

BUNIN YELETS STATE UNIVERSITY

Director of the Institute of Culture, History and Law



THE WORK PROGRAMME OF THE DISCIPLINE **B1.C.05.04 Methodology for teaching digital drawing**

Direction of training: 44.03.01 *Pedagogical Education*

Programme: *Fine Arts*

Qualification (degree): *bachelor*

Mode of study: *full-time*

Institute of Culture, History and Law

Department: *Design, Art Education and Technology*

	full-time form	full-time and part-time form	part-time form
Study course	2, 3		
Term	4, 5		
Lectures	34		
Laboratory work			
Seminars (practical work)	68		
including practical training			
Form(s) of control	Credit test 4 term, Exam 5 term – 0,3		
Control	9		
Other forms of work			
Independent work	140,7		

Total number of academic hours: 252

Labour intensity: 7 credits

Developer of the work programme:

Associate Professor Solomentseva S.B.

I. ORGANIZATIONAL AND METHODOLOGICAL SECTION

The purpose of studying the discipline: development of the ability to develop basic and additional educational programs and their individual components using digital imaging technologies.

Objectives of studying the discipline:

- explore digital art as a new direction in artistic creativity;
- teach how to use a graphic tablet as the main tool for digital drawing;
- explore the capabilities of software for digital drawing;
- acquire skills in creating digital author's projects;
- teach how to design educational programs using digital art technologies.

The place of the discipline in the structure of the basic professional educational program: it is implemented within the framework of the basic (compulsory) part of block B1. Disciplines (modules).

Planned learning outcomes for the discipline:

Competence code	Indicators of Competence Achievement	Planned learning outcomes for the discipline
GPC-2	To know: <ul style="list-style-type: none"> – federal state educational standards; – history, patterns and principles of construction and functioning of educational systems; – basics of didactics; – modern educational technologies, including ICT. 	Knows: <ul style="list-style-type: none"> – federal state educational standards; – history, patterns and principles of construction and functioning of educational systems; – fundamentals of didactics in the field of fine arts; – modern educational technologies, including digital art technologies.
	To be able to: <ul style="list-style-type: none"> – develop individual components of basic and additional educational programs; – use ICT in developing educational programs; – plan educational sessions. 	Is able to: <ul style="list-style-type: none"> – develop individual components of basic and additional educational programs in the field of fine arts; – use digital art technologies in developing educational programs; – plan educational lessons on digital drawing.
	To possess: <ul style="list-style-type: none"> – techniques for developing programs of academic disciplines within the framework of the basic general educational program; – skills in applying modern educational technologies in a real and virtual educational environment; – ICT: at the user level; at the general pedagogical level; at the subject-pedagogical level. 	Possesses: <ul style="list-style-type: none"> – methods of developing programs of academic disciplines of the art cycle within the framework of the basic general education program; – skills in applying modern educational technologies in a real and virtual educational environment; – ICT: at the general pedagogical level.
GPC-5	To know:	Knows:

	<ul style="list-style-type: none"> – principles of organizing monitoring and evaluation of students' educational results; – technologies and methods of monitoring and evaluation of educational results; – special technologies and methods that allow identifying and correcting learning difficulties. 	<ul style="list-style-type: none"> – principles of organizing monitoring and assessment of students' learning outcomes in the field of fine arts; – technologies and methods of monitoring and assessment of educational outcomes in digital drawing; – special technologies and methods that allow identifying and correcting learning difficulties.
	<p>To be able to:</p> <ul style="list-style-type: none"> – apply tools, methods of diagnostics and evaluation of indicators of the level and dynamics of students' development; – conduct pedagogical diagnostics and correction of learning difficulties. 	<p>Is able to:</p> <ul style="list-style-type: none"> – apply tools, diagnostic methods and measure indicators of students' development levels and dynamics; – conduct pedagogical training and correction necessary in art education.
	<p>To possess:</p> <ul style="list-style-type: none"> – methods of monitoring and evaluation of students' educational results (personal, subject, meta-subject); – special methods that allow identifying and correcting learning difficulties. 	<p>Possesses:</p> <ul style="list-style-type: none"> – methods of monitoring and assessing students' learning outcomes (personal, subject, meta-subject) in digital drawing; – special methods that allow identifying and correcting learning difficulties.
GPC-9	<p>To know:</p> <p>principles of operation of modern information technologies and methods of their use to solve problems of professional activity.</p>	<p>Knows:</p> <ul style="list-style-type: none"> – the principles of operation of modern digital art technologies and methods of using them to solve problems of professional activity.
	<p>To be able to:</p> <p>reasonably choose modern information technologies and use them to solve problems of professional activity.</p>	<p>Is able to:</p> <ul style="list-style-type: none"> – reasonably select modern digital art technologies and use them to solve problems of professional activity.
	<p>To possess:</p> <p>skills of working with modern information technologies, methods of their use to solve problems of professional activity.</p>	<p>Possesses:</p> <ul style="list-style-type: none"> – the skills of working with modern digital art technologies, methods of using them to solve problems of professional activity.

