

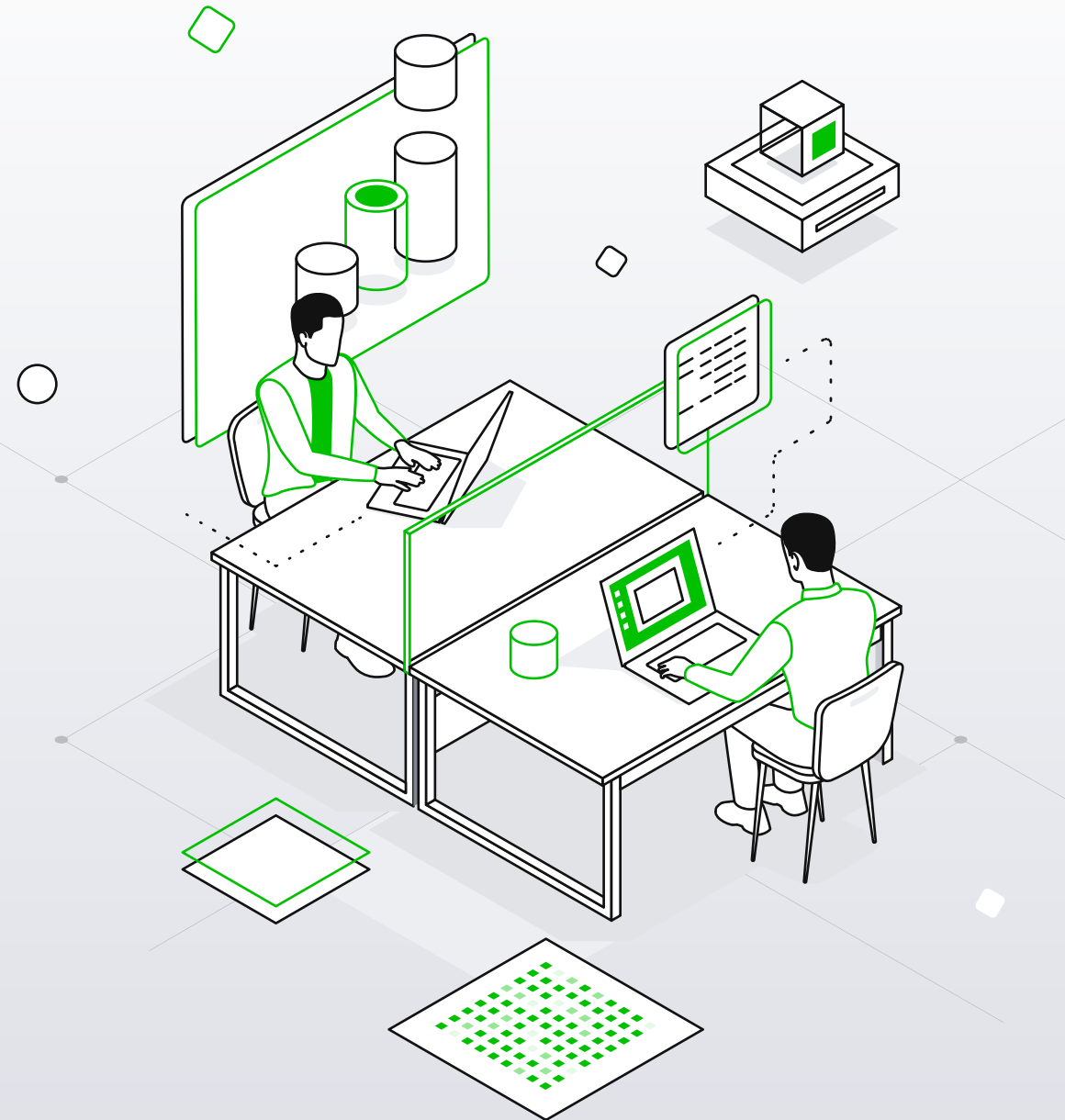
SOFTWARE ENGINEERING

International Bachelor's programme



The purpose of the educational programme

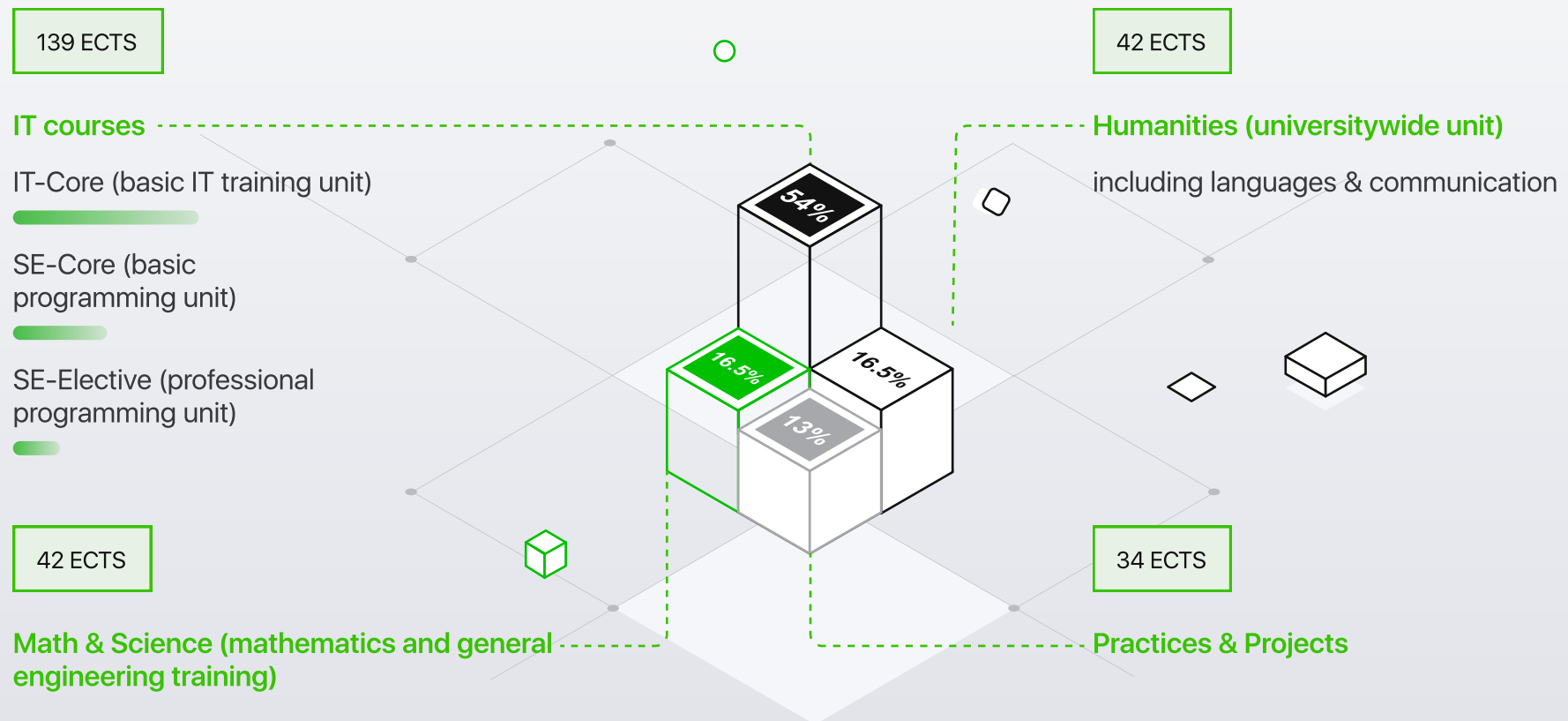
To train competitive Junior and Middle programmers who can start a professional career after the first year of study. The programme is designed in accordance with the modern job market requirements. Students will gain a unique set of competencies that help to become an effective software developer in an international IT company.



Characteristics of the education programme.

