



SUMMARY REPORT OF THE EXTERNAL EVALUATION

of the cluster of educational programmes in

«Chemistry» (04.03.01, 04.04.01),

Delivered by the Federal State Autonomous Educational
Institution of Higher Professional Education "North-
Caucasian Federal University"

While preparing this presentation we used information from the Self-Evaluation Report and the Report of the External Review Panel of the cluster of educational programmes «Chemistry» (04.03.01, 04.04.01), delivered by the Federal State Autonomous Educational Institution of Higher Professional Education "North-Caucasian Federal University".

The presentation document for the use of the National Accreditation Board.

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GENERAL INFORMATION ON EDUCATIONAL INSTITUTION

Full name of the educational institution	<i>Federal State Autonomous Educational Institution for Higher Professional Education "North-Caucasian Federal University" (NCFU)</i>		
Founders	<i>Ministry of Education and Science of Russian Federation</i>		
Year of foundation	<i>1971 – Stavropol Polytechnic Institute</i>		
	<i>1994 – Stavropol State Technical University</i>		
	<i>1999 – North-Caucasus State Technical University</i>		
	<i>2011 – Federal State Budgetary Educational Institution of Higher Professional Education North-Caucasian State Technical University</i>		
	<i>2012 - Federal State Autonomous Educational Institution for Higher Professional Education "North-Caucasian Federal University"</i>		
Current state accreditation status:			
Type	<i>Educational institution of higher professional education</i>		
Location	<i>Russia, 355029, Stavropol, Pushkin Str. 1</i>		
Rector	<i>Levitskaya Alina, cand. of philol. sc., assistant professor</i>		
License	<i>Series 90Л01 №0000357 reg. No. 0328 dated 06.09.2012, permanent</i>		
State Accreditation	<i>Certificate of State Accreditation No. 0929 dated 21.03.2014, valid till 21.03.2020</i>		
Number of students	<i>20277</i>		
	<i>including:</i>		
	<i>full-time</i>	<i>23168</i>	
	<i>part-time</i>	<i>12475</i>	
	<i>part-time</i>	<i>124</i>	
	<i>externship</i>	<i>10569</i>	

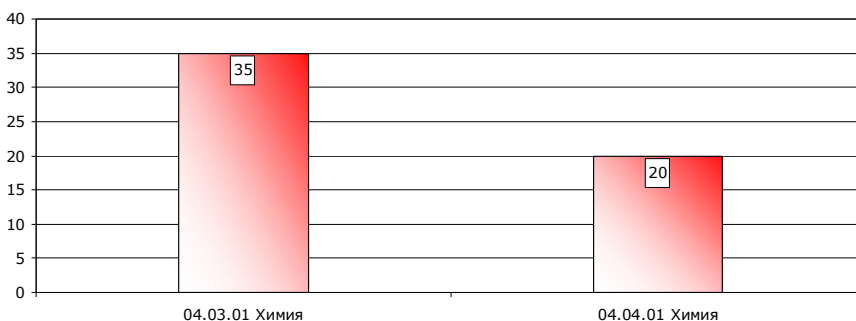
INFORMATION ON THE EDUCATIONAL PROGRAMMES UNDERGOING ACCREDITATION

Educational programmes	<i>Chemistry (04.03.01 04.004.01)</i>
Level of training / Standard period of training	<i>Bachelor's degree programme / 4 years</i> <i>Master's degree programme/ 2 years</i>
Structural subdivision (head)	<i>Institute of Institute of Life Sciences (Dr.of Medicine, professor Bondar Tatyana Petrovna)</i>
Major Departments (heads)	<i>Department of Chemistry (Dr. Of Chemical Sciences, professor Aleksandr Victorovich Aksenov</i>
Date of the site visit	<i>17-19 November,2015</i>
Person responsible for public accreditation of the study programme	<i>Vice Rector for Academic Affairs Shipulin Valentin Ivanovich</i>

SAMPLING RESULTS OF THE PROJECT "THE BEST EDUCATIONAL PROGRAMMES OF INNOVATIVE RUSSIA"