II. CONTENT AND SCOPE OF THE DISCIPLINE

indicating the number of hours allocated for contact work of students with the teacher (by type of class) and for independent work

Full-time education

№	Name of sections and topics	Total	Classroom lessons			Ind. work.
			Lec.	Sem. (pract.)	Lab.	
1	2	3	4	5	6	7
	Section 1. Digital art as a new direction in artistic creativity.	32	8	8		16

1.	Topic 1. History of the development of digital fine art.	16	4	4		8
2.	Topic 2. Types of digital fine art.	16	4	4		8
	Section 2. Graphic tablet as the main tool for digital drawing.	32	4	12		16
3.	Topic 3. Types, operating principle and main characteristics of modern graphic tablets.	12	2	4		6
4.	Topic 4. Methods of using graphic tablets to form an image, develop compositional-plastic and coloristic solutions for works of art.	20	2	8		10
	Section 3. An overview of digital drawing software capabilities.	44	6	16		22
5.	Topic 5. Commercial graphic editors and open-source software for digital driving.	32	4	12		16
6.	Topic 6. Online services for creating digital art works.	12	2	4		6
	<i>Credit test</i>					
	<i>Total for 4 term</i>	<i>108</i>	<i>18</i>	<i>36</i>		<i>54</i>
	Section 4. Features of creating digital author's projects.	64	8	16		40
7.	Topic 7. Idea in digital art. Algorithm for generating ideas.	16	2	4		10
8.	Topic 8. Digital drawing and painting techniques: styles, tools and techniques.	34	4	10		20
9.	Topic 9. Methods for assessing the optimality of design solutions for digital art projects.	14	2	2		10
	Section 5. Designing educational programs using digital art technologies.	70,7	8	16		46,7
10.	Topic 10. Requirements for the development of basic and additional educational programs in digital fine arts.	42,7	6	10		26,7
10.	Topic 11. Methods of monitoring and assessing the results of education in the field of digital drawing.	28	2	6		20
	<i>Control</i>	<i>9</i>				
	<i>Exam</i>	<i>0,3</i>				
	<i>Total for 5 term</i>	<i>144</i>	<i>16</i>	<i>32</i>		<i>86,7</i>
	Total number of academic hours:	252	34	68		140,7

Full-time and part-time education (not implemented)

Part-time education (not implemented)

III. EVALUATION MATERIALS FOR CONDUCTING CURRENT AND INTER-IM CERTIFICATION OF STUDENTS IN THE DISCIPLINE

Current certification is carried out in the form of tests, abstracts, creative assignments, etc.

Standard version of the test

1. A device that converts hand movements into computer graphics is called:

Select one correct answer:

- a) plotter
- b) modem
- c) stylus
- d) all answers are incorrect

2. The quality of a digital image is determined by the number of dots it consists of and this is called:

Select one correct answer:

- a) color capacity
- b) graphic scan
- c) resolution scan
- d) resolution

3. An image in the RGB color model on the screen is formed by mixing the following basic colors:

Select one correct answer:

- a) blue, yellow, red
- b) red, green, blue
- c) yellow, red, black
- d) white, green, red

4. A graphic image presented in computer memory as a description of a set of dots indicating their coordinates and color shade is called:

Select one correct answer:

- a) vector
- b) linear
- c) raster
- d) all answers are incorrect

5. What command can be used to convert a raster image into a vector image?

Select one correct answer:

- a) tracing
- b) inversion
- c) cropping
- d) all answers are incorrect

6. What can be attributed to digital information input devices?

Select one correct answer:

- a) mouse, keyboard, screen
- b) keyboard, printer, speakers
- c) scanner, keyboard, mouse
- d) speakers, scanner, keyboard

7. What color modes are used in computer graphics?

Select several correct answers:

- a) CMYK
- b) in shades of red
- c) RGB
- d) all answers are incorrect

8. What is the name of the resource containing systematized material on design engineering, ensuring creative, active acquisition of knowledge, skills and abilities in this area by students and their testing?

