

Federal State Autonomous Educational Institution of Higher Education "Peoples'
Friendship University of Russia"

Faculty of Economics
Department of National Economy

Recommended by MSSN / MO

**Program and Description
of the Course**

TECHNOLOGY TRANSFER IN RUSSIA AND ABROAD

Master Program "International Business"
field 38.04.01 "Economy"
specialization "International Business"

Qualification (degree) graduate: Master Degree

1. Goals and objectives of the discipline

The main goal of the course is formation of knowledge and the basic concepts of essence and a role of a transfer in innovative economy, bases of the state and interstate regulation of process of transfer of technologies, features of a transnational, interregional and interindustry transfer of technologies, as well as skills of the analysis of systems, tools, methods and mechanisms of a transfer of technologies.

To achieve this goal in the course of teaching the following tasks are solved:

- to study essence, the place and a role of a transfer of technologies in innovative economy, feature of institutional interaction of participants of innovative process in Russia and foreign countries;
- to master methods and instruments of advance of innovative technologies;
- to analyse features of a transnational, interregional and interindustry transfer of technologies;
- to study bases of state regulation of a transfer of technologies and also questions of protection of results of intellectual activity at transfer of technologies in the Russian Federation.

2. The place of discipline in structure of the Study plan

This discipline is a course on selection for master students with specialization in International Business.

Table No. 1 shows the previous and subsequent disciplines aimed at the formation of the competencies of the discipline in accordance with the competency matrix of OP VO.

3. Requirements to results of development of discipline

In accordance with the OS VO RUDN, as a result of mastering the master's program "International Business", the graduate develops the following competencies:

Universal competencies (UC):

- UC-1. Able to search for and critically analyze problem situations based on a systematic approach, and develop a strategy for action.
- UC-2. Able to manage a project at all stages of its life cycle.

- UC-4. Able to apply modern communication technologies in the state language of the Russian Federation and foreign language(s) for academic and professional interaction

General professional competencies (GPC):

- GPC-1. Able to apply knowledge (at an advanced level) of fundamental Economics in solving practical and/or research problems.
- GPC-4. Able to make economically and financially sound organizational and managerial decisions in professional activities and be responsible for them.

Professional competencies (PC):

PC-1. Able to analyze and forecast the main socio-economic indicators of the enterprise, industry, region and the economy as a whole.

PC-2. Able to develop design solutions, strategies for the behavior of economic agents and evaluate their effectiveness.

PC-3. Able to independently carry out research activities and critically evaluate the results obtained.

As a result, the student must:

Know:

- the place and role of a transfer of technologies in innovative economy;
- basic trends of development of innovative activity of the company;
- the main approaches to the commercialization of innovations;
- rates of the innovation process;
- types of innovations, their development and intensity;
- forms of interaction of participants of the innovation process;
- the main sources of financial support for innovation;
- national and international regulation of innovative activity and a transfer of technologies.

To be able:

- analyze systems, tools, methods and mechanisms of a transfer of technologies;
- use key tools and methods of innovative technologies advance

Possess:

- skills in innovation analysis;
- practical skills of analysis, evaluation and calculation of economic efficiency of innovative projects;
- methods and instruments of advance of innovative technologies.

4. The work load of discipline and types of training activitiesCredit hours for the discipline are **3 credit units (one semester)**

| Type of study | | In total hours | Semester | | |
|--------------------------------------|--------------|----------------|------------|---|---|
| | | | 1 semester | | |
| Classroom occupations (total) | | 36 | 36 | | |
| Including: | | - | - | - | - |
| Lectures | | 18 | 18 | | |
| Seminars | | 18 | 18 | | |
| Independent work (total) | | 72 | 72 | | |
| The overall credit hours | hour | 108 | 108 | | |
| | credit units | 3 | 3 | | |

