### Engineering Graphics and Design (EGD): Grade 11

<b>TERM 1</b> (45 days)	WEEK 1 27 – 29 Jan	WEEK 2 01 – 05 Feb	WEEK 3 08 – 12 Feb	WEEK 4 15 – 19 Feb	WEEK 5 22 – 26 Feb	WEEK 6 01 – 05 Mar	WEEK 7 08 – 12 Mar	WEEK 8 15 – 19 Mar	WEEK 9 23 – 26 Mar	WEEK 10 29 – 31 Mar
CAPS Topic (Days)	Classroom Admin (3 days)		Mechanical Drawing (20 days)		PAT (3 days)		PAT (3 days)			
Prescribed content & Skills	<ul> <li>Classroom and administrative management</li> <li>Revision of the General Drawing Principles</li> </ul>	3 <sup>rd</sup> angle orthograp sectional, sectional views of <u>simple</u> me Include the followi • Title, scale, hidde cutting planes, hatcl and layout planning • Hexagonal bolts washers/spacers. I labels • Different types of section, removed se • Conventional pro	hic working drawings I, half-sectional and p chanical <u>assemblies</u> . ng: n detail, dimensioning, ning detail, notes, syml nuts and lock nuts, keys and keyways an section, e.g. aligned ction, etc. esentation of common ent of working drawing	with non- part-sectional centre lines, bol of projection d appropriate section, revolved features name/title	<ul> <li>Revision of the Design Process</li> <li>The PAT scenarios given to learners and discussed.</li> </ul>	Complex isometric d auxiliary views and	es as well as	Phase 1: Complete/ consolidate the Design Process requirements: • Design brief, specifications and constraints • Research conducted • TWO free hand solutions • Selecting best solution.		
Requisite pre- knowledge	Gr 10 General Drawing Principles	<ul> <li>ALL the Grade 10</li> <li>3<sup>rd</sup> angle orthogram</li> </ul>	Mechanical drawing c phic projection	content	Design Process	<ul> <li>ALL the Grade 10 I</li> <li>The ability to conve</li> </ul>		Design Process requirements		
Add. resources, other than textbooks & drawing instruments	Files/folders, own rules, own notes	<ul> <li>LTSM: Own complaint notes, previous exam/test questions on specific topic/content, compliant content from Éc TD textbooks, relevant models/ physical examples</li> <li>ICT: Visualiser &amp; data projector, video clips</li> </ul>			PAT document, previous best practice examples	<ul> <li>LTSM: Own comp topic/content, complia examples</li> <li>ICT: Visualiser &amp; c</li> </ul>	specific dels/ physical	PAT document, previous best practice examples		
Informal Assessment	Class test (suggested)	Min 11 DDEs/Tasks completed. Class test suggested for theory			N/A	Min 9 DDEs/Tasks c		N/A		
Formal Assessment (SBA & PAT)	None	Drawings for <b>Course Drawing (CD) 1</b> (Mechanical Analytical) <b>&amp;CD 2</b> (1 <sup>st</sup> Mechanical Assembly) <b>&amp; CD 3</b> (2 <sup>nd</sup> Mechanical Assembly), to be sourced from the DDEs/Tasks			N/A	Drawings for CD 4 (Is	Phase 1 of ALL PATs completed			



