GEOG3110 Géodésie

[22.5h] 2.5 credits

Teacher(s): Bernard Ducarme, René Warnant
Language: French
Level: Third cycle

Aims

This course is primarily destined to students in Geography who wish to understand better the physical basis of Geodesy and especially of the space techniques which are now so widely used. It should be followed at the master level or as a specialized course in the frame of a PHD. It is accessible to students from the faculty of Sciences, Civil Engineering of Bio-engineering.

Main themes

This course essentially covers the physical geodesy and the modern techniques in Geodesy, including:
- gravity field and gravitational terrestrial potential;
- shape of the Earth and determination of the geoid (astrogeodetic and gravimetric);
- relation between geoid and mean sea level;
- terrestrial measurements techniques with emphasis on distance electronic measurement (EDM) systems;
- Space geodesy with a particular attention to the GPS system and satellite altimetry;
- Coordinate systems: geodetic or astronomical coordinates, local and global reference systems.

It will not address the problems of cartography and photogrammetry.