

Engineering Technology Curriculum Development



Athens Technical College
Engineering Technology Program
ADVISORY COMMITTEE ROSTER
2013 – 2014

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PROGRAM OF WORK

Sample of items included by various programs

	Date Completed
1. Hold two meetings per year	4/11/14, 6/26/14
2. Review the ATC Mission, Warranty of Graduates, and Work Ethics Policy	4/11/14
3. Review course offerings	4/11/14
4. Review curriculum	4/11/14
5. Seek internship from industry	4/11/14
6. Review student enrollment	4/11/14, 6/26/14
7. Review current training technology and future plans	4/11/14, 6/26/14
8. Discuss internship opportunities	4/11/14, 6/26/14
9. Explore ways to promote the program	6/26/14
10. Discuss program changes and optimization	4/11/14, 6/26/14

Signature of Chairperson



Signature of Program Chair

Program Advisory Board Meeting

Engineering Technology Meeting

Date:

6/26/2014

Time:

11:30 am

Location:

Nelsnick Enterprises, Athens GA

In attendance:

Tremaine Powell
Erico Mattos
Bobby Sills
Ronald J. Weaver

Tremaine Powell:

- Presented the alterations to AAS degree.
- Discussed program space expansion, a separate lab per program concentration. Three new lab/lecture spaces gained within building J for the ENGT program.
- Discussed the final approval and arrival of large equipment purchases.
- Talked about a tentative early August date for a PAC open house once large equipment order has arrived and labs are set up.
- Discussed splitting of ENGT PAC into separate groups per program track as the PAC grows.
- Will update the document and send to attendees via email.

The group discussed:

- Availability for Federal Review board visit in July.
- Total enrollment is 28 students. Discussed further ways to promote the program.
- Arrangement with the internships is flexible. Discerning between part time employee and intern.
- Ron Weaver discussed Labvolt merging with Festo, and how that may affect trainer purchasing.
- Discussed how to incorporate night classes into the program, and industry response. This is important to reach full time working potential students.
- Tremaine discussed a follow up forum type email to include other PAC members not present.
- PAC Chairman to be elected during August meeting.

ATHENS TECHNICAL COLLEGE

Program Advisory Board Meeting

Engineering Technology

Tremaine Powell – Chair of Engineering Technology

4/10/2014

ATC Mission Statement

Athens Technical College, a unit of the Technical College System of Georgia, provides educational programs and services through traditional and distance education methods to foster lifelong learning, facilitate workplace success, and promote economic development.

Warranty of Graduates

As a demonstration of confidence in the quality of the programs of study offered at each technical college in Georgia, the Technical College System of Georgia warrants every graduate of technical programs in which students may earn technical certificates of credit, diplomas, or associate degrees. The warranty guarantees that graduates demonstrated the knowledge and skills and can perform each competency as identified in the industry-validated standards established for every program of study. If the college determines that program graduates lack such competencies, the Technical College System of Georgia will provide retraining in areas of deficiencies at no charge to the employers or graduates.

An employer in conjunction with a graduate, or the graduate alone, may file a claim against the warranty if the individual is unable to perform one or more of the competencies contained in the industry-validated standards, including failure to pass a State of Georgia-required licensing examination.

This warranty is applicable only to graduates of technical certificate, diploma, or associate degree programs who entered the programs subsequent to the mandated standards implementation date. The warranty shall remain in effect for two years immediately following the date of graduation, and any state-governed technical college that offers the programs from which individuals graduated will honor this warranty.

Work Ethics Policy

To fulfill our responsibility to teach essential workplace ethics, the college reviews with all students ten standards of behavior in the workplace. These standards are as follows:

- 1) *Attendance*--Students attend classes regularly, arrive and leave on time, and notify instructors of planned absences.
- 2) *Character*--Students display honesty, dependability, initiative, self-discipline, and responsibility.
- 3) *Teamwork*--Students are supportive of classmates, respect the rights of others, and contribute to the team.
- 4) *Appearance*--Students display appropriate dress, grooming, and hygiene.
- 5) *Attitude*--Students demonstrate positive attitudes and self-confidence and have realistic expectations of themselves and others.
- 6) *Productivity*--Students follow safety practices, conserve materials, keep work areas neat and clean, demonstrate interest in the quality of their work, and follow directions.
- 7) *Organizational Skills*--Students possess skills in prioritizing and accomplishing tasks, appropriately manage time and stress, and demonstrate flexibility in responding to change.
- 8) *Communication*--Students display appropriate verbal (speaking), nonverbal (eye contact and body language), and listening skills.
- 9) *Cooperation*--Students respond appropriately to constructive criticism, conflicts, and complaints and demonstrate the ability to solve problems.
- 10) *Respect*--Students react appropriately to cultural/racial diversity in the classroom, lab, or clinical/practicum/internship setting and maintain appropriate and respectful relationships with faculty members and peers.

