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REPUBLIC OF SOUTH AFRICA

2021 Annual Teaching Plan: Term 1 — Engineering Graphics and Design (EGD): Grade 11

TERM 1 *(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)*	**Isometric Drawing** *(16 days)*				**PAT** *(3 days)*
Prescribed content & Skills	◆ Classroom and administrative management ◆ Revision of the General Drawing Principles	**3rd angle orthographic** working drawings with **non-sectional**, **sectional**, **half-sectional** and **part-sectional** views of **simple mechanical assemblies**. **Include the following:** ◆ Title, scale, hidden detail, dimensioning, centre lines, cutting planes, hatching detail, notes, symbol of projection and layout planning ◆ **Hexagonal bolts, nuts and lock nuts, washers/spacers. keys and keyways and appropriate labels** ◆ Different **types of section**, e.g. aligned section, revolved section, removed section, etc. ◆ **Conventional presentation** of common features ◆ **Format** and **content** of working drawing **name/title blocks**			◆ Revision of the **Design Process** ◆ The **PAT scenarios given** to learners and **discussed.**	**Complex** isometric drawings with isometric and non-isometric lines as well as **auxiliary views** and **circles**.				**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	◆ ALL the Grade 10 Mechanical drawing content ◆ 3rd angle orthographic projection			Design Process	◆ ALL the Grade 10 Isometric drawing content ◆ The ability to convert 2D views into a 3D drawing				Design Process requirements
Add. resources, other than textbooks & drawing instruments	Files/folders, own rules, own notes	◆ **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			PAT document, previous best practice examples	◆ **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				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** completed				N/A
Formal Assessment (SBA & PAT)	None	Drawings for **Course Drawing (CD) 1** (Mechanical Analytical) **&CD 2** (1st Mechanical Assembly) **& CD 3** (2nd Mechanical Assembly), to be sourced from the DDEs/Tasks			N/A	Drawings for **CD 4** (Isometric drawing), to be sourced from the DDEs/Tasks				**Phase 1** of **ALL PATs** completed

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2021 Annual Teaching Plan: Term 2 — 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)***	**Perspective Drawing** ***(20 days)***					**Civil Drawing** ***(21 days)***				*Commence with* **Solid Geometry** ***(6 days in Term 2)***	**PAT** ***(5 days)***
Prescribed content & Skills	**2- Point** perspective drawings of **simple** castings, dwellings and civil structures The HL, PP and SP can be varied to provide any desired view.					Limited to **single-storey** dwellings, **1st angle orthographic** working drawings with **floor plans**, **detailed elevations** with basic single line roofs (i.e. only the basic shape of the roof), and **sectional elevations** showing the **detail of** the **foundation to the ceiling height**, but **not including the ceiling itself**. **Include the following:** ◆ Annotation, labels, dimensioning, scales ◆ Relevant abbreviations and graphical symbols ◆ On **all relevant views/elevations: windows, doors** and fixtures such as **WC, bath, sink, shower, built-in cupboards** etc., as well as **all** other **features and fixtures** already **covered in Gr 10 & Gr 11** ◆ Hatching detail and the **application of colours** ◆ Perimeters and total/floor areas ◆ **Format** and **content** of layout/working drawing **name/title panels**				**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	◆ An understanding of the basic concepts of perspective drawing ◆ The ability to convert 2D views into 3D drawing					◆ ALL the Grade 10 Civil drawing content ◆ 1st angle orthographic projecting				◆ ALL the Grade 10 Solid geometry content ◆ 1st angle orthographic projecting	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 **11 DDEs/Tasks** completed for Term 2 *(Min 9 Perspective DDEs/Tasks in TOTAL!)*					Min **11 DDEs/Tasks** completed. Class test suggested for areas and perimeters, as well as other theory				Min **3 DDEs/Tasks** completed for Term 3	N/A
Formal Assessment (SBA & PAT)	**ONE compulsory controlled test** that could be made up of TWO questions, or TWO separate tests, that constitutes a **min of 60 minutes** and a **min of 50 marks**									N/A	
	Drawings for **Course Drawing (CD) 5** (2-point perspective), to be sourced from the DDEs/Tasks					Drawings for **CD 6** (Floor Plan & Elevations) **& CD 7** (Sectional Elevation), to be sourced from the DDEs/Tasks				N/A *(To be completed in Term 3)*	**Phase 2 of ALL PATs completed**

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2021 Annual Teaching Plan: Term 3 — Engineering Graphics and Design (EGD): Grade 11

