(DRAFT as on 15 November 2020)

2021 RECOVERY CURRICULUM AND ASSESSMENT PLANS

ENGINEERING GRAPHICS & DESIGN (EGD) GRADE 10, 11 & 12

Implementation: January 2021



Presentation Outline

- 1. 2021 Content Overview for the Phase
- 2. 2021 Annual Teaching Plan
- 3. 2021 School Based Assessment (SBA)
- 4. Conclusion





1. 2021 Content Overview for the FET Phase

Engineering Graphics & Design (EGD)

NOTE: Information as on 15 November 2020.

ENGINEERING GRAPHICS AND DESIGN					
GRADE 10 GRADE 11 GRADE 12					
	General drawing principles	5			
Use/care/dangers of drawing instruments, line types, line work, lettering, dimensioning etc. The Grade 10 content remains applicable applicable					
	Free-hand drawing				
Free-hand drawing The Grade 10 content remains applicable		The Grade 10 content remains applicable			
Setting up a drawing sheet					
A4 and A3 drawing sheets with general name/title blocks	Relevant Civil and Mechanical name/title blocks/-panels	Relevant Civil and Mechanical name/title blocks/-panels			

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ENGINEERING GRAPHICS AND DESIGN					
GRADE 10 GRADE 11 GRADE 12					
	Geometrical construction				
Geometrical (instrument) constructions, regular polygons and ellipses The Grade 10 content remains applicable applicable The Grade 10 content remains applicable					
Scales					
The application of any scale	The Grade 10 content remains applicable	The Grade 10 content remains applicable			
	Solid geometry				
Right-regular solids with sections and true shapes	Combinations of the right- regular solids, which includes solids with holes, that include sections and true shapes	Combinations of the right- regular solids, which includes solids with holes, that include sections and true shapes			

ENGINEERING GRAPHICS AND DESIGN					
GRADE 10	GRADE 12				
	Descriptive geometry				
 True lengths of line segments. Use projection and construction methods. True lengths of line segments. Use projection and construction methods. True inclinations The Grade 10 content on true lengths and true inclinations remains applicable True inclinations 					
	Mechanical drawing				
Castings and objects from industry	Simple assemblies	Complex assemblies and welding, machining, tolerances & treatment symbols			





ENGINEERING GRAPHICS AND DESIGN						
GRADE 10 GRADE 11 GRADE 12						
	Civil drawing					
Floor plans, basic single line elevations and sectional elevations of the foundation to slab	sectional basic single line roofs and detailed elevations and					
	Isometric drawing					
Simple isometric drawings with auxiliary views	Complex isometric drawings with auxiliary views and circles	Complex isometric drawings with auxiliary views, circles and sections				





ENGINEERING GRAPHICS AND DESIGN					
GRADE 10 GRADE 11 GRADE 12					
Perspective drawing					
2-point perspective Complex 2-point perspective perspective drawings with circles and arcs					
Electrical diagrams					
2021! N/A for 2021! Electrical fixtures and wind diagrams on floor plans of civil drawings					
Interpenetration					
Between two in-line regular geometrical prisms and/or cylinders	Between two in-line or offset regular geometrical prisms and/or cylinders				
	Perspective drawing 2-point perspective drawings Electrical diagrams N/A for 2021! Interpenetration Between two in-line regular geometrical prisms and/or				

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ENGINEERING GRAPHICS AND DESIGN						
GRADE 10	GRADE 11 GRADE 12					
	Developments					
N/A	N/A The parts of interpenetrating solids or tubes/pipes NO transition pieces for 2021! • Parts of interpenetrating solids or tubes/pipes • Transition pieces					
	Loci (Cam)					
N/A	Simple cams with uniform motion with wedge shaped followers	Complex cams with motions that are either uniform and/or harmonic and/ or uniform acceleration and retardation, with either wedge shaped or roller followers				





ENGINEERING GRAPHICS AND DESIGN					
GRADE 10	GRADE 11 GRADE 12				
	Loci (Mechanisms)				
N/A	N/A Loci of a point(s) on the				
		components of mechanisms			
	Loci (Helix)				
N/A	N/A for 2021! Helix of augers, spiral				
		chutes and coil springs			
PAT: The Design Process					
Application of the complete	lication of the complete Application of the complete Application of the comp				
Design Process to a selected	Design Process to a selected	Design Process to a selected			
scenario scenario scenario					





3. The 2021 EGD Year Plan

NOTE: The 2021 EGD YEAR PLAN is aligned to the 2021 School Calendar.

