

DEPARTMENT OF APPLIED SCIENCES

Office: 322 Gouaux Hall

Phone: 985-448-4692

Professors: Dantin (Interim Dept. Head), Badeaux.

Associate Professors: Griffin, Watt.

Assistant Professors: Foust, Pemberton, Ramachandran.

Instructors: Gautreaux.

The department offers programs leading to the Bachelor of Science Degree in Geomatics, Bachelor of Science Degree in Manufacturing Engineering Technology, the Bachelor of Science in Petroleum Services, the Associate of Science Degree in Petroleum Services, the Associate of Science Degree in Safety Technology, and a non-degree pre-professional two-year Pre-Engineering program.

GEOMATICS PROGRAM

The university awards a Bachelor of Science Degree with a major in Geomatics upon successful completion of the Geomatics curriculum. Geomatics majors must earn a grade of C or better in all required mathematics and geomatics courses. Completion of the curriculum will prepare one for mid level positions in land surveying, construction surveying, mapping and other related areas. The curriculum meets the educational requirements for registration as a professional land surveyor in the State of Louisiana and the eligibility requirements to take the "Surveyor in Training" examination.

Bachelor of Sciences Degree in Geomatics

CLR - Computer Literacy Requirement **GER** - General Education Requirement

OCR - Oral Communication Requirement **UR** - University Requirement

Suggested Course Sequence:

| FRESHMAN YEAR | Sem. Hrs. |
|------------------------------|-----------|
| EGSC 101 | 2 |
| ENGL 101, 102 (GER) | 6 |
| Freshman Seminar Course (UR) | 1 |
| GEOL 101 | 3 |
| GEOM 101, 103, 140 | 5 |
| HIST 101, 102 (GER) | 6 |
| MATH 102* (GER) | 3 |
| PHYS 101 (GER), 103 | 4 |
| | 30 |
| SOPHOMORE YEAR | Sem. Hrs. |
| CMPS 120 or 200 (CLR) | 3 |
| ECON 255 (GER) | 3 |
| ENGL 255 (GER) | 3 |
| GEOM 201, 202, 203, 204, 240 | 7 |

| MATH 165 (GER), 301 | 8 |
|---|------------|
| PHYS 102 (GER), 104 | 4 |
| Social Science Elective (GER) | 3 |
| | 31 |
| JUNIOR YEAR | Sem. Hrs. |
| Biology Elective (GER) | 3 |
| EGSC 301, 302 | 6 |
| ENGL 368 (GER) | 3 |
| GEOM 301, 303, 304, 305, 310, 311, 340 | 16 |
| MNGT 301 | 3 |
| | 31 |
| SENIOR YEAR | Sem. Hrs. |
| Arts Elective (GER) | 3 |
| BSAD 221 or LASS 215 | 3 |
| GEOM 401, 405, 410, 411, 440, 441 | 18 |
| LASS 220 or FINC 341 | 3 |
| SPCH 330 (OCR) | 3 |
| | 30 |
| Total Hours Required for Degree: | 122 |

*MATH 102 is the entry-level course for this major. All prerequisites for MATH 102 must be met.

For information on registration as a Professional Land Surveyor, contact the Louisiana Board of Registration for Professional Engineers and Land Surveyors, 10500 Coursey Boulevard, Suite 107, Baton Rouge, LA 70816-4045, (225) 295-8522, or the Department of Applied Sciences.

MANUFACTURING ENGINEERING TECHNOLOGY PROGRAM

The university awards a Bachelor of Science Degree with a major in Manufacturing Engineering Technology upon successful completion of the Manufacturing Engineering Technology curriculum. Manufacturing Engineering Technology majors must earn a grade of C or better in all required mathematics, physics, and technology courses.

The Manufacturing Engineering Technology program provides education in manufacturing systems, methods, management, materials, and fabrication.

Minor

The Department offers a minor in Manufacturing Engineering Technology consisting of the following courses: EGSC 101 (2), EGTC 208 (2), 210 (3), 220 (3), 221 (1), 315 (2), 316 (1); MNTC 110 (2), 210 (2), 211 (1), 360 (3), 361 (1).

Bachelor of Science Degree in Manufacturing Engineering Technology

CLR - Computer Literacy Requirement **GER** - General Education Requirement

OCR - Oral Communication Requirement **UR** - University Requirement

Suggested Course Sequence:

