Engineering & Science Technology Department
General Technology Area
Strategic Plan

Rev 1.3
January 19, 2007

The General Technology Area Mission:
"The mission of the General Technology area is to be an integral part of the Department of Engineering & Science Technology by providing appropriate support-courses while also helping to build enrollment and program quality. Our focus is to provide the foundation for subsequent coursework in the majors we serve via the teaching of concepts and problem solving as well as teaching learning-strategies."

General Technology Area Objectives	General Technology Strategies	General Technology Plans
1. Effectively meet the needs of the programs, including accreditation, that are served by 2820 courses.	Develop more formal methods to ensure that the 2820 support courses are serving the needs of programs, including accreditation requirements.	a. Lead informal and formal discussions with faculty from programs served by 2820 courses; these discussion will focus on program goals, course goals, and other needs of programs; discussions to take place at least once per year. b. Develop a more formal survey for E&S Tech faculty about their needs for 2820 courses included in their programs. c. Include questions related to 2820 course work in employer surveys. d. Survey students, both current and graduating, about the effectiveness of 2820 courses related to programmatic goals. e. Continue to assess the D-F-WD rates from courses in General Technology, especially Technical Physics Mechanics I and II which are gateway courses for programs in engineering technology. f. Use other program assessment results for all Engineering & Science Technology programs, such as student &

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		employer surveys, to determine effectiveness of 2820 courses to serve program needs related to specific accreditation goals. g. Examine how 2820 courses serve the program goals associated with TAC of ABET accreditation and prepare for the next program review.
2. Provide assessment of the general education objectives within our General Technology courses.	Develop an assessment plan that includes appropriate general education course goals within our courses. a. The capacity for critical, independent thought. b. The ability to use language effectively as a medium of both thought and expression. c. The analytical skills necessary to make sound qualitative and quantitative judgments. d. Knowledge of science, technology, and mathematics and their effects on human activities.	a. Continue to investigate students' critical thinking skills within 2820 courses. b. Continue to include student writing within the 2820 courses including the writing of formal reports and written responses in the laboratory, homework, quizzes, and tests. c. Continue to include both quantitative and qualitative assessment items in 2820 classes and laboratories. d. Continue to include real-world applications and situations in the classroom, laboratory, and assessment.
3. Investigate students' conceptual understanding in 2820 course offerings.	Assess students' conceptual understanding a. Assess students' conceptual understanding twice per semester. b. Compare these scores to prior semesters' scores. c. Analyze how different teaching and learning techniques may have affected scores. d. Investigate how a variety of	With the appropriate university administrative support, perform the following data collection and analysis activities related to evaluations of teaching and learning: a. Pretest and post-test of conceptual understanding in Technical Physics Mechanics (Force and Motion Conceptual Evaluation) and Basic Chemistry. b. Evaluation of critical thinking – all Technical Physics Mechanics laboratories. c. Evaluation of learning with new CPS systems & concept-tests – comparing prior learning of concepts in Technical

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	student characteristics (age, math courses completed, etc) affects conceptual understanding and the learning of concepts.	Physics Mechanics and Basic Chemistry to prior learning. d. Evaluate the relationship between critical thinking skill and the learning of force and motion conceptual understanding in Technical Physics Mechanics. e. Evaluate the relationship between most recently completed mathematics course and the learning of force and motion conceptual understanding in Technical Physics Mechanics.
4. Work toward improvement of teaching and learning in all 2820 courses.	Constantly work toward improving teaching and learning in each of the courses offered in the 2820 area through effective use of technology, teaching strategies, and other activities associated with the scholarship of teaching and learning.	a. Faculty will learn how to effectively use the classroom response system (CPS by eInstruction) in their classrooms including the development and use of concept-test questions. b. Faculty will assess the effectiveness of CPS in their classrooms. c. Faculty will include new teaching strategies in their classroom and laboratories. d. Faculty will pursue professional development opportunities related to the scholarship of teaching and learning. e. Review course pre/co-requisites as they relate to student preparation and subsequent teaching and learning and make changes as appropriate. f. Continue to assess the D-F-WD rates from courses in General Technology, especially Technical Physics Mechanics I and II which are gateway courses for programs in engineering technology. g. Use other program assessment results for all Engineering & Science Technology programs, such as student & employer surveys, to determine effectiveness of teaching and learning in 2820 courses.