basic education Department: Basic Education REPUBLIC OF SOUTH AFRICA

# Engineering Graphics and Design (EGD): Grade 11

TERM 2 (52 days)	WEEK 1 13 – 16 Apr	WEEK 2 19 – 23 Apr	WEEK 3 26 – 30 Apr	WEEK 4 03 – 09 May	WEEK 5 10 – 14 May	WEEK 6 17 – 21 May	WEEK 7 24 – 28 May	WEEK 8 09 May – 04 Jun	WEEK 9 07 – 11 Jun	WEEK 10 14 – 18 Jun	WEEK 11 21 – 24 Jun
CAPS Topic (Days)		I	Perspective Drawi (20 days)	ng			PAT (5 days)				
Prescribed content & Skills	2- Point perspec The HL, PP and	ctive drawings of <b>si</b> SP can be varied t	mple castings, dwellin o provide any desired	ngs and civil structure view.	es	Limited to single-sto drawings with floor p (i.e. only the basic sh the detail of the <u>four</u> ceiling itself. Include the followin • Annotation, labels, • Relevant abbreviat • On all relevant vie WC, bath, sink, sho features and fixture • Hatching detail and • Perimeters and tot • Format and conte	rey dwellings, 1s lans, detailed el ape of the roof), ndation to the co g: dimensioning, so ions and graphic ews/elevations: wer, built-in cup s already covered the application al/floor areas nt of layout/work	t angle orthographic levations with basic and sectional elevat eiling height, but not cales al symbols windows, doors and oboards etc., as well ed in Gr 10 & Gr 11 of colours ing drawing name/tit	e working single line roofs tions showing t including the I fixtures such as as all other	1st angle orthographic views of solids or a combination of solids, which includes solids with holes. The solids and shape of the holes may be either right-regular prisms or pyramids with 3, 4, 5, 6 and 8 sides only, as well as cylinders or cones. The axis of the solids may be perpendicular, parallel or inclined to one principal projection plane only. Include the following: • Sectional views • The true shapes of the cut surfaces • ALL hidden detail	Phase 2: Complete the working drawing an pictorial (3D) drawing as required by the specific scenario, i.e.: • An Orthographic Working Drawing with min 4 x views! • Pictorial (3D) Drawing (Perspective or Isometric Drawing)
Requisite pre- knowledge	<ul> <li>An understand</li> <li>The ability to d</li> </ul>	ling of the basic co convert 2D views in	ncepts of perspective to 3D drawing	drawing		<ul> <li>ALL the Grade 10</li> <li>1<sup>st</sup> angle orthograp</li> </ul>	Civil drawing con hic projecting	tent		<ul> <li>ALL the Grade 10</li> <li>Solid geometry content</li> <li>1<sup>st</sup> angle</li> <li>orthographic projecting</li> </ul>	Content & skills for Civil/ Mech. working drawings
Add. resources, other than textbooks & drawing instruments	LTSM: Own complaint notes, previous exam/test questions on specific topic/content, compliant content from TD textbooks, relevant models/ physical examples     ICT: Visualiser & data projector, video clips										N/A
Informal Assessment	Min <b>11 DDEs/Ta</b> (Min 9 Perspecti	<b>isks</b> completed for ive DDEs/Tasks in	Term 2 TOTAL!)			Min <b>11 DDEs/Tasks</b> perimeters, as well a	completed. Class s other theory	s test suggested for a	reas and	Min 3 DDEs/Tasks completed for Term 3	N/A
Formal Assessment	<u>ONE</u> com	pulsory <u>controlle</u>	<u>d test</u> that could be m	ade up of TWO ques	tions, or TWO separ	ate tests, that constitut	es a <u>min of 60 n</u>	ninutes and a min of	f 50 marks	N/A	
(SBA & PAT)	Drawings for Co	urse Drawing (CD	) 5 (2-point perspectiv	re), to be sourced from	m the DDEs/Tasks	Drawings for <b>CD 6</b> (F to be sourced from th	loor Plan & Eleva e DDEs/Tasks	ations) & CD 7 (Secti	onal Elevation),	N/A (To be completed in Term 3)	Phase 2 of ALL PATs completed



