# The system of education in Russia

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Edition: The Danish Centre for Assessment of Foreign Qualifications (DK-ENIC/NARIC)

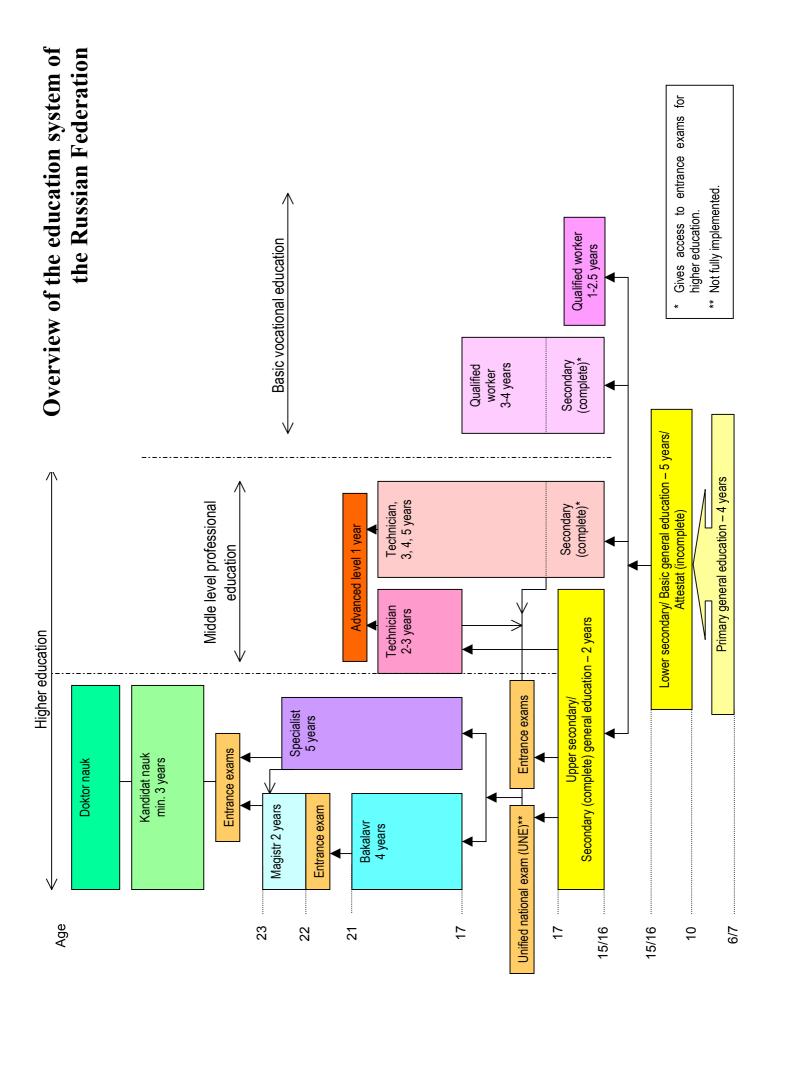
The Nordic Recognition Network (NORRIC) is a regional network established by the five Nordic ENIC/NARIC offices. The NORRIC network initiates joint Nordic projects aiming at more consistent approaches, procedures and methods in recognition of foreign qualifications within the Nordic countries. Country reports based on joint study visits and further research are examples of NORRIC activities which might lead to common standards for recognition of foreign qualifications and even a division of labour in the Nordic region.

This publication on Russian qualifications has been written jointly by the Danish, Norwegian, and Swedish recognition offices. The Danish Centre for Assessment of Foreign Qualifications has been responsible for the coordination and final edition.

The document is also available on the NORRIC website: www.norric.org

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# Introduction

The Nordic countries receive a large number of applications for the assessment of foreign qualifications from people with Russian qualifications or qualifications from the other former Soviet Republics. The number of applicants has grown rapidly in all the Nordic countries.

Between 2001 and 2003 the number of applicants in Denmark, Norway and Sweden increased by 30-100 %.

Number of applicant	s from Russia and	d countries from the	former Soviet Union

	2001	2002	2003	Increase 2001-2003
Denmark	129	220	255	98%
Norway	202	282	354	75%
Sweden	531	613	693	31%
Finland*	204	199	219	7%
Total	1066	1314	1521	43%

<sup>\*</sup> The Finnish figures show the number of applications for professional recognition within the field of regulated professions at the National Board of Education.

Until the dissolution of the Soviet Union in 1991 the former Soviet Republics all belonged to the same educational system. Since 1991 many of these new countries from the former Soviet Union have developed their educational systems in response to new demands and trends in international educational development. The old Soviet educational system generally exists alongside new structures. This is true of the Russian educational system. While the basic Soviet structure of education still prevails, changes have been made to the old system, including the recently introduced national entrance examination known as the "Unified National Exam" (UNE). Another significant change is the introduction of bachelor's and master's programmes in higher education.

The Nordic Recognition Network (NORRIC) with representatives from Denmark, Norway and Sweden went on a study visit to Moscow in October 2003 for the purpose of studying the Russian educational system in 2003. The study visit was planned and implemented in cooperation with the Russian ENIC. The main focus of the visit was to gather information on the Russian educational system with a view to benefiting the day-to-day work of credential evaluation and intensifying cooperation with the Russian ENIC. The trip was also the first joint Nordic study visit. Together with other NORRIC initiatives within the area of recognition the study visit could be a first step towards increased cooperation between the Nordic recognition offices. The study visit was very successful, not least owing to the help and hospitality of the Russian ENIC and the Russian educational institutions visited. The outcome of the study visit was a far better understanding of the Russian educational system in 2003 and this report, which has been written jointly by the three Nordic recognition offices.

From a Nordic perspective possible future outcomes of the visit could be (i) increased cooperation between the Nordic and Russian ENICs, and (ii) further Nordic cooperation concerning qualifications from Russia. The latter might include a division of labour and common standards for the recognition of Russian qualifications in the Nordic region.

#### Report structure

The first part of the report is an account of the Russian system of quality assurance and accreditation for public and private educational institutions. This is followed by a description of selected diploma formats and diploma security features.

The remaining chapters are devoted to descriptions of the different levels and programmes within the system of education in Russia today. First of all the system of General Education (primary, secondary and upper secondary education) and Technical and Vocational Education are described together with the newly introduced national entrance examination known as the Unified National Exam. This is followed by chapters about the structure and content of higher education in universities and examples of study programmes within engineering, philology and economics. The last chapter is about teacher training with the emphasis on teacher training in universities. The chapters on Technical and Vocational Education and higher education in universities end with considerations regarding the comparability of Russian and Nordic degrees and programmes.

In the concluding remarks we suggest topics for possible future work and the evaluation of Russian qualifications.

Detailed information on the participants and programme for the study visit can be found in the appendices.

# **Chapter I: Quality Assurance**

Under the 1992 Education Act and the 1996 Higher and Postgraduate Education Act the basis for quality assurance in Russian higher education is made up of three processes: licensing, attestation and accreditation. There are also special provisions on attestation in addition to these statutes

#### Licensing to provide education

Russian legislation stipulates that institutions of higher education require a licence in order to provide education. State and non-state institutions undergo the same licensing process. In the Russian Federation a total of 1,200 institutions are licensed. There are about 1,800 campuses affiliated to parent institutions and these too are included in the licensing process. If campuses are included, there are about 3,000 licensed institutions. Approximately 530 institutions are non-state, with the rest being either state federal, public regional or municipal institutions. Branches of Russian institutions in other republics of the former Soviet Union (e.g. Kyrgyzstan) and foreign institutions operating in the Russian Federation are also included in the licensing process.

In order to determine whether an institution fulfils the requirements for an educational licence, the Ministry of Education puts together an expert group consisting of representatives of state federal and regional educational bodies and subject experts. Licensing requires the candidate institution to fulfil certain criteria pertaining to factors such as sanitation, health standards, equipment, volume of literature, number of students and number of teachers. There are also special requirements relating to different fields of study. *The quality and outcome of education are not considered in the licensing process, however.* 

One particular focus of the licensing process is the level of education achieved by the teaching staff. For instance, 48-62% of all teachers must hold either *Kandidat nauk*/Кандидат наук or *Doktor nauk*/Доктор наук degrees. In addition, new standards have been introduced with the aim of regulating the ratio of part-time to full-time teachers. These new standards stipulate that at least 15% of the teaching staff should be employed on a full-time basis in the first year, 20% 3 years after the establishment of the institution and 40% 7 years after the date of establishment. Within 9 years the number of full-time teachers should have grown to at least 50%. The licensing process encompasses all programmes at the institution, including secondary education programmes, non-university preparatory programmes and graduate programmes.

Following investigation by the expert group and a positive conclusion the Ministry issues a licence to the institution that is valid for 5 years. The certificate is printed together with an annexe containing information on all the licensed programmes.

In a vast country like Russia it is difficult for Central Government to check compliance with the state standards for licensing at every single institution and campus. The Ministry of Education has therefore signed several agreements with regional or local government for site visits to be made to local institutions.

In 2003 alone 750 institutions (including branch establishments) were checked for quality. Roughly 200 of these institutions were failing to comply with state standards and received warnings. In six cases their licence was suspended altogether.

The licence can be withdrawn at any time if shortcomings are discovered. The habit of admitting too many (fee-paying) students to academic programmes without having the appropriate facilities is a common breach of state standards. Another shortcoming commonly reported to the Ministry is the practice of licensed institutions offering programmes other than those they are licensed to teach in order to attract fee-paying students and earn more money. Newspaper advertisements are closely monitored by the Ministry and, if institutions promise more than they can deliver, their licence can be suspended.

#### Attestation

Attestation is a stepping stone to accreditation. Attestation has the purpose of checking whether an institution meets state educational standards and is a prerequisite for accreditation. Therefore, in contrast to licensing, *the focus of attestation is quality assurance*. The day-to-day activities of an institution are checked as part of the attestation process. For example, the test results of graduate students over several consecutive years are an important aspect of this quality check.

Attestation is conducted in 5-year cycles. The process is carried out by either central or regional agencies and includes a self-evaluation process. The Attestation Board grants attestation to an institution following a positive outcome.

#### Accreditation – permission to issue diplomas in state format

Institutions that have completed the aforementioned licensing and attestation procedures with positive outcomes can apply for the highest form of state recognition: state accreditation. *At present 88% of all institutions are accredited.* All state Higher Education Institutions have passed accreditation procedures.

Accreditation is sought by institutions for many reasons. For example, an accredited institution has the right to issue degrees in state format. This is important, since non-accredited institutions issue degrees in their own format and holders of such diplomas have trouble finding employment in the labour market. An accredited institution may also use the state seal of the Russian Federation and be included in the state budget.

Until April 2004 the accreditation process was conducted by the Ministry of Education. Since April 2004 the new Federal Service on Supervision in Education and Research is responsible for this task. The process is applicable to both state and non-state institutions. Accreditation implies conformity between the quality of education on accredited programmes and state educational standards. State educational standards are parameters used to ensure that the quality and activities of an institution are tested against the standards.

Twelve accreditation indicators are used to determine the quality of education at an institution, including factors such as the content and outcome of education and research, scientific and teaching activities, infrastructure, number of postgraduate students and number of text-books published. The institution under scrutiny is also classified according to the following two categories:

- Status/Level, i.e. general, vocational, post-secondary vocational or higher education
- Type, i.e. institute, academy or university

Accreditation applies not only to the institution as such, but also to the academic programmes it offers. Not all programmes at an accredited institution are automatically accredited, however. An accredited institution can therefore have both accredited and non-accredited programmes, but it only has the right to award state diplomas for its accredited programmes.

