Yerevan State Academy of Fine Arts

Computer graphics

Academic programme

HANDBOOK

Bachelor's degree

Content

Introduction

Computer Graphics academic programme was opened at YSAFA in 2001. Now, the Academy offers BA and MA programmes in Computer Graphics on full time basis. The academic programme aims at preparing highly qualified specialists with in-depth knowledge and skills in computer graphics, 3D graphics, WEB site projection and graphic programming, product packaging, firm styles design, computer advertisement, electronic business.

The programme attaches a special emphasis on developing students' aesthetic perceptions as well as their abilities to turn their ideas into computer projections.

The challenging curricula enable students to learn how to make use of the variety of opportunities offered by modern automatic technologies in their compositional projections.

Academic programme mission

Today publishing industry, advertisement, computer games and applications, web design, brand style and the complex interface for user are based on graphical design.

Undergraduate students are in great demand in labor market and receive invitations from different organizations. Besides "Computer graphics" students accept orders from abroad via Internet.

The mission of the academic programme is to prepare specialists for one of the actual art spheres: computer graphics, provide learners professional education: enabling the development of learners' learning and creative search, creative and analytical thinking, prepare students to compose, implement and comment their ideas in such a environment, where the emphasis is on cultural diversity and technical innovations.

The mission of the academic programme is to have its creative investment on country's art and economic spheres contributing the increase of life quality and society development also.

The great inflow of applicants speaks about specialty demand.

The largest competition is in "Computer graphics" compared with the other YSAFA academic programmes.

"Computer Graphics" academic programme description

" Computer graphics" academic programe prepares highly qualified bachelor's degree specialists with in-depth knowledge and skills in computer graphics, polygraphy, 3D graphics, WEB site projection and graphic programming, product packaging, firm styles design, computer advertisement, electronic business, who have compositionala creative thinking and computer graphics skills.

The aim of the academic programme is:

- to create such educational environment, where will be combined art, technical technological and research spheres.
- to develop graduates' knowledge, skills and abilities through theoretical and practical courses, which are necessary to achieve success in the professional field and for development of students' aesthetic, intellectual, analytical and performance competencies.

Academic programme objectives:

- to develop graphic design industry through research and creation of new works
- to develop national and universal artistic traditions in graphic design sphere based on past traditions
- to investigate mutual ties and relations of art and applied spheres of science
- to help students to discover and develop their creative thinking, competencies and talent: combining arts education with high academic education.
- to prepare students to become leaders in their sphere combining theoretical knowledge, creativity and technical opportunities as a modern requirement
- to deepen art perception through continuously presentations and exhibitions, expand future consumer and student audience.
- the academic programme will expand its activities as a field leader in country and world through special academic courses, cooperation with the scientific and practical spheres, research oriented and creative teaching staff.

Qualification	Bachelor's degree in computer graphics
Mode of delivery	full time
Duration	4 years
Number of credits	240

Learning outcomes

After successful completion of the program, a student should be able

1. to give creative graphic solutions to visual communication objectives: displaying the copmtencies of revealing consumer/customer demands, information gathering, offering analytical, critical and alternative solutions, evaluation of results.
2. to develop brand, advertising posters, packaging, graphic style of visual media, computer games design-project, web-sites, design of mobile applications: using graphic design principles of organizing of visual composition, information hierarchical layouts, presentation of characters, aesthetics.
3. to represent and report about the project to professional and non professional community in written and oral form, show the selection ability of communication problems: taking into account the physical, intellectual, cultural, social and personal factors, which influence on solving design problems.
4. to create and reproduce visual messages showing the knowledge of fundamental and modern concepts of graphic design, modern tools and technologies and their role in graphic design.The tools and technologies include: painting, printing, photography, interactive media and 3D graphics.
5. to make decisions in limited autonomy conditions while solving computer graphics issues, to work effectively in team and independently complete solution for graphic design issues.
6. to show the knowledge of art and design theory and history, communication and information theories, usage of socio-cultural aspects of computer design.
7. to be responsible for their education and learn based on the experience acquired in different situations as well as to be presentable to society through professional portfolio.