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5. Investigate the need in the region for expanding offerings based within the area including an AAS degree in Chemical Technology and a MS / MA degree in engineering technology.	Survey regional businesses, industries, and professional engineers / technicians and technologists about needs associated with a possible program in chemical technology and graduate course work in engineering technology, including a possible master degree program.	With the appropriate non-academic load, investigate the needs for a chemical technology degree and graduate course work / master degree in engineering technology. a. Build relationships with regional business & industry. b. Develop surveys to investigate the regional need for a chemical technology program and for graduate work in engineering technology. c. Develop regional contacts in business and industry in order to promote the completion of the surveys. d. Solicit business and industry leaders to complete the surveys. e. Solicit engineers, technicians, technologists, and engineering technology alumni to complete the survey related to engineering technology course work / master degree program. f. Analyze data and make recommendations to administration accordingly.
6. Provide a plan for additional funds through grants and other monetary resources.	a. Seek appropriate academic support from the administration for pursuing funding opportunities such as non-academic load. b. Continue to investigate funding opportunities.	With the appropriate non-academic load, a. Faculty will apply for grants, including being a member of a grant team, related to 2820 course offerings b. Faculty will apply for grants, including being a member of a grant team, related to 1 or more of the department's programs. c. Build relationships within The University of Akron such that grants can be written across departments and colleges. d. Build relationships outside of The University of Akron such that grants can be written across multiple universities / colleges / K-12 schools.

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		e. Faculty will investigate a variety of other funding sources.
7. Minimize student difficulties related to scheduling and course preparation.	a. Educate advisors about our courses including scheduling & pre/co-requisites. b. Educate students about scheduling & pre/co-requisites. c. Review enrollment and course offerings each semester.	a. Invite advisors from Summit College and University College to meet with our faculty to discuss our General Technology courses and their pre/co-requisites & scheduling (e.g. must sign up for lab; half semester offerings). b. Faculty will include pre and co-requisites on all syllabi. c. Based upon demand / enrollment, consider changes in course offerings each semester / summer session. d. Full-time faculty will answer questions from Summit College and University College advising departments.
8. Have effective teachers, both full time and part time, teaching at all levels in 2820 area.	a. Maintain a file with potential part time faculty. b. Maintain professional contacts. c. Encourage professional growth. d. Encourage professional development. e. Encourage the building of professional relationships inside and outside the university.	a. Full-time 2820 faculty will participate in a variety of professional activities each academic year such as participation in professional development workshops, attendance at professional conferences &/or meetings, participation in on-line conferences and workshops, seeking publication, and/or participation in other professional activities Administrative support will include pay for travel to professional conferences/ meetings. b. Full-time 2820 faculty are encouraged to participate within teams / committees / groups from the university and college. c. Full-time 2820 faculty are encouraged to belong to at least one professional society or group, especially those associated with teaching and learning. d. Advertise for part time instructors on a regular basis in local newspapers & announcements at professional organizations / within professional organization newsletters.

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		e. Keep vitae on file of potential part time faculty who are qualified to teach within the 2820 area. f. Hire and maintain a quality faculty in the area including part-time instructors who provide quality teaching and are knowledgeable in the appropriate disciplines.
9. Maintain quality laboratory and classroom spaces.	a. Seek to constantly improve the classroom and laboratory experiences of students through the purchase, maintenance, and replacement of equipment. b. Maintain a safe space for laboratory activities.	With the appropriate university administrative support: a. Maintain and replace equipment b. Utilize department technical support on a regular basis. c. Maintain and improve laboratory space d. Plan for purchases and maintain a balanced budget e. Investigate sufficiency of student fees. f. Request an air quality survey of SHS 128, 129, & 130. g. Continue to request drop ceilings be put in SHS 128, 129, & 130 to help decrease cost of equipment cleaning and repair, to improve air quality, improve safety, and dramatically improve the quality of the rooms' acoustics (so students can hear the instructor, the instructor can hear student questions, and the strain on instructors' voices can be minimized).
10. Assist with enrollment and retention issues related to the department's programs.	Build relationships outside of the university, including those in professional organizations, in order to help enrollment within the department. Seek grant funding related to engineering technology programs.	a. Use contacts outside of the university, such as professional organizations, to help market programs within the department. b. Attend Majors Mosaic and other college and university functions intended to promote the departments programs. c. Visit high schools to market engineering technology programs. d. Serve on the department marketing committee.