REPUBLIC OF SLOVENIA
MINISTRY OF EDUCATION, SCIENCE AND SPORT

Investing in your future
OPERATION PART FINANCED BY THE EUROPEAN UNION
European Social Fund

University of Nova Gorica
School of Applied Sciences

Quality monitoring, assessment and assurance

Report for academic year 2011/12

November 2012

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

Edited by: Vesna Mržek, Assistant Professor Darko Veberič, PhD

The report was prepared in cooperation with: Prof. Gvido Bratina, PhD, Dean of the School of Applied Sciences; Aleš Bogovič, member of the Student Council of UNG; Prof. Iztok Arčon, PhD, Chair of the UNG Quality Assurance Committee; Tea Stibilj Nemec, Sabina Zelinšček, Vesna Mržek and Assistant Professor Darko Veberič, PhD, quality coordinator of the School of Applied Sciences.

The Report was adopted by the Senate of the School of Applied Sciences at its 41st session on 3rd January 2013.

Prof. Gvido Bratina, PhD
Dean of the
School of Applied Sciences

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

1 INTRODUCTION OF THE SCHOOL OF APPLIED SCIENCES

1.1 STUDY PROGRAMME INTRODUCTION

The School of Applied Sciences (hereinafter FAN; abbreviated from Slovenian Fakulteta za aplikativno naravoslovje) offers study programmes in the field of natural sciences and technology. As of the academic year 2007/08 the School offers two new study programmes: the 1st level "Physics" study programme (initially called "Engineering Physics") and 2nd level "Physics" study programme (initially called "Experimental Physics". Both programmes were created by the University of Nova Gorica in collaboration with partners from the field of industry, medicine and fundamental research. The lecturers are top experts in fields such as physics of solid substance, physics of basic particles, astrophysics, photochemistry and telecommunications. Being part of the European ECTS system, the School enables transferring credits within the schools of the University of Nova Gorica (UNG). UNG is a signatory to the ERASMUS agreement on the inter-university exchange of students.

The core of both study programmes is the study of applied physics which is markedly practically oriented. The basic mission of the programme is to produce engineers with up-to-date applicable knowledge in the field of planning, making and using state-of-the-art measuring technology, instruments and data caption devices. Through the markedly practical orientation and close links with the technological and developmental processes of both programmes, FAN is making efforts to reinforce in the Slovenian higher education a method for teaching physical science in a manner adjusted to the needs of the industry. The objective is to help first level diploma holders not to get lost in the details of highly specialized knowledge in a particular field but to provide them with a broader view and a wide range of practical skills to facilitate their adjustment to the needs of employers. The first level programme educates students in the spirit of solving problems and finding solutions beyond the limitations of a particular specialist field by applying interdisciplinary methods.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

2 STRATEGY, ORGANISATION AND MANAGEMENT, RECORD KEEPING AND QUALITY MANAGEMENT

2.1 ORGANISATION

The School of Applied Sciences (FAN) is managed by the dean who is appointed by the University Senate for a 4-year term. Prof. Gvido Bratina, PhD, is acting dean until 22nd October 2014.

The School consists of the following bodies:

- Senate including a student representative
- Committee for Academic Affairs
- Committee for the defence of graduation theses
- Quality coordinator

Members of the Senate of FAN:

- Prof. Bogdan Glumac, PhD
- Prof. Božidar Šarler, PhD
- Prof. Samo Stanič, PhD
- Assistant professor Darko Veberič, PhD.
- Assistant professor Gregor Veble, PhD.
- Assistant professor Jože Grdadolnik, PhD.
- Aleš Bogovič, student representative
- Prof. Gvido Bratina, PhD, acting Dean

Except for the student representative, the Senate members' term is from 17th December 2009 to 17th December 2013.

Members of the FAN Committee of Academic Affairs:

- Assistant professor Jože Grdadolnik, PhD.
- Assistant professor Darko Veberič, PhD.
- Assistant professor Gregor Veble, PhD.

Chair of the FAN Committee for the defence of graduation theses:

- Assistant professor Darko Veberič, PhD.

FAN Quality coordinator:

- Prof. Samo Stanič, PhD, from 7th March 2007 to 13th May 2011
- Assistant professor Darko Veberič, PhD, from 13th May 2011 (expected to 13th May 2015)

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

The Faculty makes use of the joint services of the University. Information on the library, university publisher, quality assurance office, student office, finance department, legal department, HR, international office and other administrative staff jointly applies to all the faculties of UNG and is presented in the University report on quality monitoring, assessment and assurance.

In terms of science, FAN is firmly integrated in the research work carried out at the following UNG units:

- Laboratory of Organic Matter Physics
- Laboratory for Astroparticle Physics
- Centre for Atmospheric Research
- Laboratory of Quantum Optics
- Laboratory for Multiphase Processes
- Materials Research Laboratory
- Centre for biomedical sciences and engineering

Additionally, FAN fosters good professional relationships with other scientific and research institutions from Slovenia and abroad (J. Stefan Institute, National Institute of Chemistry, Elettra-Sincrotrone etc.).

2.2 MISSION

The main mission of the programme is to produce physicists with prominent engineering skills, cutting-edge applicable knowledge in the field of planning, making and using state-of-the-art measuring technology, instruments and data caption devices.

2.3 VISION

Within the Slovenian higher education system, FAN makes efforts to establish a model of teaching physical sciences oriented toward the needs of development departments in high-tech industry and labs. Both programmes are very practically oriented and closely linked with the technological and developmental processes. First level graduates will not only possess highly specialized knowledge in a particular field but also a wide range of practical skills and modern methods of understanding problems which will facilitate their adjustment to the needs of their employers and development projects. The first level programme educates students in the spirit of solving problems and finding solutions beyond the limitations of a particular specialist field.

2.4 STRATEGIC PLAN

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

The FAN strategic plan is part of the University plan called "Activity Programme of the University of Nova Gorica: 2010-2025 Development Plan". The plan is available as an annex to the University Quality Report.

2.5 QUALITY MANAGEMENT

Quality management at the school is carried out in line with the uniform methodology of UNG. A quality coordinator is in charge of this process at the faculty. Quality coordinators are put forward by deans of respective schools and approved by the UNG Senate for a period of 4 years. The School's quality coordinator introduced in section 2.1 is a member of the University Quality Commission which meets on a regular basis, reviewing the situation in schools and coordinating intra-University activities.

Quality Management is laid down by the 2008 document "Methodology of monitoring and assurance of quality of pedagogical and research work at UNG" which is also available online[1].

The FAN self-evaluation is drawn up by the quality coordinator with the assistance of the FAN administration office and joint services (HR, enrolment and student office, quality management office, international office). Contributors to this document are listed at the beginning of this Report. An integral part of this self-evaluation report are the results obtained through anonymous student surveys which are conducted for each subject separately upon enrolment and after finishing each lecture level.

1 http://www.ung.si/si/o-univerzi/kakovost/

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

3 EDUCATION – STUDY ACTIVITY

3.1 IMPLEMENTATION OF STUDY PROGRAMMES

The first level "Physics" Bologna study programme is carried out in accordance with the accreditation. Courses are carried out in line with the set schedule[2]. Candidates who have successfully passed their matura exam may enrol in the first level "Phsyics" study programme. Should the interest in the programme exceed the number of available places, candidates shall be considered following the criteria set out below:

Criterion	Relative weighting
Overall performance at the matura examination	60%
Overall performance in 3rd and 4th year of secondary school	30%
Average grade in Mathematics in secondary school	10%

The study programme is carried out as a full-time study and the syllabus is carried out in accordance with the accreditation of the Council of the Republic of Slovenia for Higher Education. Courses are rendered in the form of lectures, exercises, seminars and laboratory exercises, according to the topics laid down by the syllabus[3]. The course contents shall be reviewed yearly and any potential changes discussed by the Senate at its last session in the spring semester. There have been no changes to programme contents in the last three years of carrying out the programme.

The modern learning and teaching methods that are applied facilitate the achievement of academic results by acquiring general and specific knowledge and skills in particular fields in order to increase students' employability, facilitate their further studies, personal development and helping them find their own place in society's stream of progress. The electiveness and flexibility of students' orientation is ensured by providing twelve elective courses. The Instructions[4]for writing diploma papers along with the copies of students' diploma theses are kept at the Library of the University of Nova Gorica.

