

## RATING -LIST

MARKS			RATING -LIST	Lectures	16 hours
«Excellent» «Good»	A+	96 – 100 Points	<b>“DESCRIPTIVE GEOMETRY. ENGINEERING GRAPHICS”</b> For Bachelor of area  150700 Mechanical Engineering 230100 Computer Science 140400 Electrical Engineering  <b>2013/2014 academic year, semester 1</b>  <b>Author:</b> Associate Professor, Interdisciplinary Department R.G. Dolotova	Practical classes	32 hours
	A	90 – 95 Points		Laboratory works	-
«Fair»	B+	80 – 89 Points		<b>Total contact hours</b>	<b>48 hours</b>
	B	70 – 79 Points		Self-Study	52 hours
Pass	C+	65 – 69 Points		<b>Total hours</b>	<b>100 hours</b> <b>3 Credits</b>
	C	55 – 64 Points		Final assessment form	Final test
Fail	D	> 55 Points			
«Excellent»	F	< 55 Points			

### Outcomes (Results) of course study:

R1	An ability to apply skills of spatial objects images on flat drawings
R2	An ability to apply skills in designing typical details and their connections; registration of the part lists and technical documentation
R3	An ability to carry out sketches, work drawings of details and assembly units, use computer schedules means

Rated activity	number of activities	Points
Graphic works	5	50
Midterm Tests	2	10
Laboratory works	-	-
		<b>60</b>

Week	The date of the week beginning	Outcomes	Form of study	Hours		Rated activity		Points	Resources		
				C	S-C	Midterm Tests	Graphic Work		The literature	Internet - resources	Video-resources
1		R1	<b>Lecture 1. Theme:</b> Introduction. Projection method. Central and parallel projections. Convertibility of the drawing. Planes of projections. The complex drawing.	2					B 1 A 1	IR 1 IR 2	VR
			<b>Practical classes 1. Theme:</b> The principal rules of drawings presentational. Drawing of point. Mutual position of two points.	2					B 1 A 1	IR 1 IR 2	
			<b>Work 1. The title page. <math>\Phi.A3</math></b>		4		5	<b>5</b>			
2		R1	<b>Lecture 2. Theme:</b> Straight lines of the general position. Straight lines of particular position. Mutual position of a point and two a line. Mutual position of two straight lines. Representation of a plain in a drawing.	2					B 1 A 1	IR 1 IR 2	VR
		R2	<b>Practical classes 2. Theme:</b> The point and the line in the plane. Mutual position of a line and a plane. Mutual position of the planes.	2	2				B 1 A 1	IR 1 IR 2	VR
3		R1	<b>Lecture 3. Theme:</b> Surfaces. Determining and specifying surfaces in a drawing. Classification. Point and a line on the surface.	2					B 1 A 1	IR 1 IR 2	VR
			<b>Practical classes 3. Theme:</b> Surfaces. A point and a line on a surface.	2					B 1		VR
			<b>Work 2. Surfaces. Polyhedrons with an aperture. <math>\Phi.A3</math></b>		4		10	<b>10</b>			
4		R1 R2	<b>Lecture 4. Theme:</b> Polyhedrons surfaces.	2					B 1 B 2	IR 1 IR 2	VR
			<b>Practical classes 4. Theme:</b> Polyhedrons surfaces.	2	2				A 1	IR 1	VR
			<b>Work 3. Surfaces of rotation with an aperture. <math>\Phi.A3</math></b>		4		10	<b>10</b>			

