



Co-funded by the  
Tempus Programme  
of the European Union

# VERITAS

STRUCTURAL DEVELOPMENT OF THE THIRD CYCLE BASED ON SALZBURG PRINCIPLES

## ACHIEVEMENTS

2013-2017

*"coming together is a beginning  
keeping together is progress  
working together is success"*

*-H. Ford*



# VERITAS

STRUCTURAL DEVELOPMENT OF THE THIRD CYCLE BASED ON  
SALZBURG PRINCIPLES

*ARMENIA*

543710-TEMPUS-1-2013-1-AM-TEMPUS-SMGR  
2013-2017

*www.tempusveritas.am*



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**YEREVAN 2017**



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## FOREWORD

Since signing the Bologna Declaration in 2005, a wide range of reforms and projects on structural modifications and the content of education have been implemented in the higher education system of Armenia. The motivation for Yerevan State Medical University and the VERITAS consortium members was triggered by the ambition to take the quality of doctoral education to a qualitatively higher and new level, making it visible and widely credited by the national, regional and international research community.

Aiming to strengthen the knowledge triangle between education, research and business, VERITAS set the objective to develop and pilot doctoral programmes, which would be based on Salzburg seven principles for doctoral education, including research excellence, attractive institutional environment, interdisciplinary research options, exposure to industry and other relevant employment sectors, international networking, transferable skills training and quality assurance.

The VERITAS project - with the involvement of Armenian HEIs, Ministry of Education and Science, respective buffer bodies dealing with quality assurance and research under the guidance of EU partners - enabled deeper understanding of the needs of developing systems in successful delivery of doctoral programmes and customization of the latter to specific country and institutions priorities. One of the key outcomes of VERITAS project is the recognition of doctoral education as a third level of Armenian higher education system at the Armenian Government level.

Taking into account this new positioning of doctoral education the HEIs should take their own institutional responsibility formally by establishing clear frameworks and guidelines to stimulate “research culture” and, in particular, “culture of supervision”. This approach ensures that the outcome of the third level of higher education will be the doctorate holder – the person whose capacity is built through actual engagement in research activities with an individual professional profile, high level of autonomy and ability to “manage the unknown”. It is only in that case that the Armenian higher education could aspire to be aligned with the key message of the European University Association (EUA): “the result of a good doctoral education is not a good doctoral thesis but a good new doctor”.



**Prof. A. Muradyan**  
*Yerevan State Medical University*  
*Coordinating Rector*

A handwritten signature in black ink, appearing to read 'A. Muradyan', written in a cursive style.



Dear Colleagues,

VERITAS is a joint endeavor of thought leaders in the Armenian and European Union higher education to move the research agenda in a post-Soviet context to a new level of performance in line with the international trends and accepted standards. As a guide the team used the ten basic Salzburg Principles for doctoral programs aimed to establish a gateway for Armenia into the European Higher Education Area (EHEA) and the European Research Area (ERA) – the two pillars of the knowledge-based society. VERITAS is one of the major steps Armenia has undertaken to reform its doctoral education and the 4-year long project contributed greatly to revisiting the current state of affairs of doctoral education in a post-Soviet context, in-depth assessment of the challenges, evaluation of compatibility of the current system with the aspired one, identification of the major gaps and, ultimately, a set of recommendations to the Armenian authorities on the next steps towards integration into the ERA.



The 4-year journey was full of learning into the current system of doctoral education in Armenia, the proposed model based on Salzburg Principles, as well as hard work of the whole consortium to ensure the best compatible and, in the meantime, legitimate approach to make the two work. It is our firm belief that the lessons learnt are invaluable, worthwhile, and useful for the academic community of Armenia and beyond. This is the contribution of the VERITAS consortium of major stakeholders in concern and we do hope it will feed into the revised approach to doctoral education promulgated by the Armenian Government ensuring a wider impact and sustainable development of doctoral education in the country. We extend our highest possible appreciation to the European Commission and its Education, Audiovisual and Culture Executive Agency for the invaluable contribution to the system sustainable development.

Susanna Karakhanyan, PhD

*Project Author and Member of Coordination Team*

## Dear Colleagues,



Doctoral education is a core element of the traditional identity of a university. Importance of this mission of universities especially underlined in the last decade as training researchers has been recognized as a central part of the development of knowledge societies.

Like all other former Soviet countries, globalization of economy and society as a whole raised the need of harmonization of the higher education in Armenia, which was the basis of the philosophy of the Bologna process, which Armenia joined in 2005. To ensure recognition of the Armenian doctoral education internationally and joining the European Research Area a major revamp of the HE system in Armenia was unavoidable to align the doctoral provisions with those of

the international ones, in line with the Salzburg Principles.

Prerequisites for modernization of doctoral education in Armenia have matured: first of all the universities with rich history of doctoral program provisions aligned with European reforms in doctoral education including interdisciplinarity, transferable skills and mobility components; second - during the last decades establishment of new universities in Armenia was tangible, which compelled further revision and development of doctoral education; third - Armenian National Centre for Professional Education Quality Assurance (ANQA) with rich experience in development and implementation of quality standards for higher education became a new player in the HE system quality assurance; finally - Ministry of Education and Science of Armenia and Supreme Certifying Commission of the Rep. of Armenia have also embarked on the process of reforming doctoral education to ensure relevance to socio-economic needs.

In view of these changes, VERITAS project – structural development of the third cycle based on Salzburg principals for amelioration of doctoral education was launched in the Armenian HE to ensure alignment with European Qualifications Framework and the Salzburg Principles. With participation of 11 Armenian Universities (Yerevan State Medical University, Armenian State Academy of Fine Arts, Yerevan State University, Yerevan State University of Languages and Social Science, Armenian State University of Economics, National University of Architecture and Construction in Armenia, Vanadzor State University, Gavar State University, Northern University, Public Administration Academy of RA, National Academy of Scienc-



es of RA), Ministry of Education and Science of RA (MoES), RA Supreme Certifying Commission (RA SCC), Education Quality (EQ), National Center for Professional Education Quality Assurance (ANQA) and invaluable support of European partner universities first steps in the revision of doctoral education in Armenia was launched. Based on fact-finding on the current situation in doctoral education in Armenia the major issues were identified, new approaches were developed and piloted within the frames of the project. Evaluation of the newly developed doctoral programs for research environment, outcomes, admission policy and criteria for doctoral education, training programme, supervision, thesis development, assessment and structure fed into the Guide for development and implementation of doctoral programmes for wider and broader use by the Armenian HE providers and beyond.

The current Guide is based on experience of revision of 11 doctoral programs piloted within the frames of VERITAS project in view of the national frame of doctoral education in Armenia and alignment with Salzburg principals. The Guide also includes the results of peer-reviews by European and Armenian experts to guide individual development based on original research while taking into consideration the academic freedom each HE enjoys.

We extend our heartfelt gratitude to the EACEA, the National Erasmus + Office, the Ministry of Education and Science, and the Armenian and European partners for the valuable contribution. Without the generous contribution from all the stakeholders involved this success of the project would not have been possible.

Marine Balasanyan, Dr.Sc., Professor  
*VERITAS Project Coordinator*

## ABOUT US

**VERITAS** – Structural Development of the Third Cycle Based on Salzburg Principles (543710-TEMPUS-1-2013-1-AM-TEMPUS-SMGR) is a national joint project under the priority of Governance Reform, EACEA N° 35/2012, 6th call and Structural Measures action.

### AIM

To ameliorate doctoral education in Armenian Higher Education System through alignment with European Qualifications Framework and Salzburg Principles.

### OBJECTIVES

- Strengthening human potential in research by building a critical mass of quality researchers through development, integration and efficient management of doctoral education in Armenian HE;
- Promoting international recognition of the III level study programmes of the ANQF through developing and adopting award criteria that are in line with Salzburg principles and comparable with international ones.
- Developing a system of quality evaluation and monitoring in scientific research by building and strengthening systems for continual tracking of relevant parameters.
- Stimulating and strengthening integration of science and research at universities through establishment/revision of university structures which will promote scientific research, network knowledge in education, research and innovation, enhance quality, effectiveness, flexibility, multi-disciplinarity and interdisciplinarity of education.

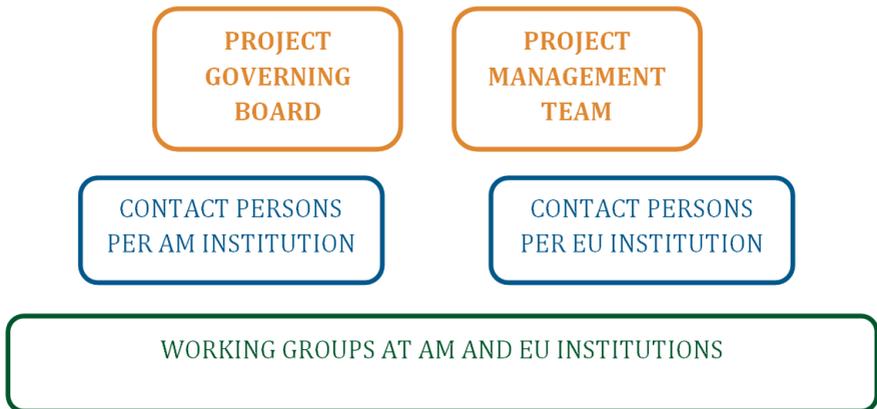


## OUTCOMES

The principle outcomes and outputs include:

- Development of university capacities for quality doctoral education: revision/establishment of new Research Units;
- Establishment of preconditions for quality doctoral education and research
- Formulation of award criteria and quality standards in Doctoral Education
- Development and launch of 11 new doctoral programs in Armenia (11 pilot projects)
- Adoption of the award criteria and quality standards for doctoral education.

## PROJECT MANAGEMENT







## PROJECT MANAGEMENT TEAM

*The project executive team was established to take care of the overall operational, technical and financial management of the project. Day-to-day coordination of the project activities ensured the smooth flow of the project implementation, while the commitment of the management team was the guarantee to the success!*



## PARTNERS

### ARMENIA



- Yerevan State Medical University (YSMU)
- State Academy of Fine Arts of Armenia (SAFAA)
- Yerevan State University (YSU)
- Yerevan State University of Languages and Social Science (YSULS)
- Armenian State University of Economics (ASUE)
- National University of Architecture and Construction in Armenia (NUACA)
- Vanadzor State University (VSU)
- Gavar State University (GSU)
- Northern University (NU)
- Public Administration Academy of RA (PAARA)
- National Academy of Sciences of RA (NASRA)



## EUROPEAN UNION

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- World University Service (WUS AUSTRIA)
- University of Heidelberg (UHMF) (Germany)
- Royal Institute of Technology (KTH) (Sweden)
- University of Girona (UdG) (Spain)
- Bath Spa University (BSU) (The United Kingdom)

## MAIN ACTIVITIES AND ACHIEVEMENTS 2013-2017

Main achievements after 4 years of VERITAS implementation:

### STAFF CAPACITY BUILDING

- International trainings and workshops on doctoral education for Research Unit staff, faculty and QA officers, governmental bodies in Austria and Germany.
- International study visit with the aim of experience exchange in Sweden, UK, Spain and Germany for Research Unit staff, faculty and QA officers, governmental bodies.
- Local trainings and workshops on roadmap development, internal and external QA models in Doctoral Education for Armenian partner HEI researchers, faculty and RU staff, Governmental bodies.
- In-house trainings at Armenian partner HEIs for broader outreach of the project achievements and results.
- Local experience exchange on doctoral programme development and supervision.