Indicators	2015
Cluster of educational programmes «Chemistry» (04.03.01, 04.04.01)	
Number of the given programmes in the RF	276
Number of higher educational institutions to offer the given programmes	161
Number of programmes – winners of the project (% from total amount of these programmes offered in the RF)	46 (16,67%)
Stavropol Region	
Number of the given programmes offered in the region	4
Number of programmes – winners of the project (% from total amount of these programmes offered in the region)	2 (50%)
Number of higher educational institutions and branches in the region	68
Total number of programmes offered in the region	1196
Total number of programmes – winners of the project (% from total amount of these programmes offered in the region)	72 (6,02%)

REFERENCE DATA ON STUDENT ENROLLEMENT FOR EDUCATIONAL PROGRAMME



ACHIEVEMENTS OF THE EDUCATIONAL PROGRAMMES

The quality of educational programs' implementation

The analysis of academic progress of the Bachelor students for the last 3 years has shown that the percentage of knowledge quality is over 44,5%, the point grade average is – 4.

During the final state attestation the Master's graduates were awarded 70 % excellent marks, there were no unsatisfactory marks; the point grade average is 4,5.

Providing up-to-date contents of education

The teachers periodically update the contents of fundamental and applied courses in order to be current with the latest achievements of national and world science. 50 new elective courses have been developed at the Department of Chemistry.

Independent assessment of the students' level of knowledge

The students of the Programmes under accreditation have regularly taken part in the project "The Federal State Exam in the Sphere of Higher Education".

According to the analysis, based on the results of students' tests within FEPO-16 and FEPO-17 in 2010-2013, there are 75% of students who have mastered 100% of teaching units from the general humanitarian and social-economic, general mathematics and professional cycle.

Employability of graduates

There have been positive reports on graduates employed in the leading chemical companies: "Arnest", "Monocrystal", "Escom". There has not been any negative feedback on the quality of graduates' training.

Competency of the teaching staff

24 people at the Department of Chemistry are involved in the delivery of the programmes, including 6 Doctors of Sciences (25%), 16 Candidate of Sciences (66,7%), senior lectures – 1 (4,2%) чел., assistant lecturers – 1 (4,2%). All teachers participate in staff development programmes.

Material and technical resources

The educational process of Bachelor, Specialist and Master Degree students is supplied with adequate and sufficient material resources according to the requirements of the State Educational Standard.

Research

During the period of 2011-2015 the teachers of the programmes have been doing comprehensive research into different areas of Chemistry.

There are post-graduate programmes in Chemical Sciences 04.06.01 – (Organic Chemistry, Physical Chemistry). Since 2011 1 Doctorate and 5 Candidate of Sciences dissertations have been prepared and defended.

The research results of teachers and post-graduate students are published in leading research journals: European Journal of Organic Chemistry, Tetrahedron: Asymmetry, Org. Biomol. Chem, Beilstein Journal of Organic Chemistry, Chemistry of Heterocyclic Compounds, Life Sci J., Proceedings of the Academy of Sciences.

The students present at different level conferences, publish articles. Since 2009 the students have participated in 51 conferences (17 international, 10 national, 22 regional, 12 University-level). 177 articles and abstracts prepared by students have been published.

Academic mobility of students

The University is involved in cooperation with over 40 Universities in 13 countries of the world (Germany, Italy, France, Poland, Czech Republic, Azerbaijan, Georgia, Kazakhstan, Ukraine, Belarus, Turkey, Korea). Mobility programmes are being developed within the framework of this cooperation.

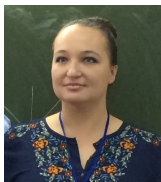
International projects

The teachers of the programmes maintain close links with Russian partner Universities (The Southern Federal University, the Crimean Federal University) and foreign partners - University of Kansas, USA.

Research cooperation of Chemistry with RAS, international companies and other organizations is carried out in the framework of joint research.

The Department received a visiting lecturer from the USA M.A. Rubin, whose lectures were attended by the staff and students.