The Accreditation Board of the Russian Ministry of Education makes the final decision regarding accreditation. Serious shortcomings can result in either accreditation being denied altogether or granted conditionally. If state accreditation is granted to an institution, it is valid for a 5-year period. Accreditation can be suspended at any time during this period if the institution does not meet state educational standards. An example of this is offered by two non-state institutions, the Upper Volga Institute of Business and Law [Verkhnevolzhskii Institut Biznesa i Prava/Верхневолжский институт бизнеса и права] in Tver and the Higher International School [Меzhdunarodnaia Vysshaia Shkola/Международная высшая школа] in Moscow, which lost their state accreditation in 2003.

The three processes of licensing, attestation and accreditation have been combined in a single process known as "complex assessment" since 2000. The Ministry of Education has done this in order to reduce the cost of evaluation for Institutions of Higher Education.

#### **Non-state institutions**

The distinction between accredited and non-accredited institutions is important when classifying institutions of higher education in Russia. Another distinction can, however, be made between state and non-state institutions. Of the country's state institutions 93% are accredited, whereas only 60% of non-state institutions enjoy this status.

The vast majority of students in Russia still attend state universities, but the number of non-state institutions is growing rapidly. Non-state institutions started operating in Russia in 1993, and although both state and non-state institutions work within the same legal framework, there are some clear differences between the two categories. For example, whereas state institutions admit both so-called budget students (i.e. students eligible for a full tuition-fee waiver and state scholarships) and fee-paying students, non-state institutions only admit the latter category. In recent years state institutions have been allowed to increase their admissions of fee-paying students, resulting in rapid growth in the number of fee-paying students in state institutions. By 2004 about 35% of students in state institutions were fully fee-paying.

Apart from some research grants, non-state institutions receive no funding at all from the state. So unlike state institutions, non-state institutions are run solely on a for-profit basis and have to finance their activities on their own. Tuition fees are their main source of income.

Students at non-state institutions pay tuition fees ranging from \$400 to \$5,000. By 2004 the average fee for 1 year of tuition had reached about \$2,500. The most popular subjects are law and business administration. Other popular subjects are modern languages, philosophy, social work, history, ecology and computer science. St Petersburg is home to most of the country's non-state institutions.

From a quality perspective the most serious problems facing non-state institutions are related to the level of education achieved by the teaching staff, i.e. teachers either lack appropriate degrees or do not teach in the field for which they are qualified. (Under recent legislation the rectors of non-state institutions must now have at least a *Kandidat nauk*/Кандидат наук degree.)

#### Identification of licensed and accredited institutions and programmes

It is possible to obtain information on which institutions and programmes are licensed and accredited through an Internet-based database of Russian higher education institutions. The web address is: <a href="http://www.edu.ru/db/cgi-bin/portal/vuz/vuz\_sch.plx">http://www.edu.ru/db/cgi-bin/portal/vuz/vuz\_sch.plx</a>. The database is updated once a quarter.

In the database it is possible to specify a type of higher education institution or a city, in which case all the institutions of higher education in that particular city will be identified. Once an institution has been selected, it is possible to see whether the institution has been licensed or accredited and when. Similarly, it is possible to find lists of accredited programmes together with their accreditation dates. It is also possible to follow links from educational programmes listed in the database to State programme ordinances (state educational standards). Finally, it is possible to combine several selection criteria. The database is in Russian.

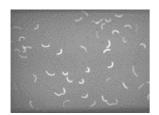
# **Chapter II: How to authenticate Russian diplomas**

Russian diplomas of higher education have a number of distinct features that it is relevant to check when validating documents. As of June 1996 all authentic Russian degrees and transcripts in state format are printed on security paper from the "Goznak" state printing mill. Authentic documents have several security features to prevent forgery, including images only visible in UV light. Scanned and forged colour reproductions of authentic qualifications do not display these features.

# Security features only visible in UV light

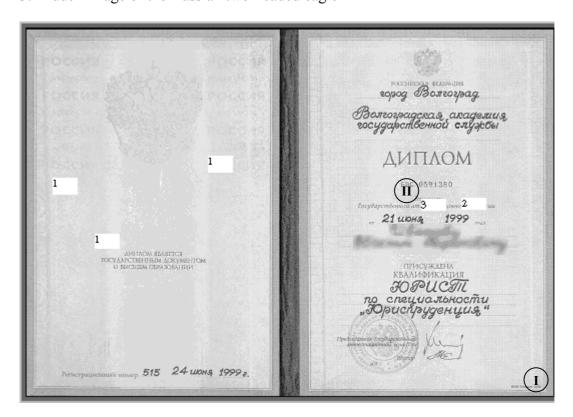
#### **Diploma**

1. UV fluorescent fibres embedded in the paper and covering the whole document



UV fluorescent fibres

- 2. UV print image of (green) laurel
- 3. Hidden image of the Russian two-headed eagle



The new format diplomas were printed twice, in 1996 and in 2002. There is at least one substantial difference between them.

**Printed 1996** – The date of printing is indicated in the bottom right-hand corner (I). The diploma number always starts with a combination of three characters (II).

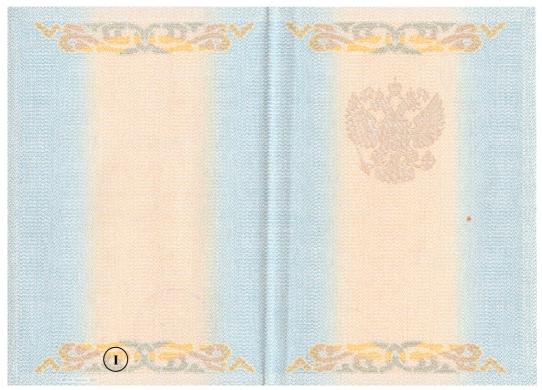
The last character is significant:

**XXC**=СПЕСИАЛИСТ (specialist)

**ХХБ**=БАКАЛАВР (bakalavr)

**XXM**=MAГИСТР (magistr)

**Printed 1997** – A diploma format for foreign students was printed in 1997. An additional page was added for apostille. All other features are the same as the 1996 printing.



**Back** 



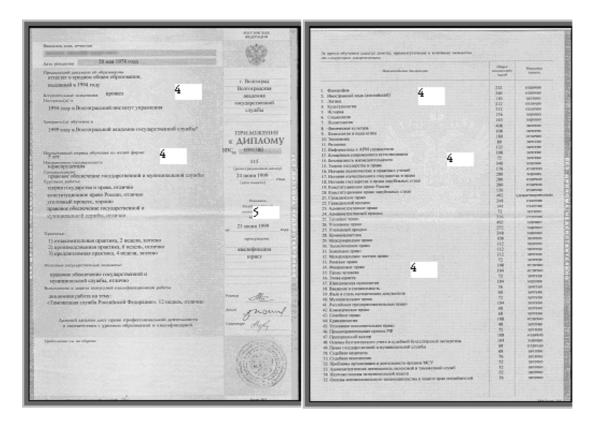
**Front** 

**Printed 2002** – The diploma is now loose-leaf, being separated from its cover. The date of printing appears in the bottom left-hand corner on the back (I). The significant character is now in the middle of the combination (II):

ХСХ=СПЕСИАЛИСТ, ХБХ=БАКАЛАВР, ХМХ=МАГИСТР

# **Transcript**

- 4. UV fluorescent fibres embedded in the paper and covering the whole document
- 5. Hidden UV print image of (green) laurel



# Security features visible when photocopied

### **Diploma**

6. A hidden word, *KOPIYA*/КОПИЯ, appears when the original diploma is photocopied. It may be necessary to adjust the photocopier for the word KOPIYA to appear on diplomas printed in 2002, but it should still be there.



# **Transcript**

6. A hidden word, KOPIYA/КОПИЯ, appears when the original transcript is photocopied.



The full range of old and new state-format diplomas can be seen on the website of the Russian ENIC at <a href="http://www.russianenic.ru/english/index.html">http://www.russianenic.ru/english/index.html</a>.

# Chapter III: General education in Russia

Children start school at 6-7 years of age and normally finish complete general education (year 11) at 17-18 years of age. At present the system of general education is made up of 67,000 educational establishments in which 21 million students are enrolled.

General education is divided into three stages:

- Primary general education (years 1-4): Nachal'noe obschee obrazovanie (Начальное общее образование)
- Lower secondary education known as basic general education (years 5-9): Osnovnoe obschee obrazovanie (Основное общее образование)
- Upper secondary education known as secondary complete general education (years 10-11): Srednee polnoe obschee obrazovanie (Среднее (полное) общее образование)

In this chapter we will mainly use the Russian terms *basic general education* and *secondary complete general education* instead of the general terms lower and upper secondary education.

Primary general education and basic general education are compulsory. Prior to 1989 general education lasted 10 years and was made up of 8 years of primary and basic general education and 2 years of secondary complete general education. In 1989 an 11-year system of general education was introduced.

The system of general education has undergone an implementation phase during which a gradual change from 10 to 11 years of general education has taken place. During the implementation phase some schools offered primary general education of only 3 years' duration and basic general education of 5 years' duration. Students from these schools skipped year 4 and entered year 5 directly. This meant that, although primary and basic general education lasted 8 years at some schools, all students completed their compulsory education at the same educational level after year 9.

There are no official statistics on the number of schools still offering 3 years of primary general education, but according to the Ministry of Education more than 90% of students have 11 years of schooling. The remaining students have received preschool education with primary school disciplines, which has been the reason for maintaining primary general education programmes of only 3 years' duration. This also means that the 3-year programmes are equivalent to years 2-4 of a 4-year programme. Under Ministerial Order No. 1312 of 09.03.04 the only model for primary general education is the 4-year model with effect from the 2004/2005 academic year.

On completion of basic general education students take a final exam called the State Final Attestation. Only students who pass obtain a Certificate of Basic General Education (Attestat ob Osnovnom Obschem Obrazovanii - Аттестат о неполном общем образовании). The certificate entitles its holder to be admitted to either secondary complete general education, basic vocational education or middle level professional education.

The standard duration of secondary complete general education is 2 years (years 10 and 11). If students pass a final examination, the state final attestation, they are awarded a Certificate of Secondary Complete General Education (Attestat o Srednem Polnom Obschem Obrasovanii - Аттестат о среднем полном общем образовании).

### **Types of institution**

In the system of general education there are four main types of school offering general education:

- General schools (obscheobrazovatel'naya srednjaya Общеобразовательная средняя).
   These are ordinary schools of general education (years 1-11). They make up approximately 80% of all schools.
- General schools with intensive learning programmes (obscheobrazovatel'naya s uklonom Общеобразовательная с уклоном). This type of school offers advanced teaching in a specific field such as languages, science, sports, choreography or music. These schools make up 15% of all schools and may offer teaching at primary, basic general and upper secondary level.
- Gymnasiums (gimnaziya- Гимназия). A gymnasium may offer teaching at primary, basic general and upper secondary level. Gymnasiums often focus on subjects within the humanities and account for 2% of all schools.
- Lyceum (licej- Лицей). A lyceum focuses on scientific and technical subjects and may offer teaching at primary, basic general and upper secondary level. Lyceums account for 3% of all schools.

There are no major differences between a Gymnasium and a Lyceum, with the difference being more one of terminology than structure and programme content.

Private schools offering programmes similar in content to those offered by one of the aforementioned institutions started operating in Russia in 1993. Private schools are fully financed by parents. They bear many different names, which do not always relate to the institutional names mentioned above. In 1996 a new Education Act was passed permitting educational institutions to charge for education. According to statistics from the Russian Ministry of Education, by 2003 85% of all public and private establishments of secondary education had received a state license allowing them to charge fees for their activities. Private schools are generally better equipped and offer better working conditions for teachers than public schools.

