

INFORMATION FOR JUNIORS

Department of Biomedical Engineering

Spring 2015

Dr. Albert H. Titus

Outline

- Flowsheet and Senior Courses
- Technical Electives
- Research and Senior Design
- Independent Study and Research Credit
- Internships – Credit for TE
- Jobs and/or Graduate School
- Questions?

Flowsheet

Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
4 MTH 141 Calculus 1	4 MTH 142 Calculus 2	4 MTH 241 Calculus 3	4 MTH 306 Diff Eq	3 BE 301 BE Lab 1	3 BE 302 BE Lab 2	3 BE 403 Biomed Instr	3 BE 494 Sr Design Proj
4 CHE 107 or 105 Chem 1	4 CHE 108 or 106 Chem 2	3 BE 201 Princ of BE	3 EAS 230 Eng Computation	3 BE 305 Biomat & Mech	3 BE 304 Princ of Med Imag	4 BE 405 Transp Proc in BE	3 BE 406 BE Sys Eng
3 EAS 140 Eng Princ	4 PHY 107 Physics 1	4 PHY 108 Physics 2	4 BE 202 Ap Med & Eng Bio	3 BE 307 BE Circuits & Sign	3 BE 308 Biofluidmech	3 BE 498 UG Research	3 Sr BE Elec
	1 EAS 202 Eng Impact	1 PHY 158 Phy 2 Lab	3 Eng Track #2	3 BE 309 or CHE 201 or 203	3 BE 310 or CHE 202 or 204	3 Sr BE Elec	3 Sr BE Elec
		3 Eng Track #1		4 EAS 305 Applied Prob		3 IE 436 Work Phys	
<p>Eng Track Options: EE 202 and EE 205; CE 212 and CE 304; EAS 207 and either EAS 208 or 209</p>							
Library Skills Workbook							
2 Gen Eds	1 Gen Ed	1 Gen Ed	1 Gen Ed		1 Gen Ed		1 Gen Ed
17 credits	16 credits	18 credits	17 credits	16 credits	15 credits	16 credits	15 credits

Technical Electives

- Three Technical Elective (TE) slots
- At least two (2) must be BE courses
- One can be from outside of BME
 - Upper level technical course
 - List of approved TE courses from outside BME are on the website
 - Courses not already approved *may* be approved, upon consultation with Dr. Titus
- <http://engineering.buffalo.edu/biomedical/education/undergraduate-programs/ug-current-students/technical-electives.html>

Technical Electives

- Check the HUB for the offerings for Fall 2015
- For planning purposes, these are offered this semester (spring 2015)
 - BE 400 - Pattern Classification for Biomedical Data
 - BE 400 - Introduction to Biomedical Optics and Ultrasound
 - BE 450 – Orthopedic Science and Engineering
 - BE 455 – Biomechanics and Mechanobiology
 - BE 480 – BioMEMS Fabrication Lab
- An additional course or two may be added in the fall or spring. Emails will announce this

Senior Design

- Senior Design is a two-semester course that starts in the Fall with BE 498 and ends in the Spring with BE 494
- In the fall semester, you will form teams and select a project that must be *realized* by the end of spring semester
- Project ideas will be provided, or you can provide your own
- Register for BE 498 – This will be the start of the sequence

Independent Study (BE 499) and Research Credit

- BE 498 is not for independent research with a faculty member
- To get credit for independent study (BE 499) doing research with a faculty member, you must:
 - Discuss this with the faculty member first to get his/her agreement
 - Register for BE 499
 - Fill out the form to get credit for this: Online – Undergraduate forms (Independent Study Request for Credit Form)
 - This may count for one TE if done for 3 cr hrs
 - You can do BE 499 multiple times, but it will count as a TE only once

Internships – Credit for TE

- If you obtain an internship, you may be able to obtain credit for this work if it is actual engineering work
- Register for BE 496 (force registration only)
- See the BE department office for forms and requirements for your employer
- You can do multiple Internships, but it will count as a TE only once

Jobs and/or Graduate School

- Approximately 1 year until graduation
 - (422 days, but who's counting?)
- By the middle of the fall semester (October 15), you should be:
 - Cleaning and polishing your resume
 - Looking at BullsEye and other sites for jobs
 - Talking with faculty about letters for graduate school (deadlines are in December and January)
 - Look for graduate school info session notice

Questions?

- Contact Dr. Titus: ahtitus@buffalo.edu