ES13 Engineering Science Technology AAS Degree

Area	Course		Credits	
I	ENGL 1101	Composition and Rhetoric	3	
II	ECON 2105	Macroeconomics	3	
	ECON 2106	or Microeconomics (if prereq not needed)	3	
III	MATH 1111	College Algebra	3	
	MATH 1113	Pre-Calculus	3	
IV	ARTS 1101	Art Appreciation	3	
	ENGL 2130	or American Literature	3	
	HUMN 1101	or Introduction to Humanities	3	
			15	
Engineering Core				
	Course	Title	Credits	
	COMP 1000	Introduction to Computers	3	
	DFTG 1101	CAD Fundamentals	4	
	DFTG 2010	or Engineering Graphics		4
	ENGT 1000	Intro to Engineering Technology	3	
	ENGL 1105	Technical Communications	3	
	MEGT 2030	Statics	3	
	MEGT 2080	Strength of Materials	4	
	PHYS 1111/L	Introductory Physics I + Lab	4	
			24	
Mechanical Specialization				
	CETC 1121	Hydraulics and Fluid Mechanics	3	
	MEGT 2260	or Fluid Power		
	CHEM 1211	Chemistry I	3	
	CHEM 1211L	Chemistry I L	1	
	ECET 1101	Circuit Analysis I	4	
	ENGT 2500	Internship	3	
	MEGT 1010	Manufacturing Processes	3	
	MEGT 2020	Engineering Materials	4	
	NANO 2020	or Material Science		4
	MEGT 2090	Machine Design	4	
			25	
Advisor approv. Elec.	Select 2 courses for a minimum of 6 cr			

ECET 1101	Circuit Analysis I	4
EMET 2060	Controls I	4
MEGT 2260	Fluid Power	3
IDSY XXX		
DFTG XXXX		
MCHT XXXX		
Total Degree Hours		70

Environmental Specialization

CHEM 1211/L	Chemistry I + Lab	4
DRFT 2050	Surveying I	2
ENGT2500	Internship	3
ESCI 1060	Survey of Environmental Law	3
ESCI 1110	Soil Mechanics	3
ESCI 1100	Intro to Environmental Engineering & Science	3
ESCI 2000	Watershed Hydrology	3
GIFS 1101	Introduction to GIS	4
		25

Select 2 courses for a minimum of 7 credits

CETC 1121	Hydraulics & Fluid Mechanics	3
CHEM 2300/L	Quantitative Analysis +Lab	5
CHEM 1212/L	Chemistry II + Lab	4
ESCI 1160	Introduction to Wastewater Treatment	4
ESCI 2150	Stormwater & Erosion Control	4
ESCI 2050	Construction Plans, Estimates & Records	3
ESCI 2140	Environmental Impact Analysis	4
ESCI 1200	Fundamentals of Ecology	3

Total Degree Credit Hours **71**

**Stormwater and Erosion Control
Technician TCC**

Course		Title	Credits
DFTG 1101		CAD Fundamentals	4
DFTG 2010	or Engineering Graphics	-4	
DRFT 2050		Surveying I	3
ENGL 1105		Technical Communications	3
ESCI 1110		Fundamentals of Soil Mechanics	3
ESCI 2000		Watershed Hydrology	3
ESCI 2150		Stormwater & Erosion Control	4
ESCI 2050		Construction Plans, Estimate & Records	3
GIFS 1101		Introduction to GIS	3
MATH 1113		Pre-Calculus	3
			29

Environmental Assessment Technician TCC

Course		Title	Credits
CHEM 1211/L		Chemistry I + Lab	4
CHEM 2300/L		or Quantitative Analysis + Lab	-5
ENGL 1105		Technical Communications	3
ESCI 1100		Introduction to Environmental Engineering & Science	3
ESCI 1060		Survey of Environmental Law	3
ESCI 1200		Fundamentals of Ecology	3