Students' knowledge is tested by oral and written examinations, colloquiums and grades for seminar papers and laboratory exercises in accordance with the study rules of the University

[2] http://www.ung.si/si/studijski-programi/urniki-predavanj/

[3] http://www.ung.si/si/studijski-programi/112233/

[4] http://www.ung.si/si/studijski-programi/razpisi-dipl-mag-dr/naravoslovje-pravila-dipl/

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

as at 18th September 2008 which are available at the School's administrative office. The methods of testing and grading students' knowledge correspond to the set objectives and learning objectives arising from the syllabus. The education process is carried out by appropriately trained staff holding suitable academic qualifications.

In the academic year 2009/10 we launched the second level "Physics" study programme. By the end of the academic year 2010/11 the master's programme was completed by the first student.

Types and number of study programmes carried out by FAN in the academic year 2011/2012

Type of study programme	Yes/No	No. of programmes	Total No. of students enrolled
Study programmes prior to the reform			
Higher-education professional study programmes	no		
University study programmes	no		
Bologna study programmes			
First level study programmes	yes	1	13
Second level study programmes	yes	1	1

Indicator \ Academic year	2008/09	2009/10	2010/11	2011/12	2012/13
Enrolment spaces available	40	40	40	40	45
Candidates applying for enrolment	31	6	4	8	6
Students accepted	31	6	4	6	4
Students accepted in line with their first choice	2	2	3	3	4
Students accepted in the 2nd application period	2	1	1	0	1
Students accepted in the 3rd application period	27	3	0	3	2
Average performance of students in secondary school	85.27	68.33	75.63	75.30	*
Students enrolled in the study programmes prior to the reform					
Students enrolled in Bologna study programmes	8	6	5	6	4

*data not yet available

Analysis of students enrolled in academic year 2012/13 by gender (total of students from all years)

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

Number and share of students		Women		Men		Total
				No.	Share (%)	No.
Study programmes prior to the reform						
Undergraduate programmes	Full-time					
	Part-time					
Bologna study programmes						
First level study programmes	Full-time	1	7.14	14	92.86	15
	Part-time					
Second level study programmes	Full-time			3	100	3
	Part-time					

Analysis of enrolled students with special needs
(total of students from all study programmes)

Academic year / Indicator	2008/09	2009/10	2010/11	2011/12	2012/13
Special needs students	0	0	0	0	0

Education
(total of students from all study programmes)

Academic year / Indicator	2008/09	2009/10	2010/11	2011/12
Average time of taking an examination per student	1.2	1.12	1.01	1.03
Average no. of examinations taken before an examination committee in a single course	0	0	0	0
Average grade of the exams passed	7.98	8.23	8.67	8.42

Analysis of students advancing to the next year and study duration
(total of students from all study programmes)

Study year	Students	Share of repeaters	Promotion (share)	No. of graduates	Duration of studies in years

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

	1st year	All years	1st year	All years	From 1st year to 2nd year	All years		Aver.	Min.	Max.
2006/07	4	4	0	0	50	50	0	0	0	0
2007/08	9	11	0	0	11.1	18.8	0	0	0	0
2008/09	9	12	11.1	22.2	11.1	27.3	0	0	0	0
2009/10	9	12	22.2	16.7	66.7	72.7	1	3	3	3
2010/11	6	14	16.6	7.14	83.3	63.63	2	3.58	2.92	4.25
2011/12	4	14	0	7.14	50	72.72	2	3.87	3	4.75

Analysis of graduates
(total of graduates from all study programmes)

Academic year / Indicator	2008/09	2009/10	2010/11	2011/12
Enrolment places per graduate	0	40	20	20
Average grade of diploma theses	0	*	*	*
Share of graduates in the regular time period	0	1	50	50

* Diploma theses are not awarded a numerical grade but merely “passed” or “failed”.

Share of higher education teachers, faculty assistants and students
(according to FTE)

Academic year / Indicator	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13*
Students per higher education teacher	2.40	2.15	2.17	0.64	0.65	0.61
Students per faculty assistant	10.00	12.00	8.8	1.56	1.56	1.56

*Projection

3.2 ASSESSMENT OF CURRENT STATE AND GUIDELINES

After five years of implementing the programme, the enrolment in the first year of full-time studies in the first level “Physics” study programme is still low despite the effort invested in promotional activities. However, there is a slight growth trend of the number of students enrolled. The interest in engineering professions in Slovenia is poor, since the country has no defined strategy for encouraging technically oriented knowledge in productive areas, hence short-sightedly allowing best secondary school graduates to get permanently lost amidst the graduates from social sciences. Despite this fact, the School of Applied Sciences is applying new ways to increase the popularity of science/natural sciences and the enrolment rate by promoting the study programme via organising regular meetings of secondary school physics

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport.
Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

teachers and sponsoring national physics competitions, organizing pupils' visits to modern research institutes (e.g. Elettra-Sincrotrone in Bazovica near Trieste), publishing oriented and field-specific articles in public media concerning the teaching of applied physics, and via attempts to improve University infrastructure to ensure high quality study conditions and student accommodation, and finally by arranging a special initiative for talented secondary school pupils with an interest in natural sciences. Unlike the first generations of students who enrolled in FAN with an extremely poor prior knowledge of physics, there is a slight improvement with the recent generations, at least with a portion of it. Additionally, these students show an above average interest in the events taking place in the research units of UNG. Usually, they get involved in the research work of the UNG laboratories well before their diploma and master's theses.

We believe that the advantages of FAN before other faculties lie in:

- Daily contacts between lecturers and students;
- Work in smaller groups;
- Close connection with the research work carried out in laboratories, where the lecturers and employees work;
- Early involvement of students in the research work in laboratories, producing interesting seminar papers and later high quality diploma and master's theses.

Opportunities to improve FAN:

- Improving the infrastructure, especially student accommodations and organizing lectures in their vicinity;
- Increasing the number of foreign students;
- Increasing the number of international exchanges of our students and visiting students within ERASMUS;
- In order to promote and increase the enrolment rate, we are again planning to issue a tender for awarding scholarships from the scholarship fund of UNG in the academic year 2012/13;
- In the academic year 2012/13, just like in the academic year 2011/12, we are planning to carry out free additional courses for future 1st year students (refresher courses). The courses are meant to repeat select chapters from the secondary school topics in order to facilitate the beginning of the studies.
- It would be reasonable to include top students who are inclined to continue their career in the research field in the research activities carried out at UNG units early on; if possible well before their diploma and master's theses deadlines.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport.
Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

4 SCIENTIFIC AND RESEARCH ACTIVITIES

The faculties and schools under UNG are exclusively concerned with pedagogical activities. The research activity at UNG is carried out entirely within the following research units: laboratories, research centres and institutes of UNG. Today, the research activity at UNG is carried out in the framework of six laboratories, four research centres and one institute (Centre for Atmospheric Research, Wine Research Centre, Centre for Systems and Information Technologies, Centre for Biomedical Sciences and Engineering, Research Centre for Humanities, Laboratory for Astroparticle Physics, Laboratory of Organic Matter Physics, Materials Research Laboratory, Laboratory for Environmental Research, Laboratory for Multiphase Processes, Laboratory of Quantum Optics).

The faculties are open units, uniting in the field of education researchers and experts who are otherwise employed in the research units of UNG or external institutions. Faculties and schools are not legal entities.

The research and expert work at UNG is the basis for conducting the education process. UNG researchers must actively participate in international research processes and projects. It is expected from researchers and teachers to be scientists with a broad general knowledge as well as experts with international experience. Therefore, it is expected from tenure candidates to have completed their postdoctoral training abroad and to excel in their particular field of research.

The School of Applied Sciences encourages its students to partake in the scientific work and research via research assignments carried out under the Centre for Atmospheric Research, the Laboratory of Organic Matter Physics and the Laboratory for Astroparticle Physics. **Please find a detailed report on the research work in the** »Report on the Work of the University of Nova Gorica in 2011«, which is made available to the public[5]. The report presents the activities carried out in the laboratories, institutes and centres in the field of core and applied solutions, their research programmes, projects, international collaborations, available equipment and facilities as well as bibliographical achievements.