### PRE-CONDITIONS FOR QUALITY DOCTORAL EDUCATION AND RESEARCH

- Fact-finding at Armenian HEIs
- Roadmap guide development, roadmaps and strategic plans by AM HEIs



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## QA STANDARDS AND CRITERIA FOR DOCTORAL EDUCATION

- External QA criteria and standard development for the evaluation of doctoral programmes in Armenia
- Evaluation templates/ report templates

## PhD PROGRAMME DEVELOPMENT/REVISION

- Re/development of 11 doctoral programmes selected at AM partner institutions
- Self-evaluation report production at AM HEIs
- External review by the national and international peers
- Recommendations by the local and international peers on doctoral programme

## PUBLICATIONS/DISSEMINATION

- Project outcome dissemination through the official website: [www.tempusveritas.am](http://www.tempusveritas.am)
- Publication of Training kit on Salzburg Principles
- Publication of Study-visit brochure: lessons learnt
- Publication of external QA standards and indicators
- Project promotion via local media and production of newsletters, leaflets, brochures
- Dissemination conference in Armenia

## QUALITY CONTROL AND MONITORING

The project had a very comprehensive plan for the quality control and monitoring of its activities that include:

- **SURVEYS** conducted after each event (training, workshop, study visit) and the respective reports on the results.
- **MONITORINGS** by the coordinator and the lead partner at AM Partner institutional level and the respective reports on the major findings, challenges and the further plans for improvement.
- **MONITORINGS** by the National ERASMUS+ office and the respective reports on the overall implementation of the project and major recommendations for further improvements.
- **INTERIM and FINAL REPORTS** on the implementation of the project that were circulated among all partners.

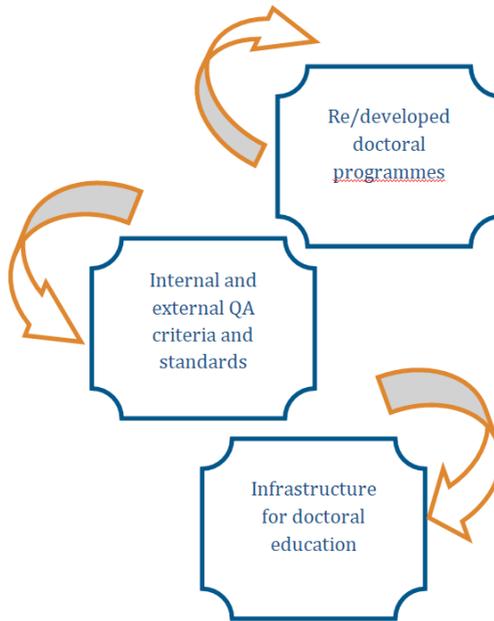
## IMPACT OF THE PROJECT

### *Cooperation/Management*





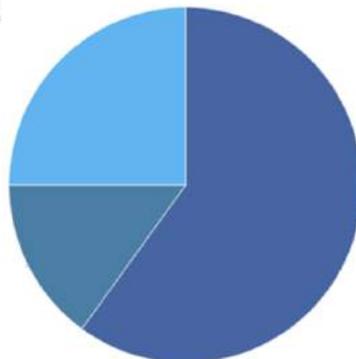
## Developments



## FACTORS FOR THE SUSTAINABILITY

QA criteria and standards  
are developed for Doctoral  
Education in Armenia

Research Units are a part of  
HEI structure and equipped



Doctoral programmes are  
re/developed and adopted by  
11 AM HEIs

## CAPACITY BUILDING

As the enhancement of the staff capacities is one of the key aspects of the project implementation, VERITAS attached more importance to the organization of events at different phases of the implementation of the project activities. Taking into account the fact that the development and implementation of the doctoral education along with the Salzburg Principles and internal and external quality assurance of the doctoral programmes are among currently developing aspect in Armenia, the events (like trainings, workshops, in-house trainings and internal discussions) were of high priority for the project consortium. They were organized and hosted by local and international partners ensuring the smooth flow of information and experience and sharing the best practice in the partner institutions and organizations. They helped to identify the current challenges and needs for further improvement and open new possibilities and a platform for further discussions.

### TRAINING ON SALZBURG PRINCIPLES

The first training within the project intended to share the experience and familiarize the Armenian academic community with diverse “PhD models” from around the world, focusing on the “case study examples” from Austria, Germany, United Kingdom and Sweden. It also enabled the participants from EU and Armenia to share their knowledge and experiences, with an aim to establish common Standards in Doctoral education in Armenia. The different profiles and visions of the Armenian institutions were on one hand an advantage, yet on another they represented a challenge for future activities associated with the Tempus VERITAS project implementation at the Armenian universities. This training supported all universities in their efforts to adopt and implement new Standards in line with the



European Higher Education Area initiatives.

The intent of the training on Salzburg Principles was for the Armenian universities to utilize the newly acquired knowledge as an important instrument for future activities and project outcomes, as well as to have a better approach in the creation of university strategies and appropriate standards as foreseen by the VERITAS project.

*The training was hosted by WUS AUSTRIA from 5th to 7th of MAY 2014.*

#### WORKSHOP ON PROMOTION OF DOCTORAL EDUCATION

The event intended to address the issues of promotion of doctoral education at the HEIs responding to the questions Why? And How?. The introduction of promotion tools opened active discussions among all the participants. The main focus was on the topics like the internationalization, university-market cooperation, linking HEIs with the industry, society and economy and inter-university cooperation.

The intent of the training on promotion was for the Armenian academic community to raise the current challenges and work on improving the tools for promotion of doctoral education.

*The training was hosted by YSMU, Armenia from 16th to 17th of JUNE 2014.*

#### WORKSHOP ON ROADMAP DEVELOPMENT

The workshop helped the consortium to share ideas on drawing the roadmap and have preliminary guidelines for the development and implementation of doctoral education at Armenian HEIs. The main focus of the event was to outline the roadmap that resulted

into preparation and publication of the general concepts – A GUIDELINE FOR ROADMAP DEVELOPMENT.

*The workshop was hosted by UHMF, Germany from 3rd to 5th of November 2014.*

### TRAINING ON AWARD CRITERIA

The focal point of the event was the definition of award criteria and quality standards and procedures in doctoral education. Based on defined university Road-maps and Salzburg principles, Armenian partners were provided with the general award criteria for doctoral education accepted in Armenia (e.g. quality and competencies of mentors, internationalization, mobility, research, interdisciplinary, study program content etc). Likewise, KTH, BSU, UHMF, UdG and PC HEIs prepared award criteria for doctoral education comparable with EU accepted criteria.

*The training was hosted by YSULS, Armenia from 26th to 27th of January 2015.*

### TRAINING ON INTERNAL AND EXTERNAL QA FOR DOCTORAL EDUCATION

The aim of the workshop was to generate a draft set of quality indicators which can be used in assessing key aspects of doctoral education.

The participants worked in groups with the facilitation of the EU partners to gather and present ideas on developing the internal and external QA standards for doctoral education in Armenia.

As a result the quality assurance criteria and standards were developed and presented for the external review of the doctoral programmes at AM partner HEIs.



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*The workshop was hosted by YSU, Armenia from 11th to 13th of May 2015.*

### WORKSHOP ON SUPERVISION

The last workshop within the project was organized and conducted for the supervisors. The main aim of the meeting was to discuss the existing difficulties in the country and at the partner institutions and discuss the possible steps to strengthen the requirements with regards to supervision. The workshop also enables the participants to discuss the best practice delivered by the partner EU countries.

*The workshop was hosted by VSU, Armenia from 1st to 2nd of July 2017.*

# VERITAS

STUDY VISIT  
14-29 NOVEMBER 2015



VERITAS Armenian consortium conducted two-week study visit to EU partner HEIs that was a unique experience to get familiarized with the existing similar doctoral programmes, make inquiries into what works and what does not, delivery modes and to share ideas on the similarities and differences of the doctoral education systems in Armenia and Europe.

The study visit was conducted to 4 European universities, Royal Institute of Technology (Sweden), Bath Spa University (UK), University of Girona (Spain) and University of Heidelberg (Germany) having quite different approaches and a history of doctoral education development. It was noteworthy that unlike Bachelor and Master programmes, doctoral education and its organization differs greatly from country to country depending on various factors such as the government regulations, recruitment and admission of doctoral students, funding, university profile, etc.

The study visit proved to be informative and productive. The invited professors, doctoral students and administrative staff shared detailed information with the Armenian participants enabling them to observe the process from various perspectives. The European partner universities have effective procedures and valuable practice of providing doctoral education which can be tailor-made to suit the needs of Armenian HEIs.

The structures of Armenian HEIs are very different from those of our partner EU universities; the research environments are different as well. However, the quality standards employed in EU universities prove to be the basis for the best practices in the field of doctoral education over Europe.



*For further and more information on the experience of the study visit, please consult the booklet published after the event with support of EU and AM partners.*



## FACTS AND FIGURES

VERITAS provided opportunity of international capacity enhancement and local experience exchange to a total of 337 representatives from the Armenian academic community (59 representatives from Governmental bodies and QA office and 278 HEI staff). Moreover, the trained staff delivered in-house trainings for broader outreach and dissemination of the project achievements and results.

### Knowledge areas VERITAS has been dealing with

Salzburg Principles

Promotion Tools for  
Doctoral Education

Roadmaps

Internal and External  
Quality Assurance Standards  
and Criteria for Doctoral  
Education

Doctoral Programme  
Development and  
Implementation

Supervision

## DOCTORAL EDUCATION PROGRAMME DEVELOPMENT AND IMPLEMENTATION IN ARMENIA

### *Case study per partner institution*

#### GENERAL OVERVIEW

In general the higher and postgraduate education in Armenia is regulated by the RA Law on Higher and Postgraduate Education which is currently under revision and where the postgraduate education will be considered as a Cycle 3 of higher education.

Postgraduate education corresponds to the 8th level of National Qualifications Framework (NQF) adopted on 7th of July 2016. In Armenia, the 3rd cycle of higher education is implemented mainly through Doctoral study Programmes. The main education Programmes are conducted in the following ways;

- Full- time,
- Part- time,
- Applicant

The duration of the Doctoral Programme is 3 years (minimum). Upon completion of at least a 3-year postgraduate study and a successful defense of a thesis, the student (researcher) is awarded with a degree of Candidate of Science.

At national level the improvement of the doctoral education and its quality assurance has been considered as an important incentive and strategy in recent years. VERITAS project plays a very important role with this regard enabling 11 leading higher education institutions in Armenia to re/develop its doctoral education programmes together with the EU partner institutions and Armenian National Center for Professional Education Quality Assurance



Foundation (ANQA) to define and develop external QA standards and criteria against which for the first time in Armenia the external review was conducted at 11 partner AM HEIs with the involvement of international peers from EU partner institutions.

As a result, the case studies of the AM 11 HEIs are presented in this booklet with the reference to the institution general research profile and priorities and outlining the research programme profile and structure that was selected for the external review within VERITAS project.



## YEREVAN MKHITAR HERATSI STATE MEDICAL UNIVERSITY (YSMU)

*Number of Doctoral Programmes: 22*

*Number of Doctoral Students: 114*

*Doctoral Programme selected for the project: **Pharmacology***

*Number of students in the selected doctoral programme: 5*

[www.ysmu.am](http://www.ysmu.am)

### Research profile of the institution and research priorities:

- Brain research
- Cardiovascular diseases
- Military medicine
- Public health
- Rare diseases (FMF)
- Mental health

### Doctoral Programme Profile and Structure:

The doctoral program consists of two interrelated parts: education and research. According to the RA legislation the doctoral program overall load is equivalent to 180 ECTS credits. 50 ECTS credits are designed for educational component, while 130 ECTS credits are designed for research.

YSMU doctoral program has been elaborated based on the national principles of doctoral level education development in Armenia, based on the provisions of the RA Law on Higher and Post-Graduate Professional Education, the Regulations on Admission and Studies at doctoral level as Full-Time doctoral Students, Part-Time Research Applicants and Doctoral Students, Regulations on Awarding Scientific Degrees in the Republic of Armenia as a general framework for



the modernization of doctoral education in Armenia. It has been harmonized with the Salzburg principles for the third level of higher education within the context of “Doctoral Programs for the European Knowledge Society.

The academic part of the program consists of 50 credits which are accumulated for **general training and professional training section, internships and attestations** . The first one serves to ensure and replenish a general background necessary for the researcher’s qualification, the second one provides the development of the researcher’s scientific-pedagogical skills, and the third one provides the necessary basis for the student’s professional knowledge and abilities.