5. Autonomy and responsibility (including learning skills)

5.1. Can undertake activities and fulfill tasks in the study or professional field under appropriate guidance, make decisions in limited autonomy conditions and take responsibility in a team

5.2. Is able under some guidance to identify his/her own learning needs and make an autonomous decision on his/her further study in different learning environments.

4. Generic cognitive skills (including making judgments)

4.1. Can apply critical thinking, analysis and judgment as well as some creativity to identify and provide different solutions to the problems of the field

4.2. Can demonstrate the creative approach to the field proposing different solutions to the problem

3. Communication, ICT and numeracy skills

3.1. Can explain and communicate information, ideas, problems, arguments and solutions that are related to the given field to the specialist and non-specialist audiences

3.2. Can apply ICTs to support and intensify work and solve problems in the respective field

3.3. Can collect, process and interpret relevant quantitative and qualitative data within the field to make reasonable judgments

2. Applying knowledge and understanding

Can apply basic principles and methods of the field for solving problems in familiar situations that are typical to profession

1. Knowledge and understanding

Demonstrates general knowledge and understanding of basic and state-of-the-art concepts, theories and methods within the field

Alignment matrix of RA NQF descriptors and bachelor's degree "Computer graphics" academic programme learning outcomes

NQF	Learning outcomes							Total
	1	2	3	4	5	6	7	
5.1.	1	1	1	1	2	-	1	7
5.2.	-	-	-	-	-	-	2	2
4.1.	2	-	-	-	-	-	-	2
4.2.	2	2	-	2	-	--	-	6
3.1.	1	-	2	-	-	-	1	4
3.2.	2	2	1	2	-	-	-	7
3.3.	2	1	1	-	-	-	-	4
2	2	2	2	2	-	-	-	8
1	2	2	2	2	-	2	-	10
Total	14	10	9	9	2	2	4	

Curriculum

Computer graphics

N	Course names and packages	Certification based on semesters							Academic workload of student																			
									Hours				Semesters															
													1		2		3		4		5		6		7		8	
		Exam	Testing	Review	Project presentation	Portfolio project	Paper	Course paper	Student's full workload	Classroom classes	Individual work	Credit	Week classroom workload	Credit	Week classroom workload	Credit	Week classroom workload	Credit	Week classroom workload	Credit	Week classroom workload	Credit	Week classroom workload	Պրեդիպ	Week classroom workload	Credit	Week classroom workload	Credit
General humanitarian and socio-economic subjects package																												
1	Armenian language and Literature		1,2						120	64	56	4	2	2	2	2												
2	Armenian History		2,3						120	64	56	4			2	2	2	2										
3	Physical Training		1-3							96			2		2		2											
4	Philosophy		4						60	32	28	2							2	2								
5	Civil Defense and Emergency Management		7						60	32	28	2													2	2		
General science subjects package																												
6	Informatics	2	1						240	12	11	8	4	4	4	4												

										8	2																		
7	Basics of Environmental Protection		4						60	32	28	2							2	2								
General professional subjects package																													
8	History of Ancient and Early Medieval Armenian Art	4							60	32	28	2							2	2								
9	History of Ancient, Early Medieval and XII-XIX Armenia	5							60	32	28	2									2	2						
10	History of Armenian Art, XV-XXI	6							60	32	28	2											2	2				
11	History of Armenian Art, XX-XXI	7							60	32	28	2													2	2		
12	History of Graphic Design		5						60	32	28	2									2	2						
Special professional subjects package																													
13	Drawing			1-7					1110	608	502	37	8	9	8	8	6	6	4	3	4	4	4	3	4	4		
14	Painting			1-7					810	448	362	27	6	7	6	5	4	4	4	3	4	4	2	2	2	2		
15	Composition			1-7					1110	640	470	37	4	4	6	5	4	4	4	3	6	6	8	7	8	8		
16	Plastic Anatomy		1						60	32	28	2	2	2														
17	Basics of Graphics		1						60	32	28	2	2	2														
18	Web-design			3, 4					120	64	56	4					2	2	2	2								