[5] http://www.ung.si/si/o-univerzi/, "Report" and "Annex to the Report" 2011

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

5 HUMAN RESOURCES

5.1 HIGHER EDUCATION TEACHERS, FACULTY ASSISTANTS, RESEARCHERS AND RESEARCH FELLOWS

The education process is carried out by higher education teachers and faculty assistants, who are adequately habilitated in their respective field based on their educational, professional and academic qualification.

Total number of UNG employees teaching at FAN
as at 31st December 2012 and new employments plan in 2013 by tariff groups

Level:	V.	FTE	VI.	FTE	VII.	FTE	VIII.	FTE	IX.	FTE
Number of employees as at 31st December 2012					2	0.3	2	0.2	23	15.71
New employments in 2013									2	2

Promotions in 2012

Promotions	Higher education teachers and faculty assistants	Researchers	Administrative and professional and technical personnel
Ordinary promotions at the workplace	8		
Extraordinary promotions at the workplace			

Higher education teachers employed at UNG
teaching at FAN as at 31st December 2012

Type of employment	Full professor		Associate professor		Assistant professor		Senior lecturer		Lecturer	
	No.	FTE	No.	FTE	No.	FTE	No.	FTE	No.	FTE
Full-time	5	2.93	2	1.31	6	2.78				
Part-time	2	3.44								

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

Over-time employment			1	0.83	2	3.52				
Contractual workers*	1	0.17			2	0.67			1	0.11
TOTAL	**8**	**6.54**	**3**	**2.14**	**10**	**6.97**			**1**	**0.11**

* FTE for contractual workers calculated as (teaching hours per year)/(15x2x6) for assistant professors and professors, and as (teaching hours per year)/(15x2x9) for senior lecturers and lecturers.

Higher education teachers mployed at UNG
teaching at FAN - plan (projection) for 31st December 2012

Type of employment	Full professor		Associate professor		Assistant professor		Senior lecturer		Lecturer	
	No.	FTE	No.	FTE	No.	FTE	No.	FTE	No.	FTE
Full-time	5	2.93	2	1.31	8	4.78				
Part-time	2	3.44								
Over-time employment			1	0.83	2	3.52				
Contractual workers	1	0.17			2	0.67			1	0.11
TOTAL	**8**	**6.54**	**3**	**2.14**	**12**	**8.97**			**1**	**0.11**

Assistants employed at UNG
teaching at FAN as at 31st December 2012

Type of employment	Assistant		AM, AS**		AD**	
	No.	FTE*	No.	FTE*	No.	FTE
Full-time	4	0.5	3	0.37	2	0.53
Part-time						
Over-time employment						
Contractual workers*						
TOTAL	**4**	**0.5**	**3**	**0.37**	**2**	**0.53**

*FTE calculated for contractual workers as (teaching hours per year)/(15x2x10) for assistants
** AS = assistant, AM = assistant with a master's degree, AD = assistant with a PhD

Title elections at FAN
in 2012 and 2013 plan

Title	Employees whose title election expired in 2012	Total title elections in 2012	Employees whose title election will expire in 2013	Total of title elections planned in 2013
Full professor		1		
Associate professor	3	1	2	3

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

Assistant professor	2	5	1	3
Researcher				
Senior lecturer				
Lecturer			1	1
Assistant with a PhD				
Assistant with a master's degree				
Assistant	7	9	3	5
Lector				

Indicators of the exchange of higher education teachers and faculty assistants at FAN

Academic year / Indicator	1st Bologna level					2nd Bologna level				
	2007/08	2008/09	2009/10	2010/11	2011/12	2007/08	2008/09	2009/10	2010/11	2011/12
Visiting higher education teachers involved in the education process at the higher education institution						4	4	3		
Higher education teachers involved in the education process abroad as visiting professors	1	2	2			1	2	1		
Faculty assistants involved in education abroad	3	1	1	2		1	1			

5.2 ADMINISTRATIVE AND PROFESSIONAL AND TECHNICAL PERSONNEL

This segment of the staff is described in the University self-evaluation report since joint services and other support activities operate at University-level and not at respective School-level. The chapter on administrative and professional and technical personnel is therefore presented in greater detail at University-level, where joint services entail administrations, the student office, international office, the library and university publisher. Thus, the School staff only comprises the dean as the School manager and the secretary as the specialist advisor.

5.3 ASSESSMENT OF CURRENT STATE AND GUIDELINES

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

We believe that the advantages of FAN before other faculties lie in the following:

- Study programmes can draw teaching faculty members and assistants from a large pool of teaching faculty members, assistants and researchers employed in any of the research units in the framework of the University;
- The pedagogical work is carried out by lecturers with a strong background in research: this keeps the lecture topics modern and up-to-date and facilitates the transfer of new and topical know-how and findings to the students;
- There are several contractual lecturers originating from other research institutes and the industry, sharing their knowledge with students;
- Lecturers and assistants invest more in their work at FAN than is formally expected of them.

Opportunities to improve FAN:

- Increase the number of international exchange of higher education teachers and faculty assistants, as well as increasing the number of visiting lecturers;
- More active involvement of contractual workers in the research at UNG.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

6 STUDENTS

FAN students have their own representative in the School Senate (refer to chapter 2.1), whereas student representatives for the UNG Senate and UNG Administrative Board get elected among the total of representatives from all Faculties.

The Student Council of UNG proposes a student representative for the FAN Senate and the FAN Senate appoints such representative. The Student Council proposes the student representatives for the Administrative Board and UNG Senate, and they get appointed by the Senate or UNG Administrative Board, respectively. The student representative has the voting right in all bodies. The student representative in the UNG Administrative Board is Jana Gregorič and in the UNG Senate Špela Brajer.

In the academic year 2011/12 the UNG Student Council comprised the following members: Valerija Zabret (Chair), Jana Gregorič (Vice Chair), Matej Lavrenčič, Špela Brajer, Matija Malik, Lucija Vidrih (members). The students organise themselves autonomously and hold sessions and student meetings at their own initiative.

Due to the small number of students at FAN, we have not been able to carry out the tutor system. In the academic year 2011/12 all students were offered the option of tutors, however only a limited number used this opportunity. Tutors are provided in order to follow students' progress through the years of study (passing examinations and meeting other obligations, enrolment and enrolment conditions), to identify potential reasons for them falling behind or repeating years, to provide advice on elective or additional subjects, advise regarding foreign exchange destinations, give tips regarding topics for finishing assignments (diploma and master's theses) and to act as potential intermediaries between students and other UNG organisational units.

6.1 STATISTICS OF STUDY ACTIVITIES

What follows below is the statistics of the study activity pertaining to the 1st level "Physics" study programme and 2nd level "Physics" study programme in the academic year 2011/12. The statistics comprise following elements:

- Student enrolment;
- Enrolment in the 1st year of study;
- 1st year student structure by type of finished secondary school;
- 1st year student structure by manner of finishing secondary school;
- Study programme implementation;
- Comparison of student number fluctuation by years of study and academic years;
- Student structure by gender;
- Average exam grade;
- Analysis of advancing to the next year by year of study;

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

- Duration and completion of the study programme;
- Study duration of full-time students on average.