Select one correct answer:

- a) e-book
- b) augmented reality portal
- c) electronic educational resource
- d) all answers are correct

9. Establish a correspondence between the term and its definition:

- | | |
|----------------|---|
| 1. Digital art | a) drawing letters or creating a composition of words |
| 2. Lettering | b) step-by-step (stage-by-stage) explanation of a process, instructions for doing something |
| 3. Tutorial | c) creating works of art in digital form using computer technology |

10. What are the main functions of color in digital graphic design?

Select one correct answer:

- a) design and technological
- b) ideological and religious
- c) emotional-aesthetic and communicative
- d) all answers are correct

Sample topics for abstracts

- 1. Stages of introducing computer technologies into art education.
- 2. Modern requirements for developing fine art training programs.
- 3. Analysis of software products for digital art.
- 4. Modern trends and directions of development of digital art sciences.

5. Comparative analysis of universal computer graphics packages.
6. Aesthetics of digital computer fine art.
7. Interaction of culture and digital technologies.
8. Computer art: essence and prospects.
9. Digital art as a tool for developing creativity.
10. Computer graphics as a special type of contemporary art.
11. History of digital art development.
12. Digital art in the film industry.
13. Digital art in web design.
14. Famous digital artists.
15. Graphic software for digital art.
16. Digital art, its origin and essence.
17. Features of developing programs for monitoring educational results obtained during training in digital drawing.
18. Promising directions for the development of digital technologies in art education.

Sample topics for creative assignments

1. Create a digital linear drawing that can later be used to form an artist's portfolio, provide methodological support for creative activities and design events. A4 format, computer graphics.
2. Create an image using digital painting technique that can later be used to form an artist's portfolio, provide methodological support for creative activities and design events. A4 format, computer graphics.
3. Create graphic sketches of a logo and name for a competition of students' research and project works, offering a conceptual, creative solution. A4 format, computer graphics.
4. Create an original concept for a booklet with creative typographic elements, justify the choice of form, design features, font, color, ornamental solution, etc. A4 format, computer graphics.
5. Create a portfolio concept for assessing the level of competence in the field of digital drawing. Define the content, recommended information and multimedia technologies, etc. Justify your choice.

Interim assessment of students is carried out in the form of a credit test, an exam using the following assessment materials: a list of questions for a credit test, list of questions for an exam.

List of questions for the credit test (4 term, Full-time education)

1. Digital art as a new direction in artistic creativity.
2. History of digital fine art.
3. The emergence of digital fine art in the 20th century.
4. Famous digital artists of the 20th -21st centuries.
5. Types of digital fine art.
6. Distinctive features of digital drawing.
7. Specifics of digital painting.

8. Graphic tablet as the main tool for digital drawing.
9. Types, operating principle and main characteristics of modern graphic tablets.
10. Methods of using graphic tablets to form an image, develop compositional-plastic and coloristic solutions for works of art.
11. An overview of digital drawing software capabilities.
12. Commercial graphic editors and open-source software for digital drawing.
13. Overview of Photoshop's capabilities for creating digital works.
14. Using the tools of the freely distributed program Krita to create digital works.
15. Free raster graphic editor of drawings Gimp.
16. Potential of using free raster graphic editor Paint.NET in art education
17. Overview of the capabilities of specialized graphic programs for tablets.
18. Online services for creating digital art works.

