INDUSTRIAL ENGINEERING

COLLEGE: ENGINEERING
SCHOOL: NONE
DEGREE: BACHELOR OF SCIENCE IN INDUSTRIAL ENGINEERING
OPTION/TRACK: NONE

LIMITED ACCESS PROGRAM: NO.

CAMPUS(ES) WHERE OFFERED/CONTACT:
- TAMPA / Coordinator of Advising, Engineering, (813) 974-2684
- LAKELAND (Partial) / Advisor, Engineering, (941) 667-7011
- SARASOTA (Partial) / Advisor, Engineering, (813) 359-4331

• Program of Study at a Florida Community/Junior College or SUS School for Students Planning to Transfer to USF
  (State Mandated Common Prerequisites)

  If a student wishes to transfer without an A.A. degree and has fewer than 60 semester hours of acceptable credit, the student must meet the
  university’s entering freshman requirements including ACT or SAT test scores, GPA, and course requirements.

  Students should complete the following prerequisite courses listed below at the lower level prior to entering the University. If these courses
  are not taken at the community college, they must be completed before the degree is granted. Unless stated otherwise, a grade of "C" is the minimum
  acceptable grade.

  Some courses required for the major may also meet General Education Requirements thereby transferring maximum hours to the university.
  The following are transferable courses from the Community College that will be accepted in the Math/Science/Engineering areas:

  Communications:
  - ENC 1101/1102 English I and II (6)

  Humanities & Social Sciences:
  - Humanities Courses (6)
  - Social Science Courses (6)
  - Humanities or Social Sciences (3)

  Mathematics:
  - USF C/C
  - MAC 2281
  - MAC 2282
  - MAC 2283
  - MAP 2302
  - *or MAC 2281, MAC 2282, MAC 2283

  Natural Sciences:
  - USF C/C
  - CHM 2045
  - PHY 2048
  - PHY 2048L
  - PHY 2049
  - PHY 2049L
  - *or CHS 1440 Chemistry for Engineers

  Please be aware of the immunization, foreign language, continuous enrollment policies of the university, and qualitative standards required.

• Procedures for Applying to the College of Engineering

  Before declaring a particular major within the field of engineering, students must meet two sets of admission requirements: one for the College of
  Engineering and the other for the student's chosen degree program (see "College of Engineering Admission Requirements" and "Admission
  Requirements for Programs in Engineering" below). Students may apply to the College of Engineering upon initial entry to the University by declaring
  Engineering as their intended major on their admissions application. When a student is accepted to USF, engineering staff will review the necessary
  credentials and notify the applicant of his or her Engineering status.

  USF students may apply through the Advising Office, in the College of Engineering. To be considered for admission to the College, an applicant
  must be accepted by the University as a degree-seeking student and be academically in good standing.

  Applicants whose native language is other than English must submit TOEFL scores to the College of Engineering. The minimum TOEFL score
  must be 550.

• College of Engineering Admission Requirements

  1. Freshmen:
     a. Test Scores:
        - SAT—combined score of 1050 minimum with a minimum quantitative of 550.
        - ACT—combined score of 25 minimum and mathematics of 25 minimum.
     b. High School Mathematics: Should include sufficient algebra and trigonometry to enter Engineering Calculus I.
     c. High School Grade Point Average of 2.5/4.0.

  2. Transfer Students:
     a. Engineering

        Florida community college transfer students that have completed the courses shown below with a minimum grade of "C" are accepted directly
        into the College of Engineering.

