University of Warmia and Mazury in Olsztyn

The University of Warmia and Mazury (UWM) was established on September 1st, 1999. The founding of the University in Olsztyn, a city with a 650-year history, was a dream come true for the many generations who had been trying to turn Olsztyn into a strong academic centre. In its activities, the University draws on the heritage of the Albertina of Königsberg, the Hosianum of Braniewo, the Academy of Agriculture and Technology and the Higher Teacher Education School in Olsztyn.

The University community continues the long scientific heritage of many great scientists of the region: Nicolas Copernicus with his groundbreaking achievements in astronomy and economy, the renowned historian and administrator Martin Kromer, the Enlightenment poet Ignacy Krasicki, the philosophers Johann Herder and Immanuel Kant, the botanist Andrzej Helwing, the mathematician and astronomer Friedrich Bessel and Emil Boehring, a Nobel Prize laureate in medicine.

Structurally, the UWM is comprised of 14 faculties, out of which 7 hold full academic rights and therefore entitle the University to operate as an autonomous unit. The University staff consists of nearly 2800 employees, including 389 professors. The UWM has over 23,000 day students and the total number of students exceeds 33,000. The UWM is located on a 69 ha campus surrounded by beautiful woods and lakes. International cooperation is carried out through 75 agreements with foreign research and teaching institutions from many European and overseas countries. The University offers diplomas and the degrees of B.A., B.Sc., M.A., M.Sc., Dr., Dr. Habil., and Prof.

The University of Warmia and Mazury in Olsztyn is a significant academic and cultural centre, which is expanding and making new investments on a regular basis. The modern Collegium Biologiae has just been built, while work is underway to build a new University Library, a Humanities and Social Sciences Centre and a Conference and Training Centre.

Olsztyn is the city with almost 170,000 citizens situated in the north-eastern Poland, among lakes and forests, only 200 km north of Warsaw and ca. 180 km south-east of Gdańsk, not far from the Polish-Russian border and to Kaliningrad. Olsztyn is the capital of Warmia and Mazury, the region famous for its long history as well as unbelievably charming glacial landscapes, the largest concentration of lakes in Poland and forest complexes covering a large proportion of the area. Not without a reason Warmia and Mazury region is frequently referred to as the Land of a Thousand Lakes also known as the green heaven of Poland. It is the center of recreation not only for the local residents but also for tourists from all over Poland and from abroad.

Besides the lakes and beaches tourists can use the swimming pool, sports halls with spectator areas, sports stadiums and tennis courts. An airfield offering tourist flights over the city and the region is also available. Warmia and Mazury Aeroclub also offers numerous attractions.

Olsztyn belongs to the Federation of Copernicus Towns associating towns where Copernicus lived and worked such as Bologna, Frombork, Kraków and Toruń. The headquarters of the Federation is situated in Olsztyn. Planetarium and Astronomical Observatory are also located in Olsztyn, conducting wide spread popularization and educational activities including interesting meetings devoted to astronomy as well as observation of the sun, the stars, the moon and planets.

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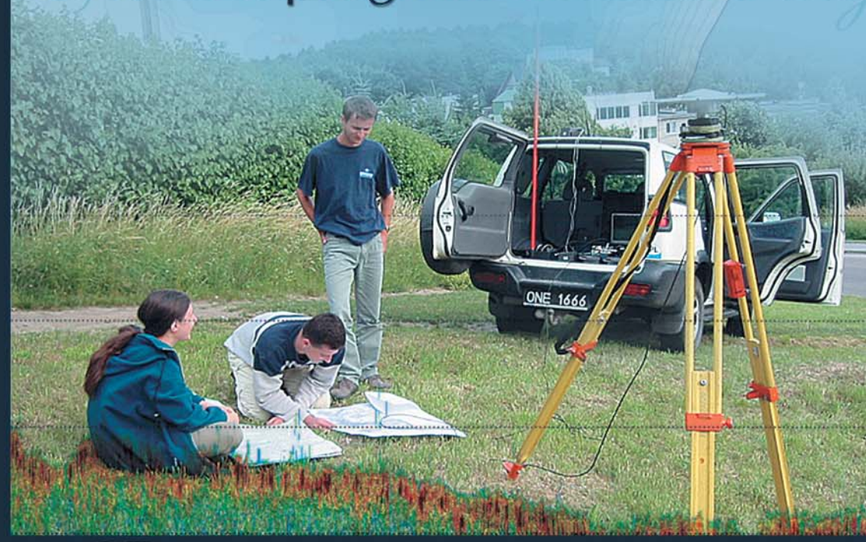
CHAIR OF SATELLITE GEODESY AND NAVIGATION

Geodesy and Satellite Navigation

International master's degree programme



UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN
Faculty of Geodesy and Land Management, Olsztyn / Poland

Master of Science degree in Geodesy and Satellite Navigation

From the 1st of October 2003, the Chair of Satellite Geodesy and Navigation is offering M.Sc. studies in English in the specialization of Geodesy and Satellite Navigation. The specialization is a part of regular master studies in the Faculty of Geodesy and Land Management - the final 2 years of the 5-year programme. Studies in this specialization last for two years (4 semesters) and lead to a M.Sc. diploma. Knowledge of the basics of geodesy and/or navigation is prerequisite. We offer a very interesting and up-to-date programme, which will prepare candidates for a professional career in GPS. The lectures and classes are conducted in English in small groups by skilled and experienced staff. We guarantee a high level of education and a friendly atmosphere.

