

2007-2008 PLANNING/OUTCOMES DOCUMENT

Name of person(s) completing form:	Peter Messier	Curriculum/Department:	Surveying Technology
Purpose/Mission Statement:		Vision Statement: (3-5 years)	
<p>To educate surveying technicians in the basic principles of Land Surveying, establish them in the techniques and procedures practiced by the Land Surveying profession, equip them to be productive surveying technicians upon graduation, and encourage them to pursue lifelong learning opportunities, higher degrees (if appropriate), and active participation in professional surveying associations. Above all, their experience in the Surveying Technology Program and SCC should inspire them to be productive and contributing professionals having concern for their fellow citizens and their community.</p>		<p>To be the Surveying Technology Program of choice in Western North Carolina, portions of Eastern Tennessee, and Northeast Georgia, up-to-date in it's teaching and equipment, and expanding to meet the educational and technical needs of the land surveying, land information and land development communities in our earned market area.</p>	
Program Strengths:		Program Weaknesses:	
<p>The program has the encouragement and support of the surveying profession in North Carolina and of the SCC administration. The curriculum is pertinent to today's practice of surveying. The program has qualified, experienced and enthusiastic faculty in major courses as well as support courses.</p>		<p>The program has significant modern equipment in place, it lacks only a very few minor equipment and software items to make it current in technology pertinent to land surveying practice in far Western North Carolina. Field scanning equipment would be needed to make the program state-of-the-art from a state-wide or national perspective.</p>	
Program Opportunities:		Program Threats:	
<p>Due to economic development and growth in WNC the demand for surveyors is significant. In addition, NCA&T University has established a 4 yr. Geomatics (Surveying) Program and has structured the curriculum to include many of the surveying courses available at NC Community Colleges, and has a 2+2 option for those graduating from Surveying Technology Programs in the NCCCS.</p>		<p>Interest in surveying as a career is relatively low compared to other technical fields. Many potential students are unaware or have very little understanding of this career path and the opportunities it provides. If current recruitment and advertising efforts are not maintained, a drop off in enrollment could develop and pose a threat to the long term viability of the program.</p>	

Goal #	Values for Teaching	College Goals	2007-2008 Department Outcomes/Goals	Success Criteria (e.g. outcomes, enrollment increases)	Plan of Action (including resources needed)
1	3 4 6	1 2 7	Retain current majors and recruit new majors in the Surveying Technology Program.	At least 60% of those identified as Surveying Technology majors in fall 2007 will continue studies through spring 2008 taking into account those graduating in fall 2007. In addition, the number of new enrollees will be equal to or greater than 10% the current enrollment in program.	<ul style="list-style-type: none"> • Monitor enrollment and admission of surveying majors. • Provide effective advising and support to existing and new surveying students. • Visit at least 4 high schools (trig or geometry classes) during the 2007-2008 academic year, seek out career fairs and display at appropriate conferences.
2	1	1 2 5	Students will exhibit proficiency in standard field data measurement and collection systems	75% of the students to attain a grade of B or better in SRV110, SRV111 and SRV 240 as a result of their abilities to: <ul style="list-style-type: none"> - set-up and operate a total station instrument - correctly observe horizontal and vertical data - collect data and record it in both manual and digital formats 	<ul style="list-style-type: none"> • Provide lecture material, equipment, and class & laboratory assignments that will equip and challenge at least 75% of the students to attain a grade of B or better in Surveying I, II, and Topo/Site Surveying. • Monitor the results of course grades for SRV 110, SRV 111, and SRV 240.
3	1	1 2	Students will understand and know how to apply the Minimum Standards of Practice for Land Surveying mandated by NCAC 21-56.16 of the NC Board of Examiners for Engineers and Land Surveyors and in NCGS 47-30	75% of the students will receive a grade of B or better in SRV 210, SRV 220, and SRV 230 as a result of their abilities to: <ul style="list-style-type: none"> - perform proper research for the definition of the boundaries of a parcel of land and to arrive at the correct limits of ownership 	<ul style="list-style-type: none"> • Provide lecture material, software, and class & laboratory assignments that will equip and challenge at least 75% of the students to attain a grade of B or better in Surveying III, Surv. Law, and Subdiv. Planning. • Monitor the results of course grades for SRV 210, SRV 220, and SRV 230.

				- perform traverse surveys and level circuits that meet the minimum closure requirements - prepare plats, maps, and descriptions that meet the minimum requirements.	
4	1 2 6 7	1 2	Current students and graduates will be satisfied with the skills they are acquiring or have acquired in this program.	90% of students and graduates surveyed will indicate they are satisfied with the skills they are acquiring or have acquired in this program.	• Monitor the results of the survey of students and graduates as part of the annual program review process.
5	6 7	1 5 6	Employers will be satisfied with the entry-level skills of current students and graduates from this program who work for them.	85% of employers surveyed will indicate they are satisfied with the entry-level skills of students from this program.	• Monitor results of the survey of employers as part of the annual program review process.