TERM 1 *(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 *(Days)*	*Continue with* **Solid Geometry** ***(17 days in Term 3,** i.e. 23 days in TOTAL)*				**Interpenetration & Development** ***(21 days)***				*Commence with* **Loci (Cam)** ***(10 days in Term 3)***		**PAT** ***(4 days)***
Prescribed content & Skills	**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				**1st angle orthographic** views showing the **curve of interpenetration** formed between two solids or pipes joined at either 30°, 45°, 60° or 90°. ◆ The solids or pipes have to be **right-regular geometrical prisms,** with 3, 4, 5, 6 & 8 sides, **and/or cylinders only.** ◆ The **axes** of the two solids or tubes have to **meet in a common plane**. ◆ The curves of interpenetration have to be **symmetrical.** ◆ **Hidden detail** must be shown. **Include** the **surface developments** of the parts of the **interpenetrating** solids or tubes.				Limited to **single-storey** dwellings, **1st angle orthographic** working drawings with **floor plans**, **basic single line elevations** and **sectional elevations** showing the detail of the **foundation to the slab.** 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-knowledge	◆ ALL the Grade 10 Solid geometry content ◆ 1st angle orthographic projecting				◆ Relevant Grade 10 & 11 Solid geometry content ◆ 1st angle orthographic projecting				◆ ALL general drawing principles ◆ 1st angle orthographic projecting		Design Process requirements
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										PAT document, previous best practice examples
Informal Assessment	Min **9 DDEs/Tasks** completed for Term 4 *(i.e. Min 12 Solid DDEs/Tasks in TOTAL!)*				Min **12 DDEs/Tasks** completed				Min **6 DDEs/Tasks** completed for Term 3		N/A
Formal Assessment (SBA & PAT)	Drawings for **Course Drawing (CD) 8** (two adjacent Solids that are sectioned), **&** **CD 9** (A sectioned Solid with a hole), to be sourced from the DDEs/Tasks				Drawings for **CD 10** (Interpenetration & Development of two Prisms) **& CD 11** (Interpenetration & Development that includes a Cylinder), to be sourced from the DDEs/Tasks				N/A *(To be completed in Term 3)*	Drawing for **CD 12** (3rd Mech. Assembly)	**All PATs completed**

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2021 Annual Teaching Plan: Term 4 — Engineering Graphics and Design (EGD): Grade 11

<table>
<tr><th>TERM 1 (45 days)</th><th>WEEK 1
05 – 08 Oct</th><th>WEEK 2
11 – 15 Oct</th><th>WEEK 3
18 – 22 Oct</th><th>WEEK 4
25 – 29 Oct</th><th>WEEK 5
01 – 05 Nov</th><th>WEEK 6
08 – 12 Nov</th><th>WEEK 7
15 – 19 Nov</th><th>WEEK 8
22 – 26 Nov</th><th>WEEK 9
29 Nov – 03 Dec</th><th>WEEK 10
06 – 10 Dec</th></tr>
<tr><td>CAPS Topic
(Days)</td><td>Continue with Loci (Cam)
(5 days in Term 4,
15 days in TOTAL)</td><td colspan="2">Catch-up/Revision
(Until the commencement of the ‘Final/Promotional Examinations’)</td><td colspan="6">Final/Promotional Examination
(Min. 15 days)</td></tr>
<tr><td>Prescribed content & Skills</td><td>Limited to single-storey dwellings, 1st angle orthographic working drawings with floor plans, basic single line elevations and sectional elevations showing the detail of the <u>foundation to 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</td><td colspan="2" rowspan="5">Continue with/catch-up on content not completed
<u>and/or</u>
do revision</td><td colspan="6" rowspan="5"><table><tr><th colspan="3">PAPER 1 -CIVIL-
(3 hours)
In first-angle orthographic projection</th><th colspan="3">PAPER 2 -MECHANICAL-
(3 hours)
In third-angle orthographic projection</th></tr><tr><td>Q 1</td><td>Civil analytical</td><td>± 15%</td><td>Q 1</td><td>Mechanical analytical</td><td>± 15%</td></tr><tr><td>Q 2</td><td>Interpenetration and Development
<u>and/or</u> Solid geometry</td><td>± 20%</td><td>Q 2</td><td>Loci of a Cam</td><td>± 20%</td></tr><tr><td>Q 3</td><td>2-point perspective drawing</td><td>± 25%</td><td>Q 3</td><td>Isometric drawing</td><td>± 25%</td></tr><tr><td>Q 4</td><td>Civil working drawing</td><td>± 40%</td><td>Q 4</td><td>Mechanical assembly</td><td>± 40%</td></tr></table></td></tr>
<tr><td>Requisite pre-knowledge</td><td>◆ ALL general drawing principles
◆ 1st angle orthographic projecting</td></tr>
<tr><td>Add. resources, other than textbooks & drawing instruments</td><td>Same as for Term 3</td></tr>
<tr><td>Informal Assessment</td><td>Min 3 DDEs/Tasks completed for Term 4
(Min 9 CAM DDEs/Tasks in TOTAL!)</td></tr>
<tr><td>Formal Assessment (SBA & PAT)</td><td>Drawings for CD 13 (Cam), to be sourced from the DDEs/Tasks</td></tr>
</table>