Week	The date of the week beginning	Outcomes	Form of study	Hours		Rated activity		Points	Resources		
				C	S-C	Midterm Tests	Graphic Work		The literature	Internet - resources	Video-resources
5		R1	<b>Lecture 5. Theme:</b> The method of axonometric projection. Representations.	2	2				B 1 A2	IR 1 IR 2	VR
		R2	<b>Practical classes 5.</b> Polyhedrons surfaces, surfaces of rotation. Screw surfaces. Mutual intersection of surfaces. <i>Examination № 1</i>	2	4	5		<b>5</b>	B 1 A 1	IR 1 IR 2	VR
6		R1	<b>Lecture 6. Theme:</b> Basic rules and definitions.	2					B 1	IR 1	VR
		R2	<b>Practical classes 6. Theme:</b> Surfaces of rotation. Mutual intersection of surfaces.	2	2				B 1	IR 1 IR 2	VR
7		R1	<b>Lecture 7. Theme:</b> Tread.	2					B 1	IR 1	VR
			<b>Practical classes 7. Theme:</b> Surfaces of rotation. Mutual intersection of surfaces.	2	2				B 1 B 2	IR 1 IR 2	VR
8		R1	<b>Lecture 8. Theme:</b> Joints.	2					B 1		VR
		R2	<b>Practical classes 8. Theme:</b> Representations. Sectional views. Sections.	2	2				B 1 A 1	IR 1 IR 2	VR
9			<b>Conference - week 1</b>								
			<b>total (control certification) 1</b>			<b>5</b>	<b>25</b>	<b>30</b>			
10		R2 R3	<b>Practical classes 9. Theme:</b> Representations. Views	2					B 1 A 1	IR 1 IR 2	VR
11		R2 R3	<b>Practical classes 10. Theme:</b> Representations. Sectional views.	2	2				B 1 A 1	IR 1 IR 2	VR
12		R1	<b>Practical classes 11. Theme:</b> Basic rules and definitions.	2					B 1	IR 1	VR
		R2	<b>Work 4. Representations. Sectional views. Views. Axonometric Projection.</b>		8		20	<b>20</b>			
13		R3	<b>Practical classes 12. Theme:</b> Basic rules and definitions.	2					B 1	IR 1	VR

Week	The date of the week beginning	Outcomes	Form of study	Hours		Rated activity		Points	Resources		
				C	S-C	Midterm Tests	Graphic Work		The literature	Internet - resources	Video-resources
14		R2 R3	<b>Practical classes 13. Theme:</b> Representations. Sections.	2	2				B 1		VR
15		R2	<b>Practical classes 14. Theme:</b> Axonometric Projection	2	2				B 1	IR 1	VR
16		R2 R3	<b>Practical classes 15. Theme:</b> Joints. <i>Work 5. Joints.</i>	2	6		5	5	B 1		VR
17		R2	<b>Practical classes 16. Theme:</b> Joints. <i>Examination № 2.</i>	2	4	5		5	B 1	IR 1	
18		R3	<b>Conference - week 2</b>								
			<b>total ( control certification 2)</b>			10	50	60			
			<b>Final test</b>					40			
			<b>Total</b>	48	52			100			

## Literature

№ (Code)	Basic resources (B)	№ (Code)	Internet - resources (IR)	The address of a resource
B 1	Vinokurova G.F., Stepanov B.L. Engineering graphics. Textbook. – Tomsk: TPU Press, 2000, 170 pp.	IR 1	Rate of lectures as presentations Power Point	<a href="http://portal.tpu.ru/departments/kafedra/ngg/metodizki">http://portal.tpu.ru/departments/kafedra/ngg/metodizki</a> <a href="http://portal.tpu.ru:7777/SHARED/d/DOLOTOVA">http://portal.tpu.ru:7777/SHARED/d/DOLOTOVA</a>
B 2	Burkova S.P., Vinokurova G.F., Dolotova R.G., Stepanov B.L. Descriptive geometry. Textbook. – Tomsk: TPU Press, 2011, 165 pp.	IR2	Electronic posters on sections of a rate.	<a href="http://portal.tpu.ru/departments/kafedra/ngg/metodizki">http://portal.tpu.ru/departments/kafedra/ngg/metodizki</a>
№ (Code)	Additional (A)	№ (Code)	Video- resources (VR)	The address of a resource
A 1	Hart K.R. Engineering graphics. With problems and solutions. Textbook. – London, 1975, 188 pp.	VR	Engineering graphic (the Electronic textbook)	1. <a href="http://www.archive.org/stream/descriptivegeome033051mbp#page/n3/mode/2up">http://www.archive.org/stream/descriptivegeome033051mbp#page/n3/mode/2up</a> 2. <a href="http://ru.scribd.com/doc/39479843/Schaum-Descriptive-Geometry">http://ru.scribd.com/doc/39479843/Schaum-Descriptive-Geometry</a>
A 2	Morling K. Geometric and Engineering drawing. Textbook. – London, 1974, 263 pp.			