1st level "Physics" study programme

Student enrolment

Available enrolment places and enrolment in the 1st year of study

Academic year	Available	Enrolled
2007/08	30	9
2008/09	40	8
2009/10	40	6
2010/11	40	5
2011/12	40	6
2012/13	40	4

Structure of 1st year students
by type of completed secondary school (in %)

School	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13
Completed secondary school		75				
Gymnasium		12.5	100	100	83.3	100
Economic technician						
Other secondary technical school		12.5			16.7	
Secondary technical school (3+2)						
TOTAL		100	100	100	100	100

Structure of 1st year students
by manner of completing secondary school

Acad. year	Matura (%)	VM, FE* (%)	Total (%)
2007/08			
2008/09	100	0	100
2009/10	100	0	100
2010/11	100	0	100
2011/12	100	0	100
2012/13	100	0	100

*VM, FE = Vocational matura or final examination passed by pupils of secondary technical schools

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

Enrolment in the 1st year of study
by type of completed secondary school

Completed secondary school	Students
Srečko Kosovel School Centre, Sežana	1
Secondary school abroad	1
Technical School Centre, Nova Gorica	1
Veno Pilon Secondary School, Ajdovščina	1

Study programme implementation

Comparison of student number fluctuation by years of study

Acad. year	1st year	2nd year	3rd year	4th year	Graduation candidates	Total
2007/08	9	2				11
2008/09	9	2	1			12
2009/10	8	1	2			11
2010/11	6	5	1		1	13
2011/12	6	5	2			13
2012/13	4	3	5		1	13

Student structure by gender

Acad. year	Males (%)	Females (%)
2007/08		
2008/09	82	18
2009/10	55	45
2010/11	77	23
2011/12	76.9	23.1
2011/12	92.86	7.14

Average exam grade

Academic year	Average grade
2006/07	
2007/08	7.73
2008/09	7.98
2009/10	8.16

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

2010/11	8.60
2011/12	8.42

Analysis of advancing to the next year by year of study

Academic year	Advancing from the 1st year to the 2nd year (%)	Advancing from the 2nd year to the 3rd year (%)	Advancing from the 3rd year to the pre-graduation year (%)	Total transition rate for the study programme
2006/07				
Actual				
2007/08	11	50		18.8
Actual	25			33.3
2008/09	11.1	100		27.3
Actual	25			50
2009/10	62.5	100	50	63.6
Actual	100	100	100	100
2010/11	83.3	40.0		63.63
Actual	83.3			63.63
2011/12	50	100	50	72.72
Actual	75			88.88

Transition rate is calculated as a ratio between the number of students who have met their study requirements and were able to enrol in higher year, and the total number of students in the year. The actual transition rate in the first year takes into consideration only those students who attended the lectures and fulfilled at least one of their study obligations (students that were enrolled but did not fulfil any of their study obligations have been left out). The actual transition rate in the third year takes into consideration only those students who enrolled in their additional pre-graduation year, leaving out students who failed to enrol in their additional pre-graduation year.

Duration and completion of the study programme

Average study duration of full-time students

Academic year	Graduates	Duration of studies in years		
		Average	Min.	Max.
2008/09				
2009/10	1	3	3	3
2010/11	2	3.58	2.92	4.25

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

2011/12	2	3.87	3	4.75

2nd level "Physics" study programme

Student enrolment

Available
enrolment places and enrolment in the 1st year of study

Acad. year	Full-time study		
	Available	Enrolled	Min*
2008/09	30		
2009/10	30	1	
2010/11	30		
2011/12	30	1	
2012/13	30	2	

Data on prior education

Acad. year	Study programme				
	UNI	1st level UNI	University College	1st level UC	Total
2009/10		1			1
2010/11					
2011/12		1			1
2012/13		2			2

Analysis of advancing to the next year by year of study

Academic year	Advancing from the 1st year to the 2nd year (%)	Advancing from the 2nd year to the pre-graduation year	Transition rate for the total study programme
2011/2012	100	-	100

Data on number of students attending individual courses and their average exam grade

Subject	Average grade	Students

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

Experimental methods and detectors I	10	1
Physics of elementary particles	9	1
Selected topics from theory of groups	10	1
Selected topics in mathematical analysis	10	1
Cosmology	10	1
Advanced numerical methods	10	1
General theory of relativity	10	1
Higher quantum mechanic	9	1
Total	9.75	8

Average duration of study

Academic year	Master's degrees	Duration of studies in years		
		Average	Min.	Max.
2008/09	No master's degree holders yet*			
2009/10	No master's degree holders yet*			
2010/11	No master's degree holders yet*			
2011/12	1	2.08	2.08	2.08

*First generation of students enrolled in the 1st year of study in the academic year 2009/10.

6.2 STUDENT MOBILITY

The University of Nova Gorica has been involved in the Erasmus – Lifelong learning programme since 2003 when it obtained the Erasmus university agreement for the first time. The Erasmus University Charter is the prerequisite for European collaboration within the Erasmus activity, while the programme itself provides participants of tertiary education various opportunities to participate in international mobility and in an international environment.

In the academic year 2011/2012, the University had in place 68 bilateral agreements[6] with institutions from 22 countries.

FAN concluded its first Erasmus bilateral agreement in the framework of the University of Nova Gorica in the academic year 2010/2011 with the Italian Università degli Studi di Firenze. In the academic year 2011/12 one student was involved in acquiring knowledge at the Elettra-Sincrotrone near Trieste, Italy. The positive experience gathered in such exchanges spread quickly among students, leading us to anticipate greater interest in the following year.

FAN student mobility analysis

[6] Full list at http://www.ung.si/si/o-univerzi/sporazumi-erasmus/.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

Academic year / Indicator	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12
Students at other higher education institutions in Slovenia						
Students from other higher education institutions in Slovenia						
Students at higher education institutions abroad						
Foreign students completing part of their studies at the higher education institution						
Foreign students at the higher education institution						
Recognized foreign school-leaving certificates (or certificates on the study obligations fulfilled abroad) at the higher education institution						
Students involved in work placement abroad						1
Foreign students in work placement in Slovenia						

FAN lecturers visiting foreign universities and institutes

- Maria Vittoria Garzelli, University of Durham, United Kingdom: 19th March 2012 – 23rd March 2012
- Darko Veberič, Institute of Physics, The Academy of Sciences of the Czech Republic: 17th June 2012 – 23rd June 2012
- Darko Veberič, Cern, Switzerland: 2nd September 2012 – 30th September 2012

6.3 STUDENT AND GRADUATE AWARDS AND ACHIEVEMENTS

This section includes the awards and achievements obtained and achieved by students and graduates in the previous academic year.

/

6.4 MONITORING THE EMPLOYABILITY OF GRADUATES

Special attention is devoted to the monitoring of the employability of graduates and the compilation of information from graduates on the applicability of obtained knowledge in the labour market. The objective of all UNG study programmes is to achieve and retain a high employment rate. Therefore, the student office has been providing support to graduates in finding their first employment. After successfully defending the master's thesis at the 2nd level, the first graduate of the 1st level programme at the School of Applied Sciences enrolled in the programme "Physics of solid substance" at the University in Kaiserslautern, Germany.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport.
Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

The second graduate received employment in the secondary school system and the third graduate enrolled in the 2nd level study and is currently not looking for employment.

6.5 ALUMNI CLUB OF THE UNIVERSITY OF NOVA GORICA

In 2004, the Alumni Club was established to connect all graduates with bachelor's, master's and doctoral degrees from all UNG study programmes. It is through members of the club that the feedback on the employment of graduates and on the applicability of knowledge obtained during their studies at UNG could be acquired. Some of this information is also obtained through surveys in companies where students carry out their practical training. This year we have registered the first alumni of the School of Applied Sciences, expecting an increase of students joining the club after the completion of this year's diplomas.

The town of Ajdovščina was host of the first Alumni Club meet-up, introducing to each other various generations of UNG students. The attendees were introduced to the operations of the Edvard Rusjan Foundation and the range of opportunities they have as former students to contribute to the development of UNG.

6.6 STUDENT SURVEY ANALYSIS

The opinions of students regarding the quality of the studied contents and the implementation of the programme are collected through four thematic surveys (see annex):

- Course Evaluation Questionnaire for Students
- Study Programme Evaluation Questionnaire for Students
- Questionnaire on Provision of Information to Candidates Prior to Enrolment
- Student Work Evaluation Form

(all questionnaires are anonymous)

Students' opinion on the quality of pedagogical work in individual courses is obtained through the ***Course Evaluation Questionnaire for Students***. There are two versions of student surveys for this purpose: one of them is intended for the evaluation of quality of pedagogical work of lecturers, who hold regular lectures, while the other survey is conducted in cases when the course is implemented in the form of consultations (when less than five students enrol in the course). Students evaluate the pedagogical work of each individual lecturer and assistant when all the lectures have been held, but before the examination period. Survey results are not public, and are available to school management only. Each lecturer has access to the results of survey related to his or her work. This information provides lecturers with feedback on their work. They can learn about the weaknesses and strengths of their pedagogical work as seen by students, and are thus stimulated to improve their work. At the end of an academic year, the Dean of the school and the Rector hold individual interviews with lecturers, whereby the survey results serve as the starting point for improvements in the pedagogical process. Student opinions on the pedagogical work of lecturers, provided and

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport.
Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

used in the process of appointment for teaching positions, is obtained on the basis of results of these surveys.

