**Course Syllabus**

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| **Title of the course** | **Technology Innovation Management** |
| Title of the Academic Programme  | MAGO LEGO |
| Type of the course  | Elective |
| Prerequisites |  |
| ECTS workload | 8 |
| Total indicative study hours | Directed Study | Self-directed study  | Total |
| 32 | 82 | 114 |
| Course Overview | The aim of the course is to give the students basic knowledge on technology management including:* Commercialization of knowledge and competence
* Modern trends in technology markets
* Industry as the principle technology recipient
* Process of technology transfer and related topics
* Technology entrepreneurship: management upside down
* Immaterial assets in technology management and Intellectual property basics and commecialization
* Open innovation and efficient business models of innovation management in universities and industry
* Communications as a principle process in TM

The course is mosly structured around practical issues, based the first hand experiences and borrowed examples from Russian and foreign practices. The practical part of the course involves small group and personal exercises in technology scouting, Technology Readiness Levels (TTL) evaluation, startup strategy and business development. All the examples will be taken from real life and bear practical value beyond purely educational purposes. Guest lectures and seminars, as well as cooperation in practical exercises will be given tech startup teams, business incubators and accelerators’ management, venture fund experts and other related speakers |
| Intended Learning Outcomes (ILO) | After the course completion, the student is expected to* Understand the basics of technology management and innovation commercialization, including specifics of the Russian situation
* Understand and be able to use concepts and practices in innovative entrepreneurship
* Understand and be able to apply basic concepts and tools in technology marketing and scouting
* Understand and be able to assess technology readiness levels and make corporate investment decisions
* Understand the basics of innovation and technology management at the universities, in industry and within innovation infrastructure (venture funds, business incubators, technoparks, engineering centers, etc)

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| Teaching and Learning Methods | Teaching and learning methods include lectures, seminars, group work, practical home assignments, progress tests, case studies. |
| Content and Structure of the Course |
| **№** | **Topic / Course Chapter** | **Total** | **Directed Study** | **Self-directed Study** |
| **Lectures** | **Tutorials** |
| 1 | **Trends in modern economy.**  Innovative economy. Information-based and digital economy. Platforms. New business models. Societal and political impact. Impact on education and employment landscape.  | 4 | 4 | 0 | 10 |
| 2 | **Basics of technology foresights and innovation commercialization.** S-curve and Gartner. Technology-market dualism and reciprocity. Evolutionary aspects of new technology emergence. Classification of innovations. Scenaria and process of innovation commercialization. | 4 | 4 | 0 | 10 |
| 3 | **Industrial innovations.** Open innovation concepts and practices. Strategic perspectives of industrial innovation development. Corporate open innovation instryments instruments. Corporate cultures. Technology transfer.  | 4 | 4 | 0 | 10 |
| 4 | **Evidence based entrepreneurship.** Lean startup. Customer discovery and verification. Business models and financial models from scratch. Where to get funding – venture and corporate venture, institutes of development.  | 4 | 4 | 0 | 10 |
| 5 | **Practicum: Technology Foresight****Practicum: Industry innovations**  | 16 | 0 | 16 | 42 |
| **Total study hours** | 32 | 16 | 16 | 114 |
| Indicative Assessment Methods and Strategy  | The course assessment consists of four parts:• Class work. Students’ individual and group work at the seminars in the form of communications, problems solving etc.• Group course project. A project presented in the written form (presentation) and verbally at the class.The amount of points that student can obtain for each part is 10 points. The Final Grade is calculated using the formula:Final Grade = 0,3\*Class Work Grade + 0,7\*Group Course Project Grade |
| Readings / Indicative Learning Resources | MandatoryLecture notesOptionalChesbrough, Henry, Open InnovationsMartino, Joseph, Technological Forecasting for Decision MakingSteve Blank, Four Steps to epiphany |
| Indicative Self- Study Strategies | **Type** | **+/–** | **Hours** |
| Reading for seminars / tutorials (lecture materials, mandatory and optional resources) | + | 20 |
| Assignments for seminars / tutorials / labs | + | 20 |
| E-learning / distance learning (MOOC / LMS) | - | 20 |
| Fieldwork | + | 20 |
| Project work/Case study | + | 40 |
| Other (please specify) | - |  |
| Preparation for the exam | + | 16 |
| Academic Support for the Course | Academic support for the course is provided via LMS, where students can find: guidelines and recommendations for doing the course; guidelines and recommendations for self-study; samples of assessment materials |
| Facilities, Equipment and Software | Tablet or notebook, internet access, presentation equipment |
| Course Instructor | Igor Rozhdestvenskii |