GENERAL EDUCATION COMPONENT	
Compulsory Course	Major Foreign Language/Academic Literature
	Philosophy of Science and Methodology
	Medical Informatics
	Pedagogy and Psychology
	Scientific Ethics and Ethical Expertise
	Scientific Research Design and Toolkit
	Biostatistics
	Project Development and Management
	Evidence-Based Medicine
	Communication Skills and Academic Writing
Elective Course	Management: Human and Material Resource Management
	Intellectual Property Law and Patent Case
	Laboratory Research Methods
	Environment and Health
	Health Law
	GCP (Good clinical practice) Principles
	GCP (Good laboratory practice) Principles
PROFESSIONAL EDUCATION COMPONENT	
Compulsory	Major Subject 1
	Major Subject 2
	Related Subject 1
	Related Subject 2
	Related Subject 3
	Professional Elective Course 1
	Professional Elective Course 2
<b>Total 50 credits</b>	

A workload of 130 credits is assigned by the program for research planning, implementation, formulation of the outcomes and preparation of the dissertation. In particular, doctoral students are required to perform the following tasks:

1. *Study of modern literature on planned research justifying the topicality and the importance of the research*

Based on the skills acquired through the work with scientific articles, through summarizing and presenting data in the form of a report at the professional workshops, the doctoral student submits two reports on the literature reviewed during the study period. The first report is presented at the Chair meeting before the approval of the research topic which aims at preparing the doctoral student for the justification of the topicality and the importance of his/her own research study based on the critical analysis of similar works (5 credit). The aim of the submission of the second analytical report on scientific literature is to summarize the nature of the problem studied based on the sources of modern literature, by finalizing the literary review of the Dissertation defense (10 credit).

2. *A critical review on the experimental methods approved for the solution of research problems and justification of the selected methods.*

For the implementation of research purpose and objectives and for the justification of methodological approaches, the doctoral student first of all gets familiar with the methods approved in the literature for the solution of similar problems and, taking into account the peculiarities of the problems as well as the University recourses, justifies the selected research methods.



3. *Mastering of the selected research methods and collection of research material.*

For acquiring experimental skills and methods, the doctoral student is given the opportunity to use all the research laboratory resources available at the University. The collection of research material is evaluated as a 40-credit workload.

4. *Formulation and Presentation of the Outcomes*

After exploring and discussing the outcomes of the conducted research with the supervisor, the student publishes articles on them and presents them at scientific conferences in the form of a poster or oral report.

The University encourages the postgraduate students to participate, with the research data obtained, in the University's annual scientific session, the scientific sessions of the corresponding association, conferences of young scientists, as well as in national and international congresses. A workload of 15 credits is assigned for the reports.

Before the defense of the dissertation, the main outcomes and theses of the dissertation should be published in peer-reviewed scientific publications of international importance and in scientific publications included in the list approved by SCC(<http://boh.am/parberakanner/>):

For the defense of the doctoral dissertation, it's necessary to publish at least six scientific articles, of which two should be without co-authors, or at least three articles, of which at least one article should be published in publications included in Web of Science or Scopus databases and one article should be without co-authors

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## Doctoral Programme LOs:

During doctoral studies and upon completion of the program doctoral students acquire the following skills and abilities:

1. Implementation of individual research, independent solutions to scientific problems, acquisition of professional knowledge, participation in team work on the same research subject, necessary knowledge of the research field and sufficient knowledge of the subject under study.
  - Presentation of the outcomes of the research in articles, and/or implementation of thesis analyses, surveys, fact-finding and evaluation, developing and strengthening analytical and critical thinking,
  - Ability to access databases, statistics and relevant literature.
  
2. Acquisition of general skills
  - Peer-to-peer communication in team work enabling researchers to take part in various workshops and conferences (posters or reports are mandatory), presenting personal research is important, however implementation of individual research is central,
  - Academic writing skills to be able to make clear and comprehensive oral speech and write scholarly articles to attract the attention of the international community,
  - Relevant skills in organizing seminars and other events on their own initiative.



3. Acquiring teamwork skills, team management and fund-raising skills:
  - doctoral researchers lead student groups and engage in mentoring, thus strengthening teamwork skills and team management skills,
  - Increased eligibility for applying for grants and other research funding opportunities.
4. Autonomy, initiative and entrepreneurship skills.
5. Ethical behavior, reliable scientific practice, sustainability, responsibility, professional behavior.

### Research Opportunities:

Doctoral education in YSMU is built within a framework which ensures smooth admission procedures, competent supervision, appropriate environment and qualified assessment due to well-established infrastructure. The Unit of Science coordinates doctoral study and research implementation through its main departments of research management and scientific personnel training as well as professional expert commissions.

At least 170 doctors of science currently employed by YSMU are potential scientific supervisors and hold necessary qualifications for guiding doctoral students.

The laboratories of YSMU Research Center aim to ensure free working conditions to the staff of the University departments, doc-

toral students as well as other entities to be able to conduct laboratory experiments. YSMU academic departments which are located both in the University and different hospitals of RA also provide necessary recourses for the implementation of doctoral programs. There is well-established culture of cooperation with local and international institutions for conducting interdisciplinary studies.

The University encourages the participation of doctoral students in international conferences, grant projects, joint research projects etc.

The Unit of Science is also responsible for facilitating the availability of on-line literature resources. The webinar of the Unit of Science has technical capacities to provide full access to Web of Science resources and all doctoral students and their supervisors are privileged to make use of the technical opportunities of the webinar.



## STATE ACADEMY OF FINE ARTS OF ARMENIA (SAFAA)

*Number of Doctoral Programmes: 1*

*Number of Doctoral Students: 7*

*Doctoral Programme selected for the project: **Fine arts, decorative and applied arts, design***

*Number of students in the selected doctoral programme: 7*

[www.yafa.am](http://www.yafa.am)

### Research profile of the institution and research priorities:

SAFAA research mission is to develop research in the field of arts contributing to the creation of new knowledge in these domains and promoting the national artistic thought and culture.

SAFAA strategic plan for 2017-2021 was developed and approved, where research is included as a separate goal (See Goal 3). Here the research strategy and directions are described in details.

The research priorities are : Interaction between research and teaching, expansion of international relations, research internationalization, targeted and adapted definition of research themes/topics based on the mission and resources of Academy, current trends and needs in those fields, as well as demand for ensuring competitiveness. They fully correspond to Academy's vision, research goals and mission. The design and continuous improvement of Doctoral program is also stated in the mission of SAFAA.

*The research directions are as follows:* Art history and theory, Fine Arts (painting, sculpture and graphics), Design and Applied Arts (computer art design, modeling, and ceramics).

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## Doctoral Programme Profile and Structure:

The program aims at preparing independent and highly educated researchers in the fields of art history and theory, fine arts, design and applied arts, gifted with deep knowledge and advanced researching skills for their professional development, as well as with creative abilities to link art and research. Doctoral degree for the above-mentioned professions is awarded after the thesis defense. The latter reflects the results of a researcher's qualifications in accordance with National Qualification Framework of RA, and should demonstrate creativity, originality, ability to conduct a research in the field of arts, as well as professional skills, and the scientific competences in the given branch of art. The presence of such specialists is due to:

- a) assuring the professional quality of SAFAA new academic generation.
- b) the development of research potential and creation of new knowledge in the above-mentioned fields, which will enhance the professional competitiveness and will expand the opportunities for internationalization and international recognition of Academy.
- c) satisfying the public demand in arts, cultural environments, official and public sectors.

SAFAA Doctoral program has been improved and developed within VERITAS project.

The program includes 2 parts, which it much more flexible:

- a) Art History and Theory for awarding Doctoral Degree in Art History and Art critic,
- b) Fine Arts (Painting, Sculpture, and Graphics) Design and Applied Arts for awarding the Doctoral Degree in Arts.



Taking into consideration the 2-part-structure of the program, the admission, learning and defense processes are organized with a slight difference based on the peculiarities, learning outcomes and goals of each part. The logical progress of the program and curriculum are structured and distributed by years taking into account:

- a) the 3 main aspects of Doctoral education, which are the student-centered teaching and formation of an independent researcher or artist-researcher, the creation and interpretation of new knowledge through original research, as well as the use of innovative-experimental techniques and technologies in the fields of art.
- b) 3 components of learning quality assurance which are: knowledge, competences and skills.
- c) Research Capacity Building Scale suggested by NQF, which includes 6 stages each of them having 5 degrees:
  1. Curious (expression of research interest, clarify and determine what knowledge is required),
  2. Determined (Identification of research topic, finding and generating needed information/data and use of methodology),
  3. Discerning (Enhancement of analytical and critical skills),
  4. Harmonizing (Research organization and management skills),
  5. Creative (Ability of creative approach, analyzing information/data critically and synthesize new knowledge)
  6. Constructive (Design and development of structural and constructive thinking, write, present and perform the processes, understanding and application of the research etc.)

## Doctoral Programme LOs:

Doctoral degree in Art History and Theory, Fine Arts, Design and Applied Arts is awarded to the candidate who demonstrated the following knowledge, competences and skills.

1. Deeply and comprehensively knows the historical development of the chosen field/branch and can systematically represent it according to chronological stages, geographical areas and main stylistic features.
2. Can interpret and classify knowledge on the chosen field/branch, as well as describe its current situation and achievements, identify actual trends and issues.
3. Completely knows the essential bibliography on the chosen area/branch/topic and is able to search and classify new bibliographical sources and use them in the research.
4. Is aware of research methods, technologies, computer opportunities and can easily use them.
5. Can make reasonable judgments on challenges and problems existing in that area/branch/topic even when the full data are absent, as well as has an ability to clearly and effectively communicate his/her thoughts and conclusions within professional and non-professional frameworks.
6. Demonstrates skills for teamwork and teaching.
7. Demonstrates skills for creating, developing, presenting and using research proposal concept.
8. Knows one or more foreign languages and can use professional skills and publish in those languages.
9. Is able to generate research topic and issue within the particular area/branch/topic and suggest ways of solutions demonstrating professional- researching intuition.
10. Is able to conduct an innovative and original research creating new knowledge, artistic or aesthetic value, performance techniques, applied technology through scientific or artistic problem and suggested solutions.



11. Demonstrates structural thinking by being able to understand and proportionally classify scientific, researching and artistic problems based on importance and priority, as well as use that skill in research and professional work.

### Research Opportunities:

Research opportunities may vary depending on the specific direction of the research.

#### *1. Art History and Theory*

Interdisciplinary research, linked with history, philology, architecture, archeology, aesthetics and philosophy by the following themes, is considered to be a priority.

- a. Study of the Armenian art history in Early Christian and Medieval Periods within the context of Eastern Christianity, Caucasian and Byzantine Studies, with special attention to the common features and peculiarities; this will allow the interpretation and re-evaluation of the Armenian Christian art on the more appropriate and justified basis.
- b. The topic “The influence of Jerusalem Sacred Tradition on Medieval Armenian Art, Theology and Culture” is encouraged as priority)
- c. Study of the Armenian Historiography of Art, which is an almost unstudied area. It will give a chance to enrich and complete knowledge in Armenian art history thought, school, as well as to get familiar with the views and positions of the Armenian specialists in soviet and international debates.
- d. Study of the modern Armenian art (80’s and post-inde-

pendence period), which is also an almost unexplored area. It has a great potential, especially in terms of ensuring the professional competitiveness and internationalization.

- e. Role and activity of women in the development of history and culture. History and modern times.

## 2. *Fine Arts (painting, sculpture, graphics)*

- a. Tradition in modernity and modern in tradition (The ratio of national tradition and modern artistic trends within compositional and performing techniques, as well as conceptual context).
- b. Urban topic: in the frames of the “City and Urban Culture” program.
- c. Techniques and technologies in combining painting and sculpture.
- d. Graphical solutions in the digital art. The use of modern technologies and potential opportunities in graphics.
- e. Innovative concepts and artistic solutions in book illustration.
- f. Combination of innovative-experimental and classical technologies in printing graphics.
- g. Composition Theory. From classical to modern trends.

## 3. *Design and Applied Arts (Computer Art Design, Modeling, Ceramics)*

- a. Design of Internet webpages. Artistic thinking and digital opportunities.
- b. Artistic conceptualization of modern communication means.



