

Program:	Engineering Physics	Dept:	Engineering and Physics
Major:	Biomedical Engineering	College:	Mathematics and Science
Degree:	Master of Science (M.S.)	Major Code:	6632

Engineering Physics - Biomedical Engineering, M.S.

This major is designed so that its graduates can enter industry/government as practicing engineers or pursue research and teaching careers with government and/or academic institutions. The major also provides advanced study in biomedical engineering, with emphasis in biomedical instrumentation, biomechanics, and medical imaging, for students who intend to pursue a Ph.D. degree in Biomedical Engineering or related fields.

Graduate Advisor: **Dr. Weldon Wilson**
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 Office: HOH 221E
 Phone: (405) 974 - 5470

and the thesis' original title page, original signature page, summary and abstract page to the JCGS.
 • Final Requirements. Apply for graduation through the JCGS by advertised deadline.

Admission Requirements

Submit the following items to:
 Jackson College of Graduate Studies
 100 N. University Drive, NUC 404
 Edmond, OK 73034

- Online application for admission (www.uco.edu/graduate/).
- Official copies of undergraduate and graduate transcripts from each institution attended with all degrees posted. All transcripts must be from accredited institutions. Undergraduate transcripts must show: *
 - A minimal 2.75 GPA overall and 3.00 GPA in the last 60 hours attempted or a 3.00 overall GPA.
 - Completion of 24 undergraduate hours in physics or the equivalent and mathematics through differential equations and other prerequisites (if any), as determined by the graduate program advisor.
- Students with course deficiencies must complete 3000/4000 level courses in physics and engineering in addition to the program course requirements.
- Graduate Record Examination scores. Submission of scores on the GRE General Test is required. There is no minimum required for admission, but a combined verbal and quantitative score of 305 is recommended.
- Two letters of recommendation.
- All applicants must receive approval for admission to the program from the Engineering Physics Admissions Committee.

**Students falling below these standards may qualify for conditional admission. See [Admissions to Graduate Studies \(p.13\)](#).*

Note: Students must meet with faculty mentor/advisor in group or individual advisement session before enrolling.

Other Requirements

- Plan of Study. Each student must file a plan of study with his/her graduate program advisor and the Jackson College of Graduate Studies by the end of the first semester during which they complete their twelfth hour of graduate work. The plan must be signed and dated by the student and the graduate program advisor before it can be considered official.
- Academic Standards. Meet the following course work standards:
 - Overall GPA of 3.00 or higher.
 - No more than 6 hours of "C".
 - No more than six advisor-approved hours from traditional correspondence courses.
- Thesis (optional). If applicable, complete an acceptable thesis and successfully defend it in public, two paper copies of the thesis and one electronic copy to the library through Proquest

Graduation Requirements

The student may select either the non-thesis option or the thesis option. The thesis option requires the submission and public defense of an acceptable thesis based on independent research activities.

Required Courses.....15 Hours

Course Prefix	Course No.	Course Title
PHY	5013	Mathematical Physics II
PHY	5443	Quantum Mechanics
ENG	5023	Advanced Technical Writing
PHY	5990	Thesis (6 hrs) OR
ENGR	5083	Electromagnetic Field II AND
ENGR	5633	Solid State Devices

Guided Electives.....6 Hours

Complete at least two courses from the list below

Course Prefix	Course No.	Course Title
Recommended Courses		
BME	5223	Biomedical Imaging
BME	5233	Biomedical Instrumentation
BME	5343	Biomechanics
Other Courses		
ENGR	5333	Digital Signal Processing
ENGR	5443	Fluid Dynamics
ENGR	5613	Photonics
BIO	5xx3	Graduate BIO Course
CHEM	5xx3	Graduate CHEM Course

General Electives.....11 Hours

Students choosing the non-thesis option must enroll in ENGR 5930 for 2 hours credit as a capstone course elective during their final semester.

All General electives must be approved by the student's advisement committee and selected from the following list:

Course Prefix	Course No.	Course Title
ENGR	5930	Ind. Study in Engineering (1-3 Hrs)
BME	5xxx	Graduate BME Course
ENGR	5xxx	Graduate ENGR Course
PHY	5xx3	Graduate PHY Course
BIO	5xx3	Graduate BIO Course
CHEM	5xx3	Graduate CHEM Course
STAT	5xx3	Graduate STAT Course

TOTAL HOURS REQUIRED 32 HOURS