Phi Psi Fraternity

The mission of Phi Psi Fraternity is to capture, nurture, and mutually benefit from the efforts of a select group of students focusing on professionalism, teamwork, and brotherhood.

Phi Psi is the professional fraternity for Polymer and Fiber Engineering.

Other active chapters include Clemson University, Georgia Institute of Technology, North Carolina State University, and Philadelphia University.

Phi Psi holds an annual national convention to promote good will among fellow members. This enables all chapters to keep in touch and learn about the latest developments in the fiber and related industries.

Membership is contingent upon scholastic achievement and by invitation only. Students can be tapped for membership after freshman year.
Department Directory

Polymer and Fiber Engineering office, 115 Textile Building ............................................ 334-844-4123
311 W. Magnolia Avenue, Auburn, AL 36849-5327
Fax .............................................................................................................................. 334-844-4068

Department Head

Dr. Peter Schwartz, 101 Textile Building ................................................................. 844-5452
composites; interfacial adhesion, flow through porous media, mechanics of flexible structures

Faculty

Dr. Sabit Adanur, Professor, 222 ................................................................. 844-5497
Polymer and nano composites, extrusion, injection molding, compression molding, fibers, yarns,
fabrics, weaving, knitting, braiding, computer-aided design and modeling, testing and analysis

Dr. Maria Auad, Associate Professor, 103 ................................................................. 844-5459
Polymer materials science, polymer nanocomposites, flow behavior of polymers, rheology,
control of microstructure & nanostructure in materials, polymers for structural & biomedical
applications, shape memory polymers

Dr. Roy Broughton, Jr., Professor Emeritus, 105 .................................................. 844-5460
Chemistry of polymers and fibers, antimicrobial materials, fiber extrusion, microscopy, CAD of
fabrics, statistical analysis of fiber properties, nonwovens engineering

Dr. Gisela Buschle-Diller, Professor, Graduate Program Officer, 221 .............. 844-5468
Biopolymers for medical applications, natural fibers and polymers from renewable resources,
application of engineered enzyme systems, hydrogels, electrospinning, coloration, surface
modifications

Dr. Edward Davis, Lecturer, 232A ................................................................. 844-5471
Biopolymers for medical applications, natural fibers and polymers from renewable resources,
application of engineered enzyme systems, hydrogels, electrospinning, coloration, surface
modifications

Dr. Yasser Gowayed, Professor, 222-A ................................................................. 844-5496
Mechanics of ceramic and polymer matrix composites, manufacture and testing of fibrous
composites, time-dependent response of viscoelastic materials, modeling of the mechanical
behavior of nanocomposites for static and transient loading and non-linear response of flexible
structures

Dr. Gwynedd Thomas, Associate Professor, 117 .................................................. 844-5461
Engineered fabrics and design; protective materials (including ballistic resistance, blast
protection, chemical resistance, flame resistance, biological agent protection); aircraft
and vehicle protective structures; fiber-based medical fabrics and protective materials;
communications enhancing, structural reinforcement fibrous structures

Dr. Xinyu Zhang, Assistant Professor, 223 ............................................................. 844-5439
Conducting polymers, carbon nanotubes, sensors, nanocarbons, energy storage and harvesting

Staff

Clark, David, manufacturing lab II, 213 ................................................................. 844-5465
Farag, Ramsis, Ph.D., research fellow, physical testing lab, 001 ............................... 844-5450
Howard, Steve, chemistry/instrumentation/polymer labs, 107 ................................. 844-5455
Jeffers, Pam, admin support associate, 115-A ...................................................... 844-5466
Johnson, Marilyn, office manager, 115 ................................................................. 844-5453
Thompson, Jeff, manufacturing lab I, 118-A .......................................................... 844-5462
Winfree, Ashley, student services coordinator, 116D ............................................. 844-5457

Labs

<table>
<thead>
<tr>
<th>Chemistry/Instrumentation/Polymer</th>
<th>Lab 108</th>
<th>Nonwovens Lab</th>
<th>005</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. Ray and Jackie Taunton Computer</td>
<td>Lab 116</td>
<td>Physical Testing Lab</td>
<td>003</td>
</tr>
<tr>
<td>Machine Shop</td>
<td>118-B</td>
<td>Polymer Processing Lab</td>
<td>208</td>
</tr>
<tr>
<td>Manufacturing Lab I, Hovercraft</td>
<td>118</td>
<td>Polymer Research Lab</td>
<td>106</td>
</tr>
<tr>
<td>Microscopy Lab</td>
<td>209A</td>
<td></td>
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</tbody>
</table>
THE AUBURN CREED

I believe that this is a practical world and that I can count only on what I learn. Therefore, I believe in work, hard work.

I believe in education, which gives me the knowledge to work wisely and trains my mind and my hands to work skillfully.

I believe in honesty and truthfulness, without which I cannot win the respect and confidence of my fellow men.

I believe in a sound mind, in a sound body and a spirit that is not afraid, and in clean sports to develop these qualities.

I believe in obedience to law because it protects the rights of all.

I believe in the human touch, which cultivates sympathy with my fellow men and mutual helpfulness and brings happiness for all.

I believe in my country, because it is a land of freedom and because it is my own home, and that I can best serve that country by doing justly, loving mercy, and walking humbly with my God.

And because Auburn men and women believe in these things, I believe in Auburn and love it.

George Petrie

THE ALMA MATER

On the rolling plains of Dixie 'N eath its sun-kissed sky, proudly stands our Alma Mater, Banners high.

To thy name we'll sing thy praise, From hearts that love so true, And pledge to thee our Loyalty the ages through.

We hail thee, Auburn, and we vow To work for thy just fame, And hold in memory as we do now Thy cherished name.

AUBURN FIGHT SONG

War . . . Eagle, fly down the field, ever to conquer, never to yield.
War . . . Eagle, fearless and true.

Fight on, you orange and blue.

Go, go. go!

On to vic'try, strike up the band.

Give 'em hell! Giw 'em hell'

Stand up and yell, Hey!

War . . . Eagle. win for Auburn.

Power of Dixieland!

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Debbie Shaw Conner and Wendy D. Huguley
### Free Tutoring Services in the College of Engineering

- Engineering tutors, Student Services, 1210 Shelby Center, W. Magnolia Ave. 844-4310
- AT&T Minority Engineering Program, 1214 Shelby Center, W. Magnolia Ave. 844-2330
- www.auburn.edu/tutoring

### IT Hotline

- 844-4512
- helpdesk@mail.auburn.edu
- www.auburn.edu/oit

### Academic Support Services: 0176B RBD Library

- 844-5972
- www.auburn.edu/academicalsupport


### Tutoring Services

- www.auburn.edu/tutoring

### Study Partners

- RBD Library Basement, Mell St., walk-in or call for appointment [math/science]
Getting Settled at AU ...

Area Zip Codes:
- Auburn 36830, 36831, 36832
- Auburn University 36849
- Opelika 36801

Did you know...

On your home computer, you can download the TigerMail Desktop version, available at www.auburn.edu/download.
It is much faster and has a great calendar!

Need help with campus technology?
- Tiger Mail, Tiger-I, Blackboard, E-Bill
- Forgotten pin or password
- Computer recommendations
- Buy or lease a computer
- Free software
- Buy software
- Campus cable help
  www.auburn.edu/oit/sg

For computer or printer problems in engineering labs, email admin@eng.auburn.edu or call 844-2280

Need immediate computer help?
- IT Assistance
  Day: 844-4944

  IT Hotline
  After hours: 844-4512
  www.auburn.edu/oit

E-mail

Every Auburn student is assigned a free AU email account and password through the Office of Information Technology (OIT). For account activation and information, visit www.auburn.edu/oit/sg.