EXTERNAL REVIEW PANEL



Alexandra Radovanovich (Republic of Serbia)

Review Chair, foreign expert

Doctor of Chemical Sciences, Senior Researcher at the Institute of Chemistry, Technology and Metallurgy, University of Belgrade доктор

A nominee of Serbian Commission for Accreditation and Quality Assurance (CAQA)



Vitalii Garkin (Russia)

Deputy Review Chair, Russian expert

Candidate of Chemical Sciences, Associate Professor, Vice-Rector for Education at Samara State University

A nominee of the Guild of Experts in Higher Education



Marat Duisembiev (the Republic of Kazakhstan)

Panel member, foreign expert

Candidate of Chemical Sciences, Associate Professor at the Department of Chemistry of L.N. Gumilyov Eurasian National University

A nominee of Independent Kazakh Agency for Quality Assurance in Education



Oleg Shirobokov (Russia)

Panel member, representative of professional community

Head of the Centralized Technical Control Department at JSC "Nevinnomysskiy Azot"

A nominee of JSC "Nevinnomysskiy Azot"



Ekaterina Popova (Russia)

Panel member, representative of students

3rd year Bachelor degree student, Faculty of Agronomy, member of the Student Committee for the Quality of Education at Stavropol State Agrarian University

A nominee of Stavropol State Agrarian University

COMPLIANCE OF THE EXTERNAL REVIEW OUTCOMES WITH THE NCPA'S STANDARDS

STANDARD 1. Policy (mission, vision) and procedures for quality assurance

Compliance with the standard: **full compliance**

Good practice

The Institute of Life Sciences perfectly implements the University regulating documents, which define the mission, the policy and procedures for quality assurance in education. Goals and development strategy of the cluster of educational programmes 04.00.00 "Chemistry" as well as the terms of study, contents and organization of the study process are clearly defined and documented.

All stakeholders: administration, the Academic Council, teachers, students, graduates and employers are involved in the development of goals and strategies of study programmes.

Methods of achieving the goals of the study programmes are set out in the curricula, which are reviewed as necessary by leading teachers in cooperation with employers.

The quality of the study programmes is ensured through the inner system of quality assurance; enhancement of the assessment system; implementation of innovative study programmes; human resource development programmes for teachers and improvement of incentive system.

Areas for improvement

- The English version of the University website should contain more regulating documents in English;
- It is recommended to develop the University social partnership with the employer companies, when updating the contents of educational programmes.

STANDARD 2. Approval, monitoring and periodic review of educational programmes

Compliance with the standard: **substantial compliance**

Good practice

The programmes are characterized by optimal approach to correlation between class and individual students' workload, increase of students' independent work, increase of practical classes and seminars especially in senior years. The differentiated approach to the programme implementation, depending on the profile and requirements to the level of students' training, is very important.

Working curricula are annually analyzed, summarizing the results of the academic year in order to refine the goals and outcomes of the educational programme mastering.

A correction mechanism for improving learning outcomes is in place. It is based on consideration of the opinions of students, teachers and employers through questionnaires, analysis of work placement results, reports of the chairs of the Final state attestation boards.

Areas for improvement:

- It is advisable to increase the number of students, who have individual learning plans;
- The monitoring of students' and teachers' satisfaction with the educational process should be intensified.

STANDARD 3. Assessment of student learning outcomes / competencies

Compliance with the standard: **full compliance**

Good practice

Educational programme «Chemistry» (04.03.01) underwent a successful independent evaluation within the project «Federal internet examination in the sphere of professional education» (Certificate of Quality № 2015/2/107 от 13.11.2015)



When implementing a model of module and rating system of learning process organization at the University, there is a formative assessment of knowledge, skills and competencies of students in modules and disciplines in general. This assessment is governed by the Regulations on organization of education based on NCFU students' performance appraisal rating system (approved by the Rector's order No 955 from 23.07.2013). All through the education period students accumulate points which are included in the cumulative student rating system, thus, defining his/her place in the rating. The quality of students' training is defined based on the analysis and evaluation of students' academic performance in the disciplines of all sections of the curriculum, interim and final state attestation of students.

Course papers are supervised by the leading teaching staff of the Department involved in the programme delivery and the representatives of the professional community with extensive working experience in this professional field. Final State Attestation Committee always includes representatives from administration, teaching staff and members of the professional community.

Students enrolled in the cluster of educational programmes 04.00.00 "Chemistry" are extremely active. Students with significant research results have an opportunity to continue their research in University laboratories abroad.

The Department of Chemistry facilitates students' employment beginning from the senior years up to their job placement.

Areas for improvement:

- It is recommended to involve students into the process of applying for grants of international exchange programmes;
- It is advisable to create conditions for bachelor students' employment as an alternative to master course.