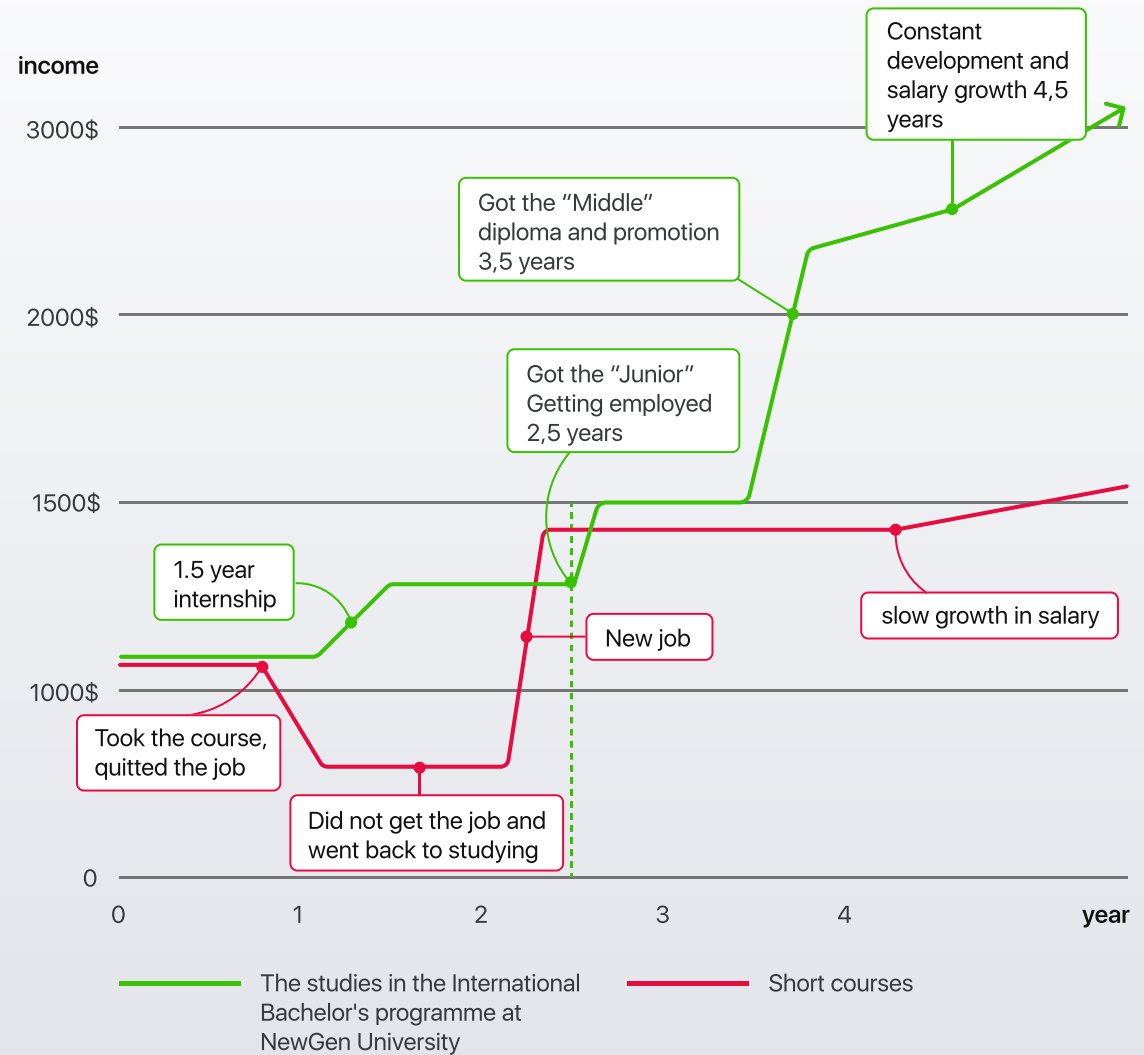
At the core of the programme are real IT market requirements.

We are constantly working on improving and updating of our education programme, so that our university graduates could show themselves in front of potential employers.



Why does the programme last 4 years but not 4 months?

Standard courses promise to turn a beginner into a qualified programmer in 3-4 months. This is a false claim. In order to gain major practical skills it is required to devote effort and time to your studies. By the end of our programme "Software Engineering" of NewGen University it is easy to find a job and perform high level and well-paid tasks. According to our practice, students who have finished short-term courses face problems and they have to complete their studies on their own closing gaps in basic education, which takes years. After 10 years, such programmers regret that they did not receive a fundamental education at the very beginning of their career.



