

PARKS COLLEGE OF ENGINEERING, AVIATION AND TECHNOLOGY

Leadership

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Dean

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Associate Dean for Graduate Education & Research

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Assistant Dean of Academic Affairs

Gary Bledsoe, Ph.D.

Director of the School of Engineering

Steve Magoc, MBA

Chair of Aviation Science

Description

Saint Louis University's Parks College of Engineering, Aviation and Technology prepares students for careers in engineering, aviation, physics and related fields. Satisfying this mission demands excellence in academic programs that integrate the education of the whole person, in the liberal and Jesuit traditions, with classroom and laboratory experiences in the major fields of study. A Parks College education provides opportunities for students to develop intellectually, stay abreast of changing technology, and to prepare for a lifetime of learning.

Programs graduate technically proficient and socially responsible engineering and aviation innovators. Faculty prepare students to be practitioners, leaders and thinkers ... ready to change the world.

The Aerospace Engineering, Biomedical Engineering, Civil Engineering, Computer Engineering, Electrical Engineering, Engineering Physics and Mechanical Engineering undergraduate curricula are accredited by the Engineering Accreditation Commission of ABET, www.abet.org (<https://www.abet.org>).

Undergraduate

- Aeronautics, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/aviation/aeronautics-bs>)
- Aerospace Engineering, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/aerospace-engineering-bs>)
- Aerospace Engineering, Minor (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/aerospace-engineering-minor>)
- Biomedical Engineering, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/biomedical-engineering-bs>)
- Biomedical Engineering, Minor (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/biomedical-engineering-minor>)
- Civil Engineering, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/civil-engineering-bs>)
- Computer Engineering, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/computer-engineering-bs>)

- Electrical Engineering, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/electrical-engineering-bs>)
- Engineering Bachelors to Engineering, M.S. Accelerated Program (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/accelerated-bachelors-masters>)
- Engineering Physics, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/physics/engineering-physics-bs>)
- Flight Science, Minor (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/aviation/flight-science-minor>)
- Mechanical Engineering, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/mechanical-engineering-bs>)
- Mechanical Engineering, Minor (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/mechanical-engineering-minor>)
- Physics, B.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/physics/physics-bs>)
- Physics, Minor (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/physics/physics-minor>)

Graduate

- Aviation, M.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/aviation/aviation-ms>)
- Aviation, Ph.D. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/aviation/aviation-phd>)
- Engineering, M.S. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/engineering-ms>)
- Engineering, Ph.D. (<http://catalog.slu.edu/colleges-schools/engineering-aviation-technology/engineering/engineering-phd>)

Policies

Undergraduate Policies

Math for Entering Students

Applicants to the engineering or physics programs are encouraged to take mathematics with a focus on trigonometry, such as Pre-Calculus or Analytical Geometry, prior to or during their senior year of secondary (high) school. Students should be prepared to take MATH 1510 Calculus I in the first semester. Students not prepared to take MATH 1510 Calculus I may need to take MATH 1400 Pre-Calculus the first semester and MATH 1510 Calculus I the second semester, followed by MATH 1520 Calculus II and PHYS 1610 Engineering Physics I during the summer, in order to graduate in four years.

Parks College utilizes the Math-Index to place students in the appropriate mathematics course. The Math-Index is an equation that includes a student's ACT and/or SAT test scores, high school GPA, and high school math work to determine the appropriate placement. Additional math assessments may be required of beginning and transfer students who have not completed a college-level transferable mathematics course before coming to Parks College. Math assessments do not result in credit being awarded.

Any student intending to major in engineering who is admitted or starts with a math course lower than Pre-Calculus will be considered a Parks College Deciding student. These students must successfully complete

MATH 1510 Calculus I, demonstrated by receiving a C- or higher, before declaring an engineering major.

College Level Examination Program

Parks College accepts successfully completed CLEP results for credit. These, however, must be Subject Examinations. The College does not recognize the General CLEP for credit purposes.