STANDARD 4. Quality assurance and competency of teaching staff

Compliance with the standard: **full compliance**

Good practice

All the members of the Department of Chemistry are highly qualified teachers with academic and research degrees and titles.

An effective system of hiring personnel as well as a feed back system is in place at the University. On the outcomes of teacher surveys a list of quality evaluation criteria for individual ranking is being put into practice. The rating system serves as a reference point for choosing individual incentives for professional and personal development and establishing terms of the labour contract between a teacher and the University.

The results of research work of the teaching staff involved in training bachelor, master and postgraduate students are regularly published in top-rated journals.

The teaching staff have opportunities for professional development.

Areas for improvement:

- Practitioners should be more involved in the programme delivery in compliance with the requirements of the Federal State Educational Standards;
- Advanced qualification training for the teachers when shifting to Federal State Educational Standards 3+.
- The academic mobility of NCFU teachers should be expanded.

INFORMATION ON THE LEADING TEACHERS OF THE EDUCATIONAL PROGRAMMES

Aksenov Aleksandr Victorovich

Doctor of Chemical Sciences, Professor, head of the Department of Chemistry, member of American Chemical Society; Honorary Worker of Science and Technology of the RF

Aksenova Inna Valerievna

Doctor of Chemical Sciences, Professor of the Department of Chemistry, member of American Chemical Society

Borovlev Ivan Vasilievich

Doctor of Chemical Sciences, Professor of the Department of Chemistry

Golota Anatoly Fedorovich

Doctor of Chemical Sciences, Professor of the Department of Chemistry

Shibaeva Ludmila Mikhailovna

Candidate of Pedagogical Sciences, senior lecturer at the Department of Chemistry

Demidova Natalya Victorovna

Candidate of Chemical Sciences, senior lecturer at the Department of Chemistry

Malikova Irina Valeryevna

Candidate of Chemical Sciences, senior lecturer at the Department of Chemistry

Demidov Oleg Petrovich

Candidate of Chemical Sciences, senior lecturer at the Department of Chemistry

Leontyev Alexander Vladimirovich

Candidate of Chemical Sciences, senior lecturer at the Department of Chemistry

Nadein Oleg Nikolaevich

Candidate of Chemical Sciences, senior lecturer at the Department of Chemistry

Aksenov Nikolay Aleksandrovich

Candidate of Chemical Sciences, senior lecturer at the Department of Chemistry, member of American Chemical Society

STANDARD 5. Learning resources and student support

Compliance with the standard: **substantial compliance**

Good practice

Material, technical and information resources for the cluster of educational programmes 04.00.00 "Chemistry" meet the requirements of the Federal State Educational Standards to the full extent. In a number of indicators, i.e. the availability of high-cost state-of-the-art research equipment and completeness of e-resources in Chemistry, the educational programmes of the cluster demonstrate better equipment status than some leading Russian universities.

The NCFU library has in stock over 2,5 ml. Copies of different publications since XVII century: books, journals, video films, electronic documents, etc. Every year the library acquires over 50 000 copies, and the annual subscription for periodicals includes 500 titles.

The resources available and goal statements, prioritizing involvement in the research work, create requisite conditions for the independent, learning and research work of Chemistry students.

Social support of students is provided in the following areas: medical service, living conditions, catering, sports and recreation.

Areas for improvement:

- It is necessary to make the laboratories of the new building of the University accessible to people with disabilities;
- It is advisable to take into account students' opinion on the quality of educational process systematically, rather than sporadically.
- It is recommended to extending the laboratories where students do their graduation theses.

STANDARD 6. Information system providing effective implementation of the study programme

Compliance with the standard: **full compliance**

Good practice

The monitoring of the quality of education is carried out by
- the system of attestations (formative, interim, final), using e-Campus of North-Caucasus Federal University education portal.

The portal has in place all the necessary tools, which help save time and make teachers' and students' every day work easier through personal accounts that have access to interactive journals, time table, academic records, rankings, etc.

The University has a common database. The available data are based on integrated automated control system (IASU-VUZ) which compiles a common database. This database is centrally controlled, automatically updated and distributed between the University subdivisions by common University corporate information network. The system allows to trace every student's path beginning from application package and admission to the University to obtaining the Diploma and graduation. It also follows the stages of professional teaching and research activity of the faculty members.