5. Content of the discipline**5.1. Contents of the section of discipline**

| № | Sections of the discipline | Section content (topics) |
|----|--|---|
| 1. | Section 1. Essence, the place and role of a transfer of technologies in innovative economy | Topic 1. Concept of a transfer. Features and the key principles of the innovative focused economy. Topic 2. Institutional interaction of participants of innovative process Topic 3. Formation and development of a system of a transfer of technologies in Russia and abroad |
| 2. | Section 2. Modern conditions of a system of a transfer of technologies and its regulation | Topic 4. Methods and instruments of advance of innovative technologies Topic 5. State regulation of a transfer of technologies. Topic 6. Features of a transnational, interregional and interindustry transfer of technologies Topic 7. Problems of results protection of intellectual activity at technology transfer in the Russian Federation |

Contents of sections and topics of discipline

Section 1. Essence, the place and role of a transfer of technologies in innovative economy

Topic 1. Concept of a transfer. Features and the key principles of the innovation- oriented economy.

Properties, features, components of innovations. Rates of the innovation process. Types of innovations, their development and intensity. An entity, the place and a role of a transfer of technologies in the innovation economy. Transfer of technologies: forms and methods.

Topic 2. Institutional interaction of participants of the innovation process.

Concept of the Triple Helix Model and its transformation. Forms of interaction of participants of the innovation process.

Topic 3. Forming and development of a system of a transfer of technologies in Russia and abroad.

The systems of a transfer of technologies in Russia and foreign countries.

Section 2. Modern conditions of a system of a transfer of technologies and its regulation

Topic 4. Methods and instruments of advance of innovative technologies.

Key tools and methods of innovative technologies advance.

Topic 5. State regulation of a transfer of technologies.

National and international regulation of a transfer of technologies.

Topic 6. Features of a transnational, interregional and interindustry transfer of technologies.

Regional, interregional, interindustry and transnational technological transfer.

Topic 7. Problems of results protection of intellectual activity at technology transfer in the Russian Federation.

Protection of interests of the innovative process participants.

5.2. Thematic sections and interdisciplinary connection with other disciplines.

Discipline is taught in the second semester of the master's program and does not require follow-up training courses.

5.3. Workload composition

| TOPIC | Lectures (h) | Seminars (h) |
|--------------|-------------------------|-------------------------|
|--------------|-------------------------|-------------------------|

| | | |
|--|-----------|-----------|
| Topic 1. Concept of a transfer. Features and the key principles of the innovative focused economy | 2 | 2 |
| Topic 2. Institutional interaction of participants of innovative process | 4 | 2 |
| Topic 3. Formation and development of a system of a transfer of technologies in Russia and abroad. | 2 | 2 |
| Topic 4. Methods and instruments of advance of innovative technologies. | 2 | 4 |
| Topic 5. State regulation of a transfer of technologies | 2 | 2 |
| Topic 6. Features of a transnational, interregional and interindustry transfer of technologies. | 4 | 2 |
| Topic 7. Problems of results protection of intellectual activity at technology transfer in the Russian Federation. | 2 | 4 |
| Total | 36 | 18 |

6. Laboratory workshop

The laboratory workshop isn't provided.

7. Practical exercises (seminars)

| № п/п | Sections of the discipline | Topics | Work load (hours) |
|----------|--|---|-------------------------|
| 1. | Section 1. Essence, the place and role of a transfer of technologies in innovative economy | Seminar 1. Concept of a transfer. Features and the key principles of the innovative focused economy | 2 |
| | | Seminar 2. Institutional interaction of participants of innovative process | 2 |
| | | Seminar 3. Formation and development of a system of a transfer of technologies in Russia and abroad | 2 |
| 2. | Section 2. Modern conditions of a system of a transfer of technologies and its regulation | Seminar 4. Methods and instruments of advance of innovative technologies | 4 |
| | | Seminar 5. State regulation of a transfer of technologies | 2 |
| | | Seminar 6. Features of a transnational, interregional and interindustry transfer of technologies | 4 |
| | | Seminar 7. Problems of results protection of intellectual activity at technology transfer in the Russian Federation | 2 |
| | Total | | 18 |

8. Sample topics for presentation and discussion

1. Historical features and models of formation of integration of innovative process participants (*different countries*).
2. Foreign experience of formation and development of technology transfer systems (*different countries*).
3. Technology transfer in countries in transition.