Uniqueness

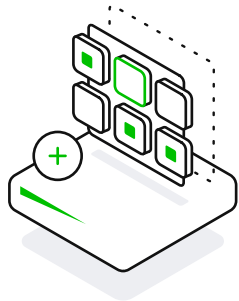


Fundamental programming training

Will make it easier to master any language, staying on trend in the changing market of IT solutions



Specialization for a specific employer in the last year of study for a quick career start



Diverse skillset

Valuable skills of a business analyst, QA engineer, DevOps engineer, network and system administrator, DBMS administrator



Intensive English language training

Integration into international teams will help you become in demand on the global labor market

Uniqueness



80% of educational materials are automated



The digital footprint is stored, analyzed and used for personalization and adaptive learning



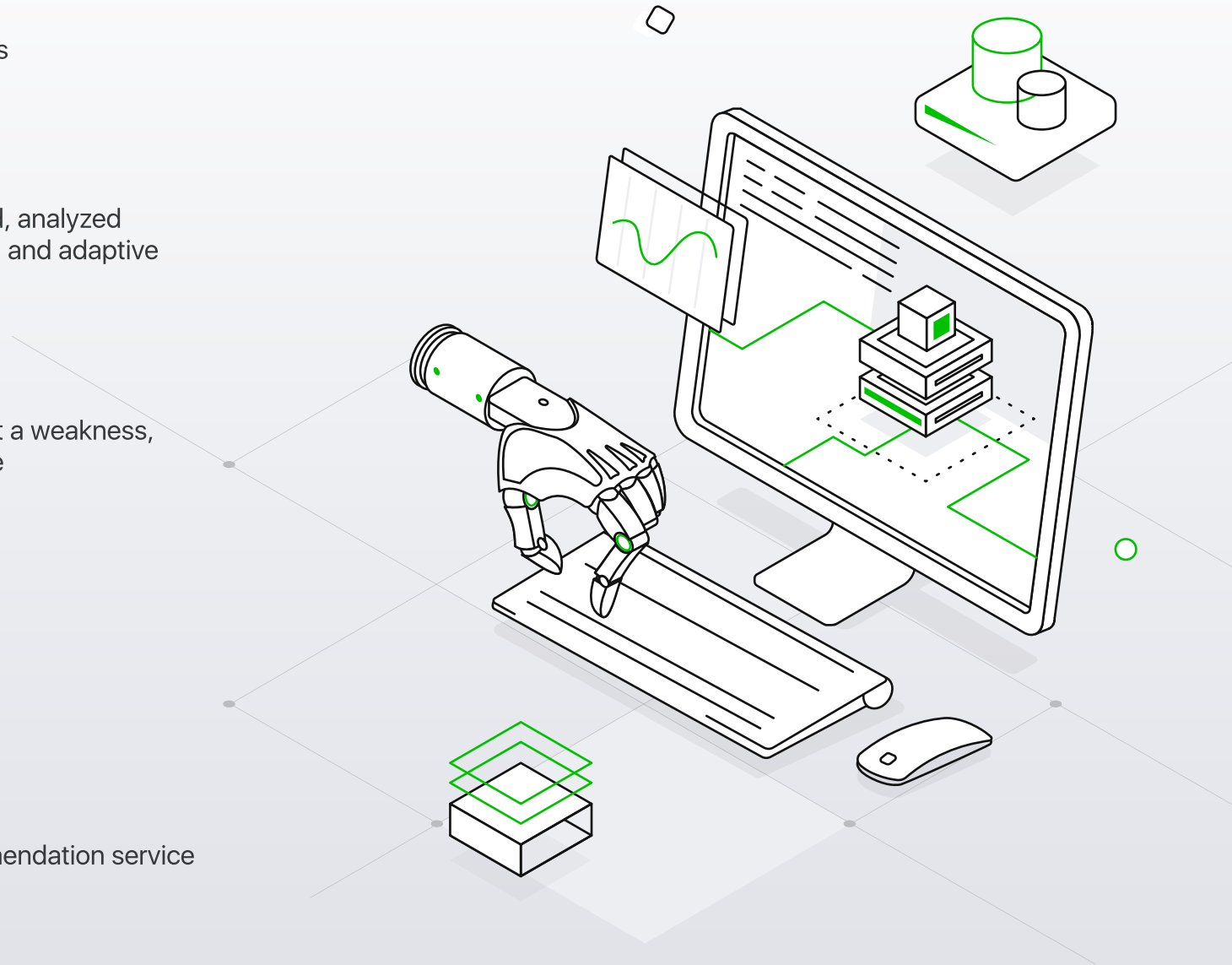
Using external content is not a weakness, but a competitive advantage