- c. The artistic design issues of the Entertainment-information Application Software.
- d. Armenian fashion trends within the international context. Relationship between national tradition and modernity.
- e. Ceramics in internal and external public environments. 6. The use of ceramics in art therapy.



## YEREVAN STATE UNIVERSITY (YSU)

Number of Doctoral Programmes: **89**

Number of Doctoral Students: **95 full-time, 295 part-time**

Doctoral Programme selected for the project: **Structural and Thermodynamical Investigations of Biological Objects (DNA, RNA, BLM)**

Number of students in the selected doctoral programme: **2 full-time, 4 part-time**

[www.ysu.am](http://www.ysu.am)

### Research profile of the institution and research priorities:

YSU is one of the leading scientific and educational centers not only in Armenia, but also in the Caucasus region. The increase of YSU's scientific and research potential, the establishments of excellence centers in priority socio-economic areas, encouraging staff involvement into research activities are considered as a strategic development tasks for YSU. The internationalization of YSU's scientific and research activities and integration into European research are also among YSU priorities. Currently, Research Institutes of Physics, Biology, Armenian Studies, the center of Physico-technical researches, 2 excellence centers and more than 27 research laboratories and centers have developed their activities at YSU having created the scientific-research infrastructure of the university. The research activities are also carried out in 19 Faculties with more than 100 Departments. YSU laboratories are involved in research in various areas of natural sciences and humanities. There are 13 Specialized Councils at YSU for the defense of PhD (candidate) and doctoral theses in the following fields of science: Physics, Mathematics, Biology, Economics, Philology, Romano-Germanic languages, Law, Philosophy and sociology, Pedagogy, Geology and geography, Religion (theory and history), Psychology.

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## Doctoral Programme Profile and Structure:

This doctoral program is based on the areas of scientific interest of the Molecular Physics Department. The project aims to prepare qualified specialists in the study of the structure of biological macromolecules (DNA, RNA, proteins and biological membranes) and the conformational transformations of their structure under the influence of various substances. The final purpose of the research is to discover the relationship between the molecular structure and function of biological macromolecules. Under this program, the department prepares graduate students specializing in the following 3 areas:

- I. a) The study of the structure of DNA-ligand complexes.
- b) The physical characteristics of the biological function of human telomeric DNA.
  - a) Research is intended to determine the influence of preparations with high anti-tumor activity (cisplatin and its derivatives, as well as porphyrins and metalloporphyrins) on the DNA double helix. We have developed a system of investigations, based on the spectral data, which allows us to illustrate the preferred mechanism of interactions of these ligands with DNA. These investigations provide significant information for understanding the molecular nature of anti-tumor properties of these compounds and are very important for the synthesis of new medicines.
  - b) Currently a novel anti-cancer strategy has been formed targeting the G-quadruplex formation in selected loci of the human genome, which inhibit the synthesis of telomeres, or the expression of oncogenes in vivo. Despite the fact that the energetics of G-quadruplexes has been intensively investigated, we still know little about the balance of forces that dictate the conformational preferenc-

es of G-rich DNA sequences in the presence and absence of their complementary C-rich strands. We have designed an experimental strategy that aims at a step-by-step characterization of various factors contributing to G-quadruplex-to-single strand and G-quadruplex-to-double strand equilibria for a selected set of human telomeric sequences.

## II. The study of properties of bilayer lipid membranes

The problem of ensuring the stability of biological membranes is very important and actual since loss of membrane stability causes the immediate death of the cell. Since the cell membrane is heterogeneous and has a quite complex structure, it is appropriate to study the main regularities of the loss of molecular stability on a model structure - bilayer lipid membranes (BLM). Various studies have shown that data on the loss of stability of the BLM can be completely transferred to biological membranes. The main purpose of our investigation is to explain the influence of various physical and chemical factors on the mechanisms of membranes stability losses. These factors are: nanoparticles, surface active compounds, biologically and pharmacologically active compounds, electromagnetic radiation with different wavelengths, and hydrostatic pressure.

## III. Theoretical modelling of biopolymers.

- a) The goal of investigations is to develop the Generalized Model of Polypeptide Chain (GMPC) for the study of the helix-coil transitions in DNA macromolecules. The investigations of stability and cooperativity of the native structure of DNA in the frames of the model allow us to interpret the experimental data as thermal and concentrational denaturation. The GMPC allows to define more accurately the physical mechanisms in the working of the genetic apparatus.
- b) The aim of the investigations is to explain the mechanisms



of proteins and RNA folding in different solvents in the presence of various low-molecular compounds. Such compounds are: metal ions, amino acids, urea, etc. The tasks are as follow: describe the kinetic and thermodynamic behaviors of nucleic acids in the presence of different solvents, determine the effects of low-molecular compounds and nucleotide sequence on the formation of secondary and tertiary structural elements in single stranded and double stranded nucleic acids.

Doctoral education program in all of these directions provides the following general plan by years:

The 1st year: Developing a step by step research plan, which includes the research plan and choosing and understanding the methods for its realization. Doctoral students are also required to participate in foreign language and computer science general lecture courses and to pass the doctoral qualifying examination in a foreign language and computer science.

1. Theoretical part: The acquisition of basic theoretical knowledge by graduate students.
2. The selection of research methods and tools.
3. Reporting on the outcomes of the investigation at a seminar or a conference for young scientists. If the proposed materials are accepted, the article can be published in a local journal.
4. Reviewing the bachelor thesis of the student in Biophysics.
5. Participation in courses of general educational block and courses of doctoral general qualification.

*At the end of the 1st year it is expected that:*

- The method of solving problems encountered by the doc-

toral student should be clearly identified.

- The doctoral student will have sufficient skills to work with the respective devices and will have mastered all the peculiarities of the methodology to continue in this direction for independent research.
- The doctoral student should pass the doctoral study general qualification exams.

*The 2nd year: The work of solving the main problem*

- The intermediate discussion of the results obtained.
- To report the results at seminars and conferences.
- Working on a coauthoring articles (1-2).
- Participation in the supervision of the bachelor thesis in Biophysics.
- At the end of 2nd year:
- The main experimental material must be obtained.
- The doctoral student must know perfectly all the specifics of the research.
- When necessary, the doctoral student must be able to make independent decisions, and decide what steps need to be taken.

*The 3rd year: The summary of results obtained, the formation of the dissertation and passing qualification exams. The doctoral student must:*

- Discuss his/her results.
- Report results at a conference.
- Have an independent publication of an article of his/her sole authorship.
- Pass the qualification exams one from general specialization – Biophysics, and one concerning the research topic.



Doctoral student will start preparing his/her dissertation.

### Doctoral Programme LOs:

By the completing the program doctoral student should:

- Be qualified specialist who have obtained skills to conduct high quality original research in the field of molecular biophysics,
- Be able to interpret the obtained research results independently and summarize them into a scientific paper that can be published in a peer-reviewed journal.
- Be able to supervise a bachelor/master student and to give them the basic knowledge of methods, equipment and other relative techniques to conduct research.
- Be able to write the dissertation and present the results of his/her research to scientific community during the defense.

### Research Opportunities:

The Department of Molecular Physics has enough resources and equipped laboratory to conduct up to date research. Due to the professional staff and international relations of the Department the research that is done in the Department is at the forefront of the discipline. The main topics of the research that is done at the Department are followings:

- The study of the structure of DNA-ligand complexes.
- The physical characteristics of the biological function of human telomeric DNA.
- The study of properties of bilayer lipid membranes.
- Theoretical modelling of biopolymers.

Doctoral students at the Department are considered as early stage researchers so they have all the opportunities that can provide the Department, including the professional and experienced staff and the cooperation with different institutions listed below:

- o **USA**  
*University of Portland (prof. A. S. Benight), Georgia Institute of Technology (prof. R. Wartell), University of Boston (prof. M. Frank-Kamenetskii), National Institute of Health, NIH (prof. A. Parsegian)*
- o **Canada**  
*University of Toronto (prof. T. Chalikian)*
- o **Italy**  
*University of Florence (prof. P. Orioli, prof. L. Messori), National University of Nuclear Physics of Rome (prof. S. Belluchi)*
- o **Germany**  
*University of Leipzig (prof. E. Donath), University of Siegen (prof. S. Grigorian)*
- o **Taiwan**  
*University of Taipei (prof. Chin-Kun Hu)*
- o **Belarus**  
*Institute of Bioorganic Chemistry (prof. D. Lando)*
- o **Russia**  
*Moscow State University (prof. Yu. Nechipurenko), S.Peterburg State University (prof. N. Kasianenko)*
- o **Ukraine**  
*Phisico-Thechnical institute of Low Temperature, Kharkov (prof. Yu. Blagoi), Institute of Radiophysics and Electronics, Kharkov (prof. V. Maleev)*
- o **Georgia**  
*Institute of Physics, Tbilisi (prof. J. Monaselidze)*

The most outstanding doctoral students can conduct their research at partner institute, especially the experimental part of the research and due to this have access to well-equipped laboratories and up to date techniques.



## YEREVAN BRUSOV STATE UNIVERSITY OF LANGUAGES AND SOCIAL SCIENCES (YSULS)

*Number of Doctoral Programmes: 8*

*Number of Doctoral Students: 5 full-time and 33 part-time PhD students and 75 research applicants*

*Doctoral Programme selected for the project: **Education Policy***

*Number of students in the selected doctoral programme: 1*

[www.brusov.am](http://www.brusov.am)

### Research Priorities:

Linguistics, Philology, Pedagogy, Education, Political Science

### Doctoral Programme Profile and Structure:

**Qualification awarded:** Education Policy (Level 8/ ANQF)

**Course length:** 3 years full-time (4 years part-time, 5 years for research applicants)

**Formal admission requirement:** Master's degree or Diploma Specialist's degree in Education Management or in relevant field

**Program description:** Education Policy post-graduate program is designed based on teaching and research objectives of YSULS Chair of Education Management and Planning which derive from YSULS's mission and strategic objectives. The program aims at addressing the current needs of the labor market by preparing researchers with advanced knowledge, research skills and abilities in the discipline of education studies, namely education policy. The program was launched at YSULS in 2015-16 academic year. This Doctoral program is designed on the basis of modules which involve advanced targeted courses and

significant component of research with the provision of fundamental knowledge in relevant academic disciplines. A set of elective courses is also included in the program. There are two distinctive routes that allow researchers to concentrate their studies either on Education Policy (with a sociological and political focus), or International Education (with a focus on education developments worldwide and globalization). In accordance with the provisions of the Bologna process, the program has been designed for 180 ECTS credits, as follows:

MODULE DESCRIPTION	ECTS	DISTRIBUTION
Module 1: Education policy and educational evaluation	30 credits	(10 per course)
Module 2: Management Discipline	30 credits	(10 per course)
Module 3: Research Methods	30 credits	(10 per course)
Module 4: Internship	20 credits	(10 per each type of internship)
Research & Dissertation Design	70 credits	

### Doctoral Programme LOs:

#### OVERALL LEARNING OUTCOMES OF THE DOCTORAL PROGRAM

Researchers completing this program will have:

- A critical understanding of modern educational systems and education politics, current education reforms, curriculum design
- A critical understanding of the role of education policy at national and international levels
- Highly advanced knowledge of current theoretical work in the field and key principles of best practice concerning education policy, education management, curriculum design and evaluation



- Highly advanced specialist expertise in designing, carrying out, analyzing and evaluating published research, complex concepts and methodologies, and models related to education policy and education management issues
- Competency in carrying out research and assisting the development of assessment systems and practices in the education systems

### Research Opportunities:

All doctoral students are required to carry out a research which would ideally be linked to their two types of internship. Researchers choose an area of study within the broad field of education policy. The topic chosen is agreed with the Head of Chair and is related either to the current professional field of work of Supervisor, or to an area of research the Chair is engaged in. Then the topic is approved in the Chair session and then at YSULS Scientific Council.

Doctoral students start preparing their dissertation only after Module 1 and Module 2 are successfully completed, and are expected to be familiar with the issues they are researching, either through direct experience, or through their studies. It is acceptable for their own professional experience to form part of the study, provided they are able to approach it as a researcher as well as a practitioner.