4. Technology entrepreneurship in a research university.
5. The current state of a technology transfer system in the conditions of integration of economies.
6. Instruments of advance of innovative technologies.
7. Mechanisms of a transfer of technologies.
8. State regulation of a transfer of technologies.
9. Norms of interstate regulation of a transfer of technologies.
10. Features of a transnational transfer.
11. Regional and interregional transfer.
12. Features of an interindustry transfer of technologies.
13. Problems of protection of results of intellectual activity at transfer of technologies in the Russian Federation (*other country*)

9. Methodical and informational support

BASIC SOURCES:

1. Karzanova I.V., Solovieva Yu.V., Zaynullin S.B., Paleev D.L., Samuseva T.V. Economics of innovative activity of enterprise, RUDN, RUDN Library, 2017. Electronic file from RUDN Library: <http://lib.rudn.ru/ProtectedView/Book/ViewBook/6322>

ADDITIONAL SOURCES:

1. Human Development Index. Electronic file from open Internet sources. URL: <http://hdr.undp.org/en/statistics/hdi>
2. The Global Innovation Index. Electronic file from open Internet sources. URL: www.globalinnovationindex.org
3. The National Center for Scientific Research (CNRS). Electronic file from open Internet sources. URL: <http://www.cnrs.fr/en/aboutcnrs/overview.htm>

Information support of the discipline

Microsoft Office 2010, Mentor: databases, reference and search systems.

Database UNIBCR RUDN:

- Electronic catalog is a base of books and periodicals in the library of the RUDN Library.

Electronic resources - including the section: Licensed resources of UNIBC (NB):

- University Library ONLINE
- SPRINGER. Book collections of publishers
- Vestnik RUDN
- East View

Universal databases

- eLibrary.ru
- Grebennikon
- Library PressDisplay
- SwetsWise
- Swets Wise online content
- University of Chicago Press Journals
- Books by Alpina Publishers
- Electronic library of dissertations of the RSL

Database "Multilingual Glossary of Terms", information bibliographic databases of the Institute of Scientific Information on the Russian Federation, Database of Russian Federation Normative Acts: ConsultantPlus: VersionProf. ON-LINE VERSION, Database on business and economy (Business Source Complete).

10. Software

OC MS Windows (XP), MS Office 2010, Mentor, Leading business Games 2010-2012.

Logistical support discipline:

- classrooms (rooms) at the workplace for lectures (depends on the number of students) and for seminars (the number of students in separate groups);
- board;
- desktop PC with Microsoft Office 2007;
- multimedia projector;
- portable equipment - a laptop and a projector;
- screen (stationary or portable floor).

| № aud. | Name-equipped classrooms | List of main equipment |
|-----------------|---------------------------------|---|
| 17 | Classroom | Multimedia Projector - 2 pcs., Sound Tribune - 1 pc., Screen - 2 pcs. |
| 19 | Computer Class | Computers Pentium 4-1700/256MB/cd/audio - 21 pcs., Multimedia projector PanasonicPT-LC75 - 1 pc., The screen is 1 unit. |
| 103 | Classroom | Multimedia Projector - 1 pc., |
| 105 | Classroom | Multimedia Projector - 1 pc., |
| 1 | Classroom | Multimedia Projector - 1 pc., |
| 2 | Classroom | Multimedia Projector - 1 pc., |
| Conference hall | Classroom | Multimedia Projector - 1 pc., Sound equipment |
| Hall 4 Library | Classroom | Multimedia Projector - 1 pc., |

There are 770 library workstations in the reading rooms of PFUR library. Reading and lending rooms of the Academic and Research Library are located in 5 university buildings. Some rooms are used for group work, 3 rooms are equipped with multimedia devices. Internet access is provided in the library via Wi-Fi.

There are more than 17000 Library readers. Library fund contains 1.800.000 books and is increased monthly. The funds are universal, they are formed by the discipline principle. It is increased due to departments' orders. The library staff counts 43, 36 of them have university degrees, 90% are computer competent.