Highly detailed database of integrated automated control system VUZ offers unlimited possibilities for the statistical analysis of information and monitoring of the learning process quality.

The teaching staff use a wide range of educational and special-purpose software packages, e-references and databases during the process of education. The teachers develop electronic text books and guidelines accompanied by assessment tools for conducting formative and summative assessment of student learning outcomes.

Areas for improvement:

- It is recommended to extend the list of information resources, including those, which contain comparative analysis of achievements of different University structural subdivisions;
- It is necessary to provide the students with an opportunity to copy and print learning materials.

STANDARD 7. Public information

Compliance with the standard: **substantial compliance**

Good practice

The data on the quality and achievements of the cluster of study programmes are published on the University official website, monthly university paper Universitetsky Vestnik of the North Caucasus Federal University (University Reporter), information booklet of NCFU with details on the delivered study programmes, regional and national periodicals.

One of the most important sources of information on the University are Press releases and protocols of the meetings of Trustee Board, which includes the heads of all the subjects of North-Caucasus Federal District.

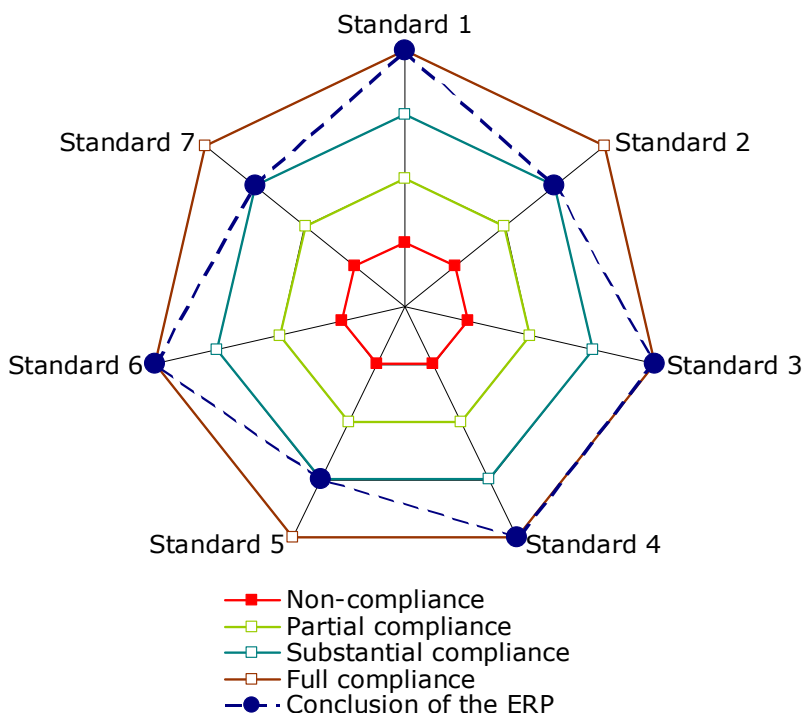
The Institute maintains close cooperation with the employment agency, organizations and enterprises. It regularly monitors current and prospective demand for qualified personnel in terms of jobs and qualifications. The Institute is actively involved in organizing career days and recruitment fairs.

The community is informed on students' employability through cooperation with professional public organizations: Chamber of Commerce and Industry of Stavropol Territory, All-Russian Non-governmental Association of Small and Medium Entrepreneurship Opora Rossii (Russian Pillar of Support), non-profit partnership of President Programme alumni Stavropol Association of Managers, Non-governmental Educational Institution of Further professional education Diplomat, regional branch of Stavropol Territory employers Congress of Stavropol Business Community and others.

Areas for improvement:

- It is necessary to use all types and kinds of contemporary Mass Media, which would publish information on the educational programmes delivered to broad audience;
- It is advisable to develop the system of teachers and staff incentives.

DISTRIBUTION DIGRAM OF THE EXTERNAL REVIEW OUTCOMES



Standard 1. Policy (mission, vision) and procedures for quality assurance
 Standard 2. Approval, monitoring and periodic review of programs and qualifications

Standard 3. Assessment of student learning outcomes / competencies

Standard 4. Quality assurance and competencies of teaching staff

Standard 5. Learning resources and student support

Standard 6. Information system providing effective implementation of the study program

Standard 7. Public information

CONCLUSION OF THE EXTERNAL REVIEW PANEL

Based on the self-evaluation report analysis, documents and data submitted the External Review Panel has come to the conclusion that the cluster of study programmes «Chemistry» (04.03.01, 04.04.01), delivered by the Federal State Autonomous Educational Institution of Higher Professional Education "North-Caucasian Federal University" **substantially** comply with the standards and criteria of public accreditation of the National Centre for Public Accreditation.