It is very important that you check it often - campus email is now the official notification at Auburn University. Missing official notifications can cause big problems!

Email Announcements
  You will receive email through TigerMail concerning Polymer and Fiber Department announcements, news, and club meetings as well as AU and Engineering announcements.

Engineering Computer Labs

Every engineering student also may use engineering computer labs located in every engineering building.

Your engineering lab login:
  Engineering accounts are automatically set up for new engineering students each semester.
  1. Sync your AU passwords at www.auburn.edu/password, wait 15 minutes to login.
  2. If all fails, take your student ID to Engineering Network Services, L-Building 103 (behind the Textile Building, walk around the east side next to Ramsay Hall)

Safety

While Auburn is a small town, it is important to take safety precautions to protect yourself and your property, wherever you are.

  - Lock your home and car, keep laptops and other valuables out of sight, with you, or in a safe, locked area.
  - Go out with friends at night, not alone, especially if you cannot park right outside your destination (dorm, etc.)
  - Be aware of Emergency Stations on campus to summon help, either emergency or non-emergency. Use the night transit services or call for an escort.
Getting involved…

To feel at home at AU, get involved! Engineering students are involved in virtually all campus and many community activities. Visit local churches, campus organizations, and interest groups. Get out, explore, meet people, and you will feel at home here before you know it!

www.auburn.edu/stuorgs/  www.auburn.edu/students

Student Activities

Phi Psi Professional Fraternity: www.auburn.edu/student_info/phi_psi
War Eagle Motor Sports, including the Hovercraft Team: www.eng.auburn.edu/motorsports
Other engineering organizations www.eng.auburn.edu/organizations
Campus organizations and community information: www.auburn.edu/students
More info on student organizations and activities in The Tiger Cub, online: www.auburn.edu/tigercub/

Where do I find….

General campus information

Search feature, AU website: www.auburn.edu
Student Information: www.auburn.edu/students
Foy Information Desk: 844-4244

Official academic information

Auburn University Bulletin on-line: http://www.auburn.edu/student_info/bulletin/
Registrar’s Office/Enrollment Management/Records, 101 Mary Martin Hall: 844-4367
Your Academic Dean’s Office: Engineering Student Services, 1210 Shelby Center: 844-4310
Your departmental advisor: Ashley Winfree, 116D Textile Building: 844-5457

Course and finals scheduling, registration procedures, E-Bill

www.auburn.edu/students

Official handbook for AU

Student organizations and activities, official academic policies, grievance and disciplinary procedures
The Tiger Cub, online: www.auburn.edu/tigercub/

Academic resources and tutoring

www.auburn.edu/academicsupport

Academic Support Services Office: 0176B RBD Library: 844-5972
Supplemental Instruction, academic coaching and counseling
Study Partners, 0176 RBD Library [Basement]. Mell St., walk-in or appointment

Student services and tutoring in the College of Engineering

Student Services, 1210 Shelby Center, Magnolia Ave.: 844-4310
AT&T Minority Engineering Program, 1214 Shelby Center, Magnolia Ave.: 844-2300

Tiger Transit Information and schedules

www.auburn.edu/transit
Tiger Transit Office: 334-844-4757
The Lost and Found at Haley Station: 844-4018
Find your bus with Tiger Transit GPS: http://auburn.transloc-inc.com/
GRADE REQUIREMENTS:

- **FRESHMAN** - 1-30 HOURS - 1.50 CUMULATIVE GPA BASED ON HOURS EARNED
- **SOPHOMORE** - 31-60 HOURS - 1.80 CUMULATIVE GPA BASED ON HOURS EARNED
- **JUNIOR** - 61-90 HOURS - 1.90 CUMULATIVE GPA BASED ON HOURS EARNED
- **SENIOR** - 91+ HOURS - 1.974 CUMULATIVE GPA BASED ON HOURS EARNED

WARNING STATUS:

Any time your cumulative GPA is less than a 2.0; you will be placed in warning. You must have at least one semester on warning before being suspended. You **MUST** have a 2.0 to graduate.

SUSPENSION:

Suspension will occur if **BOTH** of the following conditions are not met:

1. Semester GPA is less than a 2.2
2. The cumulative GPA is below that required for the designated number of hours earned (see grade requirements). If suspended, you:
   - May not be able to attend another school
   - Cannot transfer any hours to AU
   - May not be able to remain in university housing
   - May not participate in university-sponsored activities

**NOTE:** Transfer grades do not affect your AU GPA, however, they do affect your class standing, which may affect suspension.

CLASS WITHDRAWALS

- Can withdraw from a class prior to the 15th day with no grade assignment
- Withdraws from the 25th class day to mid-semester will result in a grade of “W” (does not affect GPA but is on transcript)
- Withdrawals are not allowed after mid-semester unless special permission is given by dean

GAP (Forgiveness Policy)

- May delete a maximum of three (3) course grades of D or F
- Must repeat all required courses that are deleted and must be repeated at AU
- Does not apply to transfer grades, grades for previous degrees, or grades resulting from academic dishonesty
- Transcript will have a special notation regarding the deleted grade; however, the GPA will not include deleted grade
- Invoking GPA may reinstate you to a positive academic status and/or delete suspension
- To use GAP a written request must be initiated in dean’s office

ANY QUESTIONS REGARDING ACADEMIC POLICISE SHOULD BE DIRECTED TO YOUR ACADEMIC ADVISOR OR THE REGISTRAR.
Important: Don't miss the deadline!
If pre-engineering courses are not completed on time, you can be dropped from the College of Engineering!

Academics

Pre-Engineering

Students must complete pre-engineering courses before junior year status (60 hours) to be accepted into the College of Engineering. If you miss the deadline, you will be forced to transfer out of engineering.

Pre-Polymer and Fiber Engineering
2.2 cumulative GPA, sophomore standing

ENGR 1100, 1110
Calculus I, II
Two lab sciences: Chemistry I, II or Physics I, II
COMP 1200 – MatLab (preferred by PFEN) or C

Degree Requirements

To earn a bachelor’s degree from the College of Engineering you must:
1. Complete all course requirements in your curriculum, the one in effect when you
   a. Enter your major as a freshman,
   b. Enter as a transfer student, or
   c. Change majors
2. Earn a minimum 2.0 cumulative GPA on all work attempted at Auburn University.
3. Earn a cumulative GPA of 2.0 on all transfer courses which apply to degree requirements.
4. Earn a cumulative 2.0 on all work in your major.

Your major is defined all course work with the departmental prefix and related classes listed in bold type in the Bulletin for your major.

All AU courses and grades (including those excluded by the GAP policy) are used for determining graduation honors.

Dean’s List

The Dean’s List for Auburn University includes all students who complete 12 hours (not including S-U option courses) and earn a GPA of 3.75 for the term with no D’s or D*. All grades (including those excluded by the GAP policy) are used for determining Dean’s List and academic honors.

PFEN Student Exchange Program

The first student exchange program in the College of Engineering is operated by the Department of Polymer and Fiber Engineering in cooperation with several universities in Germany.
Students in either PFEN option can apply for scholarships to study engineering, business, or language in beautiful southern Germany. One semester of German is recommended, although many courses are taught in English. AU students pay fees to the department and may be able to use financial aid, scholarships, and PACT plan funds to help pay for their expenses.
The department also provides study abroad scholarships available for undergraduate and graduate study at several German universities.


Students from Reutlingen University attend classes here in our department.

For Exchange Program information: contact
Dr. Gisela Buschle-Diller
221 Textile Building
844-5468
buschgi@auburn.edu
What Can Your Academic Advisor Do For You?

- Introduce you to the field you are entering
- Advise you on career choices
- Evaluate transfer credits
- Answer curriculum questions
- Guide you in course scheduling
- Explain academic regulations and procedures
- Refer you to other resources if needed
- Assist you in seeking equitable solutions to difficulties you may face
- Provide information on various programs of study
- Be dependable, accurate, friendly, honest, respectful and eager to help you!

