



COLLEGE OF ENGINEERING AND ARCHITECTURE
Bachelor of Science in Geodetic Engineering
 SY 2020-2021

FIRST YEAR

| First Semester | | | | | | | |
|-----------------------|------------------------------------|--------------|-----|-------|-----------|----------------|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| ES 103 | Computer Aided Drafting | 1 | 3 | 4 | 2 | NONE | NONE |
| ArtApp | Art Appreciation | 3 | 0 | 3 | 3 | NONE | NONE |
| Ethc | Ethics | 3 | 0 | 3 | 3 | NONE | NONE |
| MMW | Mathematics in the Modern World | 3 | 0 | 3 | 3 | NONE | NONE |
| Math 111 | Calculus 1 (Differential Calculus) | 3 | 0 | 3 | 3 | NONE | NONE |
| TCW | The Contemporarory World | 3 | 0 | 3 | 3 | NONE | NONE |
| UTS | Understanding the Self | 3 | 0 | 3 | 3 | NONE | NONE |
| PurCom | Purposive Communication | 3 | 0 | 3 | 3 | NONE | NONE |
| PE 101 | Fitness Exercises and Activities | 2 | 0 | 2 | 2 | NONE | NONE |
| NSTP 101A | ROTC/CWTS/LTS I | 3 | 0 | 3 | 3 | NONE | NONE |
| | | | | Total | 30 | 28 | |

FIRST YEAR

| Second Semester | | | | | | | |
|------------------------|---|--------------|-----|-------|-----------|----------------|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| GE121 | Land Administration and Management | 3 | 0 | 3 | 3 | NONE | NONE |
| GE122 | Advanced Information & Communication Technology | 3 | 0 | 3 | 3 | NONE | NONE |
| ES 106 | Computer Fundamentals & Programming | 1 | 6 | 7 | 3 | Math 111 | NONE |
| MOM | Mathematics of Measurement | 3 | 0 | 3 | 3 | NONE | NONE |
| Math 112 | Calculus 2 (Integral Calculus) | 3 | 0 | 3 | 3 | Math 111 | NONE |
| Phys 120 | Physics for Engineers (Calculus Based) | 3 | 3 | 6 | 4 | Math 111 | Math 112 |
| PE 102 | Movement Enhancement | 2 | 0 | 2 | 2 | PE 101 | NONE |
| NSTP 102A | ROTC/CWTS/LTS II | 3 | 0 | 3 | 3 | NONE | NONE |
| | | | | Total | 30 | 24 | |

SECOND YEAR

| <i>First Semester</i> | | | | | | | |
|-----------------------|--|--------------|-----|-------|-----------|----------------|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| GE 211 | General Surveying 1 | 2 | 3 | 5 | 3 | NONE | NONE |
| GE 212 | Introduction to the Laws on Private & Public Lands | 2 | 0 | 2 | 2 | NONE | NONE |
| GE 213 | Cartography | 1 | 6 | 7 | 3 | NONE | NONE |
| GE 214 | Electrical & Electronics Engg for Geodetic Engrs. | 3 | 0 | 3 | 3 | NONE | NONE |
| GE 215 | Safety Management | 1 | 0 | 1 | 1 | NONE | NONE |
| GE 216 | Engineering Mechanics | 3 | | 3 | 3 | Math 112 | NONE |
| ES 208 | Differential Equations | 3 | 0 | 3 | 3 | Math 112 | NONE |
| ES 209 | Engineering Data Analysis | 3 | 0 | 3 | 3 | MATH111 | NONE |
| PE 103 | Physical Activity Towards Health & Fitness I | 2 | 0 | 2 | 2 | PE 102 | NONE |
| | | | | Total | 29 | 23 | |

SECOND YEAR

| <i>Second Semester</i> | | | | | | | |
|------------------------|---|--------------|-----|-------|-----------|----------------|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| GE 221 | General Surveying 2 | 2 | 6 | 8 | 4 | GE211 | NONE |
| GE 222 | Theory of Errors & Adjustments | 3 | 0 | 3 | 3 | ES208 | NONE |
| GE 312 | Geodetic Computations & Adjustments | 2 | 3 | 5 | 3 | GE222 | NONE |
| GE 224 | Principles of Geology | 3 | 0 | 3 | 3 | NONE | NONE |
| GE 317 | Public Land Laws & Laws on Natural Resources | 3 | 0 | 3 | 3 | GE212 | NONE |
| STS | Science, Technology, and Society | 3 | 0 | 3 | 3 | NONE | NONE |
| RPH | Readings in Philippine History | 3 | 0 | 3 | 3 | NONE | NONE |
| TEM | The Entrepreneurial Mind | 3 | 0 | 3 | 3 | NONE | NONE |
| PE 104 | Physical Activity Towards Health & Fitness II | 2 | 0 | 2 | 2 | PE 103 | NONE |
| | | | | Total | 33 | 27 | |