Many public and private schools have signed agreements with institutions of higher education allowing students from years 10 and 11 to work under the auspices and tutorship of higher education institutions and to use their academic staff and facilities. This sort of arrangement gives students an advantage if they apply for admission to the institute of higher education that cooperates with their

school. An example of cooperation of this sort is the Moscow State Linguistic University, which has two linguistic gymnasiums as part of its overall sphere of educational activities.

#### New reforms in Russian upper secondary education – profile education

A new reform affecting secondary education and based on Ministry of Education Order RF N 334 "Programme of the Ministry of Education and Russian Academy of Education concerning mutual activities towards implementation of profile education at the third level of secondary education" of 9 June 2003 is currently being implemented nationwide. The focus of the reform is the introduction of what is known as 'profile education' in the senior secondary classes (years 10 and 11) in general schools. Profile education involves the introduction of a number of study orientations (profiles). This will allow students at general schools to specialise in a specific subject area in the same way as students at lyceums and gymnasiums.

Profile education, which is expected to be implemented in all Russian general schools from 1 September 2006, consists of two stages:

#### Preparation stage (year 9)

In order to make it easier for students to choose profiles in years 10 and 11, a preparation stage for profile education has been introduced. The Ministry of Education has defined a number of intensive programmes in selected subjects for students in year 9. Students will study one subject for 2-3 months (one semester). The duration of a course can vary from 12 to 100 hours. Students can switch to the intensive programme for another subject every semester, but only during year 9.

#### Profile teaching stage (years 10 and 11)

In years 10 and 11 students choose a profile (group of subjects), which will be taught at an advanced level. Mandatory subjects will be taught at the basic level.

Implementation is taking place as follows:

2003/2004: Implementation of profile education (preparation stage) in 10 regions

2004/2005: Implementation of preparation stage

2005/2006: Implementation of profile education in year 10

2006/2007: Implementation of profile education throughout the country

All documents relating to the implementation of profile education can be found at the following website: <a href="https://www.profile-edu.ru">www.profile-edu.ru</a>

#### Curricula

General education curricula normally stipulate 34 weeks of study a year and, as a rule, 27 to 38 hours of study a week. The school year starts on 1 September and runs through to the beginning of June. Final school examinations are held in June.

The Ministry of Education sets an approximate curriculum for schools of general education. The number of hours per subject and the number of years a subject is taught may vary. The Ministry of Education sets 75% of the curriculum (state subjects), while at least 10% of the curriculum is set by the regions and at least 10% by the schools of general education (obscheobrazovatel'naja srednjaja).

Other institutions, such as the gymnasiums and lyceums, make individual adjustments to the general curriculum in accordance with the field of study focused on at the institution in question.

The tables below show the latest curriculum for general schools.

Approximate curriculum for general schools (obscheobrazovatel'naya srednjaya - Общеобразовательная средняя). Implementation from 2004/2005 (Order No. 1312 of 09.03.04):

Basic study plan for primary general education (years 1-4)

Content of	Hours per week for each year				
education	4-year primary school				
	I	II	III	IV	Total
Russian language and literature	9	9	8	8	34
Foreign languages		2	2	2	6
Mathematics	4	4	4	4	16
Environmental studies	2	2	2	2	8
Technology	1	1	2	2	6
Fine arts and music	2	2	2	2	8
Sport	2	2	2	2	8
Total*	20	22	22	22	86

<sup>\*</sup> Maximum hours of study per week

Basic study plan for basic general education (years 5-9)

Content of education	Hours per week for each year  Basic General Education					
	V	VI	VII	VIII	IX	Total
Russian	210	210	140	105	70	735

Russian literature	70	70	70	70	105	385
Foreign languages	105	105	105	105	105	525
Mathematics	175	175	175	175	175	875
Computer science				35	70	105
History	70	70	70	70	70	350
Social science (economics and law)		35	35	35	35	140
Geography		35	70	70	70	245
Nature studies	70					70
Physics			70	70	70	210
Chemistry				70	70	140
Biology		35	70	70	70	245
Fine arts and music	70	70	70	35	35	280
Technology	70	70	70	35		245
Civics				35		35
Physical education	70	70	70	70	70	350
Total	910	945	1015	1050	1015	4935
Variation, subjects set by school, re- gion (6-day study week)	175	175	175	175	210	910
Max. hours of study	1085	1120	1190	1225	1225	5845

Basic study plan for secondary complete general education – profile education (years 10-11)

Subjects	Compulsory and elective subjects (2 years of study)	
	Basic level	Profile
Russian language	70*	210
Russian literature	210*	350
Foreign languages	210*	420
Mathematics	280*	420

History	140*	280
Sport	140*	280
Social science	70*	210
Economics	35*	140
Law	35*	140
Geography	70	210
Physics	140*	350
Chemistry	70*	210
Biology	70	210
Computer science	70	280
Art	70	210
Technology	70	280
Civics	35	140
Total:		max. 2100
Subjects set by region		140
Subjects set by school		min. 280
Total		up to 2520

<sup>\*</sup> Non-variable part (compulsory subjects)

#### State final attestation

The minimum number of disciplines in the state final attestation after year 11 is five: two federal compulsory written examinations (composition and mathematics) and at least three optional examinations. The final certificate after finishing secondary complete education is called the Certificate of Secondary Complete General Education (Attestat o Srednem Polnom Obshchem Obrasovanii - Аттестат о среднем полном общем образовании). Certificates include the results of the final examination and a transcript listing the grades achieved by students in all the subjects taught. Before 1991 grades were listed on the certificate itself. The total number of subjects listed on the transcript can vary from 17 to 20.

Private schools are only entitled to issue nationally recognised certificates in state format and using a state seal after undergoing the same state accreditation procedure as state schools. Certificates awarded by non-accredited institutions in non-state format do not qualify students for admission to institutions of higher education.

#### Standard format of Certificate of Secondary Complete General Education

This is a leather-bound booklet. The inside is sand/pale brown with the two-headed eagle on the left-hand side, a rose-coloured band framing the title on the top right-hand side and the bottom serial number in red (other printing in black).

	АТТЕСТАТ о среднем (полном) общем образовании
	Настоящий аттестат выдан
O 6 P A	В Директор Заместитель директора по учебно-воспатательной работе Классный руководитель Учителя:
06	Выдан е »
	A № 0000000

# Alternative ways of obtaining secondary complete general education

It is also possible to obtain secondary complete general education within the system of technical and vocational education and training. This option is for students who enter vocational education after year 9. Technical and vocational education programmes that include secondary complete general education last at least 3 years (see the following chapter on technical and vocational education for more details on these programmes).

The general education curriculum, which students must follow in order to obtain secondary complete general education as part of a vocational education programme, consists of 1632 hours. During the first year students complete 1404 hours of teaching in general subjects and during the second year they complete the remaining 228 hours.

The general education curriculum consists of the following subjects:

- Philology (Russian and a foreign language) 272 hours
- Mathematics 272 hours
- Social science 340 hours
- Natural sciences 408 hours
- Physical education 204 hours
- Technology 136 hours

The general education curriculum is usually adapted to the professional orientation of the basic vocational/middle level professional programme.

After passing a programme that combines vocational and complete general education students receive a diploma of vocational education. Sometimes, but not always, their diploma also states that they have passed complete general education. If this is not stated on the diploma, the list of general subjects on the transcript will provide the relevant information. Such students can apply to higher education institutions on the same terms as students from upper secondary general education institutions.

# **Chapter IV: Technical and vocational education**

In Russia technical and vocational education is offered at two levels:

- Basic vocational education (nachalnoe professionalnoe obrazovanie начальное профессиональное образование)
- Middle level professional education (srednee professionalnoe obrazovanie среднее профессиональное образование)

#### **Basic vocational education**

Basic vocational education is the first level of vocational education. Training takes place at vocational secondary schools (professional'noe ucilishche - профессиональное училище), professional lyceums (professionalnye litsei) or, less often, in parallel with middle level professional education at technical or professional institutions. In 2001 there were approximately 3,900 vocational secondary schools offering basic vocational education to about 1.6 million students.

No entrance examination is required for admission to programmes of basic vocational education. Entrance to basic vocational education is after year 9. Students entering basic vocational education after eleven years of general education follow shortened programmes.

The duration of basic vocational education programmes varies according to entry level:

After 9 years of general education the duration of programmes is:

- 1-2.5 years for vocational programmes
- 3-4 years for programmes combing vocational and general education (years 10-11) (offered at professional lyceums)

After 11 years of general education the duration of programmes is:

• 1-1.5 years

Training is practically oriented. Upon completion, students receive a diploma of vocational education (Diplom o Nachalnom Professionalnom Obrazovanii - Диплом о начальном профессиональном образовании), entitling them to practise a specific profession. Basic vocational education is directed towards employment, but may also provide access to middle level professional education (non-university higher education). Students who choose to combine basic vocational education with completing years 10-11 of general education satisfy the requirements for admission to university education.

#### Standard format of a diploma of basic vocational education

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#### Middle level professional education

The term 'middle level professional education' (srednee professional'noe obrazovanie"- среднее профессиональное образование) is a direct translation of the Russian name for this type of vocational education and training. Middle level professional education is identical with non-university-level higher education in Russia. In this context middle or "*srednee*" does not mean secondary but refers to the classification of *professional* levels of qualification. In this chapter we will mainly use the term middle level professional education rather than the term non-university higher education.

The Russian authorities classify middle level professional qualifications as being at level 5B in the ISCED system. The ISCED system was devised by UNESCO in the 1970s and revised in 1997. ISCED is made up of two components: a statistical framework for the comprehensive statistical description of national education and learning systems and a methodology that translates national educational programmes into an internationally comparable set of categories for levels of education. Level 5 in the ISCED system refers to the first stage of tertiary education.

The aim of middle level professional education is to train middle level professionals such as technicians, work managers, clerks, accountants, preschool/primary school teachers, nurses, midwives and laboratory technicians.

#### Admission

Entrance to middle level professional programmes is possible after 9 years of basic general education or the completion of 11 years of general education under the 1996 Education Act. For students entering after 9 years of basic general education the completion of secondary general education as part of vocational training is mandatory. Approximately two thirds of students are admitted after completing 11 years of education, and some programmes are only offered to students who have done so. Applicants have to pass a competitive entrance examination that makes selection possible if there are more applicants than places.

Institutions of middle level professional education offer the following programmes:

After 9 years of general education:

• 3- to 5-year programmes consisting of vocational and general education

After 11 years of general education

- 2- to 3-year vocational programmes
- Advanced training programmes requiring one additional year of training (only offered by colleges)

By 2004 there were 293 middle level professional programmes, with 243 programmes lasting 4 years following year 9, while only 30 programmes last 3 years and 20 programmes 5 years following year 9.

An example of an institution offering middle level professional programmes is Moscow Technical College. At Moscow Technical College the majority of students are admitted after 9 years of basic education.

#### Types of institution

Middle level professional education is provided in the following types of institution:

- Institutions of vocational training (uchilishe училище)
- Technical institutions (tehnikum техникум)
- Colleges (kolledz колледж)

Please note that institutions of vocational training and basic vocational schools are both called uchilishe, but they offer programmes at different educational levels (non-university higher education and upper secondary basic vocational education respectively).

Technical institutions provide training in technical professions, while institutions of vocational training provide training in other areas such as services, teaching and health. Colleges were introduced in 1989 as providers of advanced middle level professional programmes. Such programmes last 1 year after the completion of a technical or professional programme. Technical and professional institutions often try to introduce and obtain state accreditation for one or more advanced vocational programmes, which allows them to assume the more prestigious 'college' name. Most colleges continue to offer both ordinary and advanced technical and professional programmes.

