

**Information Technology and GIS - GED554**

**Instructor: Prof.Dr. Haluk Özener**

- Introduction to the course.
- What is GIS? Defining IT, Hardware components, software, algorithms and programs
- Data models, Vector and Raster Data Model, Basic database management, computers and databases
- GIS and DBMS, GIS data structure, Overlay analysis, Management support systems, Web and cooperate databases, data warehouse
- Using XML and UML for spatial data modeling, standard query language (SQL)
- Spatial fields in GIS and using GIS for integrated watershed management
- Data storage techniques, Relational databases (Access, Oracle), Metadata
- Web based GIS, security tools for GIS, social issues about data sharing (such as copyright)
- GIS in Action, Different applications, Making Maps with GIS, Future of GIS
- How to pick a GIS, Examples of GIS software (ArcView, Map Info, ArcInfo, ArcGIS)