RATING -LIST

MARKS			RATING -LIST **"DESCRIPTIVE GEOMETRY. ENGINEERING GRAPHICS"** Bachelor Degree 150700 Mechanical Engineering 230100 Computer Science 140400 Electrical Engineering **2013/2014 academic year, semester 1** **Author:** Associate Professor, Interdisciplinary Department R.G. Dolotova	Lectures	16 hours
«Excellent» «Good»	A+	96 – 100 Points		Practical classes	32 hours
	A	90 – 95 Points		Laboratory works	-
«Fair»	B+	80 – 89 Points		**Total contact hours**	**48** hours
	B	70 – 79 Points		Self-Study	52 hours
Pass	C+	65 – 69 Points		**Total hours**	**100** hours **3** Credits
	C	55 – 64 Points			
Fail	D	> 55 Points		Final assessment form	Final test
«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	**-**	**-**
		60

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	**Lecture 1. Theme:** 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
			Practical classes 1. Theme: The principal rules of drawings presentational. Drawing of point. Mutual position of two points.	2					B 1 A 1	IR 1 IR 2	
			Work 1. The title page. Ф.А3		4		5	**5**			
2		R1 R2	**Lecture 2. Theme:** 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
			Practical classes *2.* Theme: 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	**Lecture 3. Theme:** 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
			Practical classes 3*.* Theme: Surfaces. A point and a line on a surface.	2					B 1		VR
			Work 2. Surfaces. Polyhedrons with an aperture. Ф.А3		4		10	**10**			
4		R1 R2	**Lecture 4. Theme:** Polyhedrons surfaces.	2					B 1 B 2	IR 1 IR 2	VR
			Practical classes *4.* Theme: Polyhedrons surfaces.	2	2				A 1	IR 1	VR
			Work 3. Surfaces of rotation with an aperture. Ф.А3		4		10	**10**			

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 R2	**Lecture 5. Theme:** The method of axonometric projection. Representations.	2	2				B 1 A2	IR 1 IR 2	VR
			Practical classes *5.* Polyhedrons surfaces, surfaces of rotation. Screw surfaces. Mutual intersection of surfaces. ***Examination № 1***	2	4	5		**5**	B 1 A 1	IR 1 IR 2	VR
6		R1 R2	**Lecture 6. Theme:** Basic rules and definitions.	2					B 1	IR 1	VR
			Practical classes *6.* Theme: Surfaces of rotation. Mutual intersection of surfaces.	2	2				B 1	IR 1 IR 2	VR
7		R1	**Lecture 7. Theme:** Tread.	2					B 1	IR 1	VR
			Practical classes *7.* Theme: Surfaces of rotation. Mutual intersection of surfaces.	2	2				B 1 B 2	IR 1 IR 2	VR
8		R1 R2	**Lecture 8. Theme:** Joints.	2					B 1		VR
			Practical classes *8.* Theme: Representations. Sectional views. Sections.	2	2				B 1 A 1	IR 1 IR 2	VR
9			**Conference - week 1**								
			total (control certification) 1			**5**	**25**	**30**			
10		R2 R3	**Practical classes *9.* Theme:** Representations. Views	2					B 1 A 1	IR 1 IR 2	VR
11		R2 R3	**Practical classes *10.* Theme:** Representations. Sectional views.	2	2				B 1 A 1	IR 1 IR 2	VR
12		R1 R2	**Practical classes *11.* Theme:** Basic rules and definitions.	2					B 1	IR 1	VR
			Work 4. Representations. Sectional views. Views. Axonometric Projection.		8		20	**20**			
13		R3	**Practical classes *12.* Theme:** 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	**Practical classes *13.* Theme:** Representations. Sections.	2	2				B 1		VR
15		R2	**Practical classes *14.* Theme:** Axonometric Projection	2	2				B 1	IR 1	VR
16			**Practical classes 1*5.* Theme:** Joints.	2					B 1		VR
		R2 R3	***Work 5. Joints.***		6		5	**5**			
17		R2	**Practical classes *16.* Theme:** Joints. ***Examination № 2.***	2	4	5		**5**	B 1	IR 1	
18		R3	**Conference - week 2**								
			total (control certification 2)			10	50	**60**			
			Final test					**40**			
			Total	48	52			**100**			

Literature

№ (**Code**)	**Basic resources** (B)
B 1	Vinokurova G.F., Stepanov B.L. Engineering graphics. Textbook. – Tomsk: TPU Press, 2000, 170 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	http://portal.tpu.ru/departments/kafedra/ngg/metodizki http://portal.tpu.ru:7777/SHARED/d/DOLOTOVA
IR2	Electronic posters on sections of a rate.	http://portal.tpu.ru/departments/kafedra/ngg/metodizki
№ (**Code**)	**Video-resources** (VR)	The address of a resource
VR	Engineering graphic (the Electronic textbook)	1.**http://www.archive.org/stream/descriptivegeome033051mbp#page/n3/mode/2up** 2.http://ru.scribd.com/doc/39479843/Schaum-Descriptive-Geometry

«_____» _____ 2013 г.