Individual curriculum



Specializations as a recommendation service



Features of training

3 steps

Tasks solved at stages

Starting a career from a basic position

- typical tasks based on major programming languages
- analyzing other people's code for errors and selecting solutions
- ability to work with the company's technologies and standard cases
- building communication in a team

Junior

Fields of knowledge

Algorithms and data transformation - to create optimal code

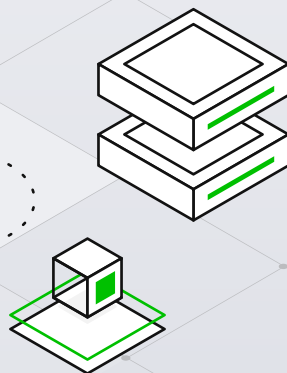
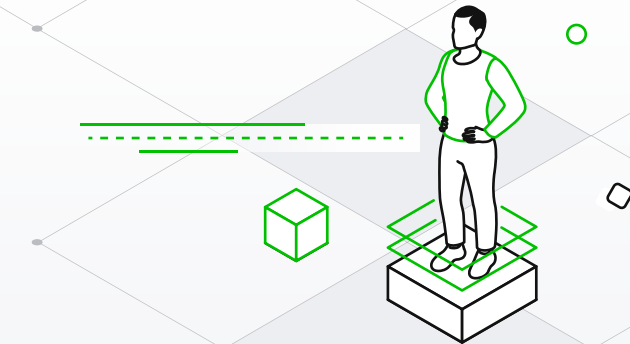
Computer and operating systems - for efficient use of resources and task automation

Working with databases - for effective data management using MySQL, PostgreSQL

Software and construction architecture - for understanding the solution architecture and the relationship of program elements (SOLID, MVC)

Programming languages - to understand their applicability for front-end and back-end development, to develop an understanding of the difference in programming approaches and their applicability in stacks (Python, HTML/CSS, Java, JavaScript, C#, C++, PHP)

Frameworks and library - for creating project architecture and solving typical problems. This knowledge will allow us to reduce the amount of work in the future and automate the routine (React, NodeJS, aAngular, Django)



Features of training

3 steps

Tasks solved at stages

Confident technology skills

- understands product architecture, product context
- performs more complex tasks, decomposes and prioritizes them
- makes constructive suggestions for plans, design and process
- capable of mastering new business logic
- uses testing and code optimization technologies
- applies the principles of project activity and effective communication in the team

Middle

Fields of knowledge

development and analysis of requirements - to understand the logic of the process, creating easy-to-analyze and change code using programming patterns

software quality and its maintenance - for understanding the testing process, creating automated tests and developing a responsible approach to the code being created

basics of version control, CI/CD, making changes to code and managing software maintenance - to develop debugging and troubles skills

infrastructure, economics and management - for the ability to plan work, perform it in a team using project management methodology in the IT field (Waterfall, Agile, Scrum), as well as understanding the economic and financial components of software development

general cultural knowledge and soft skills - in addition to the required disciplines (History, Philosophy, Law...), the student receives an understanding of the main trends in the development and digitalization of society, his role as an IT employee and the prospects for professional activity



Features of training

3 steps

Tasks solved at stages

Expanding areas of knowledge and choosing specialization

- learning and applying new popular programming languages to implement projects both as part of training and during internships in companies

Companies from IT industry will be invited to cooperate in order to select specialization and organize project activities

Fields of knowledge

Big data

Mobile app development (Kotlin, Swift...)

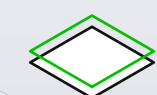
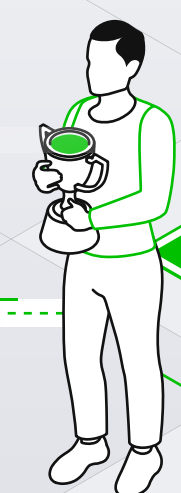
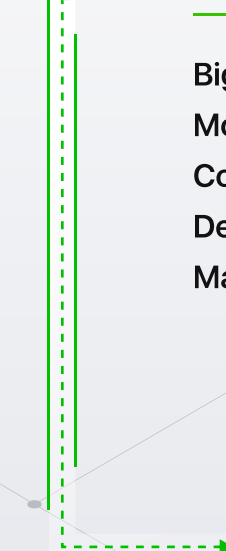
Computer Games Development (Unity...)