There are 2,590 institutions of middle level professional education providing training for about 2.5 million students. About 680 of them are colleges. There are both state and non-state institutions, with 55% of institutions having federal status, 44% regional and 1% municipal. Most teachers (97%) have university qualifications. The remaining 3% are teachers of practical subjects with many years of vocational experience.

The number of students has been increasing in recent years and by 2002 middle level professionals made up 31% of the workforce in Russia. Technical and economic programmes are most popular and attract more than 70% of all students.

#### Curricula

Studies include both theoretical and practical subjects. All programmes include humanities, business administration, law, Russian language, mathematics and computer literacy. Other subjects are professionally oriented and divided between general subjects within the chosen field of study and subjects relating to the chosen profession. Training is offered within the following fields of study:

- technology
- agronomy
- economy
- services
- teaching
- health (paramedical professions)
- culture and art

About 50% of the curriculum is practically oriented. Programmes include three periods of external practical training. The submission of a final dissertation is mandatory.

#### **Diplomas**

On successful completion of their studies, students are awarded the appropriate Diploma of Middle Level Professional Education (technical institution, professional institution, college) (diplom o srednem professionalnom obrazovanii — Technikum, Uchilishe, Kolledz - Диплом о среднем профессиональном образовании (Техникум, Училище, Колледж)) and a professional title. The transcript contains the list of subjects studied on the course, sometimes with an itemisation of contact hours and the grades achieved. Students who complete advanced technical training at a college are awarded a professional title plus the word senior (starshij - старший), e.g. senior techni-

cian (starshij tehnik - старшй техник). The diploma format is similar to the formats issued after completion of university higher education.

Graduates of middle level professional programmes are entitled to apply to institutions of higher education and can obtain 1 year of credit transfers when entering university higher education. The majority of graduates enter the labour market. Of those who continue their education, 70% pursue evening or distance learning in parallel with employment.

# Credit transfers to university higher education

New educational standards within middle level professional education have been introduced since 2002. Specialities have been grouped or merged, more autonomy in choosing study profiles has been given to individual schools and elective subjects have been introduced.

Better links to higher education have also been established. The new regulations offer greater opportunities for transferring credits to university-level institutions in the same field of study. Under recent regulations credits equivalent to 1 year of study should be transferred for students who continue in the same field of study at institutions of higher education. Some credits are granted in the first year and some at the higher level. Graduates from the middle level professional institutions have to pass the competitive entrance examinations and are admitted on the same terms as applicants from general secondary schools. They too commence their studies in the first year, but follow individual study programmes. An example of an institution of higher education transferring credits from technical institutions is the Moscow State Institute of Steel and Alloys.

Transferred credits are not specified on the final diploma supplement issued with diplomas of university higher education and so cannot be distinguished from examinations taken at the university-level institution. However, since the entrance qualifications and length of course are stated on the diploma supplement, students who have completed a degree in a shorter period of time than the programme requirements stipulate and who hold entrance qualifications from a professional institution or technical institution are likely to have obtained a credit transfer. At Moscow Technical College (MTC) 70% of graduates continue at higher education institutions. MTC has signed agreements with a number of higher education institutions that allow students from MTC to enrol in a shorter Bakalavr or Specialist programme provided they continue within the same field of study.

So far it is mainly graduates from institutions that are defined as centres within university-type institutions or institutions that have signed formal agreements with university-type institutions who obtain credit transfers.

#### Standard format of the diploma of middle level professional education

This new state format has been issued since 1995 (see figure below).

The diploma follows the same format as university higher education degrees, but the colouring is different from university-level diplomas. The background colour is pale pink with a pattern in pale

pink, blue and green. The diploma is framed by a pink pattern. There is a brown two-headed eagle on the left and a small yellow eagle on the top right. The serial number is red and the diplomas have the same security features as described in chapter II. Transcript pages are also pink.

The transcript will clearly state whether the admission level was the Atestat, i.e. complete secondary general education, or whether the studies that have been completed include the upper secondary general subjects that are compulsory for students admitted after year 9 of basic general school.



# Comparing middle level professional qualifications with Nordic qualification levels

As previously mentioned, middle level professional education is regarded as non-university higher education in Russia and is classified by the Russian Ministry of Education as level 5B in the ISCED system. The Russian Ministry of Education therefore recommends that middle level professional qualifications be compared in level to non-university higher education in other countries.

In Sweden, Norway, Finland and Denmark, however, Russian middle level professional qualifications are *not* generally assessed as comparable in level to non-university programmes of higher education. Norway and Sweden do not assess middle level professional qualifications, since they only make assessments of foreign higher education credentials that are comparable to Swedish or Norwegian higher education credentials. Denmark assesses credentials at all educational levels and

normally compares middle level professional qualifications from Russia to Danish upper secondary qualifications at ISCED level 3 or 4. Finland cannot make decisions on professional recognition concerning middle level professional qualifications, but gives advisory statements in which those qualifications are usually compared to former Finnish post-secondary vocational qualifications.

The decision to compare middle level professional qualifications to upper secondary or post-secondary vocational qualifications in the Nordic countries can be explained by factors such as:

- *Maturity*: In the Nordic countries young people typically enter non-university higher education at the age of 19 or older, whereas in Russia many students enter these programmes after year 9, i.e. at the age of 15/16.
- *Teaching methods*: The teaching methods used in technical and professional institutions seem to be focused on rote learning. This is different from the teaching methods in higher education employed in the Nordic countries.
- Length of programmes: Non-university-type higher education programmes in the Nordic countries providing the same type of professional qualifications as those obtainable in Russian middle level professional education programmes last 2-4 years and are based on at least 12 years of general or combined general and vocational education. In Russia the duration of most programmes is 4 years after 9 years of basic general education, which means that the total number of years of study by the end of a programme is 13 compared with 14-16 in the Nordic countries
- *Historical changes:* Previously, many middle level technicians in both Russia and the Nordic countries were trained at the post-secondary, non-tertiary level (ISCED level 4). Owing to technological and social changes and rising competence requirements, the Nordic countries have changed programme objectives and developed many of these programmes into non-university higher education programmes, i.e. the Swedish lower level engineering programmes and the Danish childcare assistant programme. Accordingly, the requirements with regard to theoretical components, research orientation, final reports, etc., have increased significantly. In a Russian context it is difficult to identify the extent to which objectives, curricula, teaching methods, etc., and consequently the learning outcomes, have been redefined and upgraded in the same way as in the Nordic countries.
- Position of middle level professional education in the Russian educational structure: Although the Russian Ministry of Education categorises middle level professional education at ISCED level 5B, the 1996 Education Act does not define middle level professional education as part of the higher education sector.
- *Quality assurance:* Middle level professional institutions and programmes are not subject to the same licensing, attestation and accreditation procedures as university level institutions, which means that they do not have to meet the same requirements with regard to the level of education achieved by teaching staff, research affiliation, etc., as university-type institutions.

There seems to be a need for further investigation into the nature of and the changes taking place within middle level professional programmes in Russia with a view to assessing in greater detail the differences and similarities between middle level professional education and non-university higher education programmes leading to professional qualifications in the Nordic countries.

The changes envisaged for middle level professional education by the Russian Ministry of Education, which may necessitate a revision of Nordic assessment standards, include:

- A clear definition of middle level professional education as higher education through legislative measures
- Bringing middle level professional education into the Russian Bologna Process
- New requirements with regard to final state exams, the preparation of a final dissertation or independent research

An existing indication of the efforts to bring middle level professional education and university education closer is the Education Act, which states that university institutions should offer at least 1 year of credit transfers to holders of middle level professional qualifications within the same field of study.

# Chapter V: Higher education entrance examination – the Unified National Exam

Previously, admission to higher education in Russia was based on the Certificate of Secondary Education [Attestat o srednem (polnom) obshchem obrazovanii/аттестат о среднем (полном) общем образовании], an examination set individually by institutions. Since 2001, however, the Russian Ministry of Education has been experimenting with a single, nationwide, standardised set of exams called the Unified National Exam or UNE [Edinyi gosudarstvennyi ekzamen (EGE)/Единьй государственный экзамен (ЕГЭ)]. The Unified National Exam is now gradually replacing institution-based entrance examinations.

The test period envisaged for the UNE is 2001-2005 and the experiment represents a radical break with the previous admissions system. Instead of being required to take two or more oral and written entrance exams at a (usually local) university in order to gain admission, the common entrance exam makes it possible for students to apply to several different universities and post-secondary vocational institutions all over the Russian Federation at the same time. Only state-accredited institutions are allowed to participate in the experiment.

The legal basis for the Unified National Exam is not yet solidified, but the plan is that the UNE will have left its experimental stage and be implemented throughout the Russian Federation by 2005. In January 2004 President Putin expressed his support for the UNE in public and the new Minister of Education and Science, A. Fursenko, has made similar statements. Despite the strong support for the UNE, nationwide implementation of the UNE is not yet ensured, since it is based on recommendations from the Ministry of Education and has not yet been made obligatory.

By the end of 2003 the experiment involved a majority of all the regions and institutions. The number of participants in the pilot project grew from an initial eight institutions of higher education in three regions to 464 institutions and 928 post-secondary vocational schools in 48 regions in 2003. Approximately 630,000 students took the UNE in 2003 and leading institutions admit students based on UNE test results. In 2004 900,000 school leavers took the UNE and the number of regions participating in the experiment grew to 63. By the end of 2004 schools representing more than half the student population will implement the UNE.

School leavers in regions participating in UNE sit exams locally in May-June and the exams cannot be retaken.

In addition to the usual Certificate of Secondary Education [Attestat o srednem (polnom) obshchem obrazovanii/аттестат о среднем (полном) общем образовании] school leavers also receive the new Certificate of Results from the Unified National Exam [Svidetel'stvo o rezul'tatach EGE/Свидетельство о результатах ЕГЭ]. While the UNE is not yet accepted as an integral part of upper secondary education, it is envisaged that, once fully implemented nationwide, it will replace the current state final examination leading to the Attestat.

Based on the Attestat and the Certificate of Results from the UNE, school leavers can apply to several different universities and post-secondary vocational institutions all over the Russian Federation and receive admission results by August of the same year. Web-based electronic solutions for the admissions process are being planned as well.

The vastness of Russia has caused some unexpected problems for the UNE. Owing to the country's 11 time zones, for example, a hypothetical student in Kamchatka on the Pacific coast finishing the UNE at noon can call a friend in European Russia (in the middle of the night Moscow time) and reveal the test questions for the Unified National Exam the next morning. Potential cheating of this kind has, however, been prevented by issuing the UNE in 80 alternative regional editions.

The Ministry has appointed regional State Examination Commissions to be responsible for conducting the exams. The test results are checked and evaluated by both the local State Examination Commissions and the Ministry of Education in Moscow. The number of subjects in the UNE has grown from three to 12 since the start of the experiment, with mathematics, Russian, physics, chemistry, biology, geography, Russian history, civics, literature, English, German and French now being covered. Two more subjects will be added by 2005. Students can already choose the subjects in which they want to be tested, but they must pass exams in at least five subjects, including two compulsory exams in maths and Russian. Every exam takes 3-4 hours and marking is based on a 100-point scoring system with a pass score of 31-50. Of all the students who took the exam in 2003 only 140 students scored 100 points.

While some institutions admit students solely on the basis of the UNE, other institutions participating in the implementation phase of the UNE still seem to be applying their own admissions procedures, which involve an additional entrance examination after admitting students on the basis of the UNE. Applicants who come top in the internal entrance examination can be admitted to the most popular programmes, while others are admitted, but have a limited choice of programme. Finally, students who are not selected for state-financed places may gain admission to a programme by paying for tuition. All university-level higher education institutions are allowed to admit a certain number of fee-paying students. By 2003 about 10% of students at the Moscow State Linguistic University (MSLU) were paying for tuition.