The research requires some development of research instruments (e.g. assessment instruments, questionnaires, or fieldwork observations), which will result in the collection of data that can be analyzed using a relevant program such as SPSS or SAS. Researchers become familiar with different statistical packages in Module 3. Module 3 gives them the opportunity to develop and apply their research instruments so that during the research design itself they have time to carry out the fieldwork, collect the data, analyze it and prepare their research report.

A series of workshops and tutorial sessions are arranged in the course of the program to support researchers with their project. Doctoral Students and research applicants are also supposed to take the following qualifying examinations (currently conducted) before the defense of dissertation: Qualifying examination in Philosophy, Qualifying examination in Foreign Language, Qualifying examination in Specialty, Qualifying examination in Computer Science.

The research based dissertation is comprised of 140-175 pages including academic references. The Chair organizes a pre-defense with two or three reviewers and with the participation of all relevant specialists. After a successful pre-defense the Chair recommends the dissertation for public defense in the relevant Specialized Council.

The Chair collaborates with “Noravanq” educational-research center adjunct to the RA Government which gives an opportunity to the students to carry out research in the fields of education policy, education security, national security, education management.



## NATIONAL UNIVERSITY OF ARCHITECTURE AND CONSTRUCTION OF ARMENIA (NUACA)

*Number of Doctoral Programmes: 5*

*Number of Doctoral Students: 72*

*Doctoral Programme selected for the project: **18.00.01**  
**“Architecture and architectural design”***

*Number of students in the selected Doctoral programme:  
**38***

[www.nuaca.am](http://www.nuaca.am)

### Research profile of the institution and research priorities:

The profile of National University of Architecture and Construction of Armenia (NUACA) is unique in its kind and is the only higher educational institution in the Republic that prepares specialists in scientific level of Architecture and Construction fields, hence according to its mission defined in its Strategic Plan NUACA has national significance and responsibility for the development and modernization of these spheres and related to them fields, preparation of industrial workforce, assurance of generation shift in the country's governing system and development.

The University profile is very enhance in research particularly the following topics are within the interest of research of it:

- “Architecture and architectural design”
- “Building Structures, Buildings, structures, construction materials and construction mechanics”
- “Civil, Industrial, Hydraulic Engineering, Transport and Underground Construction”
- “Engineer support (Power, Hydraulic, etc.) of Buildings and Structures”
- “Geodesy, including Cartography and Cadaster”

## Doctoral Programme Profile and Structure:

Postgraduate admission and education are available for both full-time and part time options, as well as feasible for applicants seeking an academic degree (researchers). Each year the number of free of charge long-term and short-term placement is decided by the RA Ministry of Education and Science (hereinafter Ministry) based on state demand. For full-time postgraduates the tuition period is for 3 years, part-time postgraduates study for 4 years and for applicants tuition can last up to 5 years.

### Doctoral Programme LOs:

From the 8th level of Architecture Specialization Graduates is expected to:

#### ▷ knowledge

- Have progressive knowledge about Architecture and related to it spheres and specializations
- Profoundly knows all respective methods and technical means for the realization of projects and research relating to a certain sphere of Architecture
- Completely knows the flow of architectural research, research results and outcome of a certain sphere of Architecture
- Differentiates between the useful and useless in Architecture, the scientific novelty based on Architectural study results, summary and conclusions of a certain sphere of Architecture
- Understands the role and place of high requirements for the Architectural knowledge in this sphere
- Is aware about the context of national and international Architectural knowledge and practical results where their work is spread or will be spread



- Is proficient in interpersonal and business communication skills
- Accepts the rights of those who may have influence on his research work (i.e. copyright, right of intellectual property, confidential information, problems of ethics)
- Appreciates own economic potential and the opportunities of its results' application

#### ▷ competency

- Demonstrate own Architectural concept, shaping and expressing skills and/or skills for creating more progressive specialization abilities, skills for creating methods.
- Integrates experience into the architectural creation, demonstrates unique judgment
- Is committed to independent research
- Perceives and re-perceives our perceptions about Architecture or our treatment toward it
- Affordably and accurately defines research problems related to practical, theoretical or creative issues or to their combination
- Based on own knowledge the solution of creative or practical problems considers from the technical, environmental and situational point of view
- While speaking or writing about his specialization sphere demonstrates complete independence
- Realizes the goals defined in the beginning of his project at the same time being able to change and clarify them based on research experience

#### ▷ skills

- Based on experience obtained during the progressive Architectural studies be able for independent decision-making in the sphere of professional expertise, carry the responsibility of those decisions, demonstrate considerable

amount of innovative activities and self-confidence.

- Understands the opportunities of using research abilities in other spheres
- Is able to demonstrate professional, creative and scientific competencies
- Can reveal own vices, unfulfilled potential and draft strategies for increasing own productivity
- Is committed to the development of innovative ideas or activities in the context of any work, study or research
- By the skillful analysis of the certain sphere of Architecture, its history and theory can develop new theories
- Is able to clearly and properly share specialized information with any target audience and in any format aimed at increasing public awareness on the matter
- Can create cooperative ties and enhance them in the scientific and creative world
- Can react criticism with understanding and responsibility

### Research Opportunities:

The main spheres of the NUACA research are:

- “Architecture and architectural design”
- “Building Structures, Buildings, structures, construction materials and construction mechanics”
- “Civil, Industrial, Hydraulic Engineering, Transport and Underground Construction”
- “Engineer support (Power, Hydraulic, etc.) of Buildings and Structures”
- “Geodesy, including Cartography and Cadaster”

that have strong interdisciplinary connections inside as well as outside the university.



NUACA provides enough opportunity to implement modern researches in the field of architecture and construction, particularly scientific environment is equipped by:

- Logistic resources (in addition to already existing laboratories, 6 new labs of Ventilation, Gas and Heat Supply, Chemistry and Binding Materials, Geodesy, Strength of Materials, Diagnosis of Monuments, Grounds Mechanics, Construction Materials and the Design Studio have been created).
- Human Resources (sufficient number of scholars with PhD and doctorate degrees are teaching the priority disciplines at the NUACA and highly meet the requirements for the supervisors defined by the Supreme Certifying Commission of the Republic of Armenia. Its 229 scholars sustain the academic potential of the University; there are 47 doctors of sciences, 182 PhDs, 50 professors and 130 associate professors. Moreover, 37 doctors of sciences, 75 PhDs, 30 professors and 38 associate professors are involved in the scientific and scientific-technical activity of the University.
- Young scientists by extra commissions (see the decree of the NUACA Scientific Council). There is another tradition established in the University according to which the University subsidizes the participation in international conferences by the doctoral candidates. However, financial means are limited and the mechanisms are not defined clearly.

ARMENIAN STATE UNIVERSITY OF  
 ECONOMICS (ASUE)



ARMENIAN STATE  
 UNIVERSITY OF  
 ECONOMICS

*Number of Doctoral Programmes: 17*  
*Number of Doctoral Students: 102 (both full and part-time)*

*Doctoral Programme selected for the project: Economics*

*Number of students in the selected Doctoral programme: 1*

[www.asue.am](http://www.asue.am)

Research profile of the institution and research priorities:

Main strategic directions of ASUE activities are: providing a high quality higher education based on modern standards, training of qualified economists, retraining specialists and improving their qualifications, conducting research in economics, reform of education process in order to successfully integrate education and research activities.

ASUE is the largest and leading provider of education on economics in Armenia and has got more than 7000 students with 17 specialties and 11 specializations within bachelor's degree programs (beginning from 2017/2018 academic year admission is for 11 specialties), and 17 specialties and 39 specializations within masters' degree programs and 17 specializations within 5 specialties at aspirantura (doctoral studies).

Doctoral Programme Profile and Structure:

The Ph.D. educational program "Economics" at ASUE is designed within framework of EU Tempus Veritas (Structural devel-



opment of the third cycle based on Salzburg principles) project for students interested in pursuing advanced study and conducting original research in Economics. The wider objective of the project is to ameliorate doctoral education in Armenian Higher Education System through alignment with European Qualifications Framework and Salzburg Principles. The Ph.D. degree is awarded in recognition of the recipient's qualifications as a general economist and of the ability to make scholarly contributions in fields of specialization.

The doctoral program has a strong research orientation and conveys abilities to develop independent research projects, to engage in critical discussion of other colleagues' published results, to communicate about one's field to colleagues, in public settings, and in teaching. In particular, graduates acquire abilities to produce scientific work meeting international standards, to participate in international research networks, to develop research projects independently and with scientific integrity, to successfully realize projects with the support of national and international research promotion organizations, and to liaise with colleagues, the scientific community and the general public.

The doctoral program consists of course work and thesis work, in total 180 credits. In advancing to the Ph.D. equivalent degree, students pass through two major stages:

1. **Course work (theoretical and practical preparation)** typically takes two years. During the first four semesters, students take courses to achieve competence in academic writing in foreign languages, IT and educational technologies, advanced research methods and optional courses. Then pass qualification examination on the subject of the dissertation or/and of the specialization. They also pass internship in corresponding departments of ASUE.

2. **Completion of a dissertation.** Students work intensively on their doctoral theses and they are also requested to do a limited amount of teaching. The culmination of the Ph.D. program is the dissertation, which embodies the results of the student's original research. Students working on dissertations participate actively in research workshops. The dissertation represents a significant contribution to the body of economic knowledge. After completion, department must approve the dissertation by preliminary expertise. Open defense of dissertation and awarding of degree is organized by ASUE Specialized Council under rules of Supreme Certifying Commission of RA Ministry of Education and Science (MoES).

The ratio of approx. 50/130 ECTS credits of courses and research work components are optimal and provide the student an ability to develop professionally and become independent researcher.

### Doctoral Programme LOs:

The purposes of the program are:

- to provide doctoral students with contemporary advanced knowledge in economics and deep economic analysis and to prepare qualified researchers in economics who are able to be the leaders of the field according to contemporary labor market requirements.
- to train economist-researchers both in pedagogical and research aspects and experience of various countries in economic analyses and economic policy making process.
- to enable the graduates to fluently use English for professional communication (both abroad and in their own country, while dealing with international colleagues). Also to enable them to work in the state bodies and private organizations dealing with economic system.



- not only to form the corresponding to the field knowledge, but also to develop student's study skills, in order to enable to continue their research works independently.
- among values, that program graduates will develop, are interest towards economic research and practical experience, respect towards principles humanistic and student-centered pedagogy.

The Ph.D. program in Economics at ASUE trains students in economic theory and the tools of economic analysis. Through course work, participation in seminars, and supervised research students are taught to conduct theoretical and empirical research at the highest level. The program equips its graduates with modern economic techniques.

Competences are defined as a dynamic combination of knowledge, understanding, skills and abilities. Competences are developed during the process of learning by the doctoral students. Competences are divided into generic and subject-specific.

### Research Opportunities:

Graduates are qualified junior academics. They have mastered the methods applied in research in economics and are capable of critically discussing, analyzing, and further developing theories. Junior academics possess the competence to develop and conduct substantial research projects with scientific integrity, and they are qualified to reflect on these processes scientifically and theoretically.

Graduates of the doctoral Program in Economics find career opportunities, among others:

1. at universities 2. in research institutions 3. in research departments of the Central Bank, ministries and other government

bodies, of commercial banks, rating agencies, regional development organizations, market research institutions, and in other enterprises and commercial organizations 4. in research departments of international organizations, for example the OECD (Organization for Economic Co-operation and Development), UN (United Nations), IMF (International Monetary Fund) or the World Bank 5. in research departments of public institutions, interest groups, and NGOs (non-governmental organizations) 6. in politics and the media industry.

ASUE has “Amberd” Research Center. In general all research groups of university and particularly Amberd research center include doctoral students. Implementation of “Procedure of research projects of scientific-educational group”, based on which will be founded scientific-educational laboratories in ASUE, involving doctoral students. Completed and on-going Research grants of RA MoES State Committee of Science also include doctoral students. Publication of peer-reviewed scientific journal “Banber /Messenger/ of ASUE” includes doctoral students’ research papers. ASUE Annual scientific conferences also include doctoral students’ research papers.



