

Optimal Web-based System for Subject Selection for TSU Students

Ana Asatiani ^a, Mariam Nadiradze ^B.

Email: ana.asatiani247@ens.tsu.edu.ge

^a Computer Science, Faculty of Exact and Natural Sciences,
Tbilisi State University, Ilia Chavchavadze N1

The present paper is dedicated to the optimization of the course selection process for students of Ivane Javakhishvili Tbilisi State University through the use of modern web technologies. The existing course registration process is often associated with academic errors, overloaded semesters, and curricula that are insufficiently clear for students, which negatively affects both individual academic progress and the efficient management of university resources.

The paper presents the concept of an automated web-based system that takes into account the analysis of a student's academic status, completed and failed courses, prerequisite control, and the optimal distribution of semester workload. The system provides users with personalized recommendations during course selection, thereby reducing the risk of incorrect registration and supporting effective academic planning within optimal timeframes.

The project is also significant for university administration, as it enables the analysis of course demand, the management of student flows, and more efficient planning of academic processes. The proposed web system contributes to simplifying the course registration process, reducing academic errors, and improving the overall educational environment.

The results of the study may be applied not only at Tbilisi State University but also at other higher education institutions where the automation and optimization of the course selection process are relevant.