

SURVEYING AND GEOMATICS SCIENCES PROGRAM

TU -- 2 years -- TRANSFER STUDENT PLAN (From Fall 2024)

Recommended Sequence of Core Courses

| Year | Fall | Spring | Summer | |
|------------------------|--|--|--------------|--|
| 1st | GEM 1100 Computer-Aided Drafting I | 2 GEM 1101 Computer-Aided Drafting II (GEM 1100) | 2 | |
| | GEM 2220 Basics of Surveying (MTH 1114) | 3 GEM 3330 Advanced Measurement Analysis (GEM 2220) | 3 | GEM 3395 Co-op Work Experience I (GEM 2220) 1 |
| | GEM L220 Basics of Surveying Lab | 1 GEM L330 Advanced Measurement Analysis Lab | 1 | |
| | GEM 3366 Photogrammetry and RS | 3 GEM 4408 Geodesy and Geodetics (MTH 1125) | 3 | |
| | GIS 3390 Fundamentals of Geographical Information and Analysis | 3 GIS 3391 Application of Geospatial Information Sciences (GIS 3390) | 3 | |
| | | 3 GIS 2201 Intro to Spatial Computing using Python (MTH 1114) | 3 | |
| | Subtotal | 12 | 15 | 1 |
| 2nd | GEM 3379 Intro to Least Squ Adj. (MTH 1125, STAT 2210, MTH 2230, GIS 2201, GEM 3330) | 3 GEM 4499 Geomatics / GIS Projects (GEM 4409) | 2 | |
| | | GEM 4490 Geomatics Capstone (GEM 4409) | 1 | GEM 4496 Co-op Work Experience II (GEM 3395) 1 |
| | GEM 4410 Intro to Global Positions (GIS 3390, GEM 4408) | 3 GEM 4405 Route and Construction Survey (GEM 3330) | 3 | |
| | | GEM L405 Route and Construction Survey Lab | 1 | |
| | GEM 3309 Land Survey Principles (GEM 2220) | 3 GEM 3310 Land Survey Practice (GEM 3309) | 3 | |
| | GEM L309 Land Survey Principles Lab | 1 GEM L310 Land Survey Practice Lab | 1 | |
| | GEM 4409 Hydrology | 3 GEM 4407 Land Development (GEM 4409) | 3 | |
| GEM L409 Hydrology Lab | 1 GEM L407 Land Development Lab | 1 | | |
| | Subtotal | 14 | 13/15 | Subtotal 1 |

SURVEYING AND GEOMATICS SCIENCES PROGRAM CURRICULUM (120 hours)

SPECIALIZED GENERAL STUDIES REQUIREMENTS (55 HOURS)

Area I (6 hours)

ENG 1101 (3) Composition I **
ENG 1102 (3) Composition II **

Area II (12 hours)

1000-2000 level course within Literature (3 hours)

ART 2201 (3) Introductory Drawing (3 hours)

Select Any 1000-2000 level courses with an expanded historical and cultural scope in the Humanities/Fine Arts disciplines, including English, Foreign Languages, Religion, Philosophy, Classics, Theatre, Music, Dance, Communication, Sign Language, Interdisciplinary Studies, or other Humanities/Fine Arts areas (6 hours)

Area III (12 hours)

MTH 1125 (4) Calculus I**

Select one Sequence for 8 hours

| | | |
|----------|-----|------------------------|
| PHY 2252 | (3) | General Physics I |
| PHY L252 | (1) | General Physics I Lab |
| PHY 2253 | (3) | General Physics II |
| PHY L253 | (1) | General Physics II Lab |

OR

| | | |
|----------|-----|--------------------------|
| PHY 2262 | (3) | Physics I with Calculus |
| PHY L252 | (1) | General Physics I Lab |
| PHY 2263 | (3) | Physics II with Calculus |
| PHY L253 | (1) | General Physics II Lab |

Area IV (12 hours)

Any 1000-2000 level course with a principal focus in History (3hrs) in sequence

Any 1000-2000 level courses from the following Social Science disciplines: Anthropology, Business, Criminal Justice, Economics, Finance, Geography, History, Hospitality, Tourism, Sport Management, Human Services, Interdisciplinary Studies, Leadership, Nursing, Political Science, Psychology, Religion, Social Work, Sociology or other Social Science areas (9hrs) in sequence

Area V (13 hours)

IS 2241 (3) Computer Concepts
STAT 2210 (3) Introduction to Statistics
TROY 1101 (1) Orientation
GIS 2201 (3) Intro to Spatial Computing using Python
MTH 2230 (3) Applied Linear Algebra

FREE ELECTIVES: 12 hours

PROGRAM REQUIREMENTS (53 HOURS)

GEM 1100 (2) Computer-Aided Drafting 1
GEM 1101 (2) Computer-Aided Drafting 11
GEM 2220 (3) Basics of Surveying
GEM L220 (1) Basics of Surveying Lab
GEM 3309 (3) Land Survey Principles
GEM L309 (1) Land Survey Principles Lab
GEM 3310 (3) Land Survey Practice
GEM L310 (1) Land Survey Practice Lab
GEM 3330 (3) Advance Measurement Analysis
GEM L330 (1) Advance Measurement Analysis Lab
GEM 3366 (3) Photogrammetry
GEM 4408 (3) Geodesy & Geodetics
GEM 3379 (3) Least Squares Adjustment
GIS 3390 (3) Fundamentals of Geographical Information and Analysis
GIS 3391 (3) Application of Geospatial Information Sciences
GEM 4405 (3) Route & Construction
GEM L405 (1) Route & Construction Lab
GEM 4407 (3) Land Development
GEM L407 (1) Land Development Lab
GEM 4409 (3) Hydrology
GEM L409 (1) Hydrology Lab
GEM 4410 (3) Intro to Global Positions
GEM 4490 (1) Geomatics Capstone

Choose one of the following

GEM 4499 (2) Geomatics / GIS Projects

OR

GEM 3395 (2) & 4496 Co-op. Work Exp. I & II

120 hours are required for graduation.

NOTE: Students must complete a six-hour sequence in Literature or History. This sequence must be within the same content areas for the selected disciplines (i.e. six hours in American Literature or six hours in World History). This requirement will be met in Area II or Area I.

***Must have C or better and pre-requisites must be met*