## GAVAR STATE UNIVERSITY (GSU)

*Number of Doctoral Programmes: 1*

*Number of Doctoral Students: 1*

*Doctoral Programme selected for the project: **Finance, Accounting***

*Number of students in the selected doctoral programme: 1*

[www.gsu.am](http://www.gsu.am)

### Research profile of the institution and research priorities:

Gavar State University conducts research activities in directions of natural sciences, humanities, social sciences and economics. The scientific priorities of GSU are as follows:

1. Study of history of Armenian language and issues of Modern Armenian
2. Study of dialects
3. Study of folkloristic activities
4. Study of tendencies of modern literature development
5. Comparative study of Russian and Armenian ethnography, national culture and folklore
6. Comparative-Synthetic Grammar
7. Contemporary issues of foreign language teaching methods
8. Study of antioxidants synthesized at the Physical-Chemical Institute after A. N. Belazerski of State University after Lomonosov.
9. Information Technologies
10. Automated systems of Management
11. Software development
12. WEB-technologies
13. Computer testing
14. Psychological and pedagogical issues of formation and de-

- velopment of child’s cognitive sphere, personality traits and behaviour
15. Humans in the value system of modern social, economic and political development
  16. Nor Bayazet Province of Yerevan in the 19th century and 30ies of 20th century
  17. History of Armenian State and Law, theory of Law, Institutes of Armenian Constitutional and Civillaw, Constitutional Reforms
  18. Opportunities for improving Fiscal Policy in Armenia
  19. Opportunities for increasing the effectiveness of labour resources in Armenian provinces
  20. Issues of Local and Regional economic development
  21. Development of economic analysis of economic activities of enterprises (organizations) and methodologies for financial planning and issues of their perfection.
  22. Perfection issues of accounting, tax accounting and audit methodology and organization in enterprises.

### Doctoral Programme Profile and Structure:

The implementation of fundamental research activity is an important part of the mission of Gavar State University /hereinafter GSU or University/; and the gradual investment of third-level education system and implementation of research programs in line with that system is one of the directions of University’s development. In particular, the investment of the third-level higher education system has been formulated as an objective in the 2016-2021 strategic planning of the University, corresponding to the standards of the Salzburg principles. The cooperation with European educational institutions, study of their experience, development and implementation of the inter-university scientific research projects, as well as implementation of the academic mobility projects for the academic staff and students, the involvement of business community representatives in the research projects, as well as the enhancement of the guarantees



for the implementation of financial investments are favorable conditions for the development of a post-graduate program.

Based on the fact that it is the only regional higher education institution, the orientation of the research will be defined taking into consideration the important and promising areas for the development of Gegharkunik Region to ensure practical results.

*The educational block* workload is 35 credits and that of research construction is 145 credits. The educational block includes compulsory and elective courses with the total of 26-credit workload, pedagogical and research practices of 9-credit workload.

*The research block* workload is 135 credits, 120 credits of which is intended for candidate of science's academic degree's thesis and research preparation, preliminary testing of thesis for pre-defense, 15 credits for scientific seminars and participation in workshops and report making, and 10 credits for qualitative examinations.

In the Program 9 credits' workload is given to internship, 3 credits of which are allocated to pedagogical practice for developing doctoral students' pedagogical skills with the purpose of giving lectures in future, 3 credits are allocated to the research practice, to develop doctoral students' competences for independent practical research, and the other 3 are given to postgraduates' studying regulations related to the research topic, in order to produce professionals well-informed from the legal system of the field.

### Doctoral Programme LOs:

*Knowledge:* deeper and advanced skills in finance and accounting, which are necessary for the development of new concepts, principles and theories as a result of scientific research, including interdisciplinary skills, awareness of professions correlated with finance and accounting, practical skills and abilities necessary for a free use of computer and information technologies for conducting research in that sphere, the practical and easy mastery of well-known project

packages.

*Abilities:* planning and organizing activities leading to essential changes of skills and practice concerning the fields of finance and accounting, the abilities to ensure self-dependence during research to perform a team work in the professional field, to create new skills, to organize the spread of skills and methods, to independently plan and distribute the material resources. One can compose a clear text on finance and accounting in a foreign language, as well as describe their own experience and events on social and academic topics, present the grounds for his/her views, goals and suggestions.

*Skills:* professional skills which are necessary for solving crucial problems connected with the interaction of various complicated factors for the purpose of conducting scientific research on finance and accounting, developing new principles and theories based on the scientific work, broadening and giving a new meaning to the skills and professional experience, developing and implementing further solutions within the scopes of the given and other professional fields, developing new methods and approaches, abilities for estimating the results of long-term and short-term activities within the scope of finance, accounting and correlated fields.

**Research Opportunities:**

GSU has the necessary material and technical resources for research, libraries with modern literature, and is provided with the necessary electronic resources. There are cooperative relations with the places providing research practices. The University has the mechanisms for evaluation of the doctoral students' satisfaction from effectiveness, availability degree of resources provided, e-assessment tools have been developed to evaluate the satisfaction degree of the academic staff and students for educational, research environment, resource efficiency and their access; and other active systems for identifying their needs.



## VANADZOR STATE UNIVERSITY (VSU)

*Number of Doctoral Programmes: 4*

*Number of Doctoral Students: 12*

*Doctoral Programme selected for the project: **Ecology***

*Number of students in the selected Doctoral programme: -*

[www.vsu.am](http://www.vsu.am)

### Research profile of the institution and research priorities:

Ecology, Economics, Foreign languages and Literature, Armenian Studies,

### Doctoral Programme Profile and Structure:

- “Ecology” researcher’s profession, the educational program is a set of educational documents, which includes:
  - o The curriculum
  - o Training courses, subjects, curricula modules,
  - o Other documents and materials to ensure the quality of vocational training,
  - o Internship programs and schedules,
  - o Strategy execution of research, plan,
  - o Overall objective and relevant (professional) competences
  - o Developed and adopted by the university and the grounds and documents,
  - o The introduction of appropriate educational technology providing educational and methodological materials.
- The field of professional activity.

052101.00.6 “Ecology” profession related to the field of science that involves the integrity of the human activity modes, means and methods for the prevention of the environment, environmental quality assessment, research laboratories and research stations execution , environmental management agencies and departments.

Living nature and its laws explores, develops economic and biological systems used for medical purposes, and sets the optimal ways of solving the problems of environmental protection.

*Professional activities*

- Special, design, research and scientific organizations,
- Environmental organizations, Environmental Management,
- Educational institutions,
- Local and state government.

*Professional activity objects*

1. Living in nature in the study of natural processes and patterns
2. From the study of environmental systems at different levels,
3. Assessing environmental quality monitoring
4. The organization and management of research teams.
5. Nominate their own environmental issues and performance management.
6. Ecological and environmental research centers.

*Professional Activities*

052101.00.6 “Ecology the Environmental researcher profession and professional background adequate basic educational criteria set out in this state can make different types of professional activities.



Scientific research, collect research material, conducting qualitative studies, statistical processing of field data and experimental studies, geochemical mapping using GIS pass.

### *Applied laboratory activities*

Eco-monitoring environmental conditions and biological controls assess the impact of human factors environmental problems and their solutions.

### Doctoral Programme LOs:

#### ▷ Knowledge

Demonstrates systematic and modern knowledge of principles, theories, new hypotheses and research methods in ecological and environmental areas of specialization and spheres concerning them;

#### ▷ Skills

- o can stimulate the scientific / technological, social or cultural progress in academic or non-academic professional sphere,
- o demonstrates the scientific and professional integrity and autonomy for developing new ideas and innovative processes in the work or leading industries of studies in complex;
- o effectively manages any research or professional team, who does research work in the field of ecology.

#### ▷ Capacities

- o can create, shape and promote the new complex and abstract ideas, information and issues for creative and inno-

vative clarifications based on the assessment results, to be able to plan, implement and analyze the theory of original research, having significant contribution to the science and / or professional activities:

- o can use modern methods and approaches to explain and present the new and complex theoretical and practical problems and results of research to the scientific community from different points of view;
- o can use a variety of ICT applications in scientific research and for creation of new knowledge;
- can critically evaluate and convert a wide range of qualitative and quantitative data from a variety of concerning spheres to create complex ideas and new knowledge;
- can use modern principles, theories and methods, move these from sphere to sphere and demonstrate interdisciplinary abilities for planning and implementation new and complicate interdisciplinary theoretical, practical and scientific issues.

### Research Opportunities:

The Environmental researcher profession and professional background adequate basic educational criteria set out in this state can make different types of professional activities.

Scientific research, collect research material, conducting qualitative studies, statistical processing of field data and experimental studies, geochemical mapping using GIS pass.

### Applied laboratory activities

Eco-monitoring environmental conditions and biological controls, assess the impact of human factors environmental problems and their solutions.



## NORTHERN UNIVERSITY (NU)

*Number of Doctoral Programmes: 3*

*Number of Doctoral Students: 8*

*Doctoral Programme selected for the project: **Accounting and Finance***

*Number of students in the selected doctoral programme: 2*

[www.northern.am](http://www.northern.am)

### Research profile of the institution and research priorities:

Economics and Law

### Doctoral Programme Profile and Structure:

Program implementation duration for full time study- 3 years, part time study- 4 years. The study academic total workload- 180 credits, allocated 60 credits for each year. The pattern of total Doctoral study accumulated credits is presented by following configuration: 40 credits for knowledge obtaining, 80 credits for obtaining transferable skills and abilities, 60 credits for research outcomes.

### Doctoral Programme LOs:

#### *Doctoral Programme learning outcomes are:*

- obtaining the knowledge's in current accounting practical organization field,
- obtaining the knowledge's in current finance issues solution theoretical field,
- procurement of high level transferable skills:

#### *Analysis & Problem-Solving*

- Define a problem and identify possible causes
- Design an experiment, plan, or model that defines a problem, tests potential resolutions and implements a solution

### *Interpersonal & Leadership Skills*

- Facilitate group discussions or conduct meetings
- Motivate others to complete projects (group or individual)

### *Project Management & Organization*

- Identify goals and/or tasks to be accomplished and a realistic timeline for completion
- Prioritize tasks while anticipating potential problems
- Maintain flexibility in the face of changing circumstances

### *Research & Information Management*

- Identify sources of information applicable to a given problem
- Develop organizing principles to effectively sort and evaluate data

### *Self-Management & Work Habits*

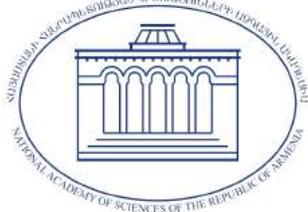
- Work effectively under pressure and to meet deadlines
- Comprehend new material and subject matter quickly
- Work effectively with limited supervision.

### Research Opportunities:

During the research, the student is provided with:

- research laboratories,
- interuniversity library funds,
- internet accesses,
- supervision,
- opportunity for participation in scientific conferences,
- university supporting for article and papers publication,
- opportunity for participation in interdisciplinary research programs,

university supporting for doctoral students mobility in process of fundraising and international grand programs application submitting.



## NATIONAL ACADEMY OF SCIENCES OF RA (NASRA)

*Number of Doctoral Programmes: 65*

*Number of Doctoral Students: 169*

*Doctoral Programme selected for the project: **Molecular and Cellular Biology***

*Number of students in the selected Doctoral programme: 6*

[www.sci.am](http://www.sci.am)

### Research profile of the institution and research priorities:

The National Academy of Sciences of RA is the highest self-governing scientific organization with a special status, which organizes, performs and coordinates fundamental and applied research required for knowledge-based economic, social and cultural development. Main directions and issues of the Academy activities are establishing scientific and technical councils, expert groups and committees regarding the main issues of armenology, physics and mathematics, social, natural, chemical and earth sciences, technical sciences; organization, development and coordination of fundamental and applied research as well as preparation of highly qualified scientific and pedagogical personnel through Master's degree, PhD, Doctoral and External Doctoral programmes. NAS RA includes over 34 research organizations, centers, enterprises and other organizations.

