BS GEODETIC ENGINEERING SUBJECTS

- GE 1 Earth Trek
- GE 10 General Surveying I
- **GE 11 Elementary Surveying**
- GE 12 General Surveying II
- GE 117 Construction & Industrial Surveying
- GE 118 Hydrographic Surveying
- GE 119 Land Surveying
- GE 120 Introduction to OOP
- GE 122 Mathematical Methods in Geodetic Engineering
- GE 128 Adjustment Computations for Spatial Data Analysis
- GE 129 Adjustment Computation for Geodetic Applications
- GE 143 Laws on Natural Resources
- GE 148 Land Registration Law
- GE 149 Contracts, Surveying Laws and Ethics
- GE 151 Introduction to Geodesy
- GE 152 Reference Systems and Reference Frames
- GE 153 Earth's Gravity and Geoid Modelling
- GE 154 Satellite Positioning Systems
- GE 155 Geodetic Control Network
- GE 155.1 Horizontal Control Network Laboratory
- GE 155.2 Vertical and Gravity Network Laboratory
- **GE 166 Astronomic Geodesy**
- GE 173 Digital Cartography
- GE 190 Seminar in Geodetic and Geospatial Engineering and Geoinformatics
- GE 191 Practicum I (OJT) I
- GE 192 Practicum (OJT) II
- GE 199 Undergraduate Research
- GIM 175 GIS Theory and Applications
- GIM 177 Land Development and Valuation
- GsE 188 Modern Photogrammetry
- GsE 189 Remote Sensing: Theory and Applications

MS GEOMATICS ENGINEERING

Common Courses

GmE 210 Spatial Visualization

GmE 211 Satellite Geodesy

GmE 216 Field Techniques in Applied

Geodesy and Remote Sensing

GmE 217 Cadastral Data Management

Specialized Courses (Geoinformatics)

GmE 220 Spatial Databases

GmE 221 Spatial Analysis

GmE 223 Integrated Spatial Systems

Specialized Courses (Remote Sensing)

GmE 230 Microwave Remote Sensing

GmE 231 Lidar Remote Sensing

GmE 232 Hyperspectral Remote Sensing

GmE 233 Close-Range Photogrammetry

Specialized Courses (Applied Geodesy)

GmE 241 Mathematical Geodesy and Adjustments of Geodetic Observations

GmE 242 Satellite Positioning, Signal Processing and Numerical Methods

GmE 243 Satellite-Based Positioning Systems (SBPS) Technology Development

Contact Us

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www.dge.upd.edu.ph



University of the Philippines

DEPARTMENT OF GEODETIC ENGINEERING

ACADEMIC PROGRAMS

College of Engineering University of the Philippines Diliman, Quezon City, 1101 Philippines



Our Department

is the country's premiere institution of higher learning in the field of geospatial science & technology.

Our Mission

is to bring out the best in our students and together – develop new ways by which the science, technology of earth and space observation and measurement can be strengthened for the good of the society.

Our Vision

is to become an education and research hub for our vast network of students and graduates in providing topnotch quality of instruction and application of space observation and earth measurement technology.

Our Achievements

span seven decades and has produced the country's industry leaders in the surveying, mapping and engineering industry. Our alumni are professionals of choice in government institutions and private corporations engaged in inventory, development and management of resources, properties and the environment. Our graduates are welcomed by a wealth of opportunities here and abroad.

Our Commitment

is to keep pace with the rapid advances in technology. By continuously upgrading our educational resources and enhancing our faculty through research and extension, our Department ensures that students receive only the best instruction and experience state-of-the-art facilities in a holistic learning environment.





Bachelor of Science in Geodetic Engineering (BS GE)

Geodetic Engineers are regarded as reliable sources of geospatial information for societal and economic development. With the growing demand for public works and infrastructure, the development of modern information systems, coupled with increasing awareness in managing resources and protecting the environment, the importance of geospatial data and information becomes essential.

The University of the Philippines (UP) offers 5-year BS Geodetic Engineering program, a uniquely balanced blend of theory and techniques for high-precision earth measurement using advanced field instrumentation and computing technologies.

Core Competencies

Our core competencies focus on: Surveying and Mapping, Geodesy, Remote Sensing, Photogrammetry, Hydrography, Geographic Information Systems (GIS), and Global Navigational Satellite Systems (GNSS or GPS).

Entry Requirements

High school students must pass the UP College Admission Test (UPCAT). Prospective shiftees and transferees must obtain above average scholastic grades on their first year of college and apply for admission in the next academic year.

Geodetic Engineering Study Grant

A competitive examination is given to UPCAT passers to qualify for a number of study grants. Benefits of the grant include tuition fees, monthly stipend and book allowance.







Master of Science in Geomatics Engineering (MS GmE)

Geomatics is the modern term referring to the science, engineering, and art in collecting and managing geographically referenced information. It integrates all the means to acquire and manage spatial data as part of scientific, technical, legal and administrative operations involved in the process of production and management of Earth-based data.

The UP MS GmE program caters to the needs of the industry and the government by equipping students with skills to develop the tools and techniques to capture and manage spatial data.

Fields of Specialization in MS GmE:

- 1. Remote Sensing
- 2. Applied Geodesy
- 3. Geoinformatics

Applied Geodesy Informatics

Curriculum

Core courses (covers the basics)	9 units
Common courses (topic of mutual interest to fields)	6 units
Specialized courses (to deepen knowledge)	6 units
Electives (to enhance skills)	3 units
Thesis (to develop applications)	6 units
TOTAL	30 units

Admission and Requirements

The MS GmE is open to graduates of engineering and allied fields. Application forms may be obtained at the Graduate Office of the UP College of Engineering.

Scholarships and Financial Assistance

Scholarships may be availed under the ERDT Program. We are part of the network of institutions of the Philippine Council for Advanced Science and Technology Research and Development (PCASTRD) of the Department of Science and Technology (DOST).