ESCI 2140	Environmental Impact Analysis	4
ESCI 2000	Watershed Hydrology	3
GIFS 1101	Introduction to GIS	3
MATH 1113	Pre-Calculus	3
		29

Prospective MET TCC

Mechanical Fluid Power Technician

Certificate Core			26 Credits
<i>Course</i>		<i>Title</i>	<i>Credits</i>
COMP	1000	Intro to Computers	3
ENGL	1105	Technical Communications	3
MATH	1113	Precalculus	3
MEGT	2260	Fluid Power	3
MEGT	2030	Statics	3
MEGT	1010	Manufacturing Processes	3
ECET	1101	Circuit Analysis I	4
EMET	2060	Controls I	4

NA13 Nanotechnology AAS Degree

Area	Course		Credits
I	ENGL 1101	Composition and Rhetoric	3
II	ECON 2105	Macroeconomics	3
	ECON 2106	or Microeconomics (if prereq not needed)	3
III	MATH 1111	College Algebra	3
	MATH 1113	Pre-Calculus	3
IV	ARTS 1101	Art Appreciation	3
	ENGL 2130	or American Literature	3
	HUMN 1101	or Introduction to Humanities	3
			15

All Courses above are guaranteed Transferrable through system of GA Institutions.

COMP1000	Introduction to Computers	3
CHEM 1211	Chemistry I	3
CHEM 1211L	Chemistry I Lab	1
CHEM 1212	Chemistry II	3
CHEM 1212L	Chemistry II Lab	1
DFTG 1101	CAD Fundamentals or	
DFTG 2010	Engineering Graphics	4
ENGL 1105	Technical Communications	3
ENGT 1000	Introduction to Engineering Technology	3
ENGT 2500	Engineering Internship	3
MATH 1127	Introduction to Statistics	3
METR 1101	Intro to Quality Standards and ISO 9000	3
NANO 1100	Intro to Nanotechnology	4
NANO 2020	Material Science	4
NANO 2250	Advanced Microscopy	3
PHYS 1111	Introductory Physics I Lab	3
PHYS 1111L	Introductory Physics I Lab	1
		45
	Pickat least 3 for a total of at least 9 credit hours	
METR 1161	Physical Metrology	3
	Engineering Biology	3
BTEC 2XXX		
BIOL 1111	Biology 1 & L	4
BIOL 1112	Biology 2 & L	4

MATH 1131	Calculus I	3
Total Degree Credit Hours		69
Future Options		
	Polymers	3
	Nanoregulations and Ethics	2

Nanotechnologist TCC		
CHEM 1211	Chemistry I	3
CHEM 1211L	Chemistry I Lab	1
	Intro to Nanotechnology	4
ENGT 1000	Introduction to Engineering Technology	3
MATH 1111	College Algebra	3
MATH 1127	Introduction to Statistics	3
	Advanced Microscopy	3
	Material Science	3
ENGL 1105	Technical Communications	3
PHYS 1111&L	Introductory Physics I & Lab	4
	Total Degree Hours	30

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Industrial Engineering Technology Program
ADVISORY COMMITTEE ROSTER
2013-2014

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**MEETING MINUTES
ADVISORY COMMITTEE
Industrial Engineering & Systems Technology
ATLANTA TECHNICAL COLLEGE**

Date: April 23, 2014 **Location:** ATC-Conference Room C1215

Presiding Officer: Gene T. Yon, Committee Chair

Members attending:

Industry Members

Gene T. Yon

John B. Morehouse

Cyril Okhio

Ron Weaver

Tony Osinaiya

Buddy Johnson

ATC Members

Dr. Samuel Afuwape

Sherrod Schofield

Walter Pincombe

Bensie Watkins

Absent Members

Michael Marlowe

Akindele Akinsola

MINUTES

The advisory committee meeting for the Industrial Engineering & Systems Technology program was held on Wednesday, April 23, 2014, beginning at 11:50PM upon the arrival of the John Morehouse.

Welcome from Dr. Afuwape with gratitude for the attendee's support of the program, along with introductions of Guest visitor Mr. Walter Pincombe, ATC's Economic Development Specialist Guest visitor and Sherrod Schofield, Program Director of the Industrial Systems Technology Program.