DevOps engineer (CI/CD, Bash, Docker, AWS, Ansible...)

Machine learning and artificial intelligence



Getting a job



Mechanisms for assessing the quality of the educational programme

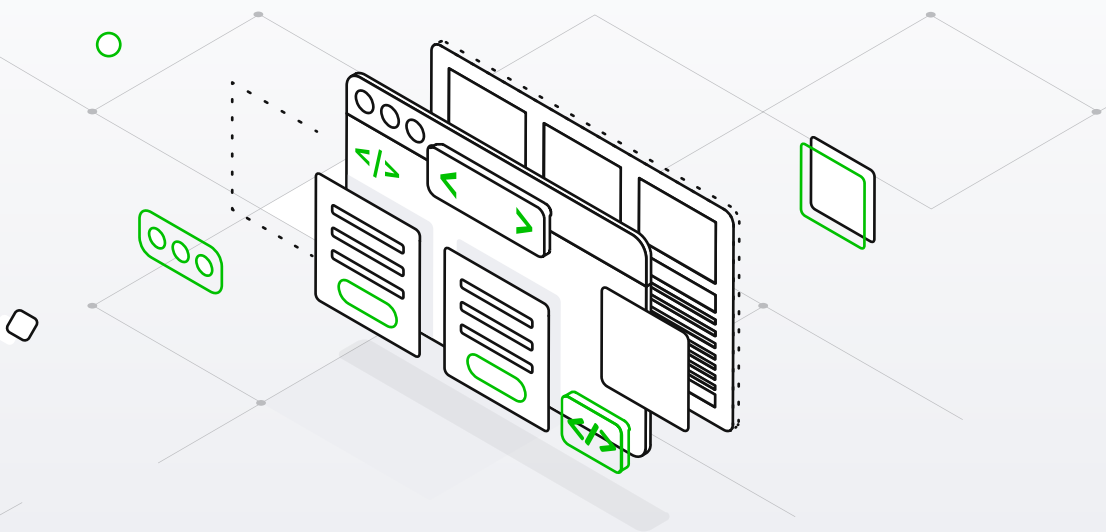
Simulators with code auto-checking

During training, students constantly practice programming skills. Developed at the University of California, Berkeley, the automated checking service Gradescope will instantly evaluate the correctness of the code, mark and comment on errors



Mutual assessment

Upgrading of teamwork skills - students evaluate the quality of assignments and case solutions from fellow students and conduct a code review



Cases from employers

During their studies, students perform real-life cases from IT companies - partners of NewGen University



The creator of the project is Togliatti State University, which is an officially recognized leader in online education in the segment of higher education in Russia

Togliatti State University is the winner of:

- The Russian Federation Government Prize for Quality (2009, 2019), Prize in the field of education of the Government of the Russian Federation (2023)
- The Intergovernmental Award in «Recognition of Business Excellence» of the CIS Quality Award (2011)
- The title of an Honorary Member of the Chamber of Commerce of the Russian Federation
- The certificate «Atomvoensert» in the voluntary certification system «Military Register»
- The certificate of recognition of competence of the Certification System for Nanoindustry Products «NANOCERTIFIC» of JSC «Rusnano»
- Accreditation for Testing in the Unified National Accreditation System of the Russian Federation
- The 1st place of the All-Russian contest for professional project management «Project Olympus - 2019» in the nomination «Project Management in the System of Higher Education and Science»
- The status of the federal innovation platform of the Ministry of Science and Higher Education of the Russian Federation from 2013 to 2018, from 2019 to 2021 and from 2023 to 2027

Degree of Governmental University of Russia (Togliatti State University)



Training Period - 4 years



Tuition fee - \$990 per year (applicants can receive up to 100% study grant)



Admission all year round



Admission office

✉ admission@newgen.university

🌐 <https://www.newgenuniv.com/>

International Executive Togliatti State University

📞 +91 8826 399 731 (Mariia Semenova)

✉ togueducation@gmail.com