Calculating Your Grade Point Average (GPA)

Auburn is on a 4-point grading scale where:

- A = 4 points
- B = 3 points
- C = 2 points
- D = 1 point
- F = 0 points

Samples:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hour</th>
<th>(Multiply by)</th>
<th>Final Grade</th>
<th>(Points)</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course #1</td>
<td>5</td>
<td>X</td>
<td>B</td>
<td>(3)</td>
<td>15</td>
</tr>
<tr>
<td>Course #2</td>
<td>4</td>
<td>X</td>
<td>A</td>
<td>(4)</td>
<td>16</td>
</tr>
<tr>
<td>Course #3</td>
<td>3</td>
<td>X</td>
<td>C</td>
<td>(2)</td>
<td>6</td>
</tr>
<tr>
<td>Course #4</td>
<td>2</td>
<td>X</td>
<td>A</td>
<td>(4)</td>
<td>8</td>
</tr>
<tr>
<td>Course #5</td>
<td>1</td>
<td>X</td>
<td>F</td>
<td>(0)</td>
<td>0</td>
</tr>
</tbody>
</table>

15 credit hours 45 points

\[
\text{GPA} = \frac{\text{Total Quality Points}}{\text{Total # of Hours}} = \frac{45}{15} = 3.0 \text{ GPA for one semester}
\]

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Advising and Registration

Students register by class, beginning with graduate students, seniors, and priority students. It is important to register as early as possible in your registration period in order to get the classes you need or get on a waiting list. You may see your “time ticket” for registration in AU Access: www.auburn.edu/students

Students who do not register within their published time period may be charged a late fee.

All College of Engineering students have a registration hold each semester and must see an academic advisor for alternate pin # before registration.

PFEN advising and registration procedures:

1. Plan your schedule for the next term and note any questions for your advisor.
2. See your departmental advisor in 116-D for review, questions, and to get your alternate pin number set by your advisor. You do not need your folder from Engineering Student Services in Shelby.
3. Follow instructions to see a faculty advisor for signature.
4. Leave the yellow copy of the signed schedule planner in the advising office. Keep the white copy to work out the details of your schedule.
5. Register online in AU Access: www.auburn.edu/students

Instructions for registration: www.auburn.edu/tigeri or www.auburn.edu/oit/sg

Schedule Adjustment

Print a new schedule just before classes start to verify class locations. After the first day of classes you cannot add classes (only departments can add for a short time), but you can drop classes until mid-term. Dropping below 12 hours may cause problems with scholarships, financial aid, health insurance, or car insurance. Consult your advisor before taking this step! Do not stop attending classes without withdrawing from them.

Questions about registration refer to:

PFE department advisor
Engineering advisor
116-D Textile Building 1210 Shelby Center
844-5457 844-4310
sandeaa@auburn.edu

Registrar’s Office
101 Mary Martin Hall
844-4770/4367

To get your alternate pin # set for dropping a class before midterm, contact your PFEN advisor in 116-D.

PFEN departmental scholarship students must see the departmental advisor each semester for advising and must take major, math, and chemistry courses as advised to receive a PFEN scholarship for the term.

Ask your faculty advisor and other professors about their research – they may give you ideas for your career!
Academic Resources

**Tutoring Services**  [www.auburn.edu/tutoring](http://www.auburn.edu/tutoring)
Use any or all of these services to prevent problems or falling behind.

**Engineering Student Services**  [www.eng.auburn.edu/ess](http://www.eng.auburn.edu/ess)

1. Free group tutoring sessions in selected math and science courses.
2. Free, private tutoring services for math, science, and engineering courses – for preventing problems, not a quick fix.
See schedule at [www.eng.auburn.edu/ess/students/tutoring/](http://www.eng.auburn.edu/ess/students/tutoring/) or sign up at the desk in 1210 Shelby Center, 844-4310

**AT&T Minority Engineering Program**  [http://www.eng.auburn.edu/admin/mep/](http://www.eng.auburn.edu/admin/mep/)
Free resources for minority students:
- Interactive learning lab with computer tutorials in math, chemistry, etc.
- Sunday evening tutorial groups
- Collaborative learning groups
- Critical thinking/problem-solving workshops

1214 Shelby Center  844-2331
scotts2@auburn.edu

**Campus Tutoring Services**  [www.auburn.edu/academicsupport](http://www.auburn.edu/academicsupport)

Academic Support Services  Office: 0176b RBD Library ...............844-5972
Supplemental Instruction, academic coaching and counseling

**Study Partners**
0176 RBD Library [Basement], Mell Street
Village Annex in Eagle Hall
Walk-in or appointment for math and science
[http://www.auburn.edu/academic/provost/undergrad_studies/support/study_partners/](http://www.auburn.edu/academic/provost/undergrad_studies/support/study_partners/)

**College of Science and Math Departmental Tutoring**

**Study Guides and Resources**

UNIV 1050  Success Strategies Course for first term students or by departmental approval.

Contact your advisor in Textile 116-D.

Learning Styles links:  [http://www.eng.auburn.edu/programs/pfen/students/](http://www.eng.auburn.edu/programs/pfen/students/)
- [www.engr.ncsu.edu/learningstyles/ilsweb.html](http://www.engr.ncsu.edu/learningstyles/ilsweb.html)

Other links for study guides and homework help

General strategies + specific course help:  [http://www.studygs.net/](http://www.studygs.net/)
Notes and flashcards:  [http://www.studyblue.com](http://www.studyblue.com)
Solutions manuals, lecture notes, formula sheets, study guides:  [http://www.cramster.com/](http://www.cramster.com/)
[http://chemistry.about.com/od/homeworkhelp/a/chemistry101.htm](http://chemistry.about.com/od/homeworkhelp/a/chemistry101.htm)

A good engineer identifies available resources and uses them!
Transient Courses

After you enroll at AU, you cannot be enrolled elsewhere even in summer without the mutual consent of both campuses. Many students take courses at other colleges or online in the summer. Courses taken for transient credit must be approved by the College of Engineering, Engineering Student Services in Shelby 1210, before you enroll in another college.

TRANSIENT ENROLLMENT FOR AUBURN STUDENTS AT OTHER INSTITUTIONS

To obtain a transient form, proceed as follows:

1. Go to student Tigrer
2. Click Student Main Menu
3. Click Transient Enrollment for Auburn Students at Other Institutions
4. Read the guidelines thoroughly and accept the terms
5. Choose a term and click Select
6. Choose the state in which you plan to study and click Select
7. Choose an institution and click Select
8. Choose the courses you wish to take and click Search
9. Once you have put in all your desired courses, click Proceed to Transient Form to print out your form
10. Go to your academic advisor if you cannot find your institution or courses as options

IMPORTANT: After you complete courses off-campus, ask the college to send an official transcript to the Registrar’s Office so that you will receive transfer credit for the courses at Auburn.

Questions about academics refer to:

Department advisor
116D Textile Building
844-5457
sandeaa@auburn.edu

Engineering Advisor
1210 Shelby Center
844-4310

Registrar’s Office
101 Mary Martin Hall
844-4770 OR 844-4367

www.collegesource.org

You need course names and numbers from the other college. College catalogs are online:
Login to eBill through AU Access to see your bursar bill and make sure your scholarship or other financial aid has been posted to your account.

If your scholarship, grant, or loan has not been credited to your account:
1. Check your email for recent messages from the appropriate office.
2. Contact the appropriate office.
3. If the award is delayed, contact your advisor or Student Financial Services to see if you can avoid schedule cancellation.

