpadmaff/table4cii.pdf>)

4.c.i. Total tuition and fees charged to non-resident students (Tracked)

	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Term of Data	AY 09-10	AY 10-11	AY 11-12	AY 12-13	AY 13-14	AY 14-15	AY 15-16
Non-resident tuition/fees (full-time)	\$9,237	\$10,077					
Peer non-resident tuition/fees (full-time)*	\$15,861	16,586					
Percentage difference	-71.7%	-64.6%					

**Provided by the ULS System Office*