### Engineering Graphics and Design (EGD): Grade 11

<b>TERM 1</b> (52 days)	WEEK 1 13 – 16 Jul	WEEK 2 19 – 23 Jul	WEEK 3 26 – 30 Jul	WEEK 4 02 – 06 Aug	WEEK 5 10 – 13 Aug	WEEK 6 16 – 2 Aug	WEEK 7 23 – 27 Aug	WEEK 8 30 Aug – 03 Sept	WEEK 9 06 – 10 Sept	WEEK 10 13 – 17 Sept	WEEK 11 20 – 23 Sept
CAPS Topic	(1	Continue with Sol	id Geometry			Interpenetration & D	Development	Commence wi	PAT (4 days)		
Prescribed content & Skills	<ul> <li>1st angle orthographic views of solids or a combination of solids, which includes solids with holes. The solids and shape of the holes may be either right-regular prisms or pyramids with 3, 4, 5, 6 and 8 sides only, as well as cylinders or cones. The axis of the solids may be perpendicular, parallel or inclined to one principal projection plane only. Include the following:</li> <li>Sectional views</li> <li>The true shapes of the cut surfaces</li> <li>ALL hidden detail</li> </ul>				<ul> <li>1st angle orthographic between two solids or p</li> <li>The solids or pipes hat &amp; 8 sides, and/or cylin</li> <li>The axes of the two s</li> <li>The curves of interpe</li> <li>Hidden detail must be Include the surface det tubes.</li> </ul>	views showing the cu pipes joined at either 30 ave to be <b>right-regular</b> <b>iders only.</b> solids or tubes have to enetration have to be <b>sy</b> be shown.	rve of interpenetrat o°, 45°, 60° or 90°. r geometrical prism meet in a common ymmetrical.	Limited to single-storey dwellings, 1 <sup>st</sup> angle orthographic working drawings with floor plans, basic single line elevations and sectional elevations showing the detail of the <u>foundation to</u> <u>the slab</u> . Include the following: • Labels, dimensioning and scales • Relevant abbreviations and graphical symbols • On the floor plan only: windows and doors • Hatching detail • Perimeters and total/floor areas		Phase 3: Complete the PAT and include: • Self-assess. & Deadlines • Presentation	
Requisite pre-	◆ ALL the Grade 10 Solid geometry content				◆ Relevant Grade 10 &	11 Solid geometry con	ntent	<ul> <li>ALL general draw</li> </ul>	Design Process		
knowledge	<ul> <li>1<sup>st</sup> angle orthogra</li> </ul>	aphic projecting	averation	o on one sifis tonis	♦ 1 <sup>st</sup> angle orthographic	c projecting	relevant madala/nh	<ul> <li>1<sup>st</sup> angle orthogra</li> </ul>	requirements		
other than textbooks & drawing instruments	<ul> <li>LTSM: Own complaint notes, previous exam/test questions on specific topic/content, compliant content from TD textbooks, relevant models/ physical examples</li> <li>ICT: Visualiser &amp; data projector, video clips</li> </ul>								previous best practice examples		
Informal Assessment	Min <b>9 DDEs/Tasks</b> completed for Term 4 (i.e. Min 12 Solid DDEs/Tasks in TOTALI)				Min 12 DDEs/Tasks co	ompleted		Min 6 DDEs/Tasks	N/A		
Formal Assessment (SBA & PAT)	Drawings for <b>Cours</b> sectioned), <u>&amp;</u> <b>CD 9</b> (A sectioned	ourse Drawing (CD) 8 (two adjacent Solids that are       Drawings for CD 10 (Interpenetration & Development of two Prisms) & CD 11 (Interpenetration & Development that includes a Cylinder), to be sourced from the DDEs/Tasks         ned Solid with a hole), to be sourced from the DDEs/Tasks       DEs/Tasks					N/A (To be completed in Term 3)	Drawing for <b>CD 12</b> (3 <sup>rd</sup> Mech. Assembly)	All PATs completed		



# Engineering Graphics and Design (EGD): Grade 11

<b>TERM 1</b> (45	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK	6	WEEK 7	WE	WEEK 8	WEEK 9	WEEK 10
CAPS Topic	05 – 08 Oct Continue with Loci (Cam)	11 – 15 Oct Catch-u	18 – 22 Oct n/Revision	25 – 29 Oct	01 – 05 Nov	26 Nov	29 Nov – 03 Dec	06 – 10 Dec				
(Days)	(5 days in Term 4, 15 days in TOTAL )	(Until the com 'Final/Promotion	mencement of the nal Examinations')		Fina							
Prescribed content & Skills Limited to single-storey dwellings, 1 <sup>st</sup> angle orthographic working drawings with floor plans, basic single line elevation and sectional elevations showing the detail of the		Continue with/catch-up on content not completed <u>and/or</u> do revision		Q 1	PAPER 1 -CIVIL- (3 hours) In first-angle orthographic pro Civil analytical	jection ± 15%	lr Q 1	PAPER 2 -MECHANICAL- (3 hours)         In third-angle orthographic projection         Q 1       Mechanical analytical       ± 15%				
	<ul> <li>Include the following:</li> <li>Labels, dimensioning and</li> </ul>			Q 2	Development and/or Solid geometry	± 20%	Q 2	Loci of a Cam	± 20%			
	<ul> <li>scales</li> <li>Relevant abbreviations and graphical symbols</li> </ul>			Q 3	2-point perspective drawing	± 25%	Q 3	Isometric drawing	± 25%			
	<ul> <li>On the floor plan only:</li> <li>windows and doors</li> <li>Hatching detail</li> </ul>			Q 4	Civil working drawing	± 40%	Q 4	Mechanical assembly	± 40%			
	<ul> <li>Perimeters and total/floor areas</li> </ul>											
Requisite pre- knowledge	<ul> <li>ALL general drawing principles</li> <li>1<sup>st</sup> angle orthographic projecting</li> </ul>				ÉcoleBooks							
Add. resources, other than textbooks & drawing instruments	Same as for Term 3											
Informal Assessment	Min <b>3 DDEs/Tasks</b> completed for Term 4 ( <i>Min</i> 9 CAM DDEs/Tasks in TOTAL!)											
Formal Assessment (SBA & PAT)	Drawings for <b>CD 13</b> (Cam), to be sourced from the DDEs/Tasks											