203 Mary Martin Hall
844-4367

Scholarships

Any student enrolled in or entering Polymer and Fiber Engineering may apply for a departmental scholarship. Obtain information and application by request or on the website, www.eng.auburn.edu/programs/pfen/students/.

For scholarship information, contact the appropriate scholarship coordinator.

PFEN scholarships:  Engineering scholarships:  Other scholarships:
Department advisor  Scholarship Coordinator  Scholarship Coordinator
116D Textile Building 1210 Shelby Center University Scholarship Ofc
844-5457  844-2249
The Quad Center
844-2320 freemja@auburn.edu
www.eng.auburn.edu/programs/pfen/students
http://www.eng.auburn.edu/scholarships
www.auburn.edu/scholarship

Financial Aid

Almost every college student, regardless of family income, is eligible to borrow funds to help pay tuition. Student loans, grants, work study, and many scholarships require the federal aid application found at http://www.fafsa.ed.gov/ or www.auburn.edu/finaid/steps-for-aid/how-to-apply/

There are also separate PLUS loan applications for parents. For information, contact the office of Student Financial Services or visit their website.

Questions about financial aid refer to:
Student Financial Services
203 Mary Martin Hall 844-4367
www.auburn.edu/finaid

Fee Payment

Your tuition bill is available online approximately four weeks before the beginning of the semester. Be sure that your scholarship or other financial aid has been posted to your account.
Co-op students often get the first and highest job offers when they graduate!

Attend Career Expos to meet prospective employers for internships and permanent jobs. Dress professionally and leave resumes.

To post your resume on the PFE website, email it in a Word attachment with your request to sandeeaa@auburn.edu

Cooperative Education
Co-op experience really pays! Students may begin a co-op job after finishing the pre-engineering curriculum. Transfer students may interview during their first semester at AU. Interested students should attend an information session held by the co-op office at least one term before you hope to begin work. The meetings are held early each term. For more information and scheduling, see the web page at www.auburn.edu/co-op.

Questions about co-op education refer to:
Cooperative Education
104 Ramsay Hall, W. Magnolia Ave.
844-5410  www.auburn.edu/co-op

Internships/Summer Jobs/Campus or Part-time Local Employment
www.jobs.auburn.edu/
A division of Career Development Services, the AU Student Employment Office assists students in finding employment both on and off campus. Register with them to search for part-time jobs and receive Job Connection announcements via email.

Many companies interview AU students on campus for internships or summer jobs. Students should register with Career Development Services by sophomore year to interview for internships and take advantage of professional development resources and seminars before graduation.

Questions about internships refer to:
Departmental advisor  Career Development Services
116D Textile Building  303 Mary Martin Hall
844-5457  844-4744
sandeaa@auburn.edu  www.jobs.auburn.edu

PFEN Undergraduate Research jobs
If you are interested in undergraduate research in the PFE department, see your advisor.

Departmental advisor
116D Textile Building
844-5457
sandeaa@auburn.edu
Senior Job Search

Find interview opportunities:

1. E-mail your resume by early September to the departmental www.auburn.edu/career/. Get a follow up on job announcements sent via email from your departmental advisor.
2. Obtain industry contact lists from your advisor and search for companies online. Apply online or send a cover letter and resume to companies that interest you.
3. Participate in CDS job search services, including mock interviews. View interview videos; attend Career Expo, seminars, and workshops.
4. Search the CDS job listings often and sign up for senior interviews through the website.
5. Follow up on job announcements sent via email from your departmental advisor.
6. Obtain industry contact lists from your advisor and search for companies online. Apply online or send a cover letter and resume to companies that interest you.

Prepare for your interview:

1. Interview tips are in the Career Services Handbook.
2. View the career services interview video; sign up for a mock interview to sharpen your interviewing skills.
3. Research companies thoroughly – on the internet, in the library, and/or in Career Development Services. Prepare questions for your interviewer that will indicate your interest and research into the company.

Questions about job search refer to:
Departmental advisor
116D Textile Building
844-5457
sandeaa@auburn.edu

Career Development Office
303 Mary Martin Hall
844-4744
www.auburn.edu/career

Employment Services for Alumni

AU Career Development Services provides programs and services to assist Auburn University graduates to identify job opportunities. There may be a one-time fee unless alum paid as a student.
334-844-4744
www.auburn.edu/career

ALUM Career Network is an Auburn Alumni Association system to help AU alumni connect with each other when posting jobs or searching for employment. All Auburn graduates can access the ALUM Network at www.aualum.org.
Click the link for Career Services. It’s a great resource!

Other links:
www.eng.auburn.edu/programs/pfen/alumni/job-srch-sites.html
www.aftercollege.com www.jobs.com
http://jobmarket.nytimes.com/jobs/
www.usajobs.com (government jobs)
www.monster.com
http://www.collegejournal.com/
http://www.careerjournal.com/
Graduating Senior Info…

Senior Design Project and Report
The format for the Senior Design Report is located on the Student Page of the Department's website.

Your grade will not be recorded until all requirements for the capstone project research, report, and presentation are met.

www.eng.auburn.edu/programs/pfen/students

Senior Credit Check
Two semesters before you graduate, advisors in Engineering Student Services must verify that you meet the engineering requirements for graduation.

Senior credit check
1. Two semesters before you graduate, meet with your department advisor in Textile 116-D to complete a substitution/credit check form.
2. Get the form signed by Dr. Schwartz and take it to Engineering Student Services (Shelby 1210) to initiate your credit check and complete a diploma application.
3. When registering for your last semester, identify yourself as a graduating senior in engineering by registering for UNIV 4AA0-EN1.
4. Early in your last semester, see an advisor in Engineering Student Services to confirm that you are on the graduation list.

Exit Interview and Senior Surveys
1. Exit interviews for graduating seniors are conducted by the department head near the end of each semester. You will receive email instructions on scheduling the interview. Please be prepared to discuss your student experience and make recommendations for our department.
2. The College of Engineering sends an EBI senior survey to each graduating senior. You will be notified by email when it is available. Please complete the survey right away and return it to your departmental advisor. Feedback from graduating seniors is important to the college and the department for SACS and ABET accreditation.
3. An Auburn University job placement survey is posted at the Career Development Services website. Please complete it.
4. Each department has an online alumni survey that is important to our ABET accreditation. After graduation, please complete the PFEN survey. The link is on our home page, www.eng.auburn.edu/pfen.
POLYMER and FIBER ENGINEERING (PFEN)
FIBER OPTION (FREN)
2012-2013

<table>
<thead>
<tr>
<th>Student ID#</th>
<th>Student Name</th>
<th>GID</th>
</tr>
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**FRESHMAN YEAR**

<table>
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<tr>
<th>Course</th>
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<td>MATH 1610 Calculus I (P)*</td>
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<tr>
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**SOPHOMORE YEAR**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>PFEN 2270 Intro to Engineered Fibrous Materials</td>
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<td>MATH 2630 Calculus III</td>
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<td>PHYS 1600 Engineering Physics I</td>
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<td>STAT 3010 Statistics for Scientists &amp; Engineers</td>
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<td>PFEN 3570 Engineered Protective Materials</td>
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<td>ENGR 2070 Mechanics of Materials</td>
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<tr>
<td>ENGR 2200 Intro to Thermo, Heat &amp; Fluid</td>
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**JUNIOR YEAR**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>CHEM 2030 Organic Chemistry Survey</td>
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<td>MATH 2650 Linear Differential Equations</td>
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<td>ENGR 2050 Statics</td>
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<td>Core Humanities: PHIL 1020/1030/1040*</td>
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<td>PFEN 3400 Fundamentals of Coloration &amp; Finish</td>
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<td>PFEN 3500 Struct &amp; Properties of Polymers &amp; Fibers</td>
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<td>INSY 3600 Engineering Economic Analysis</td>
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<td>Core Humanities: Literature or other*</td>
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<td>Free Elective or ROTC</td>
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**SENIOR YEAR**

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<td>PFEN 4400 Mechanics of Flexible Structures</td>
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<td>PFEN 4810 Polymer &amp; Fiber Eng Design I</td>
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<td>ELEC 3810 Fundamentals of Electrical Engineering</td>
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<td>PFEN 4500 Fiber Reinforced Materials</td>
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<td>PFEN 4820 Polymer &amp; Fiber Eng Design II</td>
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<td>Core Social Science*</td>
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**TOTAL 128 SEMESTER HOURS**

DATE______________________________

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*Core requires four courses in Humanities including fine arts and one literature.
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Students must complete a Core Literature sequence or a Core History sequence.
Students must complete a core course that addresses Auburn University General Education Student Learning Outcome 9.