19	3D Modeling			3, 4					240	128	112	8					4	5	4	3								
20	Polygraph Technology	4	3						120	64	56	4					2	2	2	2								
21	Font			3, 4					210	96	114	7					4	5	2	2								
22	Visualisation			5					120	64	56	4									4	4						
23	Electronic media			5					60	32	28	2									2	2						
24	Polygraph Technology			5					60	32	28	2									2	2						
25	Engraving			5, 6					120	64	56	4									2	2	2	2				
26	Computer modeling			6					90	64	26	3											4	3				
27	Computer design			6					90	64	26	3											4	3				
28	Web-site design			6					60	32	28	2											2	2				
29	3D Graphics			7					120	64	56	4													4	4		
30	Preprinting			7					120	64	56	4													4	4		
31	Electronic Advertising			7					60	32	28	2													2	2		
32	Optional Courses		3-7						240	128	112	8							2	2	2	2	2	2	2	2		
33	Academic and Industrial Internship		2,4, 6						360			12				4				4				4				
34	Pre-diploma Internship								780			26																26

35	Diploma work defence			8					120	8	112	4															4
	Ընդամենը								7200			240	30	30	30	30	30	30	30	30	30	30	30	30	30	30		30

Course investment scale in learning outcomes formation

Learning outcome / Course	1	2	3	4	5	6	7
1. Drawing	1	3	0	4	1	0	0
2. Painting	1	3	0	4	1	0	0
3. Composition	4	4	4	4	4	3	4
4. Basics of graphics	4	4	2	4	2	2	4
5. Informatics	4	2	4	2	2	2	4
6. Polygraph	4	4	3	4	2	2	4
7. Polygraph Technology	4	4	3	4	2	2	4
8. Preprinting	4	4	3	4	2	2	4
9. Computer design	4	4	3	4	2	2	4
10. Plastic anatomy	1	2	0	2	0	0	0
11. Bionics	3	4	0	4	0	2	2
12.Font	3	4	0	4	0	0	2
13. engraving	2	4	0	4	0	0	2
14. Web-design	4	4	3	4	4	3	4
15. Electronic media	4	4	3	4	4	3	4
16. Web-design	4	4	3	4	4	3	4
17. Electronic advertising	4	4	3	4	4	3	4
18. 3D modelling	4	4	4	4	4	3	4
19. Visualisation	4	4	4	4	4	3	4
20. 3D modelling	4	4	4	4	4	3	4
21. 3D graphics	4	4	4	4	4	3	4
22. Theory of colours	3	4	0	4	0	0	2
23. Photo	2	2	1	2	2	1	2
24. Marketing	4	2	4	2	4	4	2
25. Armenian language and Literature	0	0	4	3	1	2	2
26. Armenian history	0	0	2	2	0	4	2
27. History of Ancient and Early Medieval Armenian	0	0	2	2	0	4	2
28. Hitory of Arts	0	0	2	2	0	4	2
29. Philosphy	3	0	2	2	2	4	2
30. History of graphic design	2	4	2	4	2	4	2
31.Basics of nature protection	1	1	1	0	0	1	0
32. Internship	4	4	4	4	4	3	4

33. Pre-diploma internship	4	4	4	4	4	3	4

Assessment scale of course investment in learning outcomes formation

Mark	Mark description
4	The course is completely directed to the formation of the outcome.
3	The course is basically directed to the formation of the outcome.
2	The course is partly directed to the formation of the outcome.
1	The course promotes to the formation of the final product
0	The course has no promotion to the formation of outcome.

Teaching and Learning methods

General professional courses are held in studios and classrooms in the form of lectures, practical work, discussions, seminars, master classes.