# Standard format of the Certificate of Results from the Unified National Exam

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ЭКЗАМЕНА	Решение государственной экзаменационной комиссии субъекта Российской Федерации от 200_ г.∕ №
	Руководитель органа управления образованием И.О.Фамилия субъекта Российской Федерации
(ТИПОГРАФСКИЙ НОМЕР)	М.П. Выдано200г. (код образовательного учреждения)

# **Chapter VI: Higher education**

There are two kinds of higher education in Russia:

- Non-university higher education (middle level professional education)
- University higher education

Non-university higher education (middle level professional education) is described in the chapter on technical and vocational education. In this chapter the focus is on the present structure and content of university higher education.

The system of higher education in Russia has undergone several reforms since the early 1990s. The reforms were based on the 1992 Education Act and 1996 amendments and changes to it in the Higher Education and Postgraduate Education Act.

What used to be a centralised and unified system of education is gradually being replaced by a system that tries to accommodate the diverse interests of students, the academic community and employers to a larger extent by allowing greater academic freedom and institutional autonomy.

Tuition-based education and private education have been legalised and the non-state education sector has witnessed rapid growth in recent years. By 2004 there were 655 state and about 530 non-state higher education institutions in Russia. Of the 530 non-state higher education institutions, 364 were accredited by 2004. In 2002/2003 there were 5,228,700 students in state institutions and 718,800 in non-state institutions.

Finally, there have been major structural changes, including the introduction of a multi-level system of degrees to replace the previous single-level system with the *Specialist* degree.

#### **Types of institution**

A new classification of university-type institutions was introduced in 1993. The new classification is made up of three educational institutions:

- Universities: Institutions offering programmes in a wide range of subjects within the humanities, natural sciences and social sciences. Former institutions to have acquired university status include: polytechnics, specialised institutes, medical institutes, agricultural institutes and teacher training institutes.
- Academies: Institutions offering programmes in a single major area, e.g. science or music. Some former polytechnics and specialised institutes have acquired academy status.
- **Institutes**: Autonomous institution or a division of a university or academy offering programmes in a number of study areas.

The three types of institution are regarded as equal in terms of admission requirements, academic standards and awards. The institutional classification is therefore functional rather than hierarchical. In this chapter the term university higher education refers to education at all three types of institution.

In 2004 there were about 1,000 state-funded research centres affiliated to university-type institutions. There are currently plans to strengthen research at Russian universities further through a radical change in the distribution of state funding for research. It is envisaged that, based on capacity analyses, 200 of the existing research centres will be chosen as centres of excellence and all existing funding will be channelled into them. The remaining 800 institutions that lose state funding will have to rely on private funding in the future.

### **Degree structure**

Since 1992 the education system has awarded the following degrees/diplomas:

- Diploma of Incomplete Higher Education (Nepolnoe vysshee obrazovanie), min. 2 years: This type of diploma certifies the completion of two years of basic higher education as part of a Bakalavr or Specialist programme within a specific field of study. The diploma represents a sub-degree. It gives direct access to the labour market and may facilitate mobility between education institutions.
- **Bakalavr diploma, min. 4 years**: The Bakalavr degree is the first degree in the Russian degree structure. It may be offered in all disciplines except medicine. The Bakalavr degree is considered to be academically rather than professionally oriented. Although it primarily prepares for admission to Magistr-level studies, it also gives direct access to the labour market. The diploma awarded confirms the degree of Bakalavr in a discipline xx (stepen' bakalavra po napravleniju xx).
- Specialist diploma, 5-6 years: The traditional Specialist degree is aimed at professional practice, but also gives direct access to doctoral studies. Specialist degrees are offered in all fields. The graduate is awarded a diploma, which confirms the professional qualification in a certain field, for example qualification as an engineer in xx field (kvalifikacija inzenera po special'nosti).
- Magistr diploma, 6 years: The Magistr degree is obtained by completing at least 2 years of study following a Bakalavr programme. Magistr programmes are more focused on research than Specialist programmes. Admissions procedures (interviews, examinations etc.) are determined individually by education institutions. Holders of a Bakalavr degree who wish to proceed in another area of study have to pass additional tests reflecting the curriculum of the Bakalavr programme in the chosen specialisation. Magistr degrees give access to doctoral studies. The diploma awarded confirms the degree of Magistr in a discipline xx (stepen' magistra po napravleniju xx).

• **Doctoral degrees**: **Kandidat Nauk**, min. 3 years following a Specialist or Magistr diploma and **Doktor Nauk**, 5-15 years after a Kandidat Nauk degree.

Only accredited institutions with adequate staff, facilities and financial resources are licensed to offer Magistr and doctoral programmes.

In addition to the usual diplomas and degrees, universities have also started offering 2- or 3-year professional training courses to fee-paying students.

The introduction of the two-tier system (Bakalavr/Magistr) in 1992 did not entail an obligation to phase out Specialist programmes. The Specialist degree remains the predominant qualification offered by Russian university-type institutions and there is a perception among many academics that the Magistr degree is only intended for research and teaching. By 2004 92.4% of students were enrolled in Specialist programmes, 7.2 % in Bachelor's programmes and 0.5% in Magistr programmes. All in all, 681 institutions representing 50.7% of the total number of institutions have implemented Bachelor's programmes in more than 100 fields of study, while 305 (22.7%) have implemented Magistr programmes. Specialist students may choose from 500 specialisations.

There has been some movement of students between the previous one-tier system and the two-tier system since the introduction of Bakalavr/Magistr degrees. Students with a Bakalavr degree may obtain a Specialist degree after 1 year of further study and, similarly, students with a Specialist degree may obtain a Magistr degree after 1 year of further study. Only a small number of students move to and from the Specialist degree in this way.

A more common practice is to obtain a second degree in a related field of study. Graduates of Specialist programmes may enter a new Specialist programme in the same or a related field, but they do not receive state funding for second-degree studies. Specialist programmes offered as part-time courses enable students to enter the labour market while studying for their second degree. Most holders of Specialist degrees obtain at least a year or a year and a half of credit transfers. There are no regulations concerning credit transfers for second degrees, which means that credit transfers are at the discretion of the individual institutions. Examples of 'double degree' holders include engineers who combine their engineering qualifications with a qualification within management or law.

#### Educational standards/course content

In parallel with introduction of the new degree structure there have also been changes in the content of programmes of higher education.

Specialist programmes are divided into professional specialities (Special'nosti), which are further divided into specialisations (Specializacii), e.g. speciality psychology, specialisation military psychology. The Specialist diploma states the qualification, e.g. psychologist with the specialisation of military psychology (kvalifikacija psicholog po specializacii voennaja psichologija). Magistr and Bakalavr programmes are divided into study areas and study fields (Napravlenija), e.g. Bachelor of

Engineering and Technology, study field telecommunications (Bakalavr techniki i technologii po napravleniju telecommunicacija). Similarly, all programmes continue to carry an identification number and name. Programmes within the same study area have the same ID number.

The total number of specialisations has increased, since traditional specialisations continue to exist alongside new ones. New specialisations can be found in study areas such as materials science, environmental science, computer science/informatics, law, management and languages. The latter programmes in particular have become popular with students in Russia following the socioeconomic changes that took place after the dissolution of the Soviet Union.

All state-accredited study areas/specialisations are centrally regulated. Course frameworks are known as state educational standards. Educational standards cover course requirements such as:

- Number of hours, divided into contact hours and seminar work
- Content of study divided into 1) foundation studies/core courses 2) basic professional courses 3) specialised courses. Generally speaking, foundation studies/core courses constitute the major part of the curriculum during the first 2 years, with basic professional and specialisation subjects beginning in the third year. Core course requirements are the same for all specialisations within the same study area
- Number of weeks of professional training
- Number of weeks of dissertation writing
- Number of weeks of examinations
- Maximum work load assigned to students

The division of the course content into foundation studies, basic professional courses and specialised courses is reminiscent of the Soviet system of education, but institutions of higher education have been granted some autonomy regarding the definition of course content. Although the curriculum set by the state still occupies most of the study time on Bakalavr and Specialist programmes, institutions may set about 15% of the curriculum according to regional requirements and areas of specialisation. Similarly, students are now able to choose from a number of elective subjects (see tables in appendix 1 for examples of course content in engineering, economics and philology). Whereas the curriculum set by the state occupies most of the study time available for Bakalavr and Specialist programmes, state educational standards for Magistr programmes only define general course requirements.

An interdisciplinary approach has gained more value today, particularly at the level of foundation studies (1<sup>st</sup> and 2<sup>nd</sup> year of study). Compulsory tuition in humanities and social sciences has been integrated into foundation studies in the field of natural sciences, while tuition in the natural sciences has been strengthened within the humanities and social sciences. Although there has been a broadening of course content during the first 2 years of study (foundation course), many Bakalavr and Specialist programmes continue to represent a high degree of professional specialisation compared with similar programmes in the Nordic countries. Magistr specialisations are broader than Bakalvr and Specialist specialisations, however, so fewer Magistr specialisations are offered at institutions of higher education.

Content was reviewed and courses changed throughout the 1990's, particularly within the social sciences, where courses were subject to a process of revision or total elimination. Subjects such as the history of the Communist Party of the USSR and scientific communism, which were previously part of foundation studies within all specialisations, have similarly been revised or eliminated.

Professional practice and dissertation work are compulsory elements within all programmes at Bakalavr, Specialist and Magistr level. The typical duration of professional practice and dissertation work is:

- Bakalavr: 10-12 weeks of professional practice and 1.5-4 months of dissertation writing.
- Specialist: 12-14 weeks of professional practice and 3-4 months of dissertation writing.
- Magistr: On Magistr programmes professional practice is included in the number of hours assigned to scientific research, with the latter being the dominant component. Scientific research may be substituted for professional practice. One semester is reserved for writing a dissertation. Dissertation requirements on master's programmes are significantly higher than for Bakalavr/Specialist programmes.

#### Study load

The total workload of a student should not exceed 54 hours a week. Half of this time is made up of contact hours and the other half of independent work. Student contact hours have been reduced by about 30% to allow more time for independent work.

Teaching is scheduled for 17 weeks per semester. This means that one semester requires 918 hours of study. According to the state educational standards the total number of hours should be approximately 8,200 for Specialist programmes. In new diploma supplements the study load denotes both contact hours and hours for seminar work/independent work, whereas the old system only denoted contact hours.

The Russian Ministry of Education is in the process of accommodating the Russian system of Higher Education to the Bologna Process and the introduction of ECTS credits is one component in this process. The Moscow State Institute of Steel and Alloys is one of 32 universities involved in developing a framework for conversion from credits defined in terms of the number of study hours to ECTS credits. By 2003 a preliminary conversion factor had been defined, with just over 30 hours corresponding to 1 ECTS credit.

#### **Examinations – State Final Attestation**

At the end of each semester students are required to pass a number of examinations (approximately five) and complete essays and seminar papers satisfactorily. In order to qualify for the final examination, students also have to satisfy practice requirements.

All state-accredited institutions follow the same state procedure for final examinations, which are called State Final Attestation. The state final examination consists of one or more of the following evaluation procedures:

Preparation of a dissertation or project, which is reviewed by subject experts and tried before an examination commission. Students choose topics from a list or propose their own. The dissertation is expected to be a piece of independent research or scholarship. *This procedure is obligatory*. Final examination in an individual discipline or interdisciplinary subject area.

When all the examination requirements have been satisfied, students receive a diploma in state format and a degree title and/or professional qualification.

### Examples of study programmes within university higher education

There follows information on the structure and content of study programmes within engineering/technical qualifications, economics and philology based on general information and information obtained during study visits to institutions specialising in these study areas. Qualifications from within these three fields are among the most commonly evaluated Russian qualifications at the Scandinavian ENIC/NARIC offices. Examples of educational standards within engineering, economics and philology can be found in appendix 1.