Credit will be granted for CLEP under the following conditions:

- A maximum of thirty credits can be earned through CLEP.
- The score on each test must equal or exceed the 50th percentile on the national college sophomore norm.
- Credit will be awarded in Subject Examinations when approved by the department offering comparable courses. This credit will be awarded on the basis of the number of credits in the pertinent courses.
- Transfer students please note: Acceptance of CLEP Examinations for advanced standing by another college or university does not automatically ensure the transfer of this credit to Parks College. Recording of advanced standing for CLEP courses on the Academic Record is contingent upon the College's receiving the Educational Testing Service results of all CLEP examinations for which the student is seeking advanced standing.
- Full-time students may take external examinations for credit, including required departmental CLEP supplementary examinations, within one calendar year of initial registration at the University.

Special Registration Procedures

Some special registration procedures apply to students enrolled in Parks College. To maintain our accreditation in each of our programs, all undergraduate students must meet with their Parks Academic Advisor prior to their registration date each semester. Undergraduate students are also assigned a Faculty Mentor from their program. These students are encouraged to meet with their Faculty Mentor at least once per semester to discuss progress in their program and career development.

Pass/No Pass Option

The maximum number of credits that may be taken on a Pass/No Pass basis is eighteen (18), but not more than one course is permitted during any one semester.

These eighteen (18) credits may be taken under the following options:

- Any credits above the number required for graduation.
- Any credits within the number required for graduation which are no longer specified due to the results of testing out of courses and/or advanced placement.
- Any credits within the area of concentration which are not required by the controlling department and for which the student has received the approval of the academic advisor.

Pass/No Pass credits are not counted towards fulfilling degree requirements. The student must register as a Pass/No Pass member of the class. This status becomes permanent at the time of registration. The student is responsible for seeing that the above conditions are met.

Audit

A student may audit a course offered at Parks College with the following reservations:

1. The student must have approval of the instructor and department chair to sit in that particular class. A course taken for credit may be changed to an audit status until the last day to receive a grade of "W".
2. The student is eligible to take tests if he or she desires; however, students will not be graded.
3. No grade or credit can be earned by auditing a course; an "AU" mark is entered instead of a letter grade, and the course does not count toward fulfilling degree requirements.
4. An exemption examination cannot be taken for an audited course.

Registration at Another Educational Institution

Classified students at Parks may not register for courses at other educational institutions without prior written approval of the Dean of Parks College.

Flight Instruction at Other Institutions

Once a student has enrolled at Parks College, all subsequent flight instruction must be completed in residence at the College. Flight instruction outside of the College's FAA-approved pilot instruction curricula is not permitted without prior written approval from the Chair of the department (whether currently enrolled or not). Students who receive flight instruction outside the approved curricula without prior approval are subject to dismissal from the program.

Flight fees will be charged in addition to the regular tuition. Please contact the Aviation Science Department for the current rates.

Students with prior flight experience/certification will be evaluated for proficiency at the corresponding flight certification level. Based on the results of such evaluation, the Chief Instructor will recommend either some remedial training or continuation to the next level of training. Ground school courses completed at a Part 141 flight school may be transferable; those completed at a Part 61 flight school may not be transferable. Early consultation with the department chair and/or the Chief Instructor is strongly recommended.

TSA Requirements

The Transportation Security Administration (TSA) requires any individual applying for flight training to provide proof of citizenship prior to beginning the training. New student pilots will be unable to begin flight training until the proof of citizenship requirement is met. Pilots typically provide

1. the individual's valid, unexpired U.S. passport or
2. the individual's original or government-issued certified U.S. birth certificate, together with a government-issued picture identification of the individual.

Other TSA-specified documents may be accepted. Non-U.S. citizens must receive TSA approval prior to beginning any flight training. Please contact the Flight Training Director's office for additional information.

Attendance

As a policy, undergraduate students are expected to regularly attend all classes, laboratory sessions and examinations. The implementation of this policy is left to the discretion of the individual instructor with the following exception: no absences are permitted in any course that is required for the Federal Aviation Administration (FAA) regulated pilot certification courses. FAA regulations specify the number of credits required in the approved programs. Students should contact the academic departments for details of these regulations.