| FRESHMAN YEAR | Sem. Hrs. |
|----------------------|-----------|
| CHEM 101 (GER) | 3 |

| | |
|---|------------|
| ENGL 101, 102 (GER) | 6 |
| EGSC 101 | 2 |
| EGTC 110 | 2 |
| Freshman Seminar Course (UR) | 1 |
| HIST 101, 102 (GER) | 6 |
| MATH 108* (GER) | 3 |
| MNTC 110 (CLR) | 2 |
| PHYS 101 (GER), 103 | 4 |
| SPCH 101 (OCR) | 3 |
| | 32 |
| SOPHOMORE YEAR | Sem. Hrs. |
| ECON 255 (GER) | 3 |
| EGTC 208, 210, 220, 221, 245, 246 | 13 |
| MATH 165 (GER) | 5 |
| MNTC 210, 211, 297, 298 | 5 |
| PHYS 102 or CHEM 102 (GER) | 3 |
| | 29 |
| JUNIOR YEAR | Sem. Hrs. |
| BIOL 301 (GER) | 3 |
| ENGL 368 (GER) | 3 |
| EGTC 310, 315, 316, 415, 416 | 11 |
| MATH 301 | 3 |
| MNTC 360, 361, 370, 397, 398 | 9 |
| QBA 285 | 3 |
| | 32 |
| SENIOR YEAR | Sem. Hrs. |
| Arts Elective (GER) | 3 |
| ENGL Literature Elective (GER) | 3 |
| MNGT 368, 300 or 400 level MNGT Elective | 6 |
| MNTC 445, 446, 447, 450, 455, 456, 497, 498 | 13 |
| SATC 350 | 3 |
| Social Science Elective (GER) | 3 |
| | 31 |
| Total Hours Required for Degree: | 124 |

*MATH 108 is the entry-level course for this major. All prerequisites for MATH 108 must be met.

NOTES: Courses should be taken in sequential order. Student should obtain curriculum sheet from department.

PETROLEUM SERVICES PROGRAMS

The university awards the Bachelor of Science degree in Petroleum Services to the student who completes the course work listed below. The curriculum is limited to personnel employed in the petroleum industry or to those who obtain permission from the program director. All classes are scheduled to permit attendance of persons employed on a seven-days-on/seven-days-off work schedule. The curriculum of technical, people-oriented, and safety courses prepare the student for middle-to-upper level management positions in drilling or production operations, or for the service and supply segment of the petroleum industry.

Bachelor of Science Degree in Petroleum Services

CLR - Computer Literacy Requirement **GER** - General Education Requirement
OCR - Oral Communication Requirement **UR** - University Requirement

Suggested Course Sequence:

| | |
|---|------------|
| FRESHMAN YEAR | Sem. Hrs. |
| ENGL 101, 102 (GER) | 6 |
| Freshman Seminar Course (UR) | 1 |
| MATH 101 and 102 or 106 (GER) | 6 |
| PSET 131, 171 | 6 |
| Natural Science Electives (GER) | 6 |
| SATC 101 | 3 |
| SPCH 101 (OCR) | 3 |
| | 31 |
| SOPHOMORE YEAR | Sem. Hrs. |
| ENGL Literature Elective (GER) | 3 |
| HIST 101, 102 (GER) | 6 |
| Natural Science Elective (GER) | 3 |
| OIS 200 (CLR) | 3 |
| PSET 231, 301 | 6 |
| PSYC 205 and Elective* (GER) | 6 |
| SATC 112, 220, 230 | 9 |
| | 36 |
| JUNIOR YEAR | Sem. Hrs. |
| Arts Elective (GER) | 3 |
| BIOL 301 | 3 |
| ENGL 368 (GER) | 3 |
| PSET 310, 331, 341 | 9 |
| SATC 240, 350 | 6 |
| Electives (Approved) | 9 |
| | 33 |
| SENIOR YEAR | Sem. Hrs. |
| PSET 302, 330, 371, 381, 384, 452 | 18 |
| Electives | 6 |
| | 24 |
| Total Hours Required for Degree: | 124 |

*Social science elective other than psychology.

PETROLEUM SERVICES – TWO-YEAR DEGREE PROGRAMS

The university awards the Associate of Science degree to the student who completes course work listed below in Petroleum Services or in the Safety Technology. The curriculum is designed only for persons working seven-on/seven-off so that they may attend classes on their days off as full-time students.

The curriculum contains a blend of technical and supervisory courses to prepare a person for the more complex technical and middle-management positions in

the drilling and production operations as well as the highly technical service and supply segment.

Associate of Science Degree in Petroleum Services

CLR - Computer Literacy Requirement **GER** - General Education Requirement
OCR - Oral Communication Requirement **UR** - University Requirement

Suggested Course Sequence:

| FRESHMAN YEAR | Sem. Hrs. |
|---|-----------|
| ENGL 101, 102 (GER) | 6 |
| Freshman Seminar Course (UR) | 1 |
| MATH 101 and 102 or 106 (GER) | 6 |
| OIS 200 (CLR) | 3 |
| PSET 121, 131, 171 | 9 |
| PSYC 205 or 207 (GER) | 3 |
| SATC 101 | 3 |
| SPCH 101 (OCR) | 3 |
| | 34 |
| SOPHOMORE YEAR | Sem. Hrs. |
| Fine Arts Elective (GER) | 3 |
| HIST 101 or 102 (GER) | 3 |
| PSET 231, 290 | 6 |
| PSET Elective | 3 |
| Natural Science Electives (GER) | 6 |
| SATC Elective | 3 |
| Elective (Approved) | 3 |
| Electives | 6 |
| | 33 |
| Total Hours Required for Degree: | 67 |

Associate of Science Degree in Petroleum Services – Safety Technology

This curriculum is designed to prepare a person for all aspects of safety.