**Courses intended to count as Technical Elective must be approved by the Department of Polymer and Fiber Engineering. See PFEN advisor.

(P) - Denotes courses required for pre-engineering

Only academic advisors in Student Services may mark on this curriculum sheet. Other marks or alterations of this document could result in delayed graduation.

Reviewer______________________________

Approved on: June 30, 2011
# POLYMER and FIBER ENGINEERING (PFEN)
## POLYMER OPTION (PLEN)
### 2012-2013

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<tr>
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### FRESHMAN YEAR
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<th>Course Code</th>
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<tbody>
<tr>
<td>CHEM 1030</td>
<td>Fundamentals of Chemistry I (P)</td>
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<tr>
<td>CHEM 1031</td>
<td>Fundamentals of Chemistry I Lab (P)</td>
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<tr>
<td>MATH 1610</td>
<td>Calculus I (P)</td>
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<tr>
<td>Core: English Composition I*</td>
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<tr>
<td>ENGR 1110</td>
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### SOPHOMORE YEAR
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<tr>
<td>PFEN 2270</td>
<td>Intro to Engineered Fibrous Materials</td>
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<td>CHEM 2070</td>
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<td>PHYS 1600</td>
<td>Engineering Physics I</td>
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### JUNIOR YEAR
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<th>Course Code</th>
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<tbody>
<tr>
<td>PFEN 3100</td>
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<td>STAT 3010</td>
<td>Statistics for Scientists &amp; Engineers</td>
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<td>Mechanics of Materials</td>
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<td>ENGR 2200</td>
<td>Intro to Thermo, Heat &amp; Fluid</td>
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### SENIOR YEAR
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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PFEN 4200</td>
<td>Polymers from Renewable Resources</td>
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<tr>
<td>PFEN 4810</td>
<td>Polymer &amp; Fiber Engineering Design I</td>
<td>3</td>
</tr>
<tr>
<td>ELEC 3810</td>
<td>Fundamentals of Electrical Engineering</td>
<td>3</td>
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<tr>
<td>Core Humanities: Fine Arts*</td>
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<tr>
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</tr>
<tr>
<td>PFEN 4100</td>
<td>Polymer Characterization</td>
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<td>PFEN 4500</td>
<td>Fiber Reinforced Materials</td>
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<td>PFEN 5200</td>
<td>Polymer Processing</td>
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<td>PFEN 4820</td>
<td>Polymer &amp; Fiber Engineering Design II</td>
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<tr>
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<tr>
<td>UNIV4AA0 EN1 Undergrad Graduation</td>
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</table>

TOTAL 128 SEMESTER HOURS

DATE__________________________

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Reviewer__________________________

Approved on: June 30, 2011
### HUMANITIES (12 semester hours required)

Students must have a literature sequence (6 hrs) and one history course OR a history sequence (6 hrs) and one literature course.

#### LITERATURE (3 or 6 semester hours required)

<table>
<thead>
<tr>
<th>Course</th>
<th>SLO</th>
<th>Hrs</th>
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</thead>
<tbody>
<tr>
<td>World Literature</td>
<td>2</td>
<td>ENGL 2200</td>
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<tr>
<td>Honors World Literature I</td>
<td>2</td>
<td>ENGL 2207</td>
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<tr>
<td>World Literature II</td>
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<td>ENGL 2210</td>
</tr>
<tr>
<td>Honors World Literature II</td>
<td>2</td>
<td>ENGL 2217</td>
</tr>
<tr>
<td>British Literature I</td>
<td>2</td>
<td>ENGL 2230</td>
</tr>
<tr>
<td>British Literature II</td>
<td>2</td>
<td>ENGL 2240</td>
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<td>American Literature I</td>
<td>2</td>
<td>ENGL 2250</td>
</tr>
<tr>
<td>American Literature II</td>
<td>2</td>
<td>ENGL 2260</td>
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</table>

#### PHILOSOPHY (3 semester hours required by PFEN)

<table>
<thead>
<tr>
<th>Course</th>
<th>SLO</th>
<th>Hrs</th>
</tr>
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<tbody>
<tr>
<td>Introduction to Ethics</td>
<td>2.3</td>
<td>PHIL 1020</td>
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<tr>
<td>Honors Ethics</td>
<td>2.3</td>
<td>PHIL 1027</td>
</tr>
<tr>
<td>Ethics and the Health Sciences</td>
<td>2.3</td>
<td>PHIL 1030</td>
</tr>
<tr>
<td>Honors Ethics and the Health Sciences</td>
<td>2.3</td>
<td>PHIL 1037</td>
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<tr>
<td>Business Ethics</td>
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#### FINE ARTS (3 semester hours required)

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>The Art of Architecture, Place and Culture</td>
<td>11</td>
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<tr>
<td>Introduction to Art History I</td>
<td>11</td>
<td>ARTS 1710</td>
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<tr>
<td>Introduction to Art History II</td>
<td>11</td>
<td>ARTS 1720</td>
</tr>
<tr>
<td>Introduction to Art History III</td>
<td>11</td>
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<td>Appreciation of Music</td>
<td>11</td>
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<td>Honors Appreciation of Music</td>
<td>11</td>
<td>MUSA 2737</td>
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<td>Introduction to Film Studies</td>
<td>11</td>
<td>RTVF 2350</td>
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#### SCIENCE (continued):

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<td>Survey of Chemistry I Lab</td>
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<td>CHEM 1011</td>
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<tr>
<td>Survey of Chemistry II</td>
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<td>CHEM 1020</td>
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<tr>
<td>Survey of Chemistry II Lab</td>
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<tr>
<td>Fundamentals of Chemistry I</td>
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<td>CHEM 1030</td>
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<td>General Chemistry I</td>
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<tr>
<td>General Chemistry I Lab</td>
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<td>CHEM 1111</td>
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<tr>
<td>Honors General Chemistry I</td>
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<td>CHEM 1117</td>
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<td>General Chemistry II Lab</td>
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<tr>
<td>Concepts of Science</td>
<td>10</td>
<td>SCMH 1010</td>
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*May be paired with SCMH 1010 to complete science sequence

### SOCIAL SCIENCES (12 semester hours required)

Students must have a history sequence (6 hrs) and one literature course OR a literature sequence (6 hrs) and one history course.