If any absences occur, it is the student's responsibility to make up the missed work. Since the student is expected to regularly attend classes, the instructor is not obligated in any way to provide make-up examinations or additional help on material covered when a student is absent.

When, in the judgment of the instructor, a student has accrued an excessive number of absences, the instructor may report this as an early warning notification to the student and his/her academic advisor. At the discretion of the instructor, a grade of "F" (failure in course) may be given.

When a student is absent because of an authorized student activity, the instructor may excuse the absence. Any scholastic difficulties resulting from the absence, as well as any assignments and examinations, remain the student's responsibility.

Academic Categories

Non-Degree

Anyone enrolled in Parks College who is not pursuing a program of study designed to obtain a degree from the college or university but who enrolls in one or more classes will be considered a non-degree student. Non-degree students who subsequently decide to pursue a degree must complete the entire process of applying for admission and must be admitted under the usual guidelines and procedures.

Students in Good Academic Standing

Students with a cumulative grade point average of 2.00 or higher are classified as students in good standing. Such students are classified as part-time if enrolled for less than twelve credits, full-time if enrolled for between twelve and eighteen credit credits, and full-time on overload if enrolled for more than eighteen credits.

Students on Supervisory Status

Minimum satisfactory scholastic achievement at Parks College is represented by a 2.00 cumulative grade point average (a C average). Anyone whose current or term grade point average is below 2.00 and whose cumulative grade point average is above a 2.00 will be considered on supervisory status during the next term in attendance at Parks College. Such students must see their academic advisor prior to the third day of class of next term of enrollment. Supervisory conditions include:

- Student will not hold office in any student organization during the period of supervisory.
- Student will be restricted to no more than 15 credits. The academic advisor may grant exceptions to these rules.
- After receiving mid-term grades, the student must consult with his/her academic advisor as to his/her academic performance. If the student fails to do so, a registration hold will be placed on the academic record.

Students on Contract Status

Students whose overall grade point average is below 2.0 will be considered on contract status (probation) during the next term in attendance at Parks College. Such students must see their academic advisor prior to the third day of class of next term of enrollment. Contract conditions include:

- Student may not hold office in any student organization during the period of probation.
- Student will ordinarily be restricted to no more than 15 credits.
- After receiving their mid-term grades, student must consult with their academic advisor as to their academic performance. If the student

fails to do so, a registration hold will be placed on their academic record.

- Student will be required to sign a contract stating that he or she will decrease the credit point deficiency by a fixed amount (to be determined by Parks College) and acknowledging that failure to satisfy this contract can result in dismissal from Parks College. Parks College may grant exceptions to these rules.

The pre-registration of students on supervisory and contract status will be cancelled if the student fails to see their academic advisor prior to the fifth day of class of next term of enrollment. Students who have not registered and attended classes within the first three days of the semester may not be allowed to enroll. A registration hold will be placed on their academic record.

Dismissed Students

Parks College enforces the University's policy on academic dismissal. A student may be dismissed if he or she fails to reach a 2.0 cumulative GPA within two semesters subsequent to the assignment of probation status or reaches a grade point deficiency of more than 15 points. Any student on contract status who does not satisfy the contract he or she signed with Parks College may be dismissed. In addition, any student who fails a course three times can be dismissed from the college.

Appeal Options for Dismissed Students

A dismissed student may attempt to again attend Parks College by appealing to the Dean. Information regarding this appeal may be obtained from the Dean's office.

Graduate Policies

Continuous Enrollment

Students are required to enroll each semester until degree is received. M.S. students should satisfy two semesters of Graduate Seminar beyond a bachelor's degree. Ph.D. students should satisfy four semesters of Graduate Seminar beyond a bachelor's degree or two semesters with a previous master's degree.

Graduate Independent Studies and Special Topics Course

Independent Study courses are reserved for specialized topics individual to a graduate student that the student and advisor both agree fits into the program of study. Like Independent Study courses, Special Topics courses are not regularly offered courses in the catalog. Special Topics courses, however, are not specially written to match a student's research interests, but rather a course the department offers to a limited number of students for one semester. Since both types of courses are not in the catalog, the Graduate Education office requires a copy of the outline or syllabus to be kept in the student's file. All independent studies and special topics courses must be submitted and approved by the mentor/advisor of students prior to registration.