ORIGINAL 2021 EGD YEAR PLAN (ATP)

DRAFT DBE 2021 EGD YEAR PLAN (as on 15 Nov 2020)				
TERM 1 GRADE 10 GRADE 11 GRADE 12	TERM 2 GRADE	10 GRADE 11 GRADE 12	TERM 3 GRADE 10 GRADE 11 GRADE 12	TERM 4 GRADE 10 GRADE 11 GRADE 12
25-Jan Mo	12-Apr Mo 13-Apr Tu 1 PAT: EXPLA 14-Apr We 2 SCENARIO	050	12-Jul Mo	4-Oct Mo PAT: FINAL ASSESS, COMP. 5-Oct Tu 1 6-Oct We 2 CONT, with CONT, with 49 (6)
27-Jan We 1 28-Jan Th 2 29-Jan Fr 3 30-Jan Sa EGD ADMIN & REVISION & REVISION	15-Apr Th 3	RAWING	1 1-3-Jul VM 2 2 COMPLETE PHASE 1. Win 3 DOEs 18-Jul Fr 4 Win 3 DOEs CD 11 compl.	7-Oct Th 3 CIVIL LOCI of S B-Oct Fr 4 DRAWINGS a CAM P 4 E 4 E 5 E 5 E 5 E 5 E 5 E 5 E 5 E 5 E
31-Jan So 1 1-Feb Mo 1 INTRO to EGD	10-Apr Fr 4 17-Apr Sa 18-Apr So 19-Apr Mo 1 20-Apr Tu 2	NGS SOMETRIC DRAWING	18-Jul So	10-Oct So Mn 3005 Mn 3
2-Feb Tu 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 2 1	18-Apr So 19-Apr Mo 1 20-Apr Tu 2 21-Apr We 3 22-Apr Th 4 23-Apr Fr 5	MNGS ISOME	19-Jul Mo 1 20-Jul Tu 2 2 11-Jul We 3 22-Jul Th 4 23-Jul Fr 5 24-Jul Sa 2 25-Jul So 2 25-J	1 8-Oct We 2 CONT. with CONT. wit
	24-Apr Sa 25-Apr So Mn3000 26-Apr Mo 1 CD 4 con	Mn 6 DDEs.	26-Jul So	16-Oct So
000 000	27-Apr Tu 3 28-Apr We 2	LECTIVE DRAWINGS	3 28-Jul We 3 Lu 20 MA 3 Lu 20 MA 4 MA 5	19-Oct Tu 2 9-50 gpm N 9-50 gpm N 19-00 TBC.
	29-Apr Th 3 30-Apr Fr 4 1-May Sa 2-May So	-	30-Jul Fr 5 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22-Oct Fr 5 23-Oct Sa 24-Oct So 24-Oct So 32-05
15-Feb Mo 1 Wn 6 000s Compl. 4 CD 1 8 2 compl. 4 17-Feb Mo 2	3-May Mo 1 4-May Tu 2 Min 3 008 4 5-May We 3	SOLID	1-Aug So	25-Oct Mo 1 START & COMP. START & COMP. 26-Oct Tu 2 DATES TBC. DATES TBC.
19-Feb Fr 5 NAMA NAMA NAMA NAMA NAMA NAMA NAMA NA	6-May Th 4 7-May Fr 5 8-May Sa	S	5-Aug Th 4 6-Aug Fr 5 7-Aug Sa PAT	28-Oct Th 4 FINAL EXAM FINAL EXAM 22P Perspect. 29-Oct Fr 5 P1-CIVIL: 91-CIVIL: 4Sold/Inter. 8
23-Feb Tu 2	9-May So 10-May Mo 1	Min 11 DDEs CD 5 compl.	8-Aug So	31-Oct So 1st ANGLE 1st ANGLE *Civil Working Drawing Drawing
25-Feb Th 4 Mn500es CD 1, 2 & 3 PAT: REVISION 8 CENARIOS CD 1, 2 & 3 PAT: REVISION 6 SCENARIOS	11-May Tu 2 5 12-May We 3 13-May Th 4 14-May Fr 5	Min 7 DDEs Compl. CD 8 compl.	5 11-Aug We 2 Mm*2005 E CONT. with 12-Aug Th 3 CD7 & 8 LOCI of a 13-Aug Fr 4 compl. O HELIX	5 3-Nov We 3 4-Nov Th 4 5-Nov Fr 5 5-Nov Fr 5 4-Solid Geom Develop.
	15-May Sa 18-May So 17-May Mo 1 18-May Tu 2 18-May Tu 2 6 19-May We 3 20-May Th 4		5 12Aug We 2 compl. 12Aug Th 3 CD 7 & 8 CD 7 &	6-Nov Sa