SECOND YEAR

| <i>Summer</i> | | | | | | | |
|---------------|-------------------------------------|--------------|-----|-------|----------|-------------------|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| ES 301 | Engineering Economics | 3 | 0 | 3 | 3 | 2nd Year Standing | NONE |
| EnviSci | Environmental Science & Engineering | 3 | 0 | 3 | 3 | NONE | NONE |
| | | | | Total | 6 | 6 | |

THIRD YEAR

| <i>First Semester</i> | | | | | | | |
|-----------------------|-------------------------------|--------------|-------|-----------|-----------|-------------------|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| GE 311 | Geographic Information System | 1 | 6 | 7 | 3 | GE223 | NONE |
| GE 312 | Photogrammetry | 2 | 6 | 8 | 4 | GE 213 & GE 312 | NONE |
| GE 313 | Engineering Surveys | 2 | 6 | 8 | 4 | GE221 | NONE |
| GE 314 | Geometric Geodesy | 3 | 0 | 3 | 3 | GE221 | NONE |
| GE 316 | Hydrographic Surveying | 3 | 0 | 3 | 3 | GE221 | NONE |
| ES 302 | Technopreneurship 101 | 3 | 0 | 3 | 3 | ES 301 & TEM | NONE |
| GE 318 | Methods of Research | 1 | 0 | 1 | 1 | 3rd year standing | |
| | | | Total | 33 | 21 | | |

THIRD YEAR

| <i>Second Semester</i> | | | | | | | |
|------------------------|-------------------------|--------------|-------|-----------|-----------|----------------|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| GE 321 | Remote Sensing | 2 | 6 | 8 | 4 | GE312 | NONE |
| GE 322 | Physical Geodesy | 2 | 0 | 2 | 2 | GE314 | NONE |
| GE 323 | GE Elective 1 | 3 | 0 | 3 | 3 | NONE | NONE |
| GE 325 | Land Registration Laws | 3 | 0 | 3 | 3 | GE212 | NONE |
| GE 326 | Property Surveys | 3 | 6 | 9 | 5 | GE221 | NONE |
| GE 327 | Special Studies in GE 1 | 1 | 6 | 7 | 3 | GE318 | NONE |
| | | | Total | 32 | 20 | | |

THIRD YEAR

SUMMER

| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
|-------------|-------------------------|--------------|-------|-------|----------|---------------------|---------------|
| | | Lec | Lab | Total | | | |
| GE 331 | Survey Camp (120 hours) | | 3 | 3 | 1 | Third Year Standing | NONE |
| | | | Total | 3 | 1 | | |

FOURTH YEAR

| First Semester | | | | | | | |
|-----------------------|--|--------------|-------|-----------|-----------|--------------------|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| GE 411 | GE Elective 2 | 3 | 0 | 3 | 3 | Fourth Yr standing | NONE |
| GE 412 | GE Elective 3 | 3 | 0 | 3 | 3 | Fourth Yr standing | NONE |
| GE 413 | Land Use Planning and Development | 2 | 3 | 5 | 3 | GE311 | NONE |
| GE 414 | Satellite Geodesy | 4 | 0 | 4 | 4 | GE314 & GE322 | NONE |
| GE 415 | Geodetic Surveying | 3 | 0 | 3 | 3 | GE314 & GE322 | NONE |
| GE 313 | GE Laws, Obligations, Contracts & Ethics | 2 | 0 | 2 | 2 | GE212 | NONE |
| ES 303 | Engineering Management | 2 | 0 | 2 | 2 | Fourth Yr standing | NONE |
| GE 416 | Special Studies in GE 2 | 1 | 6 | 7 | 3 | GE327 | NONE |
| GnS | Gender and Society | 3 | 0 | 3 | 3 | NONE | NONE |
| Rizal | Life and Works of Rizal | 3 | 0 | 3 | 3 | NONE | NONE |
| | | | Total | 27 | 26 | | |

FOURTH YEAR

| Second Semester | | | | | | | |
|------------------------|---|--------------|-------|-------|----------|--|---------------|
| Course Code | Description | No. of Hours | | | Units | Pre-requisites | Co-requisites |
| | | Lec | Lab | Total | | | |
| GE 420 | Geodetic Engineering Immersion/ O.J.T (min of 480 hours) | | | 480 | 3 | Completed all major/ professional courses | |
| | | | Total | | 3 | | |

Number of units

GRAND TOTAL

178

Suggested Geodetic Engineering Elective:

- a. Spatial Database
- b. Unified Cadastre (from upland to lowlands, reefs)
- c. Geospatial Information Management
- d. Building Information Modelling
- e. Laser Scanning
- f. Unmanned Aerial Systems
- g. 3D GIS
- h. Location-based Services
- i. Geovisualization
- j. Land Valuation and Appraisal
- k. Disaster Risk Reduction Management
- l. Hydrology
- m. Review on Land and Environmental Laws