#### HISTORY (3 or 6 semester hours)

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<th>Hrs</th>
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<td>Honors World History I</td>
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<td>HIST 1027</td>
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<tr>
<td>Technology &amp; Civilization I</td>
<td>8</td>
<td>HIST 1210</td>
</tr>
<tr>
<td>Honors Technology &amp; Civilization I</td>
<td>8</td>
<td>HIST 1217</td>
</tr>
<tr>
<td>Technology &amp; Civilization II</td>
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<td>HIST 1220</td>
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<tr>
<td>Honors Technology &amp; Civilization II</td>
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#### OTHER SOCIAL SCIENCES CHOICES (6-9 hours needed to total 12 semester hours)

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<td>Principles of Microeconomics</td>
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<tr>
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<td>Principles of Macroeconomics</td>
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<td>Honors Global Geography</td>
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<td>GEOG 1017</td>
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<td>Global Politics &amp; Issues</td>
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<td>American Govt in a Multicultural World</td>
<td>8</td>
<td>POLI 1090</td>
</tr>
<tr>
<td>Honors American Govt in a Multicultural World</td>
<td>8</td>
<td>POLI 1097</td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>9</td>
<td>PSYC 2010</td>
</tr>
<tr>
<td>Honors Introduction to Psychology</td>
<td>9</td>
<td>PSYC 2017</td>
</tr>
<tr>
<td>Sociology: Global Perspectives</td>
<td>9</td>
<td>SSCIY 1000</td>
</tr>
<tr>
<td>Honors Sociology: Global Perspectives</td>
<td>8</td>
<td>SSCIY 1007</td>
</tr>
<tr>
<td>Honors Technology &amp; Culture II</td>
<td>2.3</td>
<td>HONR 1007</td>
</tr>
<tr>
<td>Honors Technology &amp; Culture II Lab</td>
<td>2.3</td>
<td>HONR 1017</td>
</tr>
<tr>
<td>Honors Sustainability &amp; Modern World I</td>
<td>8</td>
<td>HONR 1027</td>
</tr>
<tr>
<td>Honors Sustainability &amp; Modern World II</td>
<td>8</td>
<td>HONR 1037</td>
</tr>
<tr>
<td>Honors Human Odyssey II</td>
<td>8.9</td>
<td>HONR 2727</td>
</tr>
</tbody>
</table>

SLOs: 1* 2* 3* 4* 5* 6* 7* 8 9 10* 11

* Satisfied by required courses in PFEN curriculum

Not recommended in PFEN curriculum

7/15/2011
# Auburn University
## Department of Polymer and Fiber Engineering
### Transfer Guide

**University Core Courses for All Majors**

<table>
<thead>
<tr>
<th>Auburn Courses</th>
<th>Credit Hours</th>
<th>Transfer Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Composition 1100, 1120</td>
<td>6</td>
<td>*English Composition I, II</td>
<td>6</td>
</tr>
<tr>
<td>Literature: ENGL 2200, 2210</td>
<td>6</td>
<td>*Any Literature Series</td>
<td>6</td>
</tr>
<tr>
<td>World History Series I, II</td>
<td>6</td>
<td>*Any World History I, II</td>
<td>6</td>
</tr>
<tr>
<td>Social Science GRP I &amp; GRP II</td>
<td>6</td>
<td>*Social Sciences:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Choose one from each line:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soci 1000, Psych 2010, Geog 1010,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anth 1000, Econ 2020, Poli 1020,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Poli 1090</td>
<td></td>
</tr>
<tr>
<td>Fine Arts (Choose one):</td>
<td></td>
<td>*Fine Arts (Choose one):</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appreciation of Theatre, Music,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Architecture, or Art History……..</td>
<td>3</td>
</tr>
<tr>
<td>Ethics: Phil 1020, 1030 or 1040</td>
<td>3</td>
<td>*Ethics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[Intro, Medical or Business Ethics]</td>
<td></td>
</tr>
</tbody>
</table>

### Additional Courses for Polymer and Fiber Engineering – Both Options

<table>
<thead>
<tr>
<th>Auburn Courses</th>
<th>Credit Hours</th>
<th>Transfer Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 1610, 1620, 2630</td>
<td>12</td>
<td>*Calculus I - III</td>
<td>12</td>
</tr>
<tr>
<td>Math 2650</td>
<td>3</td>
<td>*Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>Math 2660</td>
<td>3</td>
<td>*Linear Algebra</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry: Chem I, II (W/Labs)</td>
<td>8</td>
<td>*Chemistry I, II (W/Labs)</td>
<td>8</td>
</tr>
<tr>
<td>Computer Prog: Comp 1200 MatLab</td>
<td>3</td>
<td>*Computer Programming Language...</td>
<td>3</td>
</tr>
<tr>
<td>Physics: Phys 1600, 1610 (W/Labs)</td>
<td>4</td>
<td>*Physics I, II, (Calculus-Based)</td>
<td>4</td>
</tr>
</tbody>
</table>

### Additional Courses for Polymer and Fiber Engineering – Polymer Option

<table>
<thead>
<tr>
<th>Auburn Courses</th>
<th>Credit Hours</th>
<th>Transfer Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem 2070, 2080 (W/Labs)</td>
<td>8</td>
<td>*Organic Chem. I, II, (W/Labs)</td>
<td>8</td>
</tr>
</tbody>
</table>

*Auburn students may request authorization to take these courses at other colleges as AU summer transient students.*

---

**NOTE:** FOR TRANSFER REQUIREMENTS, LIMITS, OR QUESTIONS CONCERNING COURSES, CONTACT ENGINEERING TRANSFER ADVISOR, 1210 SHELBY CENTER (334) 844-4310 OR DEPARTMENTAL ADVISOR, POLYMER AND FIBER ENGINEERING (334) 844-5457

*(REVISED 7/2010)*
Understanding Success and Nonsuccess in College

The University Retention Committee has spent considerable time and energy analyzing the factors and behaviors that contribute to success and failure. The committee and faculty consistently agree on the following:

**Why Students Succeed**

Attendance in class and recitation  
Ability to take useful notes  
Ability to adapt: learning quickly that they need to study more and differently for different subjects and teachers  
Having at least one of these: (a) very bright (b) academically average but worked hard academically in high school and continue to do so (c) excellent academic background  
Appropriate visits to faculty or GTA  
Willingness to take advantage of Supplemental Instruction, Study Partners, free tutoring, and other academic support services  
Attitudinal characteristics: motivated, confident, not lazy, not looking for shortcuts  
Maturity, does not make a habit of procrastination  
A strong support system: parents, advisors, older/mature friends, serious study group, people at work who encourage them  
Understanding how to manage money and avoid debt  
Connections to people on campus

**Why Students Fail**

~ Do not attend class  
~ Lack note-taking skills  
~ Weak reading skills  
~ Procrastination - do not get started soon enough on assignments and test preparation  
~ Lack of ability to do critical reasoning, to see implications, to make connections  
~ Cannot distinguish important topics and concepts from the rest of the material  
~ Inability to adapt to college culture (can’t read syllabus, deal with lectures and pace of courses)  
~ Become hopeless and despairing when they do badly. Lack skill in dealing with feelings of frustration and hopelessness  
~ Poor organization and prioritizing skills.  
~ Inability to stay focused and „on task.”  
~ Not proactive; does not seek help  
~ Deficiencies in high school and/or cultural background. Examples: has never seen a model or drawing of an atom; writes “Express Wu” instead of “Empress Wu” in notes because he/she does not know what „empress” means  
~ Wrong priorities. Example: addicted to computer games  
~ Psychological, personal, and physical issues such as clinical depression, malnutrition, lack of sleep, sniffing, drug or alcohol abuse, unreasonable parental demands, medication imbalances  
~ Bad fit between major or college and student  
~ Social life gets out of hand  
~ Too many work hours

Reprinted from an AU report to advisors
Tips to Help you Succeed in the Classroom

- Don’t forget to turn off your cell phone in class—they annoy others, especially professors!!!

- If you have a choice, do not sit in the back of the class. Sit on the front row. You’ll see better, it will keep you attentive (and awake) and your professor will more likely get to know you.

- Come prepared. Bring your textbook, paper and pen.

- Body language speaks a thousand words. Don’t lean down low in your chair, lay your head on your desk, or pull your cap down to cover your eyes. Look interested! Your professor will notice.

- Take notes.

- Don’t skip class. If you do, make sure it’s for a good reason and relay it to your instructor/professor.