#### Engineering/technical qualifications

Traditionally, advanced engineering programmes have lasted 5-6 years. A majority of the institutions providing the programmes have been single-discipline institutes, oriented towards specific branches of industry. Multidiscipline polytechnic institutes existed in parallel with the specialised institutions. The traditional universities did not offer engineering programmes.

During the Soviet period there was a market for specialists in narrow branches of industry and so the number of different centrally regulated engineering programmes was large. In 1990 programmes were offered in 23 study areas, which were further divided into specialisations. These were regulated in detail. Today there are even more engineering specialisations, since previous specialisations continue to exist in most study areas in parallel with new specialisations.

In technical study areas the Specialist degree is still preferred to Bakalavr/Magistr degrees. The number of state educational standards for Specialist programmes currently stands at 100, and these are further divided into specialisations. By comparison 37 Bakalavr/Magistr educational standards had been developed by 2004. The professional qualification awarded in Specialist programmes is engineer (*inzener - инженер*) with addition of the relevant specified professional field. For example, the qualification in electrical engineering is *inzener-elektrik* (инженер-електрик), in mechanical engineering *inzener-mehanik* (инженер-механик), etc.

Tables 1, 2 and 3 in appendix 1 show examples of state education standards for Specialist, Bakalavr and Magistr courses within the metallurgy study area.

One of the institutes offering courses within metallurgy is the Moscow State Institute of Steel and Alloys. The institution offers 11 different engineering specialisations in different aspects of metallurgy. All specialisations last 5.5 years. The degree awarded is that of Specialist and the professional title that of "inzener-tehnolog" (инженер-технолог), with the specialisation also being mentioned.

The institute also offers Bakalavr/Magistr degrees in the field of metallurgy. After completing a 4-year Bakalavr programme, graduates may continue their studies on a 2-year Magistr programme in order to obtain a Master of Science and Technology degree. Finally, it is possible to obtain a Spe-

cialist degree carrying the title of engineer—researcher (inzener-issledovatel - инженер-исследовател).

The time scheduled for the preparation of a dissertation at the Moscow State Institute of Steel and Alloys is 1.5 months for a Bachelor's degree and 3 months (+ practical research period) for engineers. For the Master's degree one semester is scheduled for writing a dissertation.

#### **Economics**

Study areas and specialisations within the social sciences have been subject to significant curriculum changes since the dissolution of the Soviet Union. Specialisations have been revised or eliminated and new specialisations have been developed within areas such as business administration and management. Economics and related specialisations have become very popular with students in Russia.

Bakalavr and Magistr degrees seem more popular within economics than in the field of engineering. By 2004 educational standards had been defined for 22 Specialist programmes and 26 Bakalavr/Magistr programmes. See tables 4, 5 and 6 in appendix 1 for examples of state educational standards within economics.

The People's Friendship University of Russia (PFUR) located in Moscow offers courses in popular study areas such as business economics and management at its Faculty of Economics. The number of students has doubled from 700 to 1,500 in just a few years. In 2004 a new programme will be added to the present four, with the following specialisations now being available: accounting, auditing, international economics, world economics and finance & credit (new).

PFUR introduced Bakalavr degrees on an experimental basis in 1989 to satisfy demand from the relatively large community of foreign students at PFUR. Students are offered the opportunity to study at a Preliminary Faculty for a year before starting a 4-year Bakalavr programme. The majority of students (80%) spend 1 year in a Preliminary Faculty, where foreign students learn Russian and Russians learn foreign languages. At PFUR Specialist degrees are less popular than Bakalavr and Magistr degrees.

#### Philology (languages/linguistics)

Philology is another study area that has become popular in Russia.

There are 39 state educational standards for Specialist programmes within the philology study area and 16 Magistr study areas.

All programmes within the philology study area must include at least two languages: a main language and a subsidiary language. Another feature common to programmes within philology is that all degree holders obtain qualifications that allow them to carry out educational activities in educational institutions. Educational and psychological training are a feature of all programmes leading to teaching qualifications.

See tables 7, 8 and 9 in appendix 1 for curriculum examples within philology.

The Moscow State Linguistic University (MSLU) teaches 26 foreign languages, including the Scandinavian languages and the languages of the republics of the former Soviet Union such as Ukrainian and Armenian. Scandinavian languages can be taught as a main or subsidiary language in combination with English. The entrance requirement for studying English, German, French or Spanish as a first foreign language is that students have previous knowledge of these languages from senior secondary school. No previous knowledge is required for studying a second modern language (subsidiary). At MSLU students in the non-linguistic departments also study two foreign languages, but this is unique to this university.

The Bakalvr/Magistr degree structure has been implemented at MSLU. MSLU admitted the first students to its Bakalavr programme in 1999. The first generation of Bakalavr students, who graduated in 2003, have all continued to Magistr level studies. At MSLU the Specialist degree is still the preferred leaving qualification. The Specialist level is considered the absolute minimum for a fully trained translator or interpreter at MSLU, and employers also require Specialists. In 2003 only 2-4% of all Specialists applied for entry to Magistr-level studies, but this number is predicted to rise once Bakalavr graduates have started Magistr-level studies.

### Comparing university higher education levels with Nordic qualification levels

Assessment standards for Russian university higher education in the Nordic countries may vary depending on factors such as study area and course content. In general, however, the following can be said about current assessment standards for Russian Bakalavr, Specialist and Magistr degrees in Denmark, Norway, Sweden and Finland:

- In Denmark Specialist degrees are generally assessed as being at the level of a second cycle degree, but not comparable to a full Danish Master's (Kandidat) degree (Bachelor + 60 ECTS at Master's (Kandidat) level). Bakalavr degrees are generally assessed as comparable to a Danish first cycle degree (Bachelor's degree (3-4 years)) and Magistr degrees are generally assessed as comparable to a Danish second cycle degree (Master's (Kandidat) degree (2 years)).
- In Norway Specialist degrees are generally assessed as being at the level of a second cycle degree, but not comparable to a full Norwegian Master's (Kandidat) degree (Bachelor + 60 ECTS at Master's level). Bakalavr degrees are generally assessed as comparable to a Norwegian first cycle degree (Bachelor's degree (3 years)) and Magistr degrees are generally assessed as comparable to a Norwegian second cycle degree (Master's degree (2 years)).
- In Sweden Specialist degrees within the field of engineering are generally assessed as being comparable to a Swedish Civilingenjörexamen qualification (4.5 years) and Specialist degrees in other study areas are generally assessed as comparable to a Swedish second cycle degree (Magister degree (4 years)) or a comparable professional degree, if one exists in the field concerned. Bakalavr degrees are generally assessed as comparable to a Swedish Kandidatexamen degree (3 years) and Magistr degrees are assessed as comparable to a Swedish

Magister degree. Bakalavr and Magistr diplomas can also be compared to one of the Swedish professional degrees.

• In Finland Specialist degrees are generally assessed as being at the level of a second cycle (maisteri/magister) Finnish degree. Bakalavr degrees are generally assessed as comparable to a Finnish first cycle degree (usually called kandidaatti/kandidat) and Magistr degrees are assessed as comparable to a Finnish second cycle degree.

These standards refer to the assessment of newer credentials from Russia. While Bakalavr and Magistr degrees are compared to full first and second cycle degrees in Norway, Sweden, Finland and Denmark, Specialist degrees are not in most cases compared to a full Danish Master's (Kandidat) degree or a full Norwegian Master's degree.

This practice does not follow the recommendations of a UNESCO working group on Russian qualifications, which has advocated that Specialist degrees should be assessed by credential evaluators as comparable to a full second level degree. Similarly, Russian legislation stipulates that Specialist and Magistr degrees are at the same educational level, and the Russian ENIC strongly recommends that Specialist and Magistr degrees are both considered comparable to full second cycle degrees in other countries. Russia's ratification of the Lisbon Convention in 2000 and the commitment by Russia to the Bologna Declaration, which was joined by Russia in 2003, has not so far brought about any changes in the way Specialist qualifications are assessed in Denmark and Norway.

Some of the arguments for not assessing Specialist degrees as comparable in level to a full Norwegian Master's or Danish Master's (Kandidat) degree are:

- Specialist programmes are generally more practically/application oriented than Danish and Norwegian Master's programmes, which are both more research oriented, resulting in differences in the learning outcome of the two types of programme.
- Although the duration of Specialist programmes is the same as for Danish or Norwegian
  Master's programmes (5 years), the emphasis on foundation studies involving a number of
  general subjects within university education in Russia means that subject-specific teaching
  relating to the chosen specialisation is more limited than in traditional Master's programmes
  in Denmark and Norway.
- Admission requirements for entrance to higher education in Russia have so far been regarded as lower than admission requirements in Norway and Denmark. Both countries therefore require the completion of one year of higher education following the completion of upper secondary school in Russia for the general admission requirements for higher education studies in Norway and Denmark to be met.
- It is possible to obtain at least 1 year of credit transfers to university higher education in Russia from middle level professional education programmes. Middle level professional

education is currently not recognised as being at the level of higher education qualifications in any of the Nordic countries.

The Norwegian ENIC is currently in the process of revising its assessment standards regarding Russian qualifications. The outcome of the revision process is likely to be that Russian Specialist qualifications will be assessed as full second cycle (Master's) degrees in the future. One of the considerations of the Norwegian ENIC is the fact that, although the Attestat is still considered to be at a lower level than Norwegian entry requirements for higher education, entrance examinations for higher education in Russia are considered to be at a more advanced level than the Attestat.

Both Norway and Denmark have also initiated a revision of assessment standards for qualifications giving access to higher education in Russia (Attestat).

A further analysis of Nordic assessment standards might benefit from reviewing assessment standards from a more general perspective of the Russian and Nordic degree structures, which would provide a comprehensive picture of the differences and similarities between Russian and Nordic degrees and qualifications. Such an approach could take as its point of departure the Bologna degree structure as well as the conceptual thinking underlying national qualification frameworks. This would allow a more structured analysis of different factors such as formal requirements (e.g. entry requirements), what defines Russian and Nordic degrees, learning outcomes and the nature of change between educational levels.

## **Chapter VII: Teacher Training**

Teacher training in Russia takes place at two levels:

- Non-university higher education (middle level professional education level)
- University higher education

Preschool, primary school and lower secondary school teachers are mainly trained at the non-university level, while teachers for lower secondary and upper secondary schools are trained at the university level. It is also possible to obtain preschool and primary school teaching qualifications within university-level programmes. This overlap of professional qualifications/teaching competencies of teachers trained at non-university and university-level is a distinct feature of the Russian system of teacher training (see table 7.1 below for an overview of competence levels obtained at different institutions).

Most teachers are now trained at university higher education institutions. There are approximately 100 teacher training establishments in university higher education. Until 1992 teacher training at the university-level took place at teacher training institutes and ordinary institutions of higher education. In 1992 the first teacher training universities were established by upgrading some of the teacher training institutes.

Teacher training is based on the same legal framework as other programmes of university higher education. Since the dissolution of the Soviet Union the Ministry of Education has paid a lot of attention to reforming the system of teacher training in order to accommodate the needs of a society marked by radical social, economic and cultural changes. A reform programme for teacher training is now in its implementation phase. The reform focuses mainly on university teacher training programmes, but it is also intended to be implemented within non-university teacher training institutions.

The main aim of the reform is to change the concept of teacher training. There is a move from teaching methods based on concepts of rote learning and one-way communication towards more interactive teaching methods. A total of 23 inter-university centres dealing with revision and development of forms of teaching and educational content have been established as a means of enabling and benefiting the reform process.

