The learning objective of the course is to prepare graduate students with a solid background to perform information retrieval and database-related research and development. Through this course, students will learn the various aspects of information retrieval, use, and models for Web and the Internet, database-modeling techniques, emerging needs and approaches to data and information integration. Additional topics will be covered based on the interests of the students in the class, the focus areas of the instructor, and the emerging topics and problems in information retrieval and the World-Wide Web. The course lays a solid foundation for students interested in doing research related to these areas.