25th eb 50 1 1 1 1 1 1 1 1 1	6 19-May We 3 20-May Th 4 21-May Fr 5		17-Aug Tu 2 18-Aug We 3 19-Aug Th 4 20-Aug Th 4	6 10-Nov We 3 11-Nov Th 4
8 Mar No 1 5	22-May Sa 23-May So 24-May Mo 1	AMING	6 18-Aug We 3 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	13-Nov Sa
7 10-Mar We 3 11-Mar Th 4 4 5	25-May Tu 2 7 26-May We 3 27-May Th 4 Min 10 DD		26-Aug Th 4 Min 6 DOEs Min 5 DOEs	16-Nov Tu 2 2 (2 Hours) (3 Hours) 310 Anote 17-Nov We 3 18-Nov Th 4 4 4 4 4 4 4 4 4
12-Mar Fr 5 5 8 8 8 8 8 8 8 8	28-May Fr 5 CD 5 con 29-May Sa 30-May So 31-May Mo 1	INTER§	27-Aug Fr 5 CD 9 compl. CD 14 compl. 28-Aug Sa MECH ASSEM 29-Aug So CD 15 compl.	19-Nov Fr 5 20-Nov Sa 19-Nov Sa 21-Nov So 19-Nov Sa 19-Nov So 19-Nov Sa 19-Nov So 19-N
14-Mar So	1-Jun Tu 2 8 2-Jun We 3		30-Aug Mo 1 CONT. with T3 31-Aug Tu 2 CONTENT until PREP. EXAM	22-NoV MO 1 23-NoV Tu 2 8 24-NoV We 3
13-Mar Sa	3-Jun Th 4 4-Jun Fr 5		Z-Sep 1h 4 3-Sep Fr 5 4-Sep Sa 2 5-Sep So 3 6-Sep Mo 1 7-Sep Tr 2	25-Nov Th 4 26-Nov Fr 5 27-Nov Sa
" 23-Mar Tu 1 Min 12 00Es	4-Jun Fr 5 5-Jun Sa 6-Jun Sa 7-Jun Mo 1 8-Jun Tu 2 9 9-Jun We 3 10-Jun Th 5 11-Jun Fr 5	Min 11 DDEs CD 6 & 7 compl. CD 9 compl.	6-Sep Mo 1	28-Nov So 29-Nov Mo 1 30-Nov Tu 2 9 1-Dec We 3
9 24-Mar We 2 CD 2 8.3 Life 5 OCE Life 4 COD 2 CD 4 compt. CD 6 compt. 26-Mar Fr 4 71 CDc Compt. 11 CDc Compt. 11 CDc Compt. 11 CDc Compt. 27-Mar Sa	10-Jun Th 4 11-Jun Fr 5	Locieta	7-Sep We 3 5 CAM Cold flat CAM CAM Cold flat CAM CAM CAM COld flat CAM	2-Dec Th 4 3-Dec Fr 5
28-Mar So 29-Mar Mo 1 PAT: TEACH PAT: COMPLETE ALL 10 30-Mar Tu 2 the DESIGN PAT: COMPLETE ALL	13-Jun So 14-Jun Mo 1	CAM CAM MECHASSEM CD 10 compl. LOCI of a	12-Sep So	4-Dec Sa 5-Dec So 6-Dec Mo 1 7-Dec Tu 2 2
31-Mar We 3 PROCESS PRASE REGUIREMENTS	15-Jun Tu 2 10 16-Jun We	CAM ppl. Min 3 DOEs Compl. Min 3 DOEs Compl. ppl. 72 DDs Compl. 72 DDs Compl.	10 15-Sep We 3 CD 10 & 11 16-Sep Th 4 compt. In 1005 Min 1005 (3 Hours) 17 Cls Compt. 10 Cls Compt.	10 8-Dec We 3 9-Dec Th 4 10-Dec Fr 5
45 SCHOOL DAYS 45 TEACHING DAYS	19-Jun Sa 20-Jun So 21-Jun Mo 1 22-Jun Tu 2	NOT	18-Sep So **Mech Analytical *Isometric **Sep So **Sep Mo 1 **Sep So **Sep	
	11 23-Jun We 3 REVIEWT1 24-Jun Th 4 CONTEN	PHASE 1 REQUIREMENTS & T2 [NOTE: RATHER COMPLETE DURING ONE ENTIRE DAY (8 - 9 hours)	21-Sep Tu 2 PAT: ALL PATS COMPLETED 10.00	
	25-Jun Fr 5 52 SCHOOL DAYS	PER GRADE, AS EGO'S PAPER S] 52 TEACHING DAYS	52 SCHOOL DAYS Gr 10/11 = 52 & Gr 12 = ± 33 TEACHING DAYS	