The Panel recommends that the National Accreditation Board **accredit the study programmes «Chemistry» (04.03.01, 04.04.01), delivered by the Federal State Autonomous Educational Institution of Higher Professional Education "North-Caucasian Federal University" for the period of 6 years.**

SCHEDULE OF THE SITE VISIT OF THE EXTERNAL REVIEW PANEL

Time	Activity	Participants	Venue
November 16, Monday			
Throughout the day	Meeting of the External Review Panel (ERP) members, coordinators of the review of the educational programmes at the Stavropol airport		
November 17, Tuesday			
07.00 – 08.30	Breakfast at “Eurohotel”		
08.30	Transfer to the HEI		
08.45	Arrival at North-Caucasus Federal University (NCFU)		Academic Building №2, Room121
09.00 – 11.00	Meeting of the ERP and coordinators of the study programmers (ERP briefing)		Academic Building №2, Room121
11.00 – 11.30	Break		
11.30 – 13.00	Meeting of the ERPs with university administration	ERP, university administration, heads of structural subdivisions, chairs of major departments,	Academic Council Conference Hall, 218
13.00 – 14.00	Lunch		University Café
14.00 – 15.00	Excursion around the university (visiting classes, libraries, exhibition of monographs, textbooks, etc.)	ERP	Library, Main Building
15.00 – 15.30	Transfer to Building №3; 1 , Pushkin Str. P-P1		
15.30 – 16.30	Meeting with the Institute’s Director and chairs of the departments	Director of the Institute of Life Sciences, Deputy Directors, chairs of the Departments, ERP	Academic Building N 3, Room 506
16.30 – 17.00	Work with documentation	ERP	Academic Building N 3, Room 406
17.00 – 18.00	Meeting with representatives of professional community	Representatives of professional community, ERP	Academic Building N 3, Room 506
18.00 – 18.30	Internal meeting of the ERP	ERP	Academic Building N 3, Room 406

Время	Мероприятие		Участники	Место проведения
19.15	Dinner at “Eurohotel”			
November 18, Wednesday				
07.00 – 08.30	Breakfast at “Eurohotel”			
08.30	Transfer to the HEI			
08.45	Arrival at NCFU			Academic Building N 3, Room 406
09.00 – 10.00	Meeting with students	Students, ERP		Academic Building N 3, Room 506
10.00 – 10.30	Internal meeting of the ERP	ERP		Academic Building N 3, Room 406
10.30 – 11.30	Attending classes	ERP		Academic Building N 3, Room 506
11.30 – 12.30	Internal meeting of the ERP.	ERP		Academic Building N 3, Room 406
12.30 – 13.30	Lunch			University Café
13.30 – 14.30	Meeting with teaching staff	Teaching staff, ERP		Academic Building N 3, Room 506
14.30 – 15.00	Internal meeting of the ERP	ERP		Academic Building N 3, Room 406
15.00 – 16.00	Meeting with alumni	Alumni, ERP		Academic Building N 3, Room 506
16.00 – 17.00	Internal meeting of the ERP.	ERP		Academic Building N 3, Room 406
17.00 – 18.00	Guided tour of Stavropol			
19.15	Dinner at “Eurohotel”			
November 19, Thursday				
07.00 – 08.30	Breakfast at “Eurohotel”			
08.30	Transfer to the HEI			
08.45	Arrival at NCFU			Academic Building N 2Room 121
09.00 – 11.30	Internal meeting of the ERP: discussion of preliminary results of the site visit, preparation of the oral report of the panel	ERP		Academic Building N 2Room 121
11:30 – 12:00	Transfer to Academic Building №2; 1, Pushkin Str.			
12.00 – 13.00	Lunch			University Café
13.00 – 15.00	Closing meeting of the External Review Panel with the representatives of North-Caucasus Federal University	ERP, university administration, chairs of the major departments,		Academic Council Conference Hall, 218
15.00	Departure			