The fee for studies is € 2300 per year, excluding accommodation and food. The deadline for application submission for the next academic year is June 30. The program of studies begins on October 1 each year.

There is a wide financial support available from European Commission, e.g. the Socrates Erasmus Programme, in which our University is a partner. For more information concerning this programme in Poland visit: http://www.socrates.org.pl/erasmus/en/ or contact our co-ordinator: Dr. Mirosław Bełej (caprio@uwm.edu.pl). Support from other national and international organizations is also possible.

For further information concerning applications and terms of our specialization in Geodesy and Satellite Navigation do not hesitate to contact:

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Chair of Satellite Geodesy and Navigation: http://www.kgsin.pl/

University of Warmia and Mazury in Olsztyn: http://www.uwm.edu.pl

List of subjects on the Specialization: Geodesy and Satellite Navigation

SUBJECT	Code	Number of hours			ECTS	Assessment
		lectures	classes	total	credits	
1	2	3	4	5	6	7
4th year / 7th semester						
Geodesy	07.6–08-C/2	30	30	60	5	FT
Cartography	07.6–08-C/8	15	30	45	3	E
Basic of town and country planning	02.0–08-C/10	15	30	45	4	FT
Real estate cadaster	07.6–08-C/17	15	30	45	4	FT
Satellite geodesy	07.6–08-D/2	30	30	60	5	FT
Astrodynamic foundations of geodesy	07.6–08-D/3	15	15	30	3	FT
Advanced programming techniques	11.3–08-D/9	15	45	60	5	E
4th year / 8th semester						
Geodesy	07.6–08-C/2	15	45	60	5	E
Field training geodesy	07.6–08-E/5	–	30	30	4	FT
Basic of town and country planning	02.0–08-C/10	15	15	30	3	E
Real estate administration	07.6–08-C/18	15	15	30	3	FT
Satellite geodesy	07.6–08-D/2	15	30	45	3	E
Satellite navigation	07.6–08-D/5	15	30	45	3	FT
Theory of satellite measurements elaboration	11.2–08-D/6	15	30	45	4	E
Hydrographic surveys	07.6–08-D/8	15	30	45	3	FT
Collection and distribution of geodetic and cartographic data	07.6–08-C/16	–	15	15	1	FT
5th year / 9th semester						
Physical geodesy	07.6–08-D/1	15	15	30	5	E
Methods of satellite positioning	07.6–08-D/4	15	45	60	5	E
Satellite navigation	07.6–08-D/5	15	30	45	5	E
Data teletransmission systems	07.6–08-D/7	15	15	30	3	FT
Seminar	07.6–08-D/11	–	30	30	2	FT
5th year / 10th semester						
Monographic lectures	07.6–08-D/10	30	–	30	2	FT
Seminar	07.6–08-D/11	–	30	30	2	FT
Field training in satellite geodesy	07.6–08-D/12	–	30	30	4	FT

FT – Final test, E – Exam

In addition to regular lectures and classes the programme of our specialization also includes a few days of training concerning navigation in our partner institutions: the Naval University of Gdynia and the Air Force Academy in Dęblin.

The list of subjects of specialization: „Geodesy and Satellite Navigation" is specified according to ECTS Information Package 2002/2003, Faculty of Geodesy and Land Management, Field of study: Geodesy and Cartography – University of Warmia and Mazury in Olsztyn

Chair of Satelite Geodesy and Navigation

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Chair of Satellite Geodesy and Navigation main activities:

- Extension of the European satellite navigation systems EGNOS and GALILEO to the Central and East Europe Countries (CEEC).
- Research and development of land, aircraft and marine satellite navigation systems and the monitoring of vehicles.
- Application of the GPS to the real-time positioning and monitoring of moving objects with high precision and reliability.
- Precise GPS/RTK surveying.
- Development of numerical maps for geodesy and navigation.
- Development of GIS/LIS databases and their upgrading and updating with GPS techniques.
- Integration of bathymetric surveying with GPS/DGPS positioning.
- Establishment of Permanent Reference Stations for Local Area Augmentation Systems (LAAS).