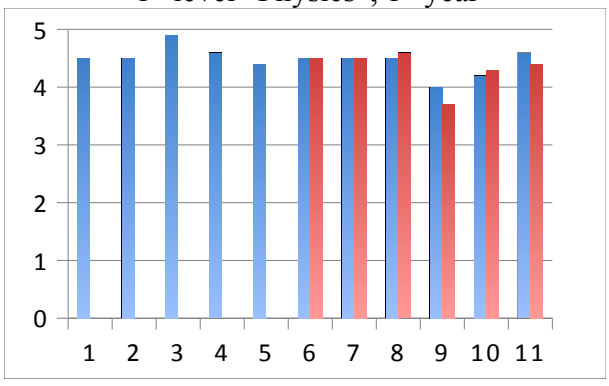
The ***Study Programme Evaluation Questionnaire*** *which includes questions regarding the study programme, library, computer classrooms, administrative office and student office* provided us additional feedback on the 1st level "Physics" study programme. The suitability and effectiveness of candidate informing is reviewed each year by means of the **Questionnaire on Provision of Information to Candidates Prior to Enrolment,** which is filled out by all the students of the first year upon enrolment.

In line with the Criteria for the Allocation of Credits to Study Programmes under ECTS adopted by the Council of the Republic of Slovenia for Higher Education as at 12th November 2004, the workload of students enrolled in a new study programme should be monitored every year until the first enrolled generation graduates. Afterwards, this should be monitored every two years. Student workload is monitored through a student survey conducted after they pass their exams, namely the **Student Work Evaluation Form**.

The analyses and findings of student surveys are presented in annexes. In order to ensure the protection of personal data, the results of student surveys regarding the quality of courses held by individual lecturers are not included. Survey results are not public, and are available to school management only. Each lecturer has access to the results of survey related to his or her work. At the end of an academic year, the Dean of the school and the head of the University hold individual interviews with lecturers, whereby the survey results serve as the starting point for improvements in the pedagogical process. Findings regarding the average grade of individual lecturers in the respective study programme are presented below. In order to ensure the protection of lecturers' and assistants' personal data, the results are presented in numbers.

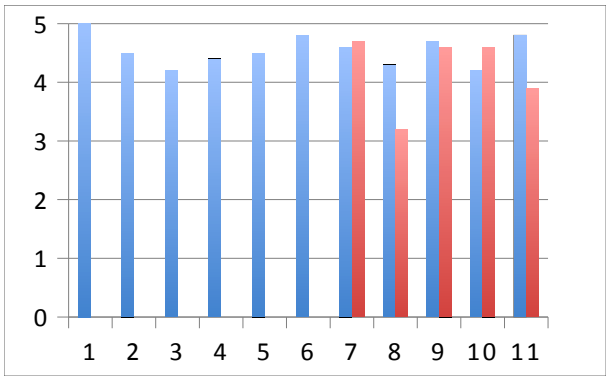
Average grades for lecturers and assistants based on student surveys
by year of study for 1st level and 2nd level "Physics" study programmes

1st level "Physics", 1st year

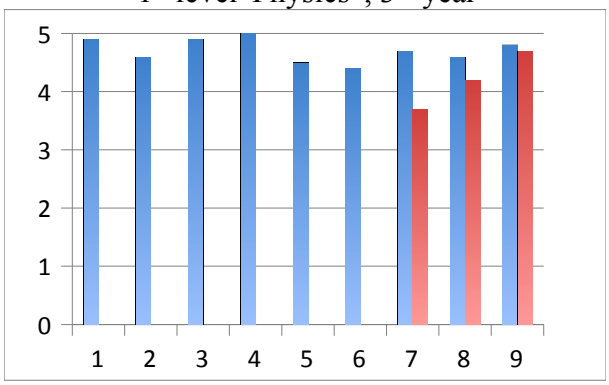


1st level"Physics", 2nd year

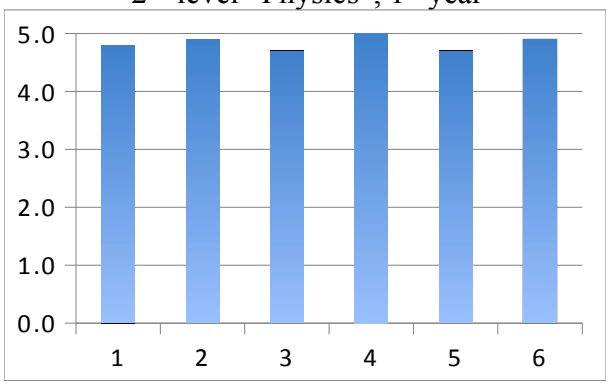
»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «



1st level"Physics", 3rd year

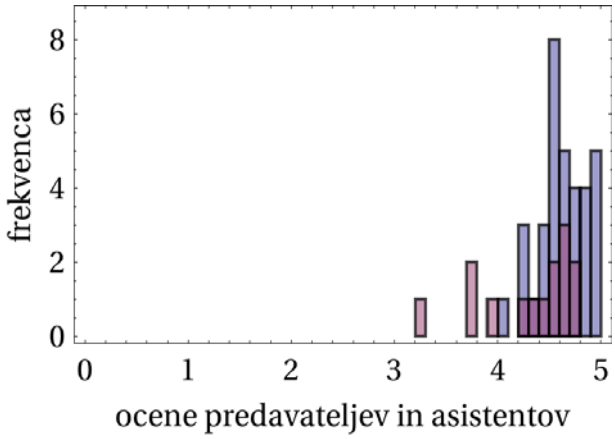


2nd level "Physics", 1st year



Total distribution of grades in both levels and years:

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «



Student surveys regarding the quality of pedagogical work of all teachers and assistants have been carefully processed; participation of students was very high. Students of FAN take the surveys seriously and complete them regularly. They are informed of the manner of completion and type of surveys at the beginning of lectures.

6.7 ASSESSMENT OF CURRENT STATE AND GUIDELINES

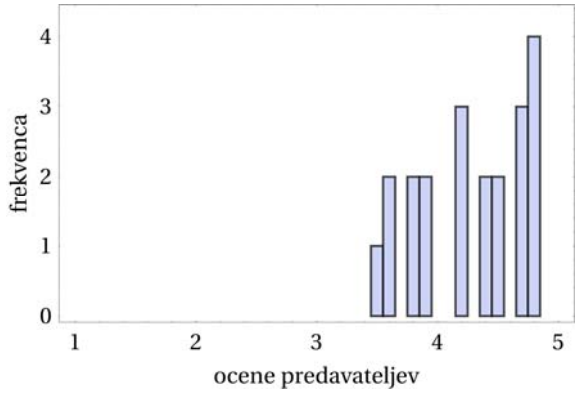
Lecturer grades based on student surveys show that students consider their pedagogical work to be of high quality. Looking back at the FAN operations through the years, we can see that the quality of lectures and lecturers has remained consistent.

With the relocation of lectures to Križna ulica in Gorica, students will have fewer logistic problems, since the new location is close to student dormitories and other private accommodation facilities in Nova Gorica. Thus, the attendance of students in lectures will improve, reducing potential dissatisfaction of students who had difficulties attending the lectures.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

6.7.1 Comparison with previous years

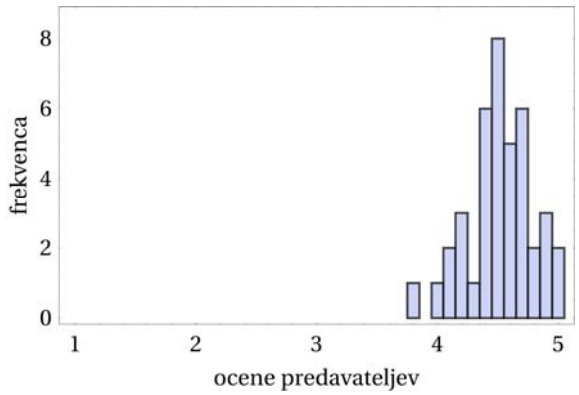
Academic year 2008/2009



Student surveys regarding the quality of pedagogical work of all teachers and assistants have been carefully processed; participation of students was very high. Students of FAN take the surveys seriously and complete them regularly. They are informed of the manner of completion and type of surveys at the beginning of lectures.