- If you must miss a class, you are responsible for catching up.

- Turn in your assignments on time.

- Do not hesitate to ask questions in class. Chances are others are thinking the same question, too.

- If you do not understand class material or need help with an assignment, do not hesitate to visit your professor. This is why they keep office hours.

- Don’t eat food in the classroom. It can be distracting to others and considered rude by the professor.

Reprinted with author’s permission from The Auburn Experience
Debbie Shaw Conner and Wendi D. Huguley
Evaluating Your Study Habits

[There are two parts to this exercise.]

PART 1: Evaluate your study habits by answering the following as (A) ALWAYS, (S) SOMETIMES, or (N) NEVER.

1. I always give myself plenty of time to adequately prepare for tests and exams.
   A       S       N

2. I always feel confident that I know how much time it will take to adequately prepare for tests and exams.
   A       S       N

3. I plan my study time so I can finish what I start.
   A       S       N

4. I always have total concentration when I study.
   A       S       N

5. I allow my study periods to be frequently interrupted by family, friends, and other distractions.
   A       S       N

6. I do better studying alone.
   A       S       N

7. I listen to the radio or T.V. when I study.
   A       S       N

8. I schedule study time as a regular part of my day.
   A       S       N

9. I take advantage of times during the day when I could conduct quick review sessions (class notes, etc.)
   A       S       N

10. I study with study groups for some classes.
    A       S       N

11. I study consistently during the time of day each day that is my personal best time.
    A       S       N

12. I read all reading assignments by the time I begin studying for a test or exam.
    A       S       N

13. I use a highlighter when I read as part of an assignment.
    A       S       N

14. I recopy my notes when I am studying for a test or exam.
    A       S       N
15. I collaborate notes I have taken in class with information from my textbook when preparing for tests and exams.
   A S N

16. I take notes as I read from my textbook, either in the column of the book or on separate paper.
   A S N

17. I collaborate my notes with those of classmates to fill in missing information or to reinforce so that I have all the information I need when preparing for tests and exams.
   A S N

18. I use mnemonic devices regularly when I have trouble memorizing materials for a test.
   A S N

19. I use flashcards and other helpful materials as study tools.
   A S N

20. I keep records of my test grades in a class and always have a clear understanding of how tests and final exams will weigh on my final grade.
   A S N

21. I do not wait until the last minute to get a private tutor or to take advantage of Auburn’s Study Partners Program when I need help in a class.
   A S N

Use your responses to the above statements to determine your personal study habits. Think about your ideal learning environment and try to create that for yourself.

Make a list of strengths and weaknesses in your study habits, analyze them and investigate ways to enhance your strengths and improve your weaknesses.

One way to get ideas is to complete the Index of Learning Styles, an on-line instrument used to assess preferences on four dimensions (active/reflective, sensing/intuitive, visual/verbal, and sequential/global). The learning style model was formulated by chemical engineering professor Richard M. Felder and Linda K. Silverman. The instrument was developed by Richard M. Felder and Barbara A. Soloman of North Carolina State University. Complete the questionnaire at www.ncsu.edu/felder-public/ILSpage and see the handout for suggestions.
<table>
<thead>
<tr>
<th>Cue words/phrases:</th>
<th>Notes:</th>
</tr>
</thead>
</table>

Comments:
### Problem Column
(Do the problem here, listing the steps or operations one at a time.)

Simplify: \((3 - 4i)(2 + 5i)\)

\[
\begin{align*}
6+15i - 8i - 20i^2 & \\
6+7i - 20 & \\
6 + 7i - 20(-1) & \\
126 + 7i & 
\end{align*}
\]

Solve: \(x + x^2 - 12 = 0\)

\[
\begin{align*}
(x + \sqrt{x^2}) & = 12 \\
(u^2 + u - 12) & = 0 \\
(u-3)(u + 4) & = 0 \\
u-3=0 & \quad u=4=0 \\
u = 3 & \quad u = -4 \\
x & = 3 & \quad x^2 = -4 \\
W=i5 & \quad W=-4 \\
|x| = \sqrt{-31} & \quad |x| = \pm 2j 
\end{align*}
\]

### Explanation Column
(Explain the purpose for each step-what the step accomplishes.)

Use the FOIL method
Combine like terms
Write answer in form of \(a + bi\):
Solution

The equation is in quadratic form
Let \(x^2 = u\)
Solve for \(u\) by factoring
Replace \(u\) by \(x^2\)
Solve for \(x\) by taking square roots
Solution

*Toolkit for College Success, Daniel R. Walther*
*Wadsworth Publishing, Belmont, CA, 1994*
Chapter Bubble Chart

Date:  
Class:  

Chapter #: 2  
Chapter Title: Social Sciences and the Scientific Method

Science and the Scientific Method

Science

Characteristics

Scientific Method

Causal relationships

Observation of data

Hypothesis

Tests of empirical data

Conclusions & theories

"Unscientific" limitations

Social Science

Research design

Principles

Gathering data

Experimentation (like science)

Surveys

Field research

Secondary source data

Write on one side only to facilitate review for tests

Toolkit for College Success, Daniel R. Walther  
Wadsworth Publishing, Belmont, CA, 1994

29
Battles w/ Big Business

MINER'S STRIKE

J.P. Morgan-Northern Security Co.
Used a "bi   stick"

TEDDY ROOSEVELT'S
FIRST-TERM CHALLENGES

Opposed by big business

Wanted "e   uit of stature"

Promoted a "s   uare deal"

DEAL

Took message

to common man

WON A SWEETING VICTORY

Immigrants-widespread poverty

MEATPACKING REFORM

ELECTION CAMPAIGN

SOCIAL AND ECONOMIC REFORMS

Write on one side only to facilitate review for tests- make it graphic!
The DETER Strategy for Taking Tests

To do well on a test, you must have good knowledge of the information that is being tested. But you must also have a strategy for taking the test that allows you to show what you know. The DETER strategy can help you do your best on any test. Each letter in DETER reminds you what to do.

D = Directions
Read the test directions very carefully.
Ask your teacher to explain anything about the test directions you do not understand
Only by following the directions can you achieve a good score on the test.
If you do not follow the directions, you will not be able to demonstrate what you know.

E = Examine
Examine the entire test to see how much you have to do.
Only by knowing the entire task can you break it down into parts that become manageable for you.

T = Time
Once you have examined the entire test, decide how much time you will spend on each item.
If there are different points for items, plan to spend the most time on the items that count for the most points.
Planning your time is especially important for essay tests where you must avoid spending so much time on one item that you have little time left for other test items.

E = Easiest
The second E in DETER reminds you to answer the items you find easiest first.
If you get stuck on a difficult item that comes up early in the test, you may not get to answer items that test things you know.

R = Review
If you have planned your time correctly, you will have time to review your answers and make them as complete and accurate as possible.
Also make sure to review the test directions to be certain you have answered all items required.
Using the DETER strategy will help you do better on tests and get better grades.

See our other study skills resources at www.how-to-study.com and don't forget to visit www.mangrum-strichart.com to learn about our study skills programs and online tutoring.
Feel free to link to our site. Give credit to www.how-to-study.com whenever you print and distribute material from this site.
You must obtain our written permission for use of any of the information at this site for commercial purposes. Copyright © How-To-Study.com.
Research Paper Flowchart

Preliminary research for possible topics

Choose research topic Locate

and check out sources Read

and take notes

Adequate notes?

Refine or reshape topic

Organize ideas and develop outline w/ rhetorical pyramid

Write rough draft

Does paper have clear idea and adequate support?