Budget Item Description: (Budget items requested from college funds)	Current Year Budget (Total Request):	Ongoing Operational Budget:	Expansion Budget:
Supplies - stakes, nails, rebars, ink cartridges, water resistant paper, ID caps, and tick & insect repellent.	\$8,395	\$680	\$7,715
Equipment - Upgrade AutoCAD to Release 2008, GPS-VRS Upgrade, total station calibrations, astro observation equipment, precise level, plus miscellaneous smaller field and office equipment.	\$8,743	\$1,500	\$7,243
Travel - local and regional surveyor meetings, NCSS Conv., TAPS Conv., VAS Conv., high school visits, and misc. local travel on SCC business.	\$4,390	\$3,340	\$1,050
Program Accreditation - deciding whether or not to pursue, based on input from NCA&T and other NC Community Colleges who offer surveying.	\$0	\$0	\$0
Other/Expansion - pipe & cable locator, mirror stereoscope w/parallax bar, and half the cost of computer lab to be shared with CIV.	\$16,980	\$0	\$16,980
TOTALS (includes 6.5% sales tax)	\$38,508	\$5,520	\$38,508

Goal	Criteria Results Be sure to utilize most current data available	End of Year Analysis (Goals achieved, impact of equipment purchased, improvements to your program, contingencies, etc.) Describe how you used the results to improve your program
1.	<p>Goal criterion was met. 63% of the students (15 out of 24) returned for spring semester due to the loss of 2 students who graduated in December and 7 who failed or apparently dropped out. There was a 38% increase (9) in enrollment due to new students entering the program this spring. Net enrollment now stands at 24 for a 0% loss in enrollment.</p> <p>We performed 2 high school visits (four individual math classes and conducted a career day event here on campus and are scheduled for two career fair events the end of April.</p> <p>We exhibited the Surveying Technology Program at the NCSS Convention this past February, and held an open house for the Surveying and Civil Engineering Technology Programs. We have received positive feedback from both events.</p>	<p>We have exceeded our enrollment success criteria, but need to continue to bring more students into the program. The new Civil Engineering Technology Program is bolstering enrollment in surveying courses and attracts new surveying majors from those who decide to double major in CIV & SRV. We have had decent success, but we still need to be vigilant.</p> <p>We need to continue efforts to attract new students via high school visits and by continued development of good PR with surveying firms, government agencies, and professional societies.</p> <p>Due to a schedule conflict this year, we missed the opportunity to participate in the Cherokee H.S. Career Days. Hopefully next year that will not happen.</p> <p>Hopefully our presence at the NCSS Convention and Career Days will give us good exposure and credibility, spread the word about our programs around, and results in people recommending us, and sending employees, children and acquaintances our way.</p>
2.	<p>Goal criterion was partially met. 78% of the students enrolled in SRV 110 in Fall 2007 attained a grade of B or better in the course. SRV 111 and SRV 240 are currently in process, however 50% of the students who took SRV 111</p>	<p>Some students have shown proficiency in standard surveying field procedures especially in SRV 110. Last year students in SRV 111 and SRV 240 did not meet our goal. I believe part of that is lack of discipline by some students and partly me not pushing/challenging them enough. I</p>

	<p>and 71% of those who took SRV 240 last year (Spring 2007) received a grade of B or better.</p> <p>New robotic total station equipment obtained during the Fall 2007 semester along with new GPS equipment that was obtained last year were fully implemented into the program.</p>	<p>anticipate better success with this year's students. However, I need to continue to improve presentation and course content to strengthen this important goal and challenge them to do better in their study of the material.</p> <p>The new GPS and robotic equipment has provided great exposure to this new technology for the students. It is also providing the opportunity for students to see when GPS is appropriate and when traditional total station equipment is more appropriate for different applications. They are also witnessing the improved efficiency that robotic equipment can provide.</p>
--	---	---

<p>3.</p>	<p>Goal criterion was not met. 33% of the students enrolled in SRV 210 in Summer 2007 attained a grade of B or better in the course (one A, one C and one F). SRV 220 and SRV 230 are currently in process, however 33% of the students who took SRV 220 and 100% of those who took SRV 230 last year (Spring 2007) received a grade of B or better.</p>	<p>Low student discipline in 2 out of 3 students in SRV 210 and SRV 220 caused us not to meet goal in those courses. The one good student in SRV 210 and in SRV 220 showed an understanding of and appears to appreciate the importance of board of licensure minimum standards and related NC State Statutes. SRV 230 was successful because there were motivated students in that group. Like Goal 2, I need to continue to improve presentation and course content, and to challenge the students to work harder in order to strengthen this important goal.</p>
<p>4.</p>	<p>Goal criterion was met. An in-class anonymous survey of 12 (27%) of students enrolled in the Surveying Technology and Civil Engineering Technology Programs indicates that 92% are satisfied or very satisfied with the skills they are acquiring in this program. Please see scan of student surveys provided with these results on the W drive. 100% of graduate responses (6 out of 9 returned) to SCC survey by Delos Montieth are satisfied or very satisfied with the quality of instruction in the program.</p>	<p>We are doing fairly well with student satisfaction. The results of the surveys conducted by Delos are gratifying, but I wish there would have been a 100% response rate.</p> <p>We need to improve the program in terms of quality of instruction, content of courses, responsiveness to and respect for student needs.</p> <p>I believe we are doing very well on the equipment side. We still need a few small priced items relative to field data collection, but anticipate that can be taken care of in the next budget cycle.</p>
<p>5.</p>	<p>Goal criterion was met. An email survey of employers (7 out of 8 responses) who have employees enrolled in the Surveying Technology or Civil Engineering Technology Program indicates that 100% are satisfied or very satisfied with the entry-level skills of their employees who are or were students in this program. Please</p>	<p>This goal has been achieved and hopefully shows we are on the right track. We need to continue to help place students with good firms. We also need to continue to provide practical instruction that helps them to be more "job ready" and will also help them bring new skills to the firms that hire them, especially in the areas of field data analysis, CADD, and new technology like GPS and robotics.</p>

see scan of emails provided with these results on the W drive.

SCC survey by Delos Montieth of employers of graduates indicates 100% (89% response rate) are either satisfied or very satisfied with the various skills of employees.