« \_\_\_\_\_ » \_\_\_\_\_ 2013 г.

Head of IDD

G.V. Kashkan

Associate Professor, Interdisciplinary Department

R.G. Dolotova

## RATING -LIST “DESCRIPTIVE GEOMETRY AND ENGINEERING GRAPHICS”

ESTIMATIONS			RATING -LIST of the course DESCRIPTIVE GEOMETRY. ENGINEERING GRAPHICS		
«Excellent» «Good»	A+	96 – 100 Points	For Bachelor area 150700 Mechanical Engineering 230100 Computer Science 140400 Electrical Engineering  <b>2013/2014 academic year, semester 2</b>  <b>Author:</b> Associate Professor, Interdisciplinary Department R.G. Dolotova	Lectures	
	A	90 – 95 Points		Practical classes	24 hours
«Fair»	B+	80 – 89 Points		Laboratory works	24 hours
	B	70 – 79 Points		<b>Total contact hours</b>	<b>48 hours</b>
Pass	C+	65 – 69 Points		Self-Study	50 hours
	C	55 – 64 Points		<b>Total hours</b>	<b>98 hours</b> <b>2 Credit cost</b>
Fail	D	> 55 Points		Final assessment form	Final test
«Excellent»	F	< 55 Points			

### Results of training on discipline:

R1	To apply skills of the image of spatial objects on flat drawings
R2	To apply skills of designing of typical details and their connections; skills of registration of the part lists and technical documentation
R3	To carry out sketches, working drawings of details and assembly units, to use means computer schedules

Estimating actions	Quantity	Points
Topics for Graphic works	<b>2</b>	<b>30</b>
Midterm Tests	<b>4</b>	<b>30</b>
Laboratory works	-	-
		<b>60</b>

Week	The date of the week beginning	Outcomes	Form of study	Hours		Rated activity		Points	Resources		
				C	S-C	Midterm Tests	Topics for G.W.		The literature	Internet - resources	Video-resources
1		R1	<b>Practical classes 1. Theme:</b> Sketches of Details.	2					B 1	IR 1	
		R3	<b>Work 6.</b> Sketches of Details. Assembly Drawing A 3,4.		20		15	15	A 1	IR 2	
2		R1	<b>Laboratory works 1. Theme:</b> Fundamentals of Computer – aided Design (CAD).	2					B 1	IR 1	
									A 1	IR 2	
3		R1	<b>Practical classes 2. Theme:</b> Sketches of Details.	2					B 1	IR 1	
		R2							A 1	IR 2	
4		R1	<b>Laboratory works 2. Theme:</b> Introduction to CAD system.	2					B 1	IR 1	
									B 2	IR 2	
5		R1	<b>Practical classes 3. Theme:</b> Sketches of Details.	2					B 1	IR 1	
		R2								IR 2	
6		R1	<b>Laboratory works 3. Theme:</b> Introduction to AutoCAD.	2					B 1	IR 1	
		R2							B 2	IR 2	
		R3									
7		R1	<b>Practical classes 4. Theme:</b> Assembly Drawing	2	6	10		10	B 1	IR 1	
		R2	<b>Examination № 1</b>						A 1	IR 2	
8		R1	<b>Laboratory works 4. Theme:</b> Commands AutoCAD.	2		5		5	B 1	IR 1	
		R2	<b>Examination № 2</b>						A 1	IR 2	
9			<b>Conference - week 1</b>								
			<b>In total on a control point (certification) 1</b>			15	15	30			
10		R1	<b>Practical classes 5. Theme:</b> Assembly Drawing	2					B 1	IR 1	
		R2	<b>Work 7.</b> Overall Drawing Detailing. A3,4		16		15	15	A 1	IR 2	
		R3	<b>Laboratory works 5. Theme:</b> Commands AutoCAD.	2					B 1	IR 1	
								A 1	IR 2		