Special professional courses are held in well-equipped laboratories, the material is provided and displayed through projector in an interactive way by lecturer, and parallelly students do given tasks. Students are given tasks for individual work. Students improve and use their theoretical and practical knowledge during industrial internships.

Learning can be considered individually because each student presents work done to lecturer and classmates. Work done is discussed by lecturer and classmates. The lecturer gives a response, which promotes to the formation of student's knowledge.

Assessment

- **Assessment methods** – Diploma work defense /final certification/
- **Components of mark**

	Component	Criterion	Mark %
1	General and professional knowledge and understanding	Theoretical general and professional knowledge and understanding • Ability to express knowledge and concepts acquired in work done and presentation, • Clarity of approaches and methodology done deep and research volume • Knowledge of existing ideas, accepted values, thought and discussions of relevant field • Ability to understand course and academic programme contextual and critical ideas. • Critical thinking about ideas and applied methods • Ability to analyze facts and task • Ability to combine facts and ideas • Ability to gather the most important elements of a fact • Ability to use the knowledge and experience in decision making process	50%
2	Professional applicable, as well as transferable applicable competencies	Professional applicable transferable integrated competencies • Skills displayed in work done, • appropriate usage of technique and technology in work done • Combining of thinking and work done • Usage of acquired knowledge and understanding • Self-learning • Communication skills • Usage of information technologies • Problem solving skills • autonomy and initiative • team work competencies • effective usage of time/ time managemet • response to others views	50%

Assessment scale

At the end of the semester YSAFA students' assessment is done with numbers, letters and scores.

Score	Mark	Letter mark	Comment
10	4.0	A	Passing marks
9	3.5	B	
8	3.0	C	
7	2.5	D	
6	2.0	E	
5		FX	Failed A student has an opportunity to redo some tasks
Below 5		F	Failed A student should repeat the course.

Assessment criteria

Score	General and professional knowledge and understanding	Professional applicable, as well as transferable competencies	Key words
	The work represented by student shows	The work represented by student shows	
10	• acquisition of excellent and exclusive knowledge, intellectual abilities • understanding, deep interpretation of relevant profession or subject, deep and reasoning perception	• excellent usage of professional, transferable, applicable competencies for relevant or generally associated with profession or subject. • demonstration of exceptional abilities, creative and individual approaches	excellent independent creative exclusive
9	• excellent and comprehensive acquisition of knowledge • deep interpretation of relevant profession or subject, deep and reasoning perception	• excellent usage of professional, transferable, applicable competencies for relevant or generally associated with profession or subject. • demonstration of exceptional abilities, creative and individual approaches • usage of methods	excellent comprehensive
8	• valid and considerable knowledge acquisition • commenting on relevant or generally associated with profession or subject • reasoning	• excellent usage of professional, transferable, applicable competencies for relevant or generally associated with profession or subject using different methods	valid grounded based on methods considerable

	perception of methodology		
7	• knowledge acquisition, professional approach demonstration of relevant or generally associated with profession or subject • acquisition of relevant methodology	• usage of professional, transferable, applicable competencies for relevant or generally associated with profession or subject based on relevant professional approach, demonstration well-structured methods and control approaches	Controlled Appropriate Critical
6	• acquisition of sufficient knowledge, a good demonstration of relevant or generally associated with profession or subject • not in-depth methodology approach	• transferable, applicable and sufficient usage of relevant or generally associated with profession or subject • demonstration of comprehensive approach about chosen subject or profession	Sufficient Grounded Shallow
5	• acquisition of limited and insufficient knowledge	Limited usage of transferable, applicable and professional applicable competencies	Limited Eelementary
4	• incomplete acquisition of knowledge	• Transferable, applicable and professional applicable competencies Incomplete usage	Incomplete

Admission

Applicants take exams in Drawing, Painting and Composition for YSAFA computer graphics academic programme.

1. Drawing

Task

Portrait

In order to find out applicant's knowledge and abilities an applicant is given a task to make a portrait (dreaw with pencil).

