

Exchanges and Orientations at Surveying and Geomatic Engineering Education in Turkey

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PRESENTATION OUTLINE

- **Introduction**
- **Orientations and Threats in Surveying and Geomatic Engineering Education in Turkey**
 - Quality and Accreditation
 - Curricula
 - Teaching Staff
 - Newly Opened Departments
- **Conclusion and Recommendations**

Introduction

Historical Background and Advances in Turkey

- 1949: YTU, Survey and Cadastral Engineering
 - Curriculums For Cadastral affairs
 - Today: All kind of Engineering Projects (updated)
- 1981: Geodesy and Photogrammetry Engineering
- Now:
 - 11 Universities (most includes master and doctoral degrees-active in education)
 - 10 universities (passive)
 - 4 Universities (only graduate programs)

Up to now

Departments in Universities (Turkey)

- Educational quality
- Current course plan
- E- learning system
- Accreditation facilities

Table 1. Surveying/Geomatic/Geodesy and Photogrammetry Engineering Departments in Turkey, 2009

No	University	Department	City	State
1	Yıldız Teknik University	Dept. of Surveying/Geomatic Engineering	İstanbul	Open-Active
2	Karadeniz Teknik University	Dept. of Surveying/Geomatic Engineering	Trabzon	Open-Active
3	İstanbul Teknik University	Dept. of Geomatic Engineering	İstanbul	Open-Active
4	Selçuk University	Dept. of Surveying/Geomatic Engineering	Konya	Open-Active
5	Zonguldak Karaelmas University	Dept. of Geodesy and Photogrammetry Engineering	Zonguldak	Open-Active
6	Ondokuzmayıs University	Dept. of Surveying/Geomatic Engineering	Samsun	Open-Active
7	Afyon Kocatepe University	Dept. of Surveying/Geomatic Engineering	Afyonkarahisar	Open-Active
8	Erciyes University	Dept. of Surveying/Geomatic Engineering	Kayseri	Open-Active
9	Kocaeli University	Dept. of Surveying/Geomatic Engineering	Kocaeli	Open-Active
10	Gümüşhane University	Dept. of Geodesy and Photogrammetry Engineering	Gümüşhane	Open-Active
11	Aksaray University	Dept. of Geodesy and Photogrammetry Engineering	Aksaray	Open-Active

Table 1. Surveying/Geomatic/Geodesy and Photogrammetry Engineering Departments in Turkey (contd)

12	Hacettepe University	Dept. of Geodesy and Photogrammetry Engineering	Ankara	Open-Passive
13	Cumhuriyet University	Dept. of Geodesy and Photogrammetry Engineering	Sivas	Open-Passive
14	Niğde University	Dept. of Geodesy and Photogrammetry Engineering	Niğde	Open-Passive
15	Gediz University	Dept. of Geodesy and Photogrammetry Engineering	İzmir	Open-Passive
16	Okan University	Dept. of Geomatic Engineering	İstanbul	Open-Passive
17	Harran University	Dept. of Surveying/Geomatic Engineering	Şanlıurfa	Open-Passive
18	Gaziosmanpaşa University	Dept. of Geodesy and Photogrammetry Engineering	Tokat	Open-Passive
19	Fırat University	Dept. of Geodesy and Photogrammetry Engineering	Elazığ	Open-Passive
20	Korkut Ata University	Dept. of Geodesy and Photogrammetry Engineering	Osmaniye	Open-Passive
21	Çanakkale Onsekiz Mart University	Dept. of Geodesy and Photogrammetry Engineering	Çanakkale	Open-Passive

Table 2. Surveying/Geomatic/Geodesy and Photogrammetry Engineering Graduate Schools in Turkey

No	University	Institute - Department	City	State
1	Middle East Technical University	Natural and Applied Sciences Institute Geodetic and Geographic Information Technologies Division	Ankara	Open-Active
2	Gebze Institute of Technology	Faculty of Engineering Dept. of Geodetic and Photogrammetric Engineering	Kocaeli	Open-Active
3	İstanbul Kültür University	Natural and Applied Sciences Institute Division of Civil Engineering - Geomatic Program	İstanbul	Open-Active
4	Boğaziçi University	Kandilli Observatory and Earthquake Research Institute Geodesy Department	İstanbul	Open-Active