Table 7.1. Overview of competence levels obtained at institutions providing teacher training

	Professional institutions and colleges (Uchiliche/kolledz)	Teacher Training Institute	University
Preschool and primary school (years 1-4)	X	X	X
Lower secondary school (years 5-9)	X	X	X
Upper secondary school (years 10-11)		X	X

### **Teacher training institutions**

#### Professional institutions and colleges at non-university level

Professional teacher training at the non-university level (middle level professional education) takes place at professional institutions (uchilishe) or colleges (kolledz). These institutions mainly train teachers for preschools and primary schools (years 1-4). Students entering after year 11 follow a basic 3-year programme, while students entering after year 9 follow a 4-year programme. It is also possible to qualify as a lower secondary teacher (years 5-9). In this case the programme lasts 3 years following year 11 and 5 years following year 9. Primary school teachers may choose between a general curriculum, which prepares them for teaching all subjects in years 1-4 or an area/subject of specialisation.

Teachers trained at professional institutions or colleges may take part-time courses to upgrade their qualifications. Some teacher training colleges have signed credit transfer agreements with teacher

training institutes or universities, allowing diploma holders from professional institutions or colleges to be exempted from 1-2 years of study. Typically, students may enter university level teacher training in the third semester, but in some cases they gain access to the fifth semester. As mentioned in chapter V, educational legislation stipulates that students should obtain 1 year of credit transfers when continuing within the same field of study.

#### **Teacher training institutes and universities**

Teacher training institutes and universities, together with institutes and universities within other study areas where teaching qualifications can be obtained, train teachers for the lower and upper secondary levels (years 5-9 and 10-11). Although admission requirements, academic standards and awards are in principle the same at teacher training institutes and universities, in reality teacher training universities are more research oriented than institutes.

A Specialist degree is required in order to teach at upper secondary level. Specialists who are trained at universities are mainly oriented towards teaching at the upper secondary level, but they may also teach at the lower secondary level (years 5-9). University graduates usually specialise in one subject, i.e. mathematics, biology, a language, etc.

#### **Professional titles**

The qualification of teacher (*ucitel'*, *prepodavatel'*) may be added to a professional title or subject title when teacher training requirements are satisfied. The following examples are titles obtained after the completion of a Specialist programme lasting five years:

- Teacher in the Russian language (ucitel' russkogo jazyka)
- Foreign language teacher (ucitel' inostrannogo jazyka
- Teacher for primary school (*ucitel' nacal'nych klassov*)
- Preschool teacher (pedagog doskol'nogo obrazovanija)

### Degrees and curricula

The following information refers to university-level teacher training programmes.

University-level teacher training leads to the same degrees as other study areas in higher education, i.e. Bakalavr, Specialist, Magistr, Kandidat Nauk and Doktor Nauk. Students who have obtained a Bakalavr degree may continue their studies on a Specialist programme (+ 1 year) or Magistr programme (+ 2 years).

In the past the Ministry of Education issued a detailed curriculum for teacher training institutions every 5 years and monitored its application. The current reforms, on the other hand, aim to develop greater autonomy and diversity among teacher training institutions.

New state standards have been issued for all university-level teacher-training institutions. These standards include guidance on subject matter and course structure. As mentioned in chapter VI, the

combination of federal, regional and local components allows institutions to set part of the curriculum and to some extent allows students to create their own profile.

Teacher training programmes are divided into:

- foundation studies/core course within the humanities, social sciences and natural sciences (compulsory for all university higher education programmes)
- subject specialisation
- studies in biology and medicine
- studies in education and psychology
- introduction to the teaching profession (in-service teacher training)

# **Concluding remarks**

The study visit to Moscow provided answers to many of the questions previously identified by the Nordic evaluation offices. In addition to this report the study visit has resulted in increased cooperation between the Nordic offices with regard to Russian qualifications, increased cooperation with the Russian ENIC and an agreement on student and teacher exchanges between "Moscow Technical College" (MTC) and the "Vitus Bering" technical college in Denmark.

The visit also gave rise to new questions concerning the Russian degree structure and issues relating to the definition of degrees such as content, learning outcomes, entry levels and the nature of change between different educational levels. Although Russia has joined the Bologna Process and is now developing its system of higher education within the same framework as the Nordic countries, the chapters on the comparability of Russian and Nordic degrees in this report indicate that there are still differences in the way some higher education qualifications, i.e. Specialist and non-university higher education qualifications, are perceived and consequently assessed by Russian and Nordic credential evaluators.

One way of approaching these differences and benefiting a possible revision of assessment standards might be to initiate further investigation into the Russian degree structure, the definitions of degrees, including learning outcomes and the nature of change between levels of education, and formal demands such as entry levels. Apart from the Nordic offices involved in this report, neighbouring countries such as the Baltic States could perhaps be invited to join such a process in order to benefit the work with their knowledge and experience.

Another issue of mutual interest emerging from the study visit was the idea of creating a database of original Russian documents with a view to the quick exchange of information on formats, details, logos, names of chancellors, etc. Again, the expertise of other offices, such as the Baltic ENICs, would be most beneficial in this process.

# **Glossary**

Akkreditatsiya/Аккредитация – Accreditation

Attestatsiya/Аттестация – Attestation

Bakalavr tehniki i tehnologij бакалавр техники и технолгий - Bachelor of Science in Engineering Doktor nauk/Доктор наук - Doctor of Science

Edinyi gosudarstvennyi ekzamen (EGE)/Единьй государственный экзамен (ЕГЭ) – Unified National Exam (UNE)

Gosudarstvennyi obrazovatel'nyi standart/Государственный образовательный стандарт – State Education Standard

*Inzener*) инженер – Engineer

Inzener-issledovatel' инженер-исследователь – Engineer Researcher

Kandidat nauk/Кандидат наук – Candidate of Science (Ph.D.)

*Kolledz* колледж - Middle level professional institution offering both basic and advanced programmes

Litsenziya/Лицензия – Licence

Magistr tehniki i tehnologij - магистр техники и технолгий - Master of Science in Engineering, prepares for an academic career.

Ministersterstvo obrazovaniya Rossiiskoi Federatsii/Министерство образования Российской Федерации – Ministry of Education of the Russian Federation

Nachal'noe professional'noe obrazovanie - начальное профессиональное образование — Basic Vocational Education

Professional'noe ucilishche - профессиональное училище – Vocational Secondary School Srednee professional'noe obrazovanie - среднее профессиональное образование – Middle Level Professional Education

среднее (srednee) – Middle

Svidetel'stvo o rezul'tatach EGE/Свидетельство о результатах ЕГЭ – Certificate of Results from the Unified National Exam

Tehnikum/ucilishche техникум/училище— Middle Level Professional Institution

### Sources

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Information from members of staff at the Swedish National Laboratory of Forensic Science (Statens Kriminaltekniska Laboratorium, SKL)

Presentation by Tatyana Komarova, Dept. of Licensing, Accreditation and Attestation, Ministry of Education, on 20 October 2003

Presentation by Tatyana A. Barkhatova, Dept. of Quality Control of General Education, Ministry of Education, on 20 October 2003

EAIE-ACE training course, International Credential Evaluation: Soviet Union, Eastern Europe and Central Asia, 25-27 March 2004, Tallinn.

#### Web links/Official links

Official homepage of "Goznak": www.goznak.ru

Official homepage of the Russian National Accreditation Centre, Ministry of Education: www nica ru

Official homepage of the Russian Ministry of Education: www.ed.gov.ru

Official UNE homepage: <a href="http://ege.edu.ru/PortalWeb/index.jsp">http://ege.edu.ru/PortalWeb/index.jsp</a>

Official home page of the Russian ENIC www.russianenic.ru

Official home page with current state educational standards within higher education in the Russian Federation <a href="http://www.edu.ru/db/portal/spe/index.htm">http://www.edu.ru/db/portal/spe/index.htm</a>

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# **Appendix 1: Examples of State Educational Standards**

The tables presented in this appendix are translations of ministerial ordinances (State Educational Standards) for study programmes within the field of engineering (metallurgy), economics and philology. All State Educational Standards within higher education in the Russian Federation can be found at the following website of the Russian Ministry of Education: <a href="http://www.edu.ru/db/portal/spe/index.htm">http://www.edu.ru/db/portal/spe/index.htm</a>.

The tables give the total number of hours in each subject area as well as the number of hours in specific subjects. If the number of hours within a specific subject is not given in a table, it means that the number of hours is set individually by institutions on the basis of the total number of hours allocated to subjects within the study area in question. The tables also give the number of hours/weeks allocated to professional practice and examinations.

### **Engineering**

**Table 1. Bakalavr in technology, metallurgy** (Bakalavr tehniki. Metallurgija- Бакалавр техники по направлению Металлургия), identification number 550500

Study area and related subjects	Hours
Humanities, social science and economics – total number of hours	1800
Mathematics and natural science – total number of hours:	2450
Mathematics and computer science	860
Natural science	1100
Physics	
Chemistry	
Introduction to crystallography and mineralogy	
Physical chemistry	
Ecology	
Student elective subjects (subjects set by the institutions)	490
General specialisation presentation – total number of hours	1820
Heat and mass transfer and heat technology in metallurgy	120
Descriptive geometry and technical drawing	150
Applied mechanics	200
Electrical engineering	190

Metal physics	260
Physics and chemistry of metallurgical processes and systems	100
Physicochemical methods of analysis	100
Heat technology in metallurgy	190
Metrology, standardisation	70
Work safety	100
Student elective subjects (subjects set by the institutions)	340
Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students	824
Additional subjects	450
Military defence	450
The whole theoretical course includes	7344
Practical training and state accreditation	40 weeks

**Table 2. Specialist degree: Engineer with specialisation in ferrous metallurgy** (Ingener po special'nosti Metallurgija chernyh metallov- Инженер по специальности Металлургия черных металлов), identification no. 110100

Study area and related subjects	Hours
Humanities, social science and economics – total number of hours	1802
Mathematics and natural science - total number of hours	2380
Mathematics and computer science  Mathematics  Computer science	920 670 250
Physics	400
Inorganic chemistry	270
Introduction to crystallography and mineralogy	60
Physical chemistry	250
Ecology	200
Student elective subjects (subjects set by the institutions)	280
General professional subjects – total number of hours	1850
Heat and mass transfer and heat technology in metallurgy	250
Descriptive geometry and technical drawing	150

Applied mechanics	200
Electrical engineering	190
Physical metallurgy	260
Production of non-ferrous metals	80
Forming of metals under pressure	70
Physicochemical methods of analysis	100
Metrology, standardisation and certification	70
Work safety	100
Organisation and management	100
Student elective subjects (subjects set by the institutions)	280
Specialised subjects within ferrous metallurgy – total number of hours	1630
Specialisation (seminars and workshops included)	530
Elective subjects	600
Military defence	450
Other additional subjects	150
Course total	8262
Practical training	12 weeks

**Table 3: Magistr in technology, metallurgy** (Magistr tehniki, metallurgija - Магистр техники теталлургия")

Study area and related subjects	Hours
Humanities, social science and economics- total of number of hours	200
Philosophical aspects of science and technology	
Research methodology	
Marketing of scientific results	
Teaching problems in higher education	
Mathematics and natural science – total number of hours	150
Computer science in science and education	
General specialisation subjects	300
Modern problems in metal science	
Mathematical modelling	

Organisation of research activities	
Specialisation (seminars and workshops are included)	1200
Student elective subjects	526
Total number of hours for theoretical courses	2376
Teacher training and research	2376
Total number of hours for Magistr studies	4752
The course including bachelor programme - in total	12528

The institution may change the number of hours within each subject area by up to 20% and substitute scientific research for teaching practice.