To place portrait in A3 paper, to build a head parameters, neck movement with head, size interrelationship, to get space and image with the help of tones and plans.

Needed material resources

Hard and soft pencils, A3 paper, rubber, pencil-sharpener.

Work duration.

10 academic hours, which are organized during 3 days.

Assessment criteria

a) head placement on the paper surface, 0-4 points

b) neck movement towards head, 0-4 points

c) maintenance of anatomical proportions 0-4 points

d) the relation between tones and plans, 0-4 points

e) the revelation of model's features0-4 points

2. Painting

Task.

Naturmort:

In order to find out applicant's knowledge and abilities an applicant is given a task to make a natumort. Applicant should paint a natumort on A2 paper with watercolour: to place it correctly on paper surface, to build correctly proportions between natumort and things, to show th harmony of cold and hot colour and shades

Needed material resources

A2 paper, acrylic, tempera, gouache, watercolor, pencil, water glass, brushes.

Work duration.

10 academic hours, which are organized during 3 days.

Assessment criteria

a) natumort placement on paper surface, 0-4 points
b) proportion of things, 0-4 points
c) natumort problem solving, 0-4 points
d) Subjects, material and size problem solving, 0-4 points
e) colour harmony, 0-4 points

3. Composition

Task № 1.

Applicant's drawing knowledge disclosing task

The task consists of two parts.

a) Projection Drawing: an applicant is given a task to draw a geometrical body (cylinder or prism with regular polygonal base), in which are opened «Z», «Y» the coordinate axes parallel axes. Two projections are given, one of which is incomplete. Students should fill the incomplete projection, to draw the second one and build outstanding image giving necessary cuts.

b) Լծորդումներ: An applicant is given a difficult geometrical (compound) image, whose construction considers the knowledge of difficult geometrical drawing.

Needed material resources

A2 or 2 A3 drawing paper, drawing materials (two triangular rulers with 45˚ and 60/30˚ corners, caliper, size-caliper, bevel, ruler/inch ruler)

Work duration

6 academic hours, which are organized during a day (applicants stay at classrooms during breaks)

Assessment criteria

1) problem / task– 10 points
a) Construction of projection, 0-5 points
b) Drawing techniques, 0-5 points

2) task – 10points

ա) construction of compound elements, 0-5 points

բ) Drawing techniques, 0-5 points

Task № 2.

Disclosing creative task of Applicant's ability to form a composition

An applicant is given geometric images, they chose at least 3 images and create symmetrical and asymmetrical composition.
One of them should be colourful based on applicant's choice and the other one should be solid colour.

Needed material resources

A2 or 2 A3 drawing paper (it is desirable to be pulled on board), watercolour, (colored pencils), brush, rulers.

Work duration

6 academic hours, which are organized during a day (applicants stay at classrooms during breaks)

Assessment criteria

a) Construction of component elements of image, 0-4 points
b) Drawing technique, 0-4 points
c) Correct placement of creation on paper, 0-3 points
d) Applicant's imagination expressed in creation with elements diversity, 0-3 points
e) The harmony of chosen colors, colorfulness, drawing skills usage in creation, 0-3 points
f) Work done accuracy, applicant's desires and inclinations, 0-3 points

List of needed material resources for academic programme implementation

Material resources for general professional courses

Easels
Plaster cast
Naturmort materials /thematic, from different materials/
Different colors and decorative fabrics for naturmort
chairs
Drawing tables
Models
Plaster geometric bodies
Plaster statuettes
Artificial lighting lamps
Computer
Projector
Internet
Library resources

Material resources for special professional courses

Powerful computers
Software
Colour printers - A4, A3, A2 formats
Paper of different quality - A4, A3, A2 formats
Scanner
Copy machine - A3, A2 formats
Drawing tables
Photo studio

Teaching staff

	Name, Surname, Middle Name	Position/Subjecy	Telephone/E-mail Add.
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