List of questions for the exam (5 term, Full-time education)

1. Features of creating digital author's projects.
2. Idea in digital art. Algorithm for generating ideas.
3. Methods for generating new artistic ideas.
4. Types of digital illustrator work.
5. Techniques and methods of digital drawing.
6. Styles, tools and techniques of digital drawing.
7. Creating a palette that imitates the artist's palette.
8. Drawing and coloring tools.
9. Line drawing techniques.
10. Layers and blending modes.
11. Selection tools. Masks. Masking techniques.
12. Working with color. Functions of color and tone correction.
13. Color schemes.
14. Psychology of visual perception of digital images.
15. Distortions. Puppet deformation.
16. Technique of digital applique. Collage.
17. Linear and spot digital graphics. Contour sketches.
18. Methods for assessing the optimality of a design solution.
19. Main criteria for assessing the optimality of a design solution.
20. Design of educational programs using digital art technologies.
21. Requirements for the development of basic and additional educational programs in digital fine arts. Methods for monitoring and evaluating the results of education in the field of digital drawing.

IV. LIST OF REFERENCES REQUIRED FOR MASTERING THE DISCIPLINE

4.1. Main literature

1. Ershova, D. E. Fine Arts: A Workshop on Visual Network Technologies: [16+] / D. E. Ershova; Herzen State Pedagogical University of Russia. – St. Petersburg: Herzen State Pedagogical University of Russia (RSPU), 2021. – 88 p.: ill. – Access mode: by sub-

scription. – URL: <https://biblioclub.ru/index.php?page=book&id=691734> (date of access: 04 April 2025). – Bibliography in the book. – ISBN 978-5-8064-3009-1. – Text: electronic.

2. Nagaeva, I. A. Art informatics: fundamentals, technologies, prospects / I. A. Nagaeva. - Moscow; Berlin: Direct-Media, 2021. – 120 p.: ill., table. – Access mode: by subscription. – URL: <https://biblioclub.ru/index.php?page=book&id=602628> (date of access: 04 April 2025). – Bibliography in the book – ISBN 978-5-4499-1866-6. – DOI 10.23681/602628. – Text: electronic.

4.2. Additional literature

1. Shafrai, A. V. Graphic editors of a designer: a tutorial: [16+] / A. V. Shafrai; Kemerovo State University. - Kemerovo: Kemerovo State University, 2019. - 102 p.: ill. - Access mode: by subscription. - URL: <https://biblioclub.ru/index.php?page=book&id=600400> (date of access: 04 April 2025). - Bibliography in the book. - ISBN 978-5-8353-2423-1. - Text: electronic.
2. Shuldova, S. G. Computer graphics: a tutorial / S. G. Shuldova. - Minsk: RIPO, 2020. - 301 p.: ill., table. - Access mode: by subscription. – URL: <https://biblioclub.ru/index.php?page=book&id=599804> (date of access: 04 April 2025). – Bibliography in the book – ISBN 978-985-503-987-8. – Text: electronic.

V. LIST OF RESOURCES OF THE INFORMATION AND TELECOMMUNICATION NETWORK "INTERNET" REQUIRED FOR MASTERING THE DISCIPLINE

№	Link to information resource	Name of the development in electronic form	Availability
1.	http://edu.ru/	Russian Education: Federal Portal. Includes links to portals and websites of educational institutions; state educational standards; regulatory documents; catalog of excursions and educational programs.	Free access

VI. MODERN PROFESSIONAL DATABASES AND INFORMATION REFERENCE SYSTEMS

1.	http://www.biblioclub.ru	Electronic library system (ELS) University library online	Registration via the university computer. In the future, unlimited individual access is provided from any point where there is access to the Internet.
2.	https://e.lanbook.com/	Electronic library system (ELS) Lan	Registration via the university computer. In the future, unlimited individual access is provided from any point

			where there is access to the Internet.
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VII. LICENSED AND FREELY DISTRIBUTABLE SOFTWARE

The following licensed and freely distributed software is used in the implementation of the academic discipline:

- Microsoft Windows;
- Microsoft Office;
- LibreOffice;
- Photoshop;
- Krita;
- Gimp and others.

VIII. EQUIPMENT AND TECHNICAL TEACHING AIDS REQUIRED FOR THE IMPLEMENTATION OF THE EDUCATIONAL PROCESS IN THE DISCIPLINE

Classes are held in classrooms equipped with specialized furniture, including stationary or portable technical teaching aids (projector, screen, computer/laptop). Practical classes are held in specialized classrooms equipped with personal computers with licensed and freely distributed software installed and the ability to connect to the Internet.

Independent work is carried out in rooms equipped with computers with the ability to connect to the Internet and provide access to the electronic information and educational environment of the university.