Surveys show certain deviations in lecturer grading. During regular consultations with the panel of lecturers, the Dean of the School identified the weaknesses and put forward proposals for improvements that would also take into account student remarks. This was done in cooperation with the lecturers that had received poor grades.

Academic year 2009/2010

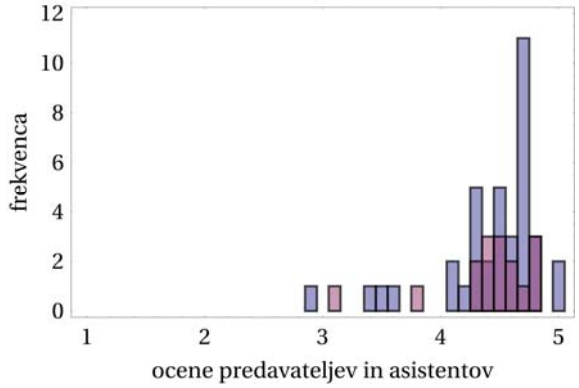


Lecturer grades based on student surveys show that students consider their pedagogical work to be of high quality.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

In view of the last year, the results have significantly improved, indicating a prompt and effective dealing with problems and student complaints. Material conditions for the implementation of lectures and laboratory exercises have also improved, probably accounting for the improvement of final grades.

Academic year 2010/11



Lecturer grades based on student surveys show that students consider their pedagogical work to be of high quality.

With the relocation of lectures to Križna ulica in Gorica, students will have fewer logistic problems, since the new location is close to student dormitories and other private accommodation facilities in Nova Gorica. Thus, the attendance of students in lectures will improve, reducing potential dissatisfaction of students who had difficulties following the lectured contents.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

7 TEACHING FACILITIES AND EQUIPMENT

The section on the space requirements comprises data on the effective surface area of classrooms, lecture halls, laboratories and other facilities used to carry out the study programme. The data on the number and size of lecturer offices is not given as lecturers are mostly involved in the research work carried out the laboratories at the University of Nova Gorica, occupying offices next to these laboratories. Each Faculty has two offices – one for the administration and one for the Dean of the School.

7.1 SCHOOL OF APPLIED SCIENCES

In the academic year 2011/12, the School of Applied Sciences the fifth generation of students enrolled in the 1st level "Physics" study programme and the second generation in the 2nd level "Physics" study programme. In order to be able to carry out all three years of the 1st level study programme and two years of the 2nd level study programme, FAN occupies facilities in the University Centre of Ajdovščina. The building with a total surface area of 2200m^2 was renovated by the University of Nova Gorica and now provides facilities suitable for lectures and laboratories. The facility has one lecture theatre with 150 seats, 4 classrooms with 25 seats (P2, P3, P4 and Pipistrel), one lecture hall with 50 seats (Mercator) and one lecture room with 15 seats (N6). There is also a computer room with 20 work stations. There is enough laboratory space to carry out laboratory exercises. The Faculty is provided with an administration office, the Dean's office, a student office and a student room.

Below is a list of the multimedia equipment available for the implementation of the teaching activity:

Type of equipment	Pieces
Computer equipment by users	
For students	20
For non-pedagogical staff	2
For teachers	4
Equipment of lecture halls	
Laptop computer	1
Portable projectors	2

7.2 ASSESSMENT OF CURRENT STATE AND GUIDELINES

In terms of availability of facilities and equipment for the implementation of teaching activities, the current state at FAN can be deemed excellent. The School disposes of a new building with an adequate number of lecturer halls and the necessary infrastructure. The only drawback is the lack of sleeping accommodations for students, of which we are well aware. The University development plan anticipates settling this matter with the campus construction

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport.
Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

which is expected to occur in 2015. Currently, the situation is being alleviated by providing new student accommodations in the "Železničarski dom" facility in Nova Gorica and the student dorm in Ajdovščina. In the framework of last year's findings and future directions, the lectures in this academic year were transferred to the building at Križna ulica, Gorica, Italy, which was completely renovated in 2006 and is hosting six lecture halls, namely: 101 (76,38 m^2), 102 (64,40 m^2), 201 (78,68 m^2), 202 (69,70 m^2), 204 (66,32 m^2), conference room (64,15 m^2), study room (62,75 m^2) and a computer lecture hall (62,40 m^2). The total surface area of all lecture theatres amounts to 544.78 m^2. In this way the study location will be much closer to the extensive accommodation facilities available in Nova Gorica, facilitating students' daily travels. Laboratory work as well as students' work on their diploma and master's thesis can thus be carried out in direct vicinity, at Vipavska 13, Rožna Dolina.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

8 FUNDING OF STUDY ACTIVITIES

The 1st level "Physics" study programme is wholly financed through a concession awarded by the Ministry of Education, Science, Culture and Sport, allocating €260,361 to this end in the academic year 2011/12.

Structure of School revenues (in €)

	2007	2008	2009	2010	2011	2012
Market-generated revenues (tuition fees, applicable projects etc.)						9,971
Revenues from budget funds of RS		39,714	247,403	234,415	258,789	260,361
Donations and grants						

The school spent the funds for investments, furniture, teaching equipment and other purchases and maintenance works.

8.1 ASSESSMENT OF CURRENT STATE AND GUIDELINES

The 1st level "Physics" study programme received a national concession in 2007. These funds ensure that the programme can be carried out uninterruptedly.

»Operation part-financed by the European Union, the European Social Fund and the Ministry of Education, Science and Sport. Operation implemented in the framework of the Operational Programme for Human Resources Development for the Period 2007-2013, Priority axis 3: Development of human resources and lifelong learning; Main type of activity 3.3: Quality, competitiveness and responsiveness of higher education. «

9 COOPERATION WITH THE COMMUNITY

The School has been successfully cooperating with the community on a regional, national and international scale. In the academic year 2011/12 is was host to several presentations of the "Physics" study programme for secondary school pupils in their 3rd and 4th year from across Slovenia. This was complemented by an initiative for talented pupils, in the course of which pupils perform complex experimental tasks together with researchers. Secondary school pupils also had the opportunity to visit the Elettra – Sincrotrone research centre located in Bazovica near Trieste. In the course of such presentations, the faculty professors held lectures presenting the research results obtained from their laboratory work. This year, FAN ceased to organise meetings for secondary school physics teachers, mainly owing to the fact that the otherwise excellent response was limited to the same circle of secondary school teachers who did not excel at promoting FAN at their respective secondary schools. Instead, like last year, we plan to extend the visits paid by FAN associates to a wider list of Slovenian secondary schools in order to present the research achievements of UNG laboratories, present the related scientific findings and discoveries and to present in detail the study options provided at FAN and UNG. In this time of crisis, it would be wise to increase the promotional efforts at the local scale, as an ever-growing number of pupils are deciding to study at locations closer to home in order to minimize the study expenses.

FAN fosters connections with the local economy in the field of high-tech (e.g. Pipistrel d.o.o., Hidria d.d., Sinhrotron Elettra, Iskra Avtoelektrika d.d.), providing the opportunity to carry out physics exercises in the framework of the *Physical laboratory* course. Some of the employees of the above-mentioned companies are lecturers at FAN.