The Presidium of NAS RA has five scientific divisions on particular areas of science:

- Division of Mathematical and Technical Sciences,
- Division of Physics and Astrophysics,
- Division of Natural Sciences,

- Division of Chemistry and Earth Sciences,
- Division of Armenology and Social Sciences.

### Doctoral Programme Profile and Structure:

The ultimate aim of doctoral program in Molecular and Cellular Biology offered by the Institute of Molecular Biology NAS RA is to provide, for each student individual depth of experience and competence in the chosen major specialization; understanding of a substantial body of knowledge which is at the forefront of the academic discipline; the development of such skills as critical analysis, evaluation and synthesis of new and complex ideas, as well as other qualities and transferable skills that will enable them to continue self-education after formal training, to undertake new research at an advanced level and to serve his or her field productively through a long career.

*The educational part of the program* consists of general courses and professional courses, internships and attestation. The general courses serve to ensure and complement soft skills needed for the doctoral qualification. The professional courses ensure doctoral candidate's professional knowledge and skills. Internships ensure increase in researcher's scientific-pedagogical skills.

*The research part of doctoral program* consists of the following components: participation in scientific seminars and workshops, self-research work and dissertation preparation.

Scientific seminars (workshops) are formed and held by the regularly operating program structure (Faculty, chair, center etc.). During those seminars the doctoral student gets methodological assistance to do scientific research in their professional field with skills and abilities formed to make reports during the sci-



entific seminars, to take in scientific debates and to give reviews.

### Research work and dissertation preparation.

The plan and content of research work is conditioned with the issues of doctoral dissertation and is to drawn up together with the supervisor. It is carried out the whole duration of the doctoral studies.

The dissertation must be an independent, scientific work complying with high academic standards with regard to research questions, examination of concepts, methodological, theoretical and empirical basis and form of presentation. The doctoral dissertation determines whether the candidate is ready to carry out independent, original and scientifically significant research, and to critically evaluate work done by others. Doctoral candidates must prove that the results are recognized in the domestic scientific fields as well as internationally. Candidates, prior to defending their dissertation, are required to publish their work in a defined number of papers published in internationally recognized, distinguished, peer-reviewed journals, conferences, domestic journals, etc.

The dissertation completeness, originality and novelty are assessed at multiple stages of review by:

- Supervision and mentoring team;
- Two internal reviewers nominated by Scientific Council;
- Scientific council through pre-defense presentation. The dissertation can be defended only after obtaining positive response during all stages of review.

After the dissertation is released for the Institute the doctoral student follows the procedures defined by Supreme Certifying Committee RA.

## Doctoral Programme LOs:

At the end of the education, candidates should:

- Have written and performed new knowledge through original research with sufficient quality to encompass the review by peers, which guarantee that the research is at the forefront of the discipline and is worth of being published;
- Have acquired and understood a body of knowledge that is in the avant-garde of the academic discipline;
- Be able to conceptualize, design and implement a project to generate new knowledge, apply or have the understanding of a discipline, and adjust the design based on unforeseen problems;
- Have reached a detailed understanding of techniques to carry out the research;
- Demonstrate academic mastery in the interrelated biological disciplines encompassing Molecular and Cellular Biology;
- Understand safe laboratory practices and perform basic and advanced molecular biology techniques;
- Be able to apply skills and knowledge in solving research problems in the fields of biomedicine, biotechnology and agriculture.

## Research Opportunities:

The Institute of Molecular Biology was founded in 1966 to promote the development of molecular biology in Armenia. Current research activities of IMB are focused on investigation of regulatory mechanisms of cell activity and its alterations in a number of pathologic conditions including autoimmune, autoinflammatory, cerebrovascular, infectious, cancer and psychiatric disorders. IMB comprises



18 research units (11 laboratories and 7 groups), and 3 educational units. Three laboratories and 4 research groups are included in the Department of Applied Molecular Biology. IMB also harbors Institutional Scientific Council, Young Scientists Council and Ethics Committee. Institutional supporting units include Sequencing Center, Human DNA Samples Bank, Cell Line Collection, Animal Facility and Library.

The most contemporary research topics by labs and groups are presented below:

*The laboratory of human genomics and immunomics studies* of the relation between genetic background and antipsychotic treatment response in patients with schizophrenia.

*The laboratory of cell biology and virology* aims at elucidation of viral ecology and pathogenesis in vitro, using cultivated cell lines such as Hela, BHK, RD, Vero, Cos, etc.

*The laboratory of computation modeling of biological processes* is using modern methods of bioinformatics and computational biology for modeling and in silico analysis of the processes of protein-protein, protein-ligand interactions and its regulation.

*The laboratory of ethnogenomics* conducts research on reconstruction of the genetic history of Armenians and other neighboring peoples of the Near East and the South Caucasus.

*The laboratory of molecular membranology* studies the role of oxidative processes (peroxidation of proteins and lipids) leading to the damage the function of cell membrane lipids, as well as to changes in the immune system in normal ageing and age-related diseases.

*The laboratory of regulation of cellular activity* is aimed at investigation of dysfunctions in the lipid modification and signal

transduction mechanisms in human peripheral blood mononuclear cell plasma membranes in diverse types of blood and solid tumors.

*The group of cell technologies* conducts research on cellular mechanisms of mutagenesis and in vitro safety testing programs for potential therapeutic agents, biopharmaceuticals, medical devices, chemicals, agrochemicals, cosmetics and radiation.

*The group of molecular and cellular immunology elucidation* of the mechanisms that drive the abnormal activation of neutrophils and monocytes in patients with autoinflammatory and autoimmune syndromes using in vitro models.

*The group of bioinformatics* aims at understanding molecular pathomechanisms of complex human diseases and cancers using computational approaches.



## PUBLIC ADMINISTRATION ACADEMY OF RA (PAARA)

*Number of Doctoral Programmes: 4*

*Number of Doctoral Students: 76, in which 47 degree  
seekers, thus 29/ 12 full-time, 17 part-time ed.*

*Doctoral Programme selected for the project: **General  
psychology, Theory and History of Psychology, Psy-  
chology of Personality***

*Number of students in the selected Doctoral programme:  
7*

[www.paara.am](http://www.paara.am)

### Research profile of the institution and research priorities:

Public Administration, Economics, Management, Psychology  
of Management, Law, Political Science

### Doctoral Programme Profile and Structure:

*Psychology of Management: Educational Component- 45 cr.*

*Research Component- 135 cr.*

#### ***Compulsory Courses and Sections /Modules/:***

*Philosophy of Science – 4 cr.*

*Pedagogical Skills and Ethics- 5 cr.*

*Professional foreign language – 6 cr.*

*New IT and educational Technologies – 4 cr.*

***Total: - 33 cr.***

***Selective courses : - 14 cr. /4+4+6/***

*Development and publishing of research papers*

*Psychology teaching methods*

*Implementation of mathematical and statistical methods in Psychology*

*Ethics of conducting psychological research*

*Preparation and conducting of scientific and methodological seminars*

***Internship – 12 cr.***

***Educational Component: - 45 cr.***

*Preparation of the Thesis - 100 cr.*

***Qualification Examinations: - 20 cr.***

***Qualification examination on specialty - 10 cr.***

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*Qualification examination on foreign language and IT –10 cr.*  
*Predefense of the thesis – 15 cr.*  
*Research Component 135 cr.*  
*Total : - 180 cr.*

### Doctoral Programme LOs:

- o To provide postgraduate educational programmes in compliance with the requirements of the administrative, political, social, legal and economic spheres of public and private sectors' administration systems;
- o To conduct additional and continuing education, academic and applied research, consulting services;
- o To develop international academic cooperation in the field of public administration.

### Research Opportunities:

All necessary resources for the implementation of doctoral program are available;

- an effective and strong scientific environment is created for research

“Management of Science” project in common with the State Committee of Science under the MoES of RA (5 doctoral students involved)

“Psychology of Management” laboratory (a research group consisting of lecturers, professors and Doctoral students conducting research and analytic activities on given program)

“Center of Regional Research” under PAARA; Doctoral students of the Chair of “Political Management and Public Policy” are involved in research.

- “Public Administration” scientific journal makes possible publishing of interim results of research.

- Full library available for research purposes.



# QUALITY ASSURANCE FOR DOCTORAL EDUCATION

## *External Evaluation in Armenia*

### GENERAL OVERVIEW

In 2017 the external review of doctoral programs has been carried out within “VERITAS” Tempus Project – Structural Development of the Third Cycle Based on Salzburg Principles. The external review process was organized and coordinated by the National Centre for Professional Education Quality Assurance Foundation (ANQA), Armenia.

The external review aimed to pilot new doctoral programs and newly developed quality assurance (QA) criteria and standards for doctoral education.

### EXTERNAL QUALITY ASSURANCE CRITERIA AND STANDARDS FOR DOCTORAL EDUCATION IN ARMENIA

#### *1. Institutional strategies*

The Higher Education Institution’s (hereinafter HEI) research strategy is in concord with its mission and goals.

- 1.1. HEI has a research strategy that is adopted at the institutional level of the HEI, represents the institution’s mission and its goals for research.
- 1.2. Research strategy reflects the needs of the internal and external stakeholders and includes ethical concepts.
- 1.3. HEI has formal mechanisms and procedures to evaluate the effectiveness of research strategy and to further improve it.

## *2. Doctoral program*

The doctoral program's ambitions are in concord with the institution's research strategy, forms part of institutional planning and resource allocation is designed to meet new challenges and needs of global labour market.

- 2.1. Doctoral program is thoroughly formulated, according to the intended outcomes, is flexible, meets the needs of doctoral candidates and is in line with the institution's research strategy.
- 2.2. Doctoral program is contextually coherent with other relevant doctoral programs.
- 2.3. Doctoral program is functioning in the context of a strong research environment ensuring critical mass of researchers and relevant resources promoting interdisciplinary approach.
- 2.4. Doctoral program provides training in core discipline areas and transferable skills and ensures an active involvement of doctoral candidates in research activities.
- 2.5. Doctoral program has set criteria on the assessment of the quality of research results against achieved outcomes and mechanisms for the evaluation of the research results' social impact.
- 2.6. There are set mechanisms and procedures in place to ensure development, approval, monitoring and periodic review of doctoral program with an active involvement of internal and external stakeholders.

## *3. Admission Policy*

HEI's admission policy on doctoral program is transparent, is in line with doctoral program's ambitions.



- 3.1. HEI has set mechanisms for promoting equitable recruitment, selection and admission procedures.
- 3.2. Selection criteria of doctoral candidates are transparent, publicly available and are in line with the explicit outcomes of doctoral programme.
- 3.3. HEI periodically analyses the effectiveness of applicants' assessment system.

#### *4. Supervisor*

HEI provides highly qualified supervisors/well-structured supervisory team to achieve doctoral program's ambitions.

- 4.1. Supervisors/supervisory team responsibilities, qualifications, workload, recognition criteria are comprehensively stated and described and are in line with doctoral program's ambitions.
- 4.2. HEI has supervisor/ supervisory team appointment procedures.
- 4.3. HEI has motivation mechanisms for supervisors to be involved in active researching and be part of relevant scientific network.
- 4.4. There is well-established system for periodic evaluation of supervision that foster to review existing policies and procedures for supervision and to reveal the professional needs of supervisors.
- 4.5. HEI fosters the development and professional progress of supervisors.

#### *5. Research Environment*

HEI promotes the quality research provisions by creating an environment conducive to research.

- 5.1. There are necessary resources for the implementation of doctoral program in accordance with its content, which effectively support the implementation of program's ambitions and create an environment conducive to research.
- 5.2. HEI monitors the scientific progress of the individual doctoral candidates by achieved scientific results and provides career development opportunities. Supervisors have primary responsibility in doctoral candidate's scientific progress.
- 5.3. HEI ensures that all doctoral candidates receive useful and regular information and advice to promote research and to have opportunity to work in research teams and different research environments.
- 5.4. HEI has sound financial distribution policy and capacity to sustain and ensure the integrity and continuity of doctoral programs at the institution.
- 5.5. HEI has mechanisms in place for the evaluation of the effectiveness, applicability and availability of resources.

### *6. Doctoral Candidates*

Doctoral candidates are recognized as professionals with commensurate rights.