Head of IDD G.V. Kashkan

Associate Professor, Interdisciplinary Department R.G. Dolotova

RATING -LIST "DESCRIPTIVE GEOMETRYAND ENGINEERING GRAPHICS"

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

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	**2**	**30**
Midterm Tests	**4**	**30**
Laboratory works	**-**	**-**
		60

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 R3	**Practical classes *1.* Theme:** Sketches of Details.	2					B 1 A 1	IR 1 IR 2	
			Work 6. Sketches of Details. Assembly Drawing A 3,4.		20		15	**15**			
2		R1	**Laboratory works 1. Theme:** Fundamentals of Computer – aided Design (CAD).	2					B 1 A 1	IR 1 IR 2	
3		R1 R2	**Practical classes *2.* Theme:** Sketches of Details.	2					B 1 A 1	IR 1 IR 2	
4		R1	**Laboratory works 2. Theme:** Introduction to CAD system.	2					B 1 B 2	IR 1 IR 2	
5		R1 R2	**Practical classes *3.* Theme:** Sketches of Details.	2					B 1	IR 1 IR 2	
6		R1 R2 R3	**Laboratory works 3. Theme:** Introduction to AutoCAD.	2					B 1 B 2	IR 1 IR 2	
7		R1 R2	**Practical classes *4.* Theme:** Assembly Drawing ***Examination № 1***	2	6	10		**10**	B 1 A 1	IR 1 IR 2	
8		R1 R2	**Laboratory works 4. Theme:** Commands AutoCAD. ***Examination № 2***	2		5		**5**	B 1 A 1	IR 1 IR 2	
9			**Conference - week 1**								
			In total on a control point (certification) 1			15	15	**30**			
10		R1 R2 R3	**Practical classes 5*.* Theme:** Assembly Drawing	2					B 1 A 1	IR 1 IR 2	
			Work 7. Overall Drawing Detailing. A3,4		16		15	**15**			
			Laboratory works 5. Theme: Commands AutoCAD.	2					B 1 A 1	IR 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	**Practical classes *6.* Theme:** Overall Drawing Detailing	2					B 1 A 1	IR 1 IR 2	
		R2	**Laboratory works 6. Theme:** Commands AutoCAD.	2					B 1 B 2	IR 1 IR 2	
12		R1	**Practical classes *7.* Theme:** Overall Drawing Detailing	2					B 1 A 2	IR 1 IR 2	
		R2	**Laboratory works 7. Theme:** Commands AutoCAD.	2					B 1 A2	IR 1 IR 2	
13		R1 R2	**Practical classes *8.* Theme:** Overall Drawing Detailing	2					B 1 B 2	IR 1 IR 2	
		R3	**Laboratory works 8. Theme:** Commands AutoCAD.	2					B 1 B 2	IR 1 IR 2	
14		R2	**Practical classes *9.* Theme:** Overall Drawing Detailing	2					B 1 B 2	IR 1 IR 2	
		R3	**Laboratory works 9. Theme:** Introduction to INVENTOR.	2					B 1 B 2	IR 1 IR 2	
15		R1 R2	**Practical classes *10.* Theme:** Overall Drawing Detailing	2					B 1 B 2	IR 1 IR 2	
		R3	**Laboratory works 10. Theme:** Commands INVENTOR.	2					B 1 B 2	IR 1 IR 2	
16		R1 R2	**Practical classes *11.* Theme:** Overall Drawing Detailing	2					B 1 B 2	IR 1 IR 2	
		R3	**Laboratory works 11. Theme:** Commands INVENTOR. ***Examination № 3.***	2	2	5		**5**	B 1 B 2	IR 1 IR 2	
17		R1 R2 R3	**Practical classes *12.* Theme:** Overall Drawing Detailing ***Examination № 4.***	2	6	10		**10**	B 1 B 2	IR 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
			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	http://portal.tpu.ru/departments/kafedra/ngg/metodizki http://portal.tpu.ru:7777/SHARED/d/DOLOTOVA
IR2	Electronic posters on sections of a rate.	http://portal.tpu.ru/departments/kafedra/ngg/metodizki
№ (**Code**)	**Video-resources** (VR)	

«_____»_____ 2013 г.

Managing faculty MD G.V. Kashkan

Associate Professor, Interdisciplinary Department R.G. Dolotova