Edit rough draft for mechanics and form

Complete final draft
### Note Card System

<table>
<thead>
<tr>
<th>A</th>
<th>Note cards with source code B-2,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>A-1 p. 220-221</td>
</tr>
<tr>
<td>Title of book</td>
<td>Short note in your own words</td>
</tr>
<tr>
<td>Publisher</td>
<td></td>
</tr>
<tr>
<td>City, Year</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>A-2 p. 224</td>
</tr>
<tr>
<td>Title of article</td>
<td>“Quote” exactly</td>
</tr>
<tr>
<td>Title of publication</td>
<td></td>
</tr>
<tr>
<td>Volume</td>
<td></td>
</tr>
<tr>
<td>Date (June, 2005)</td>
<td></td>
</tr>
<tr>
<td>Page numbers</td>
<td></td>
</tr>
</tbody>
</table>
Rhetorical Pyramid

When writing or analyzing a paper, presentation, or speech, the rhetorical pyramid is an alternative to a topic or sentence outline. One can easily construct a paper, presentation, or speech. The higher levels are more general or abstract statements, with supporting ideas and details at the lower levels.
Get Financially Savvy: Create a Budget

**Step #1: Assess your income:** The goal of a budget is to spend less than what you earn. To begin, identify all sources of income. Break your year into manageable increments, such as months. Make your best estimate when necessary. We’ve listed some examples below.

<table>
<thead>
<tr>
<th>Jobs (after taxes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student loans</td>
</tr>
<tr>
<td>Scholarships/grants'</td>
</tr>
<tr>
<td>Financial aid</td>
</tr>
<tr>
<td>Parents</td>
</tr>
<tr>
<td>Miscellaneous income</td>
</tr>
</tbody>
</table>

**Total Income:** $__________

**Step #2: Identify fixed expenses:** Certain items, such as your utilities or tuition, cost about the same amount from month to month. Can you do without any of the fixed costs? If not, plan to cut corners or add to your income through a part-time job or other means. To find scholarship opportunities, do a free search at www.fastweb.com.

<table>
<thead>
<tr>
<th>Tuition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class materials/books</td>
</tr>
<tr>
<td>Rent/room &amp; board</td>
</tr>
<tr>
<td>Cable</td>
</tr>
<tr>
<td>Gas (cooking and heating)</td>
</tr>
<tr>
<td>Internet access</td>
</tr>
<tr>
<td>Telephone (local service)</td>
</tr>
<tr>
<td>Electricity</td>
</tr>
<tr>
<td>Car payment</td>
</tr>
<tr>
<td>Insurance (auto and medical)</td>
</tr>
<tr>
<td>Misc. fixed expense</td>
</tr>
</tbody>
</table>

**Total Fixed Expenses:** $__________

**Step #3: Identify variable expenses:** The items in this list are also important, but their cost can fluctuate from month to month. Depending on your budget, they also could be the items you target first when trying to cut costs.

<table>
<thead>
<tr>
<th>Credit card payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline</td>
</tr>
<tr>
<td>Transportation/commuting</td>
</tr>
<tr>
<td>Groceries/toiletries</td>
</tr>
<tr>
<td>Cell phone/text messaging</td>
</tr>
<tr>
<td>Travel</td>
</tr>
<tr>
<td>Eating out (including coffee)</td>
</tr>
<tr>
<td>Movies/music/magazines</td>
</tr>
<tr>
<td>Clothes</td>
</tr>
<tr>
<td>Entertainment (misc.)</td>
</tr>
<tr>
<td>Misc. variable expense</td>
</tr>
</tbody>
</table>

**Total Variable Expenses:** $__________

**Step #4: What’s your balance?** Total Income - Total Expenses (Fixed + Variable) = Savings. If the number is less than zero (0), you’ll want to rethink your budgeting strategies. Start by adjusting line items in Step 3 to cut costs.

**Balance (Income minus expenses):**

Extra Budgeting Advice

* After keeping your budget for several months, you may need to make adjustments such as adding an additional expense, or eliminating an old one. Continue to monitor credit card usage, if possible, do not use cards, rather use cash at all times until your card balances are paid in full.

* Set goals and experiment with your funds. See how long you can stretch $20.00 for miscellaneous expenses. When you reach a goal, plan a low-cost reward. Small indulgences will keep you motivated!

* Stay consistent with your budget and don't give up! Maintaining a budget takes a lot of persistence, and a positive attitude.

* Additional assistance can be found on FastWeb's College Gold site. www.collegegold.com, which includes budget calculators and other resources to help you pay for your education.
Formerly the English Center, the Miller Writing Center offers face-to-face consultations on any writing assignment from any undergraduate course at AU.

Consultants in the writing center will help with all stages of the writing process: Talk through your ideas, plan strategies for developing a finished product, get reader response to a draft, work on proof-reading and editing, revise a piece of writing based on professor comments, understand what the comments are asking you to do, work on specific writing issues (grammar, style, citations, punctuation, organization, etc.).

Services Offered by the Miller Writing Center:

- On-line consultations and resources through the website
- A variety of handouts designed for Writing Center users
- A hotline (334) 844-5749 for answering quick and simple questions about writing
- Two tutoring locations:
  - 3183 Haley Center – appointments recommended, walk-ins welcome
  - RBD Library, 2nd floor - walk-ins only
- On-line appointment booking recommended
- All services are free

To make an appointment with a Writing Center tutor, visit our online Appointment Book.

John C.H. Miller, Jr., Writing Center
3183 Haley Center
Auburn University, AL 36849-5203
Phone (334) 844-4339

www.auburn.edu/writingcenter
Academic Support... @ Your Service!

Academic Support is designed to assist students in refining and strengthening the academic skills necessary for success at Auburn University.

STUDY PARTNERS – Free peer tutoring is provided during Fall and Spring semesters in select undergraduate subjects to all AU students. Individual and group tutoring sessions are available by appointment and walk-in (subject to tutor availability.) All Study Partners have received recommendations from professors and have been trained by the Academic Support staff.
Visit www.auburn.edu/studypartners Free service for AU students.

SUPPLEMENTAL INSTRUCTION (SI) - This program targets traditionally difficult courses. It offers regularly scheduled, collaborative, peer directed review sessions. The review sessions are lead by SI leaders who attend and take notes in these classes before leading group reviews.
Visit www.auburn.edu/si Free service for AU students.

TUTORING WEBSITE - Designed to aid students, faculty, and staff in easily accessing information concerning tutoring opportunities available on campus, specifically by presenting subject specific and skill development information.
Visit www.auburn.edu/tutoring Free service for AU students.

ACADEMIC COACHING & COUNSELING - Our staff utilizes many tools in assisting students with academics and personal responsibility. We offer one-on-one academic coaching and other resources geared toward student success.
Visit www.auburn.edu/academicsupport Free service for AU students.

STUDY SMART - These credit and non-credit courses are designed to improve the academic performance and overall success of students. Study Smart courses are geared toward students on academic warning or suspension.

UNIV1000: THE AUBURN EXPERIENCE - This one-credit hour course introduces students to a variety of campus services and programs, investigates career options, and discusses academic and personal issues which may confront the college freshman.

UNIV1050: SUCCESS STRATEGIES - This one-credit hour course is designed to introduce freshmen to effective study skills needed to succeed in college. Topics include time management, note taking, effective reading, test taking, and motivation.

UNIV1100: FIRST-YEAR SEMINAR - Based on the same principles as UNIV1050: Success Strategies, UNIV1100: First-Year Seminar provides students with instruction on effective study skills, time management, note taking, effective reading, test taking, etc. This two-credit hour course teaches the academic skills in the explorative context of a particular topic such as sustainability/environmentalism, or international studies.

Questions?
Please email us or call our office at 334.844.5972.
We are happy to assist you in any way possible.

www.auburn.edu/academicsupport www.auburn.edu/tutoring
www.auburn.edu/studypartners www.auburn.edu/si

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