        Communications:
        - ENC 1101/1102 English I and II (6)

        Mathematics:
        - MAC 2311 Engineering Calculus I (4) or MAC 2281, MAC 2282, MAC 2283
        - MAC 2312 Engineering Calculus II (4) or MAC 2281, MAC 2282, MAC 2283
        - MAC X283 Engineering Calculus III (4) or MAC 2281, MAC 2282, MAC 2283
        - MAP X302 Differential Equations (3)

        Natural Sciences:
        - CHM X045/X045L General Chemistry I (with lab) (4) or CHS 1440 Chemistry for Engineers
        - PHY X048/X048L General Physics and Laboratory I (4)
        - PHY X049/X049L General Physics and Laboratory II (4)

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Humanities & Social Sciences:
  Humanities Courses (6)
  Social Science Courses (6)
  Humanities or Social Sciences (3)

b. Computer Science
  Transfer students into the Computer Science program from a Florida community college are not required to have Differential Equations, MAP
  X302, or any of the Chemistry courses indicated above.

c. Information Systems
  Transfer students into the Information Systems program from a Florida community college are not required to have Calculus III, Differential
  Equations, MAP X302, or any of the Chemistry courses indicated above.

All other transfer students should contact the College’s Admission Office (813/974-2684).

• Required Prerequisites for Entering Engineering programs
  Once a student has been admitted to the College of Engineering, he/she must then seek admission into one of the specific departments.
  The minimum requirements for acceptance by the departments administering the Engineering programs in Chemical, Civil, Electrical, Industrial
  and Mechanical Engineering are completion of English, Calculus, Differential Equations, Physics and Chemistry requirements.
  The minimum requirements for admission to the Computer Engineering, Computer Science, and Information Systems programs offered by the
  Computer Science and Engineering Department are completion of English I & II, Physics I & II (and labs) and Calculus I & II with a grade point average
  of 3.0 or higher in those eight courses. Following departmental admission, it is necessary that a student complete the courses CDA 3100 (Computer
  Organization), and COP 3514 (Program Design) with a grade point average for all attempts of at least 3.0 prior to taking any other departmental
  courses.
  Prior to being admitted to a department, a student may be permitted to take no more than two departmental engineering courses. Individual
  departments may have continuation requirements.
  A student can have his or her academic records housed in a department and be advised by the department advisor prior to completing
  requirements for department admission if he or she so chooses. This type of student must still comply with all of the above-listed requirements prior
  to official acceptance by the department.

• Bachelor’s Curriculum Industrial and Management Systems Engineering

Semester I
  CHM 2041 Chemistry I 3
  CHM 2045L Chemistry I Lab 1
  EGN 3000 Foundations of Engineering 1
  ENC 1101 Composition I 3
  MAC 2281 Eng. Calculus I 3
  Social Science Elective 3
  Total 14

Semester II
  CHM 2042 Chemistry II 3
  EGN 2031 History of Technology 3
  ENC 1102 Composition II 3
  MAC 2282 Eng. Calculus II 4
  PHY 2048 Physics I 3
  PHY 2048L Physics I Lab 1
  Total 17

Semester III
  EGN 3443 Engineering Probability Statistics I 3
  MAC 2283 Calculus III 4
  PHY 2049 Physics II 3
  PHY 2049L Physics II Lab 1
  Historical Perspectives 3
  Total 14

Semester IV
  EGN 3311 Statics 3
  EGN 3373 Electrical Systems Engineering I 3
  EGN 4450 Linear Systems 2
  MAP 2302 Differential Equations 3
  Fine Arts Elective 3
  Total 14

Summer Term
  EGN 1113 Engineering Graphics 3
  EGN 4930 Engineering Econ. with Social and
  Global Implications 3
  ALAMEA Elective 3
  Total 9

Semester V
  COP 2510 Programming Concepts 3
  EGN 3365 Materials Engineering I 3
  EIN 4312 Work Analysis 2
  EIN 4312L Work Analysis Lab 1
  EIN 4411 Manufacturing Processes 2
  EIN 4411L Manufacturing Processes Lab 1
  ESI 4312 Deterministic OR 3
  Total 15

Semester VI
  EGN 3343 Thermodynamics 3
  EIN 4333 Production Control 3
  EIN 4801 Automation/Robotics 2

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