### **Economics**

**Table 4: Bakalavr in economics** (Bakalavr ekonomiki - Бакалавр экономики), identification number 521600

Study area and related subjects	Hours
Humanities, social science and economics- total number of hours	1690
Philosophy	
Foreign language	340
Culture	
History	
Sport	408
Law	
Sociology	
Political science	
Psychology and education	
Student elective subjects (subjects set by the institutions)	324
Mathematics and natural science – total number of hours	1200
Mathematics and computer science	
Modern scientific theories	
Student elective subjects (subjects set by the institutions)	300
General specialisation presentation – total number of hours	2900

Economic thinking throughout history  History of economics  Statistics  Accounting  Finance, money and credit  Management  Economics and sociology of labour  World economy  Marketing  Strategic organisation  Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  State accreditation  2 weeks  State accreditation	Theory of economics	360
Statistics Accounting Finance, money and credit  Management Economics and sociology of labour World economy Marketing Strategic organisation Price formation Social and economic forecasting Tax systems Human resources Income and salary policies Student elective subjects (subjects set by the institutions) Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students Additional subjects (e.g. military defence) Additional courses  Total number of hours for theoretical courses  7536 Practical training	Economic thinking throughout history	
Accounting Finance, money and credit  Management  Economics and sociology of labour  World economy  Marketing  Strategic organisation  Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  Practical training  12 weeks	History of economics	
Finance, money and credit  Management  Economics and sociology of labour  World economy  Marketing  Strategic organisation  Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  7536  Practical training	Statistics	
Management  Economics and sociology of labour  World economy  Marketing  Strategic organisation  Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  Practical training  12 weeks	Accounting	
Economics and sociology of labour  World economy  Marketing  Strategic organisation  Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  7536  Practical training	Finance, money and credit	
World economy  Marketing  Strategic organisation  Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  7536  Practical training	Management	
Marketing  Strategic organisation  Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  7536  Practical training	Economics and sociology of labour	
Strategic organisation  Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  Practical training	World economy	
Price formation  Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  Practical training	Marketing	
Social and economic forecasting  Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  Practical training	Strategic organisation	
Tax systems  Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  Practical training  12 weeks	Price formation	
Human resources  Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  7536  Practical training	Social and economic forecasting	
Income and salary policies  Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  510  Additional courses  Total number of hours for theoretical courses  Practical training  12 weeks	Tax systems	
Student elective subjects (subjects set by the institutions)  Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  Practical training  1058  1058  806  806  807  806  807  806  807  807	Human resources	
Specialisation subjects to be planned locally at higher education institutions, including elective courses chosen by students  Additional subjects (e.g. military defence)  Additional courses  Total number of hours for theoretical courses  Practical training  806  806  110  120  120  120  120  120  130  120  12	Income and salary policies	
elective courses chosen by students  Additional subjects (e.g. military defence)  510  Additional courses  130  Total number of hours for theoretical courses  7536  Practical training	Student elective subjects (subjects set by the institutions)	1058
Additional courses 130  Total number of hours for theoretical courses 7536  Practical training 12 weeks		806
Total number of hours for theoretical courses 7536  Practical training 12 weeks	Additional subjects (e.g. military defence)	510
Practical training 12 weeks	Additional courses	130
-	Total number of hours for theoretical courses	7536
State accreditation 2 weeks	Practical training	12 weeks
	State accreditation	2 weeks

Valid from 1.9.1997.

**Table 5: Specialist degree: Economist with "Economic theory" as study field** (Ekonomist po napravleniju "Ekonomicheskaja teorija" – Економист по направлению "економическая теория"). Duration of programme: 5 years (full-time study), identification no. 060100

Study area and related subjects	
Humanities, social science and economics- total number of hours	1800
Philosophy	136

Foreign language	340	
Culture		
Russian history	204	
Sport	408	
Law	64	
Sociology	108	
Political science		
Psychology and education		
Russian and rhetoric		
Subjects determined by the institution	540	
Student elective subjects	(270)	
Mathematics and natural science – total number of hours		1400
Mathematics	850	
Computer science	300	
Modern scientific theories	100	
Subjects set by the institution	150	
Student elective subjects	(75)	
General specialisation presentation – total number of hours		3000
Theory of economics	730	
Theories of periods of economic transition	108	
Economy in its historical setting	216	
History of economics	216	
Statistics	250	
Accounting and book-keeping, financial analysis and auditing	216	
Finance and credit	216	
Industrial economics	216	
International economy	216	
Marketing	108	
Management	108	
Subjects set by the institution	700	
Elective subjects	(350)	

Subjects of specialisation	2524
Institutional economics	108
Economics of the public sector	108
Economics of industry	108
Economics of labour	108
Econometrics	108
Theoretical analysis of economic theories	108
Theoretical workshop on transitional economies	108
Theoretical workshop: Modern system of market economies	108
Subjects set by the institutions	1660
Elective subjects	(880)
Additional subjects	1550
Military defence	450
The theoretical course includes – in total	10274 (190 weeks)
Practical training	12 weeks
State accreditation	8 weeks

The whole educational period is 260 weeks, including 190 weeks of theoretical training, scientific research and dissertation, 12 weeks of practical training, 8 weeks of final state accreditation and 50 weeks of holidays (including 8 weeks of vacation after graduation).

**Table 6: Magistr in Economics** (Magistr ekonomiki - Магистр економики), identification number 521600

Study area and related subjects	Hours
Subjects of the study field	1134
Modern issues of economics as a science	
Computer science in economy and education	700
Subjects set by institutions	434
Elective subjects	
Subjects of specialisation	900
Research activities	2034

Research activities	
Research practical training	
Scientific teacher training	
Dissertation	
Total number of hours for Magistr studies	4068

# Philology

Table 7: Bakalavr in Philology (Bakalavr filologii), identification number 520300.

Study area and related subjects	Hours
Humanities, social science and economics – total number of hours	1800
State-set curriculum	(1260)
Foreign language	340
Sport	408
Russian history	512
Culture	
Political science	
Law	
Psychology and education	
Russian language and linguistic	
Sociology	
Philosophy	
Economics	
Subjects set by region (educational institution):	270
Student elective subjects	270
General mathematics and natural science- total number of hours	400
State-set curriculum:	(320)
Mathematics and computer science	250
Modern scientific theories	70
Subjects set by region (educational institution)	40
Student elective subjects	40

General specialisation presentation. subjects:		5800
State-set curriculum	(5300)	
	200	
General philology	300	
Classical language / languages	300	
History of literature	2050	
Specialisation language / languages	1750	
Foreign language / languages (practical part)	900	
Subjects set by region (educational institution)	300	
Student elective subjects	200	
Specialisation (seminars and workshops are included)		406
Additional subjects		450
The whole theoretical course includes	136	weeks
Practical training	4	weeks
Examinations	28	weeks
Final state examinations	4	weeks
Holidays (including 8 weeks after graduation)		36
Total	208	weeks

**Table 8: Specialist in philology/teacher** (Filolog/Uchitel' (prepodavatel') - Филолог, учитель (преподаватель)), identification number 021700.

Study area and related subjects	Hours
Humanities, social science and economics – total number of hours	1800
State-set curriculum	(1260)
Foreign language	340
Sport	408
Russian history	
Culture	
Political science	
Law	
Psychology and education	

Russian language and linguistic	
Sociology	
Philosophy	
Economics	
Subjects set by region (educational institution)	Up to 270
Student elective subjects (subjects set by the institutions)	Up to 270
General mathematics and natural science– total number of hours	400
State-set curriculum	(320)
Mathematics and computer science	250
Modern scientific theories	70
Subjects set by region (educational institution):	40
Student elective subjects (subjects set by the institutions)	40
General specialisation presentation. Subjects are:	6400
State-set curriculum: Exact curriculum (total hours are 6400) set by the educational institution depending on the chosen specialty of a student, but the curriculum should be based on the following subjects:	(5300-5800)
General philology	300
Classic language / languages	100-300
History of literature	750-2050
Specialisation language / languages	1750-3350
Foreign language / languages (practical part)	700-1200
Subjects set by region (educational institution)	300-600
Student elective subjects (subjects set by the institutions)	300-500
Specialisation (seminars and workshops are included)	886
Additional subjects: Military defence	450 450
The theoretical course includes – in total	9936
Practical training	756 hours
Course total	10692 hours

Valid from 2000.

The programme consists of 260 weeks, including 184 weeks of theory, 14 weeks of practical training (teacher training), 12 weeks for preparing a dissertation, 4 weeks of state examinations, 46 weeks of holidays (including 8 after graduation).

Table 9: Magistr of Philology (Magistr filologii), identification number 520300

Study area	Hours
State-set curriculum	700
Modern problems of philology	300
History and methodology of philology	300
Computer technology in philology	100
Subjects set by region (educational institution)	434
Subjects set by institution (faculty)	300
Specialisation subjects	900
Scientific research activities	2034
The whole theoretical course includes scientific-research activities, practical training and a dissertation	58 weeks
Practical training	20 weeks
Scientific research Teaching (scientific area)	14 6
Examinations	6 weeks
Final state examinations	4 weeks
Holidays (including 4 weeks after graduation)	16
Total	104 weeks

# **Appendix 2: Participants**

### Danish ENIC/NARIC (Center for Vurdering af Udenlandske Uddannelser, CVUU)

Ministry of Education

Centre for Assessment of Foreign Qualifications

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#### **Norwegian ENIC/NARIC (NOKUT)**

Norwegian Agency for Quality Assurance in Education (NOKUT)

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#### Swedish ENIC/NARIC (Högskoleverket)

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### **Experts from Danish educational institutions**

Carsten Sørensen, Head of Department, The Civil Engineering Department, Aalborg University
Jens Møller Pedersen, Assistant Professor, The Civil Engineering Department, Aalborg University
Knud Pedersen, Agricultural Adviser, The Danish Agricultural Advisory Board
Peter Aalykke, Head of Department, "Vitus Bering" – Horsens Technical College
Peter Køhn, Senior Teacher, Silkeborg Business College
Peter Neergaard, Professor, Copenhagen Business School
Viggo Plum, Assistant Professor, Department of Geography, Roskilde University

# **Appendix 3: Study tour programme**

Programme for the 3-day study visit to Moscow, 20-22 October 2003

### Monday 20 October - working meeting at the Russian ENIC

First session 9.30-12.30

- 1. Russian education system, recent changes in the course of modernisation, similarities with the Bologna Process. By Gennady LUKICHEV, Head of the Russian ENIC.
- 2. Licensing and accreditation of education institutions. By Tatyana KOMAROVA, Department of Licensing, Accreditation and Attestation, Ministry of Education.

Second session 13.30-17.30

- 1. Secondary general education: State examinations, the "Unified" exam. By Tatyana BAR-HOTOVA, Department of Quality Control for General Education, Ministry of Education.
- 2. Post-secondary (Scrednee) vocational education. By Alla KOLOMENSKAYA, Department of Secondary Vocational Education, Ministry of Education.

#### Tuesday 21 October - visit to Moscow Technical College

A comprehensive presentation of the educational programmes of the college and an exchange of views on the cooperation between the vocational institutions on the one hand and the employers and labour market needs on the other. By Director Alexander BAKUSHIN and a number of teachers in the different fields of specialisation.

#### Wednesday 22 October – parallel visits to Higher Education Institutions

First session 9.30-12-30

Engineering Institution: Moscow State Institute of Steel and Alloys, Technological University. Presentation by Victor SOLOVIEV, Vice Chancellor, and a number of other teachers on international relations and comparison of own credit system with American and European systems. Philology and Teaching: Moscow State Linguistic University. Presentations by a number of teachers on the structure, qualifications and content of the various fields of study at the University.

Second session 14.00-17.00

Economics and Management: Russian People's Friendship University. By Dmitry BILIBIN, Rector of R.P.F.U.

Concluding meeting between the delegation and Russian ENIC represented by Gennady LUKI-CHEV.