Parks College Policies

Academic Integrity

Students, faculty and staff members share the responsibility to maintain a learning environment of mutual trust and integrity. Since Parks College seeks to prepare students for lives of integrity and for occupations of trust, it regards all acts of academic dishonesty as matters of serious concern. Dishonest conduct includes, but is not limited to, cheating, falsification, plagiarism, sabotage, concealment, collusion, and conflicts of interest.

To view the full policy, click here (<http://www.slu.edu/parks/pdfs/academic-integrity-policy.pdf>).

Grade Appeal

Students may appeal a grade only for one or more of the following reasons:

- A. Miscalculation of grade.
- B. The assignment of a grade to a particular student on some basis other than performance in the course.
- C. The assignment of a grade to a particular student by more exacting or demanding standards than were applied to other equivalent students in that section.
- D. The grade assigned results from different standards than the criteria for performance and evaluation outlined in the course syllabus.

To view the full policy, click here (<http://www.slu.edu/parks/pdfs/academic-integrity-policy.pdf>).

Core

Parks College Core Curriculum

In addition to general requirements specified by the University, all students in degree programs leading to Bachelor of Science degrees must satisfy the Parks College Core Curriculum requirements and additional requirements specified by the individual academic programs.

Parks College of Engineering, Aviation and Technology has established educational objectives for students graduating from Bachelor of Science degree programs. Some objectives are specific and unique to degree programs, while others are broader in scope and may include students and instruction from outside of the degree program and college. The Parks College Core Curriculum describes the educational experiences that the faculty and administration of the college have identified as being "essential" for all Parks College students, and it describes the methods by which selected academic objectives may be accomplished.

Notice to Students

Individual degree programs may require specific courses in order to satisfy these requirements. It is recommended that students consult their academic advisor, department chairperson or program director for guidance in choosing core curriculum courses.

The core curriculum is a required component for degree programs leading to a Bachelor of Science from Saint Louis University's Parks College of Engineering, Aviation and Technology.

The curriculum describes the educational experiences that the faculty and administration of the college have identified as being essential for all Parks College students and the methods by which selected academic objectives may be accomplished.

Individual degree programs may require specific courses in order to satisfy core curriculum requirements. We recommend students consult their academic adviser, department chairperson or program director for guidance in choosing core curriculum courses.

Courses for Core Curriculum

Professional Orientation (One total credit)

Designed for incoming freshmen, this course provides an orientation to careers in the intended field of study and introduces resources available to students from the department, college and University.

Jesuit Tradition (12 total credits)

This portion of the core curriculum is met by taking a three-credit course in theology, a three-credit course in philosophy or ethics, and an additional six credits in humanistic values which should be chosen from the social and behavioral sciences including anthropology, communications, communication sciences and disorders, criminology and criminal justice, economics, education, political science, psychology, public health, sociology and social work; or the humanities including philosophy, theology, fine arts, literature, history and foreign language.

Knowledge (16 total credits)

This portion of the core curriculum is met by taking a four-credit science course with laboratory experience, a three-credit mathematics course and additional six credits in science or mathematics. Science courses may be selected from astronomy, biology, chemistry, engineering science, geology, meteorology and physics.

Communication Skills (Three credits)

A three-credit written communication course.

Cultural Diversity (Three credits)

Cultural diversity courses are chosen from the list of courses provided by the College of Arts and Sciences. You may also satisfy the cultural diversity requirement with an academic semester of study at an institution where the culture is significantly different from your own; however, the credits will need to be replaced with an additional humanistic values course. You should always consult with your department chair prior to the semester of study at another institution.

Capstone Experience (Three credits)

A senior-level course or sequence of courses providing opportunities for you to use your acquired and accumulated knowledge on a problem, or in a setting, that is representative of those found in your future profession.

Double Major Options

A student pursuing two majors from two different colleges should satisfy the core requirements of both colleges.