Electronic catalogue has been compiled since 1990. Since 2010 PFUR e-library system has provided readers with information and full-text document access.

Book lending is done automatically. The free access room is equipped with self-service lending station applying RFIT-technology.

All PFUR computers provide access to PFUR e-library system and electronic sources. The platform for information, service and resource access is available at the library website <http://lib.rudn.ru/>.

11. Guidelines on the organization of the discipline

Types of classes and teaching methods.

The implementation of the course includes interactive lectures, practical sessions (workshops) including multimedia equipment and an interactive tutorial, the independent creative works and their subsequent presentation, testing, group discussions on topics of the course.

| | |
|---------------------------|--|
| Lectures | The classroom form of instruction in which the main provisions of the academic discipline are given. The ultimate goal of the lectures is the achievement by students of the degree of mastering the theoretical knowledge they need for further professional activity. The form of the lecture can be both traditional and interactive. |
| Seminars | A classroom dialogue form of classes on one of the course topics, involving the active participation of students (all or some of them), aimed at developing their skills of independent theoretical analysis of the problems addressed in the course, including by studying texts of primary sources, accumulating practical experience in solving typical professional tasks. |
| Group academic counseling | The main task of group academic counseling is a detailed or in-depth examination of some theoretical course topics, the development of which, as a rule, makes it difficult for some students. At the request of students, it is possible to introduce additional ones for discussion: topics of particular interest to them that do not receive sufficient coverage in the lecture course. This form of study is mandatory for the teacher, the student has the right not to take part in such a consultation if he has successfully mastered this section of the course on |

| | |
|--------------------------|--|
| | his own or the additional topic being discussed does not interest him. |
| Individual consultations | An out-of-class form of a teacher's work with an individual student, implying discussion of those sections of the discipline that were not clear to the student, or caused by the student's desire to work on writing a course or final qualifying work for the course being studied. |
| Independent work | Reading the recommended literature (mandatory and optional), preparing for oral presentations, preparing for written examinations (midterm, final tests), writing essays, essays, term papers and final qualifying works; as well as other types of work required to complete the curriculum |

Terms and criteria for grading

From students are required to attend lectures and seminars, mandatory participation in the certification tests, the performance of the teacher's assignments. Especially appreciated is the active work at the seminar (the ability to lead a discussion, a creative approach to the analysis of materials, the ability to clearly and concisely formulate their thoughts), as well as the quality of the preparation of quizzes (tests) and reports.

Evaluation of the discipline being taught is based on the results of the study, demonstrated by students throughout the entire period of study (usually a semester). The final grade is determined by the amount of points received by students for various types of work during the entire period of study provided by the curriculum.

All types of educational work are carried out exactly in the terms stipulated by the training program. If a student, without good reason, did not complete any of the study tasks (he missed the test, passed the abstract later, etc.), then points are not awarded for this type of study, and the works prepared after the due date are not evaluated.

The final grade for the discipline is set in accordance with the sum of the points scored, which consists of the following elements (maximum 100 points):

- Current work in the classroom - 10
- Active work on seminars - 30 points
- Midterm evaluation - 20 points
- Referat and presentation - 20
- Final evaluation - 20 points

Score-rating system of knowledge assessment, rating scale

| BRS points | Traditional RF ratings | ECTS |
|------------|------------------------|--------|
| 95 - 100 | Excellent - 5 | A (5+) |
| 86 - 94 | | B (5) |
| 69 - 85 | Good - 4 | C (4) |

| | | |
|----------|--------------------|---------|
| 61 - 68 | Satisfactory - 3 | D (3+) |
| 51 - 60 | | E (3) |
| 31 - 50 | Unsatisfactory - 2 | FX (2+) |
| 0 - 30 | | F (2) |
| 51 - 100 | Test | Passed |

Description of ECTS ratings:

A (“Excellent”) - the theoretical content of the course has been mastered completely, without gaps, the necessary practical skills of working with the mastered material have been formed, all the training tasks provided by the training program have been completed, the quality of their implementation is estimated by the number of points close to the maximum.