Week	The date of the week beginning	Outcomes	Form of study	Hours		Rated activity		Points	Resources		
				C	S-C	Midterm Tests	Topics for G.W.		The literature	Internet - resources	Video-resources
11		R1	<b>Practical classes 6. Theme:</b> Overall Drawing Detailing	2					B 1	IR 1	
		R2	<b>Laboratory works 6. Theme:</b> Commands AutoCAD.	2					A 1	IR 2	
12		R1	<b>Practical classes 7. Theme:</b> Overall Drawing Detailing	2					B 1	IR 1	
		R2	<b>Laboratory works 7. Theme:</b> Commands AutoCAD.	2					A 2	IR 2	
13		R1	<b>Practical classes 8. Theme:</b> Overall Drawing Detailing	2					B 1	IR 1	
		R2 R3	<b>Laboratory works 8. Theme:</b> Commands AutoCAD.	2					B 2	IR 2	
14		R2	<b>Practical classes 9. Theme:</b> Overall Drawing Detailing	2					B 1	IR 1	
		R3	<b>Laboratory works 9. Theme:</b> Introduction to INVENTOR.	2					B 2	IR 2	
15		R1	<b>Practical classes 10. Theme:</b> Overall Drawing Detailing	2					B 1	IR 1	
		R2 R3	<b>Laboratory works 10. Theme:</b> Commands INVENTOR.	2					B 2	IR 2	
16		R1	<b>Practical classes 11. Theme:</b> Overall Drawing Detailing	2					B 1	IR 1	
		R2 R3	<b>Laboratory works 11. Theme:</b> Commands INVENTOR. <b>Examination № 3.</b>	2	2	5		<b>5</b>	B 2	IR 2	
17		R1	<b>Practical classes 12. Theme:</b> Overall Drawing Detailing	2	6	10		<b>10</b>	B 1	IR 1	
		R2 R3	<b>Examination № 4.</b>						B 2	IR 2	



Week	The date of the week beginning	Outcomes	Form of study	Hours		Rated activity		Points	Resources		
				C	S-C	Midterm Tests	Topics for G.W.		The literature	Internet - resources	Video-resources
			Laboratory works 12. Theme: Commands INVENTOR.	2					B 1 B 2	IR 1 IR 2	
18			Conference - week 1								
			In total on a control point (certification) 2			30	30	60			
			Final test					40			
			Total amount of work on discipline	48	50						

### Supply with information Educational

№ (Code)	Basic resources (B)
B 1	Vinokurova G.F., Stepanov B.L, Gorisev S.A. Engineering graphics and CAD. Textbook. – Tomsk: TPU Press, 2000, 137 pp.
B 2	Burkova S.P., Vinokurova G.F., Dolotova R.G., Stepanov B.L. Descriptive geometry. Textbook. – Tomsk: TPU Press, 2011, 165 pp.
№ (Code)	Additional (A)
A 1	Hart K.R. Engineering graphics. With problems and solutions. Textbook. – London, 1975, 188 pp.
A 2	Morling K. Geometric and Engineering drawing. Textbook. – London, 1974, 263 pp.

№ (Code)	Internet - resources (IR)	The address of a resource
IR 1	Rate of lectures as presentations Power Point	<a href="http://portal.tpu.ru/departments/kafedra/ngg/metodizki">http://portal.tpu.ru/departments/kafedra/ngg/metodizki</a> <a href="http://portal.tpu.ru:7777/SHARED/d/DOLOTOVA">http://portal.tpu.ru:7777/SHARED/d/DOLOTOVA</a>
IR2	Electronic posters on sections of a rate.	<a href="http://portal.tpu.ru/departments/kafedra/ngg/metodizki">http://portal.tpu.ru/departments/kafedra/ngg/metodizki</a>
№ (Code)	Video-resources (VR)	

« \_\_\_\_\_ » \_\_\_\_\_ 2013 г.

Managing faculty MD

G.V. Kashkan

Associate Professor, Interdisciplinary Department

R.G. Dolotova