- 6.1. HEI has formal mechanisms to regulate relations between candidate, supervisors and institution where the rights and responsibilities of doctoral candidates are clearly formulated.
- 6.2. Doctoral candidates are engaged in governance at the university and participate in decision-making.
- 6.3. HEI has set mechanisms that ensure quality of the student services and doctoral candidates are involved in the quality assurance practices.



## *7. Internationalization*

Internationalization is coherent with institution's research strategy and the individual needs of the doctoral candidates.

- 7.1. HEI promotes fruitful and effective collaboration with local and international counterparts aiming to create critical mass and networking as well as to implement joint research and doctoral programs.
- 7.2. The mobility of doctoral candidates is driven by the candidates' research projects.
- 7.3. HEI allocates sufficient financial resources for internationalization.

## *8. Degree Awarding*

HEI has clear mechanisms for monitoring and assessment of the research results (applicable to the institutions having Specialized Councils).

- 8.1. Specialized Council has awarding criteria that are applied and periodically reviewed.
- 8.2. HEI has set criteria for the nomination of the members of Specialized Council/s.
- 8.3. HEI periodically implements quality assurance of Specialized Council/s' activities.
- 8.4. Specialized Council/s periodically publishes reports on the development of the relevant fields.

## *9. Internal quality assurance*

HEI has an internal quality assurance system, which promotes continual improvement of all the processes of doctoral education.

- 9.1. There are well-established and publicly available policies

- and procedures for internal quality assurance of doctoral education.
- 9.2. The internal and external stakeholders of doctoral education are involved in the quality assurance processes.
  - 9.3. HEI collects reliable information on the implemented processes through feedback mechanisms, which is evaluated for the improvement of the goals and processes of doctoral education.
  - 9.4. The internal quality assurance system of doctoral education is periodically reviewed.

## PHASES FOR EXTERNAL EVALUATION OF DOCTORAL PROGRAMMES

### *Preparation of Self-evaluation Report*

The timetable of the activities was prepared by the ANQA, agreed with the HEIs, international partners and the grant holder. Upon finalization of the development of the new doctoral programs HEIs conducted internal self-assessment of the programs, drawing on newly developed QA standards and submitted them to the ANQA. The members of the expert panels conducted the desk reviews based on the self-assessment reports, doctoral programs and attached documents.

### *Establishment of Peer-Reviewer Groups*

The expert panels that consisted of two local experts and one doctoral student from Armenian partner HEIs as well as one international expert from the EU partner HEIs carried out the evaluation. The compositions of the expert panels were agreed with the institutions under review. The works of the expert panel were coordinated by the ANQA coordinators.

### *Desk-review. Site-visits. Report writing*

The preliminary site-visit agendas were drafted by the ANQA coordinators and were circulated among the members of the expert



panel for the feedback. The intended meetings with all the target groups, close meetings, documents and resource review were foreseen in the agenda.

The agendas of the expert panel site-visits were discussed and agreed with the representatives of HEIs under review. Discussions were held and mutual decisions were reached referring to the organizational and technical questions of the site-visit. Questions related to the conduct and the norms of ethics of meeting participants were also touched upon. The rooms prepared for focus groups were also discussed, the issues related to the equipment and facilities were clarified.

The site-visit of the expert panels took place from 3rd to 7th of April 2017. According to the agendas the site-visits were launched with a close meeting throughout which the expert panels agreed upon the framework of assessment, strong and weak points of the institutions, issues to be discussed with the target groups as well as clarified further steps. Representatives of the doctoral program management, supervisors and doctoral students were selected beforehand. During the site-visits the expert panels conducted resource observation and focus group meetings with faculties and doctoral students over questions, clarifications and discussions.

### *Schedule on the site-visits to HEIs*

N	AM HIGHER EDUCATION INSTITUTION	PROGRAMME TO BE REVIEWED	DATES
1	National Academy of Sciences of RA	Molecular and Cellular Biology	03.04.2017
2	National University of Architecture and Construction of	Architecture	03.04.2017
3	Yerevan State University	Structural and Thermodynamic investigations of Biological Objects	04.04.2017
4	Yerevan State University of Languages and Social Sciences	Education Policy	04.04.2017
5	Armenian State University of Economics	Economics	04.04.2017
6	Yerevan State Medical University	Pharmacology	05.04.2017
7	Public Administration Academy of RA	Theory and History of Psychology	05.04.2017
8	Northern University	Accounting and Finance	05.04.2017
9	Gavar State University	Finances	06.04.2017
#	Vanadzor State University	Ecology	07.04.2017
#	Armenian State Academy of Fine Arts	Design, Art and Applied Arts	07.04.2017

The expert panels have conducted preliminary evaluation according to the self-assessment reports of the HEIs, the documents attached to it and the observations during the site-visits. The Chairs of the panels drafted the preliminary reports which were agreed upon with the panel members and the ANQA coordinators. The reports were handed over to the HEIs under review.

The reports are the result of the external assessment. They include findings and considerations according to quality assessment criteria as well as recommendations for improvements.

### MAJOR FINDINGS: RECOMMENDATIONS:

- Increase flexibility and support for the student’s research projects. This can e.g. involve a fewer number of mandatory courses covering theory of science and different research methods, while the number of elective courses should permit the students to choose courses based on the topic and methods for their specific research project.
- Develop programs that meet the requirements of the contemporary world.
- Regulate the participation of external stakeholders (industry, local experts, etc.) in the development and assessment of the doctoral programme.
- Establish and promote further agreements with other research institutions (national and international) for collaboration in educational and research projects.
- Implement benchmarking activities.
- Develop clear financial distribution policy for doctoral programs, and diversification funding for doctoral programs e.g. from external sources.
- Promote interdisciplinary research and educational perspectives.
- Develop handbook for doctoral candidates.



- Progress monitoring should include a parallel process of collecting feedback from students about their progress and experience of supervision.
- Develop motivation mechanisms for supervisors.
- Offer pedagogical training or courses for supervisors to enhance the quality of supervision and the supervisory team.
- The mobility of doctoral candidates is recommended to primarily be driven by the candidates' research projects.
- Increase the quality and quantity of the library resources/ increase accessibility to international databases.
- Find mechanisms to increase the internationalization.
- Develop a system for internal quality assurance of doctoral education.

## PROJECT DISSEMINATION

A comprehensive and a detailed project dissemination plan was developed within the project taking into consideration the project ambitious goals and objectives and the significance of the Doctoral Education promotion in Armenia. Different methods and channels were chosen to ensure the wider dissemination of the project with the aim

- o to inform and update the Armenian Academic Community on the project activities and progress;
- o to present the major achievements introducing the best practice and possible changes for improvement of Doctoral Education in the country;
- o to promote the enhancement of the Doctoral Education in Armenia a by re/developing the study programmes, evaluating them externally and by introducing the recommendations to the governmental bodies the possible changes for further improvement of the field;
- o to bring in all the relevant stakeholders of the field/bodies and promote their active participation in the open discussions of the topics.

For this purpose the following measures have been undertaken by the project consortium in different phases of the project implementation.



[www.tempusveritas.am](http://www.tempusveritas.am)

*The project official **web-site** was designed to constantly update the stakeholders on the project progress and achievements. It has the basic information on the project as well as provides news on events and current developments. Materials developed and related to the project implementation as well as published materials are also available.*



### NEWSLETTERS

The project newsletters were prepared and disseminated among the stakeholders summarizing the activities undertaken, as well as presenting the major tasks foreseen by the project, events and status of current developments. They are all available on the web-site of the project. So far, project has developed 7 newsletters.



### PUBLICATIONS

One of the major achievements of the project is the presentation of the best practice and respective developments conducted by the partners that were filed and published for wider dissemination and exploitation. The online version of all publications can also be found in the project web-site.

- Training kit on Salzburg Principles
- Study visit: Lessons Learnt
- Guidelines for Doctoral Programme Development and Implementation in Armenia
- Quality Assurance Criteria and Standards for Doctoral Education in Armenia
- VERITAS Achievements



### DISSEMINATION VIA LOCAL MEDIA

Active dissemination of the project was conducted via local media (newspapers, magazines, HEI newspapers, web pages and online media) by all partner institutions. Newsletters and booklets were also developed and disseminated by universities. Some of the institutions prepared and published articles on the issues discussed within the project. The Article prepared by RA SCC representatives presents the current state of Doctoral education in Armenia and reforms foreseen. It is also available on the project web-site. More links on project dissemination from the partner institutions can be found in the respective home pages and in the interim report.

**STRUCTURE**

The project is managed through the following bodies:

- COORDINATING GROUP
- MANAGEMENT TEAM
- CONTRACT PARTNER
- LOCAL WORKING GROUPS

**Events**

The project is an umbrella one for the country and has been based a lot of activities across the country. There is a lot of work that will be carried out in order to be able to guide the partners in order of needs, together with training, seminars and workshops, seminars on doctoral education, etc. The project is an umbrella one for the country and has been based a lot of activities across the country. There is a lot of work that will be carried out in order to be able to guide the partners in order of needs, together with training, seminars and workshops, seminars on doctoral education, etc.

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**PRO-MATERIALS**

The dissemination campaign of the project was resulted in preparing, publishing and sharing a series of promotional materials, like project banner, project brochure, posters by all AM consortium partners. And again the main aim was to make the stakeholders aware of the project implementation and progress.



**IN-HOUSE TRAININGS**

Taking into account the fact that most of the workshops were conducted in Armenia all partner institutions had opportunities to engage more staff members and stakeholders of the field. In-house trainings were also conducted by the AM HEIs in to inform the staff, faculty members, supervisors and potential/current PhD students on the Salzburg Principles as well as QA criteria for Doctoral Education.

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FINAL CONFERENCE

**FINAL CONFERENCE**

The culmination of the dissemination campaign of the project was the final conference held in Armenia in October that enabled to bring in about 250 stakeholders of the field from HEIs, educational organizations and governmental bodies in Armenia. The experience exchange and introduction of the best practice by AM and EU partner institutions opened new possibilities for further discussions and improvement in the field of doctoral education in the country.

The event was hosted by the coordinating institution – YSMU on 12<sup>th</sup> of October 2017. The materials of the event are also available on the web-site.



## ABBREVIATIONS

- ANQA** – National Center for Professional Education Quality Assurance  
Foundation
- AM** - Armenian
- ANQF** – Armenian National Qualification Framework
- ASUE** – Armenian State University of Economics
- BSU** – Bath Spa University
- ECTS** – European Credit Transfer and Accumulation System
- EQ** – Education Quality
- EU** - European
- GSU** – Gavar State University
- HEI** – Higher Education Institution
- KTH** – Royal Institute of Technology
- MoES** – Ministry of Education and Science
- NASRA** – National Academy of Science of RA
- NU** – Northern University
- NUACA** – National University of Architecture and Construction of Armenia
- NQF** – National Qualification Framework
- PAARA** – Public Administration Academy of Republic of Armenia
- QA** – Quality Assurance
- RA SCC** – Supreme Certifying Commission of Republic of Armenia
- RU** – Research Unit
- SAFAA** – State Academy of Fine Arts of Armenia
- UdG** – University of Girona
- UHMF** – University of Heidelberg
- VERITAS** – Tempus project “Structural Development of the Third Cycle  
Based on Salzburg Principles”
- VSU** – Vanadzor State University
- WUS** – World University Service - Austria
- YSMU** – Yerevan State Medical University
- YSU** – Yerevan State University
- YSULS** – Yerevan Brusov State University of Languages and Social Sciences

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VERITAS team also thanks Armenian Partner HEIs and ANQA for providing the information on the Doctoral Education and Quality Assurance process.

For further information please contact us at Yerevan State Medical University and for more detailed information about the project please visit the project web-site ([www.tempusveritas.am](http://www.tempusveritas.am)) or e-mail us ([veritas.mngt@gmail.com](mailto:veritas.mngt@gmail.com))!





# VERITAS

STRUCTURAL DEVELOPMENT OF THE THIRD CYCLE BASED ON SALZBURG PRINCIPLES

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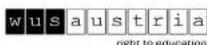
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