4. 2021 Curriculum Annual Teaching Plans (ATPs)

NOTE: The 2021 EGD ATP is aligned to the 2021 School Calendar.

Summary: (as on 15 November 2020) 2021 EGD Topics

	GRADE 10 A	TP for 2021	
TERM 1 (45 days)	TERM 2 (28 days)	TERM 3 (52 days)	TERM 4 (Max 14 days)
EGD Admin and Introduction to (5 days)	PAT: Scenarios(s) (2 days)	PAT Phase 2 (4 days)	Civil Drawing (5 days)
General drawing principals (9 days)	Ellipse (8 days)	Solid Geometry (19 days)	Revision (Remaining days till examination)
Free-hand drawing (9 days)	Scale (5 days)	Descriptive Geom. (10 days)	
Geometrical construction (15 days)	Mechanical draw. (18 days)	Civil Drawing (15 days)	
PAT: Design Process (3 days)	Isometric drawing (14 days)	PAT Phase 3 (4 days)	

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Summary: (as on 15 November 2020) 2021 EGD Topics

<u>GRADE 11</u> ATP for 2021				
TERM 1 (45 days)	TERM 2 (28 days)	TERM 3 (52 days)	TERM 4 (Max 14 days)	
Mechanical drawing (20 days)	2-point perspective (20 days)	Continue with Solid geometry (17 days)	Continue with Loci of a Cam (5 days)	
Isometric drawing (16 days)	Civil drawing (21 days)	Interpenetration & Development (21 days)	Revision (Remaining days till examination)	
2-point perspective (5 days)	Solid geometry (6 days)	Loci of a Cam (10 days)		
PAT Phase 1 (3 days)	PAT Phase 2 (5 days)	PAT Phase 3 (4 days)		





Summary: (as on 15 November 2020) 2021 EGD Topics

	GRADE 12 AT	ΓP for 2021	
TERM 1 (45 days)	TERM 2 (28 days)	TERM 3 (Max 28 days)	TERM 4 (Max 10 days)
Mechanical draw. (12 days)	Isometric drawing (10 days)	Continue with Loci of a Cam (4 days)	Revision (Remaining days till examination)
Civil drawing (15 days)	Solid geometry (12 days)	PAT Phase 3 (3 days)	
2-point perspective (10 days)	Interpenetration & Development (19 days)	Loci of a Mechanism (10 days)	
PAT Phase 1 (3 days)	Loci of a Cam (6 days)	Loci of a Helix (8 days)	
	PAT Phase 2 (5 days)	Develop. Transition Piece (8 days)	

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4. 2021 School Based Assessment (SBA), Examination & Practical Assessment Task (PAT) Amendments

NOTE: 2021 EGD 'Assessment Requirements' are aligned to the 2021 School Calendar.