FAN has in place cooperation agreements with the following enterprises:

- Fructal d.d. Živilska industrija, Tovarniška cesta 7, 5270 Ajdovščina
- Tekstina d.d. Ajdovščina, Tovarniška cesta 15, 5270 Ajdovščina
- Komunala Nova Gorica d.d., Cesta 25. junija 1, 5000 Nova Gorica
- Kemiplas d.o.o., Dekani 3A, 6271 Dekani
- Iskra Avtoelektrika d.d., Polje 15, 5290 Šempeter pri Gorici
- Salonit Anhovo, Gradbeni materiali d.d., Vojkova ulica 1, 5210 Deskle
- Soške elektrarne, Erjavčeva ulica 20, 5000 Nova Gorica
- Elektro Primorska d.d. Nova Gorica, Erjavčeva ulica 22, 5000 Nova Gorica
- Franc Derganc General Hospital, Šempeter
- Pipistrel d.o.o., Ajdovščina
- OKM d.o.o, Ajdovščina
- Petrič d.o.o., Ajdovščina
- Primorje d.d., Ajdovščina
- SŽ ACRONI d.o.o., Cesta Borisa Kidriča 44, 4270 Jesenice
- IMPOL d.d., Partizanska cesta 38, 3210 Slovenska Bistrica
- Štore-Steel d.o.o., Železarska cesta 3, 3220 Štore
- Agricultural cooperative Goriška Brda, Dobrovo Hum 0N, 5211 Kojsko
- Chamber of Commerce and Industry of Slovenia
- Primorska Technology Park, Vipavska 13, Nova Gorica

- Regional development Agency, Šempeter pri Novi Gorici
- Agroind Vipava 1894 Vipava d.d., Vinarska cesta 5, 5271 Vipava
- Wine cellar »Goriška Brda« z.o.o., Zadružna cesta 9, Dobrovo
- Agricultural cooperative Vipava z.o.o., Goriška cesta 13, 5271 Vipava
- Chamber of Agriculture and Forestry of Slovenia
- Institute of Agriculture and Forestry Nova Gorica, Pri hrastu 18, 5000 Nova Gorica
- Selection and Nursery Centre Vrhpolje, Vrhpolje 38a, 5271 Vipava
- Abanka Vipa
- Adria Mobil d.o.o., Novo Mesto
- AET Tolmin d.o.o., Tolmin
- Airmobil d.o.o., Šempeter pri Novi Gorici
- AJ Kogoj d.o.o., Miren
- Alpos Šentjur d.o.o., Šentjur
- Aluminij Montal d.d., Komen
- Apros d.o.o., Novo Mesto
- BIT s.p., Nova Gorica
- Business solutions d.o.o., Šempeter pri Novi Gorici
- Cimos Commerce, d.d. Koper
- Efekt d.o.o., Črniče
- Esal d.o.o., Deskle
- Elektro Primorska d.d.
- Extra d.o.o., Nova Gorica
- Final d.d.
- France d.o.o.
- GOAP d.o.o., Solkan
- Gopack d.o.o., Solkan
- Goriške opekarne d.d., Renče
- Gostol-Gopan d.o.o., Nova Gorica
- Gradišče d.o.o., Cerknica
- Hisoft plus d.o.o., Šempas
- HIT d.d., Nova Gorica
- Hidria d.d., Idrija
- Jožef Stefan Institute, Ljubljana
- Intereuropa d.d., Koper
- Intra Lighting d.o.o., Miren
- Kolektor d.o.o., Idrija
- Kraški vodovod d.o.o., Sežana
- Lipa d.d., Ajdovščina
- Lozej d.o.o., Ajdovščina
- Luka Koper d.d., Koper
- Martex d.o.o., Volčja Draga
- Meblo Jogi d.o.o., Nova Gorica
- Meblo PTRC d.o.o., Nova Gorica
- Meblo TOP d.o.o., Nova Gorica
- Metalflex d.o.o., Tolmin

- Mitol d.d.
- Mizar d.d.
- Ivan Rob Primary School
- Plama-pur d.d.
- Plin ekspert d.o.o.
- Projekt d.d., Nova Gorica
- Rotomatika d.o.o., Spodnja Idrija
- Simp d.o.o., Šempeter pri Novi Gorici
- SENG d.o.o., Nova Gorica
- Spin d.o.o., Solkan
- Systec d.o.o., Solkan
- S.K.M. d.o.o.
- Ščit d.o.o., Kojsko
- TKK Srpenica d.d., Srpenica
- Teams d.o.o.
- Technical School Centre, Nova Gorica
- Okroglica d.d.
- Zavarovalnica Maribor d.d., Maribor

9.1 ASSESSMENT OF CURRENT STATE AND GUIDELINES

The School of Applied Sciences carries out controls of the study quality in both study programmes, using the findings to constantly adapt the study programmes to the needs of both seekers and providers of employment. Special attention is paid to the monitoring of practical assignments within the industry and research labs, which are the core of the 1st level "Physics" study programme. We will continue to carefully monitor the events in the field of the development of high-tech companies and seek out active connections with new developmental units within the industry in order to increase the range of experimental exercises available to our students. The study programmes which are harmonized with the recommendations of the Bologna Declaration provide FAN the opportunity to establish international links via student and teacher exchanges. We plan to further intensify our involvement in the ERASMUS programmes.

Despite the efforts we have already made in terms of advertising, presentation of study programmes in secondary schools, higher-education promotional events, organisation of information days etc., FAN will continue with its promotional activities aimed at attracting a large number of students to the study of “Physics” and science in general. Irrespective of the improved enrolment rate in the academic year 2010/11, the figures remain unsatisfactory; only about 25% of the available places were occupied in recent years. The promotional activities in the academic year 2009/10 comprised hosting regular events for secondary school physics teachers, organisation of physics competitions and organizing pupils' visits to the research institute Elettra-Sincrotrone in Bazovica near Trieste (in the framework of the newly designed programme for promoting science in talented youth carried out by FAN). Additionally, we also continued with the publishing of targeted and field-specific articles in public media relating to the teaching of applied physics. The plan for the academic year 2011/12 has foreseen a large increase of visits to secondary schools, timing the visits to that time of the

year when most secondary school pupils are deciding where to continue their studies. In this way the interested candidates will be given first hand information on the study options provided at FAN. It is our understanding that the counselling services in secondary schools cannot cover such information in a satisfactory manner and that they lack the motivation to carry out their primary mission. The mid-term plan of FAN for the academic year 2010/11 regarding infrastructure has not been fully realized owing to the fact that the lecture hall for remote learning and demonstrations lecture hall with the equipment required for physics classes were out of our budget. In the academic year 2012/13 we plan to organise a visit and guided tour of UNG for counselling staff who are in charge of providing advice to secondary school pupils regarding their decisions where to continue their study and career path.

Within the development policy of the University of Nova Gorica there was an increase of accommodation facilities in the student dorm "Železničarski dom" in Nova Gorica and the student dorm "Ribnik" in Ajdovščina in the academic year 2009/10, thus significantly improving the study conditions at FAN and, hopefully, contributing to an increase of the number of future students. In the academic year 2011/12 we decided to move all lectures to the UNG facilities in Križna ulica, Gorica. In doing so, students who are mostly accommodated in Nova Gorica and the vicinity will have a much easier access to the school without having to rely on private or public transport, reducing their transportation costs and organisational efforts necessary for them to be able to attend the lectures in Ajdovščina.

Overall, the integration of FAN with the community is very good. The building where FAN and several of its labs are located was acquired by the University from the Municipality of Ajdovščina, which is also its co-founder. The School nurtures solid links with the local economy, some of its lecturers also being researchers in high-tech companies from the region. In general, we believe that the recipe for the increase of the enrolment rate and raising pupils' interest in studying technical sciences lies in a joint effort with the companies in order to introduce the respective professions, and companies publically expressing their interests for the professions that FAN is providing education for. To this end, the academic year 2009/10 saw us launching an ongoing initiative for talented pupils to attract them to study natural sciences, technology and science. In the following years our efforts will be aimed at regional and cross-border promotion and cooperation.

10 SUMMARY

The School of Applied Sciences (FAN) offers study programmes in natural science and technology. As of the academic year 2007/08, it has been offering two study programmes, i.e. 1st level **"Physics"** study programme and 2nd level **"Physics"** study programme. Both programmes were developed by the University of Nova Gorica (UNG) in cooperation with partners from industry, medicine and fundamental research. A signatory to the ERASMUS agreement on the inter-university exchange of students and being part of the European ECTS system, the School enables transferring credits within the schools of the University of Nova Gorica (UNG). In 2011/12, FAN implemented both programmes; all three years of the 1st level programme and two years of the 2nd level study programme.