B (“Very Good”) - the theoretical content of the course has been fully mastered, without gaps, the necessary practical skills of working with the mastered material are basically formed, all the training tasks provided by the training program are completed, the quality of performance of most of them is assessed by the number of points close to the maximum.

C (“Good”) - the theoretical content of the course has been fully mastered, without gaps, some practical skills of working with mastered material are not sufficiently developed, all the training tasks provided for by the training program are completed, the quality of performance of none of them is assessed by the minimum number of 5 dollars, some types of tasks are completed with errors.

D (“Satisfactory”) - the theoretical content of the course has been partially mastered, but the gaps are not essential, the necessary practical skills of care with the material mastered are mostly formed, most of the training tasks provided by the training program are completed, some of the completed tasks may contain mistakes.

E (“Mediocre”) - the theoretical content of the course has been partially mastered, some practical skills have not been formed, many of the training tasks provided by the training program have not been completed, or the quality of performance of some of them is assessed by the number of points close to the minimum.

FX (“Conditionally unsatisfactory”) - the theoretical content of the course is partially mastered, the necessary practical skills are not formed, most of the training tasks provided by the training program are not fulfilled or the quality of their implementation is assessed by the number of points close to the minimum; with additional independent work on the course material it is possible to improve the quality of the performance of training tasks

F ("Certainly unsatisfactory") - the theoretical content of the course is not mastered, the necessary practical skills are not formed, all completed training tasks contain blunders, additional independent work on the course material will not lead to any significant improvement in the quality of the training tasks.

12. The fund of assessment tools for the intermediate certification of students in the discipline

Sample of Exam:

1. Triple Helix Model includes:

| | |
|---|------------------------|
| A | state |
| B | science |
| C | education |
| D | financial institutions |
| E | business |

2. Depending on type of the contract allocate the following types of a transfer:

| | |
|---|-----------|
| A | Direct |
| B | Indirect |
| C | Classical |
| D | Mediate |

3. On the level of exchange allocate the following types of a transfer:

| | |
|---|---------------|
| A | External |
| B | Internal |
| C | Local |
| D | Quasiinternal |
| E | Regional |

4. Depending on the nature of advance of technology in the course of its transfer allocate the following methods:

| | |
|---|------------|
| A | Horizontal |
| B | Vertical |
| C | Diagonal |

5. From the economic point of view, the transfer acts in the following forms:

| | |
|---|---------------|
| A | Commercial |
| B | Mixed |
| C | Noncommercial |

6. The model of formation of national innovative system on the basis of the concept of Triple Helix Model is inherent:

| | |
|---|-------------|
| A | Japan |
| B | Switzerland |
| C | Sweden |
| D | USA |
| E | China |

7. In what country on formation of system of a transfer considerable impact was exerted by consortia/clubs of the industrial companies, the universities, laboratories for carrying out joint research and development?

| | |
|---|---------------|
| A | Japan |
| B | Germany |
| C | Great Britain |
| D | USA |

8. Allocate the following stages of a transfer of technology:

| | |
|---|--|
| A | identification of technology |
| B | search of technology |
| C | choice of the supplier of technology |
| D | negotiations |
| E | signing of the contract/agreement |
| F | transfer of technology |
| G | start and adaptation of new technology |

9. At what stage technical tests, start is carried out to work of technology, transfer of documentation?

| | |
|---|--|
| A | Signing of the contract/agreement |
| B | Transfer of technology |
| C | Start and adaptation of new technology |

10. Allocate the following models of the Scientific and educational centers:

| | |
|---|---------------------|
| A | Cluster |
| B | System |
| C | Network |
| D | Cluster and network |
| E | Dot |
| F | Focal |

Developers:

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Head of the Department of

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The work program of the discipline is recommended for approval by a representative of the employing organization:

LLC Astakhov, Khoroshev, Zainullin and Partners

General Director _____ S.B. Zainullin.