CLR - Computer Literacy Requirement **GER** - General Education Requirement
OCR - Oral Communication Requirement **UR** - University Requirement

Suggested Course Sequence:

| FRESHMAN YEAR | Sem. Hrs. |
|---------------------------------|-----------|
| ENGL 101, 102 (GER) | 6 |
| Freshman Seminar Course (UR) | 1 |
| MATH 101 and 102 or 106 (GER) | 6 |
| PSET 121, 171 | 6 |
| Natural Science Electives (GER) | 6 |
| SATC 101, 112, 220 | 9 |
| | 34 |
| SOPHOMORE YEAR | Sem. Hrs. |
| Fine Arts Elective (GER) | 3 |
| HIST 101 or 102 (GER) | 3 |

| | |
|---|-----------|
| OIS 200 (CLR) | 3 |
| PSET Electives | 6 |
| PSYC 205 or 207 (GER) | 3 |
| SATC 230, 240, 295 | 9 |
| SPCH 101 (OCR) | 3 |
| Elective (Approved) | 3 |
| | 33 |
| Total Hours Required for Degree: | 67 |

NON-DEGREE PRE-PROFESSIONAL AND CERTIFICATE PROGRAMS

Pre-Engineering

Pre-Engineering is a two-year curriculum for students who plan to complete a Bachelor of Science degree in engineering at another institution. The typical pre-engineering curriculum listed below will vary according to the institution that the student plans to attend and the engineering field selected. Students must consult the pre-engineering advisor early in their freshman year regarding the selection of electives and changes in the typical curriculum to meet their particular needs and the requirements of the institution they are planning to attend.

| FRESHMAN YEAR | Sem. Hrs. |
|----------------------------|-----------|
| CHEM 105, 106-110 | 8 |
| CMPS 120 | 3 |
| EGSC 101 | 3 |
| ENGL 101, 102 | 6 |
| MATH 165*, 166 | 10 |
| PHYS 201 | 4 |
| | 34 |
| SOPHOMORE YEAR | Sem. Hrs. |
| ENGL 368 | 3 |
| MATH 265 | 3 |
| MATH Elective** | 3-5 |
| Natural Science Elective** | 3-5 |
| Electives** | 12 |
| | 24-28 |

* MATH 165 is the entry-level course for this major. All prerequisites for MATH 165 must be met.

** See pre-engineering advisor.

Professional Land Surveyor Certification

The following courses offered by NSU meet the 30 semester hour requirements of Louisiana Revised Statute 37.69 3(b) and 4(f) for certification as a surveyor in training and/or registration as a professional land surveyor:

A minimum of 15 semester hours must come from the following Lists:

| COURSE | TITLE | HOURS |
|---------------|--------------------------------|--------------|
| GEOM 101 | Introduction to Geomatics. (3) | 3 |
| GEOM 201 | Geomatics Methods I. (2) | 2 |
| GEOM 202 | Geomatics Methods II. (2) | 2 |
| GEOM 203 | Geomatics Methods I Lab. (1) | 1 |

| | | |
|-----------|---|---|
| GEOM 204 | Geomatics Methods II Lab. (1) | 1 |
| GEOM 301 | Route and Construction Surveys. (2) | 2 |
| GEOM 303 | Route and Construction Surveys Lab. (1) | 1 |
| GEOM 305 | Geodesy and Geodetic Coordinates. (3) | 3 |
| GEOM 310* | Boundary Control and Legal Principles. (3) | 3 |
| GEOM 401 | Subdivision Design and Platting. (3) | 3 |
| GEOM 405 | Geodetic Positioning Systems (GPS). (3) | 3 |
| GEOM 410 | Surveying and Mapping Practice. (3) | 3 |
| GEOM 411 | Mapping by Photogrammetry and Remote Sensing. (3) | 3 |

*Required

No more than 15 semester hours may come from the following list:

| COURSE | TITLE | HOURS |
|---------------|--|--------------|
| EGSC 101 | Engineering Graphics (2) | 3 |
| EGSC 301 | Introduction to Computer Aided Drawing (3) | 3 |
| EGSC 302 | Computer Aided Surveying Drawing (3) | 3 |
| FINC 341 | Principles of Real Estate (3) | 3 |
| FINC 441 | Real Estate Appraisal (3) | 3 |
| ENGL 368 | Technical Writing (3) | 3 |
| LASS 215 | Legal Research (3) | 3 |
| LASS 220 | Real Estate Law (3) | 3 |

For information on registration as a Professional Land Surveyor, contact the Louisiana Professional Engineering and Land Surveying Board, 9643 Brookline Avenue, Suite 121, Baton Rouge, LA 70809-1433, Ph 225-925-6291, Fax 225-925-6292.