The core of both study programmes is the study of applied physics, which is highly practice-oriented. The main mission of the programme is to train engineers with cutting-edge applied knowledge of planning, designing and applying modern measurement techniques and instruments. FAN strives to establish a method of teaching physical science that would be in compliance with the needs of the industry, since both study programmes are highly practical and closely related to technological development processes. Graduates from the 1st level programme will not only have specialized knowledge of a specific discipline, but will be able to quickly adapt to the needs of employers since they will acquire a wide range of practical knowledge through their studies. The 1st level study programme trains students to solve problems and seek multidisciplinary solutions outside a certain discipline. The 2nd level programme provides students with in-depth knowledge required for individual research work and for pursuing an academic path to the doctoral degree, or for individual research work at various high-tech enterprises.

The 1st level "Physics" study programme and 2nd level "Physics" study programme were implemented by applying modern methods of learning and teaching of both general and specific knowledge and skills in individual fields. The educational process was conducted by 21 teachers, top experts from the field of solid matter physics and particle physics. They all have appropriate academic qualifications. 17 of them are fully-employed, while only 4 of them work on a contractual basis. In the academic year 2011/2012, there was one successful appointment to the title of full professor, one to the title of associate professor, 5 to the title of assistant professor and 9 to the title of assistant.

In the academic year 2011/12, lectures were carried out in the facilities at Križna ulica, Gorica, which hosts six lecture halls with a total surface area of 544,78 m^2, a conference room (64,15 m^2), a study room(62,75 m^2) and a computer lecture hall (62,40 m^2). There was enough laboratory space for laboratory exercises. The School has at its disposal a school office and a Dean's office, as well as a student office.

In the academic year 2011/12, there were 13 students enrolled in the 1st level "Physics" programme - 6 in the first year, 5 in the second and 2 in the third year. A total of 75% of them successfully completed their first year of studies, 100% the second year, and 50% their third year. The average grade of the total passed exams in 2011/12 was 8.42, while there were 2 diploma theses. The 2nd level "Physics" programme had 2 students enrolled, and the academic year 2011/12 saw the successful defence of the first master's thesis in this programme. Study

programme evaluation questionnaires were conducted. The results show that students were satisfied with the study programme.

Enrolment in the first year of the full-time 1st level "Physics" programme has remained relatively low during its first three years of implementation, while the quality, skills, prior knowledge and motivation of the student population show an upward trend. FAN is constantly looking for new approaches to attract as many secondary school pupils as possible. In the last year, all its previous activities were complemented with an initiative for talented secondary school pupils, by means of which we would like to attract students to study natural sciences and technology. Both the University and FAN are at a turning point as they are faced with the decision to construction of the future campus. The Municipality of Nova Goric regarding the site of the UNG campus several times in the past, lea it its construction. This academic year saw us retreating to a short-te ack of space we are facing by relocating the courses to the UNG facility at Križna ulica in Gorica, Italy. At the same time, this solution is more suitable for the majority of students, relieving them in terms of transport and increasing the attractiveness of accommodations in Nova Gorica and its vicinity.

FAN will continue to conduct the quality control of its study programmes. The results will be used to adapt the study programmes to the needs of job seekers and job providers. Special attention will continue to be focused on the monitoring of practical training in industry. We will also strive to complement our own capacities for laboratory exercises and demonstrations. Moreover, we will make continuous efforts to monitor the development of high-tech enterprises and to nurture relations with new industrial development units in order to provide students with a wider range of experimental exercises available to them within such enterprises. Active efforts to motivate students to participate in international exchange networks and to use the opportunity of credit allocation within the European ECTS programmes have yielded first results. Special attention will be given to the early integration of senior students in the research work carried out in UNG physics laboratories, hence preparing them for possibilities of employment within the young researcher programme.

Assistant professor Darko Veberič, PhD
Quality coordinator
School of Applied Sciences

11 ANNEXES

- Results of the Questionnaire on Provision of Information to Candidates Prior to Enrolment
- Results of the Study Programme Evaluation Questionnaire for Students

Univerza v Novi Gorici, Fakulteta za aplikativno naravoslovje
Program: Fizika I. Stopnja

Rezultati vprašalnika o informiranju kandidatov pred vpisom

Anketo je izpolnjevalo **2** študentov

- **2** moških
- **0** žensk
- **2** rednih študentov,
- **0** izrednih študentov.

---

1. Ali ste dobili dovolj informacij o študijskem programu še preden ste se vpisali?

	Povprečje 1 - 5	Stnd. dev.	
Premalo informacij	**5.00**	**0.00**	Dovolj informacij

2.Kje ste dobili informacije o študijskem programu, pred vpisom?

1. Informativni dan	**100%**
2. Predstavitev na srednji šoli	**0%**
3. Predstavitvene brošure	**50%**
4. Na spletnih straneh	**0%**
5. Od študentov	**100%**
6. Osebno sem povprašal na šoli	**0%**

---

3. Kateri način pridobivanja informacij je po vašem mnenju najbolj primeren?

1. Informativni dan	**100%**
2. Predstavitve na srednji šoli	**0%**
3. Predstavitvene brošure	**50%**
4. Na spletnih straneh	**0%**

Univerza v Novi Gorici. Fakulteta za aplikativno naravoslovje

Program: Fizika I. stopnja

Rezultati študentske ankete za oceno študijskega programa

Anketa vsebuje, poleg vprašanj o študijskem programu tudi vprašanja o knjižnici, študentski pisarni, o študentskemu svetu in o obštudijski dejavnosti študentov.
Študentje so anketo izpolnjevali tako, da so obkrožili ustrezno številko na lestvici od 1 do 5.

Anketo je izpolnjevalo	**6**	študentov.	
	2	prvih letnikov,	**3** drugih letnikov
	1	tretjih letnikov	**0** četrtih letnikov
	6	rednih,	**0** izrednih študentov
	5	moških	**1** žensk.

Študijski program

	Pov. Ocena 1 - 5	Stnd. dev.
1. Ali ste dovolj seznanjeni z vsebino študijskega programa?	**4.33**	**1.11**
2. V kolikšni meri se študijski program sklada z vašimi začetnimi pričakovanji?	**4.50**	**0.50**
3. Ali se vam zdi ocenjevanje izpitov korektno?	**4.33**	**1.11**
4. Ali ste zadovoljni s sprotnim informiranjem o študijskih zadevah med šolskim letom?	**3.67**	**1.11**
5. Ali bi svojim prijateljem priporočili vpis na ta študijski program?	**4.50**	**0.76**

Knjižnica

6. Kako pogosto obiskujete šolsko knjižnico?

1. Nikoli	**50.00%**
2. Enkrat na mesec	**50%**
3. Enkrat na teden	**0%**
4. Večkrat na teden	**0%**

	Povp. Ocena 1 - 5	Stand. Dev.
7. Ali vam urnik šolske knjižnice ustreza?	**2.33**	**1.11**
8. Kako ste zadovoljni z delom osebja v knjižnici?	**3.00**	**1.53**
9. Ali menite, da vam je v knjižnici na razpolago ustrezno učno gradivo za vaš študij?	**2.83**	**1.07**
10. Ali potrebujete čitalnico v sklopu knjižnice?	**1.83**	**1.07**

		1 - 5	
15.	Kako ste zadovoljni z delom tajništva?	**4.2**	**1.1**
16.	Ali ste dovolj seznanjeni z delom oziroma z nalogami študentske pisarne?	**4.0**	**0.8**
17.	Kako ste zadovoljni z urnikom študentske pisarne?	**4.2**	**0.7**
18.	Kako ste zadovoljni z delom osebja v študentski pisarni?	**4.2**	**1.5**
19.	Kaj menite o tem, da bi vam študentska pisarna nudila pomoč pri iskanju bodoče zaposlitve?	**4.5**	**0.5**

Študentski svet

		Povp. Ocena 1 - 5	Stand. Dev.
20.	Ali ste dovolj seznanjeni z nalogami in dejavnostjo študentskega sveta?	**2.2**	**0.7**
21.	Ali smatrate, da študentski svet dovolj zastopa vaše interese?	**2.8**	**0.4**

:

Datum: **28/ 10/ 2012**