Dr. Afuwape announced the combination of the Systems program with the Engineering program's Advisory Committee effective this meeting. Dr. Afuwape announced the roll-out status of the Systems program in Fall 2014. He went further to express his hopes of the roll-out soon of the AS and TCC programs for the Engineering programs.

Individual introduction of all attendees was made for the information of Mr. Schofield, Mr. Pincombe, and the newest committee's Buddy Johnson of Coca-Cola. Mr. Pincombe distributed literature pertaining to ATC's Division of Economic Development resources and services for business and industry. His introduction included thanks to the committee and their involvement in ATC's new word toward committees as "Network Technology" that is hopefully fully-integrated strategically by August 2014 of the Fall Semester Term.

Mr. Schofield's overview of the System program emphasized his intended efforts to develop and enhance the student's troubleshooting skills in the industry.

Ron Weaver's overview of the equipment and the software was expressed as state-of-the-art purchases that contribute to 21st century skill development.

Gene Yon opened the review of the minutes from the last meeting for any concerns that needed to be addressed. The review was closed with no concerns from the members and guest.

Open discussion of the program's curriculums received Dr. Afuwape commented on mechatronics instructional procedures in Germany industries as a barometer of what will be successful for the ATC program. The math course was commented on unanimously as a scary-process in technical colleges, because colleges can lose students in the math department. Suggestions were to offer the math within the program and not as general course as a hybrid form called Engineering Math that consist of:

- Eighteen (18) days of Engineering statistics.
 - Incorporate with application systems of analysis and engineering distribution

Other suggestions for the curriculum included eliminating the electives of Humanities, Art and Music and adding of a Capstone Project to the Engineering program to provide solutions as students aggressively engage in problems from industry using the Six-Sigma process DIMAC which is D - Define goals of a process; define customers, their needs and expectations; M - Measure significant data; measure performance of a process; A - Analyze data and define cause of errors; I - Improve the process by removing defects - Control process; preventing form making errors.

Recommendations for Course Offerings through standards and program brochure were made from the review of current flyers for both programs that resulted in suggestions to package the course so that industry can become involved.

Suggestions for hand-out flyers included adding scholarship opportunities and adding academia statistics.

Suggestions for the new programs promotion and sustainability included having the recruitment person present all efforts for review at the next meeting.

Advisory roster was updated by Bencie Watkins, Interim Secretary with new member Buddy Johnson of Coca-Cola.

Closure was made at 12:50PM by Dr. Afuwape for recommendations. Recommendations included not serving lunch at the next meeting to prolong discussion time.

Tour of the lab was performed by Mr. Schofield, Gene Yon, Committee Chairperson and Ron Weaver, Committee Member.

The meeting adjourned at 1:30 P.M.

ACTIONS FOR NEXT MEETING:

1. Begin an open-forum and work schedule for committee members that involve benchmarking, curriculum, evaluation, and lesson delivery methods for next meeting.
2. Make invitation to Recruitment Person to attend next meeting and present recruitment plans.

BLWatkins

Bencie Watkins, Recorder

Albany Technical College
Civil Engineering Technology
ADVISORY COMMITTEE ROSTER
2013 – 2014

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**Civil Engineering Technology
Advisory Committee Meeting
March 5, 2014
Minutes**

The meeting was called to order at 12:10 pm.

Members present: Tod Lanier

Members absent: Matthew Inman, Steven Hunter, Fenton Nash, Robert Fletcher, Casey Joyner, William Van Linden, Richard Marbury, Kevin White

School representatives present: Joy Knighton

Minutes from the proceeding meeting were read and approved.

Old Business

- I. Discussion of recommendations from last meeting.
- II. Discussion of suggestions from last meeting.

New Business

- I. Achieving the Dream Community Engagement Meeting. Regina Watts presented a PowerPoint presentation of the DREAM Report analysis.
- II. Warranty Statement. Dr. Shirley Armstrong reminded advisory committee members about TCSG's Warranty Statement.
- III. Review program admissions requirements. Members did not have any recommendations about admissions requirements.
- IV. Review program length and content (course objectives, course syllabi, and lesson plans for each course), using the Curriculum Assessment form. Material was reviewed
- V. Make suggestions regarding the modification, addition, or deletion of course offerings. Members did not have any recommendations/suggestions.
- VI. Discussion of recommendations from the last meeting. Comments: No recommendations were made.
- VII. Discussion of suggestions from the last meeting. Comments: No suggestions were made.

Other items discussed: None