GRADE 10 SBA Requirements for 2021 TERM 1 TERM 2 TERM 3 TERM 4 **Course Drawings: Course Drawings: Course Drawings: Course Drawings:** 1. Freehand 12. Civil section of 4. Ellipse 7. 1st Solid geometry 2nd Solid geometry 5. Mechanical foundation drawing 2. 1st Geometrical drawing Descriptive construction 6. Isometric geometry 3. 2nd Geometrical 10. Civil: areas & drawing construction perimeters **FINAL** 11. Civil floor plan **Controlled Test Promotional Examination** CDs indicated in GREEN are the CDs replaced/moved for 2021 only!

- See 2021 EGD Assessment Requirements document for details of CDs.





GRADE 11 SBA Requirements for 2021			
TERM 1	TERM 2	TERM 3	TERM 4
Course Drawings:	Course Drawings:	Course Drawings:	Course Drawings:
 Mechanical analytical exercise 1st mechanical assembly 2nd mechanical assembly 1sometric 	 5. Two-point perspective 6. Civil floor plan with elevations 7. Civil sectional elevation 	8. 1st Solid geometry 9. 2nd Solid geometry (new) 10. 1st Interpen. & development 11. 2nd Interpen. & development (new) 12. 3rd Mechanical	13. Loci: Cam
drawing	Controlled Test	assembly	FINAL Promotional Examination

- CDs indicated in GREEN are the CDs replaced/moved for 2021 only!
- See 2021 EGD Assessment Requirements document for details of CDs.





GRADE 10 & 11 PROGRAMME of FORMAL ASSESSMENT for 2021								
	FORMAL ASSESSMENT: 100%							
LEA	PROMOTIONAL	1						
SCHOOL BASED ASSES	SMENT	PRACTICAL ASSESSMENT TA	ASK (PAT)	EXAMINATION				
60% (tbc.)		20% (tbc.)		20% (tbc.)				
(Internally set and assessed)		(Externally set and internally a	issessed)	(Internally or externally set, but internally assessed)				
TEST: Term 2 Controlled			NB: The final mark for each paper must be a mark that					
Tests	(tbc.)	&	&		100 .			
COURSE DRAWINGS:	60	PAT Phase 2: Orthographic Working Drawings &		PAPER ONE:	100			
ALL the marks of ALL the prescribed CDs	(tbc.)	PAT Phase 3: Self-assessment and Presentation		PAPER TWO:	100			
TOTAL	100	TOTAL 100		TOTAL	200			



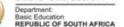


GRADE 12 SBA Requirements for 2021

The second secon					
TERM 1	TERM 2	TERM 3	TERM 4		
Course Drawings:	Course Drawings:	Course Drawings:			
 1. 1st mechanical assembly 2. Mechanical analytical exercise 3. Civil section 4. Civil floor plan with elevations 5. Civil site plan 6. Two-point 	 7. Isometric drawing 8. Solid geometry 9. Interpenetration & development 7. 2nd mechanical assembly 	 11. Loci: Cam 12. Loci: Mechanisms 13. Loci: Helix 14. Development of			
perspective		Preparatory Examination	FINAL NSC Examination		

- CDs indicated in GREEN are the CDs replaced/moved for 2021 only!
- See 2021 EGD Assessment Requirements document for details of CDs.





