

Strategic Plan – SZTE Doctoral School of Mathematics

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The Strategic Plan of the Doctoral School of Mathematics (MatDI) at the University of Szeged defines three main directions: maintaining and improving the quality of education, strengthening scientific excellence and international competitiveness, and enhancing the social and economic impact of doctoral training.

1. Mission and Strategic Goals

The mission of the Doctoral School of Mathematics is to serve as one of the world-renowned centers of Hungarian mathematical research, support the development of new scientific talent, reinforce the international embeddedness of its research and training programs, and place the accumulated knowledge at the service of national and regional scientific, economic, and industrial development.

1.1. Main Strategic Areas

- **Enhancement of Educational Quality:** Improve the degree completion rate, optimize the educational process leading to the final certificate and comprehensive exam, promote international (Q1–Q2) publication activity, and support personalized learning pathways.
- **Strengthening International Relations:** Increase participation in foreign scholarships, joint degrees, regular invitations for guest lecturers, and involvement in global research projects.
- **Scientific Excellence:** Ensure teaching and supervisory excellence, mentor emerging researchers, support research groups, operate scholarship programs for young talents, facilitate attainment of the Hungarian Academy of Sciences doctorate, and promote interdisciplinary research.
- **Societal and Economic Integration:** Expand research in industrial and applied mathematics, strengthen regional connections, develop mathematics didactics and teacher training, and integrate practical research topics into the doctoral program.

2. Goals and Indicators

- **Increasing Degree Completion Rate and Time Optimization:** Monitor annually the proportion of students obtaining their certificate and degree, identify dropout reasons, and reduce dropout through targeted mentoring.
- **Student Publication Performance:** The goal is for each doctoral candidate to publish at least one paper in a Q1–Q2 journal during their studies; this performance is continuously evaluated in annual reports.
- **International Mobility:** Raise the proportion of doctoral candidates participating in international mobility programs (Erasmus, Fulbright, joint programs), increase the ratio of English-language programs and materials, and the number of international students.
- **Development of Faculty:** Continuously audit the scientific quality and competencies of supervisors and faculty; operate a system of scholarships and recognitions (e.g., Móricz Ferenc Foundation).
- **Quality Assurance Processes:** Regular (annual) review of curricula, regulations, and quality assurance plans; analysis of student and staff feedback; documentation of self-assessment and development measures.

3. Key Actions and Processes

- **Regular Discussion of Professional and Educational Strategies:** Foster communication and cooperation among the Council, supervisors, and student body; strategic goals and development directions are treated as regular agenda items.
- **Infrastructure Development:** Continuous improvement of IT equipment, library and journal subscriptions, dedicated PhD study spaces, and guaranteed access to scientific databases.
- **Engagement of External and Internal Stakeholders:** Regular involvement of research institutes, industrial partners, and international collaborators in the development and updating of curricula and research topics.
- **Doctoral Student Support and Integration:** Operate a mentoring network, organize integration programs, provide regular orientation, bilingual information, and inclusive, supportive administration.

4. Review and Monitoring

- **Annual Quality Assurance Report:** Collection and evaluation of statistical data, performance indicators, analysis of dropout and mobility, and annual recording of dissertation and publication metrics.
- **Development Cycle:** Operate according to the PDCA (plan-do-check-act) model: strategic planning, implementation, evaluation, correction, and integration of feedback into planning for the next year.

5. Summary

The aim of the Strategic Plan is to ensure that the Doctoral School of Mathematics maintains and develops its world-class professional reputation, secures the quality of doctoral education, supports the professional development of researchers and students, increases its international presence, and strengthens its industrial and societal impact. All actions and indicators are continuously monitored and reviewed, with feedback forming an integral part of the strategy.