Table 3. Year 2009 Quotas of Surveying/ Geomatic/ Geodesy and Photogrammetry Engineering Departments in Turkey

No	University	Overall Quota	
		1.Education	2.Education
1	Yıldız Technical University	100	100
2	Karadeniz Technical University	80	80
3	İstanbul Technical University	70	-
4	Selçuk University	80	80
5	Zonguldak Karaelmas University	60	-
6	Gümüşhane University	40	40
7	Ondokuzmayıs University	50	50
8	Afyon Kocatepe University	50	50
9	Erciyes University	50	50
10	Kocaeli University	30	-
11	Aksaray University	40	40
Total = 1140		650	490

Orientations and Threats in Surveying and Geomatic Engineering Education in Turkey

Secondary School Education



Undergraduate Education



In-Service Training → Certification Programs

+

Through to these increase → (Need=Demand Balance)

Orientations and Threats in Surveying and Geomatic Engineering Education in Turkey

- Quality and Accreditation
- Curricula
- Teaching Staff
- Newly Opened Departments

Quality and Accreditation

Problems in Graduate Programs and Recommendations for Them

- National Scale → MÜDEK “Engineering Education Program Evaluation and Accreditation Association”
- International Scale → ABET “Accreditation Board for Engineering and Technology”

Curricula

Problems in Graduate Programs and Recommendations for Them (contd)

■ Curricula

Basic Science Lectures

+

Professional Theoretical and Practical Lectures

+

Social and Cultural Lectures

Accreditation studies, ECTS Credits, Socrates-Erasmus LLP

The Problem: Determination of the lesson context of the profession

Teaching Staff

Problems in Graduate Programs and Recommendations for Them (contd)

No	University	Academic Staff					Total
		Prof.Dr.	Assoc.Prof.Dr.	Assist.Prof.Dr.	Lecturer	Res. Assist.	
1	Yıldız Technical Uni.	9	8	10	-	18	45
2	Karadeniz Technical Uni.	8	2	8	-	14	32
3	İstanbul Technical Uni.	17	10	7	1	19	54
4	Selçuk Uni.	2	1	13	-	18	34
5	Zonguldak Karaelmas Uni.	1	1	3	2	5	12
6	Gümüşhane University	-	-	2	1	2	5
7	Ondokuzmayıs University	1	-	5	1	-	7
8	Afyon Kocatepe University	-	-	4	1	3	8
9	Erciyes University	-	2	4	-	5	11
10	Kocaeli University	3	-	5	-	1	9
11	Aksaray University	-	1	8	-	-	9

Problems in Graduate Programs and Recommendations for Them (contd)

■ Teaching Staff

The Problems:

- * New Founded Departments Deficiencies
- * Any Support to be a lecture at there
- * So Many Students, Less time to Academic Research Projects, Studies, Thesis

Not to accept student upon complete the deficiencies

Newly Opened Departments

Problems in Graduate Programs and Recommendations for Them (contd)

- Newly Founded Departments

Locations and location selections for the departments offering programs should be assessed seriously

Conclusion and Recommendations

Basic problems:

- lack of coordination
- insufficient cooperation
- less participation processes
- insufficient substructure facilities

STRATEGIC PLAN

Solution

Conclusion and Recommendations

Solution;

- Founded a BOARD including head of departments
- Enlarged with heads of divisions
- Universities + HKMO + Private & Public Sector → components

“Investments on education do not yield results in short-term...”

Conclusion and Recommendations

Candidates;

- * should have a high level cultured
- * should carry a love for human and nature
- * should know a foreign language at advance level
- * should have an advanced knowledge of the current professional software
- * should know the law related to our profession
- * should learn the management of the human and knowledge resources, and have management skills
- * should be well versed/ knowledgeable not only in professional aspects but also in social aspects
- * must own professional ethic
- * should specialize in certain issues
- * should know and follow current professional activities
- * must detect and evaluate the global strategies
- * can understand, illustrate the professional problems, and must be able to do cost analysis