GRADE 12 PROGRAMME of FORMAL ASSESSMENT for 2021								
	FORMAL ASSESSMENT: 100%							
SCHOOL BASES ASSESS	SMENT	EXTERNAL ASSESSMENT: 75%						
25%	JIVILIVI	PRACTICAL ASSESSMENT TASK (PAT)		FINAL NSC EXAMINATION				
		25% 50%		50%				
(Internally set and assessed)		(Externally set & internally as	ssessed)	(Externally set and asse	essed)			
LEARNER'S EGD FI	LE	LEARNER'S PAT FILE/POR	TFOLIO	The final mark for each	for each			
COURSE DRAWINGS: ALL the marks of ALL	40 (tbc.)	The Design Process & PAT Phase 2: Orthographic Working Drawings & PAT Phase 3: Self-assessment and		paper will be a mark that has been converted from 200 to 100.				
the prescribed CDs				PAPER ONE: 3 hrs (200 marks ÷ 2 = 100)	100			
EXAMINATIONS: Preparatory (Sept)	60 (tbc.)			PAPER TWO : 3 hrs (200 marks ÷ 2 = 100)	100			
TOTAL	100	TOTAL	TOTAL	200				





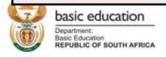
Motivation for retaining Course Drawings (CDs):

An **essential 'teaching and learning' component** of EGD is **'assessment for learning'**, which requires of learners do as many tasks as possible, of which most should be informally evaluated or assessed so that gaps can be identified, and appropriate remedial actions implemented.

Although only addressing some of the required 'assessment for learning' requirements, CDs will at least ensure that all the learners will be given constructive feedback on some of their Daily Developmental Exercises (DDEs)/tasks.

As EGD is both a knowledge and application/skill-based subject, many DDEs, on the content of each topic and in accordance with the Annual Teaching Plan (ATP), must be done on a regular (daily) basis.

From this essential developmental process, various DDEs should be formally assessed and recorded as part of the programme of compulsory SBA tasks. These assessed and recorded DDEs will then be referred to as CDs.





Cont. of Motivation for retaining Course Drawings (CDs):

Some of the purposes of the CDs (As described in the CAPS):

- To provide evidence that the prescribed content has been adequately covered;
- To provide evidence that ALL the learners have been assessed and given sufficient feedback on their acquired knowledge and skills on common tasks of each topic;

Some of the most relevant requirements for CDs (As described in the CAPS):

- The CDs must come from the normal developmental teaching and learning process of EGD and should therefore be some of the regular (daily) tasks, i.e. the DDEs;
- The recorded CD mark should address all, or most of, the grade-specific content of the topic and it must be of an appropriate higher order of complexity for the specific grade. However, more than one task may be used to obtain the recorded CD mark;
- To ensure that all the CDs comply with test and examination requirements and standards, all CDs, with the exception of the analytical exercises and the perspective drawing(s), must be tasks that are completely redrawn;
- It is important to note that the **CDs are not tests**.





Moderation of EGD SBA tasks

The <u>pre-</u> and <u>post-moderation</u> of SBA task must still be implemented where required!

Moderation of Course Drawings (CDs):

As CDs should be randomly selected from the daily tasks, referred to as Daily Developmental Exercises (DDEs), the **pre-moderation of CDs is not a prerequisite**. The **post-moderation of ALL aspects of CDs**, i.e. if the tasks met ALL the requirements as well as the assessment of ALL the tasks, **must however be conducted at ALL the required levels**, i.e. School (SMT), District and Provincial.

Moderation of Examination Papers:

ALL Examination Papers, i.e. the Final/Promotional Grade 10 & 11 papers as well as the Preparatory Grade 12 papers, **must at least be pre-moderated at the level it was set**, i.e. at School (SMT) level if set at school, Provincial level if set by the Province etc., **and post-moderated at ALL the required levels**, i.e. School (SMT), District and Provincial.





Summary: (as on 15 November 2020) Examination Structure for 2021 Grade 10 Final Examination

ENGINEERING GRAPHICS & DESIGN

GRADE 10 2021 FINAL Promotional Examination

PAPER 1 -CIVIL- (2 hours) In first-angle orthographic projection			PAPER 2 -MECHANICAL- (2 hours) In third-angle orthographic projection		
Q 1	Civil analytical	± 15%	Q 1	Mechanical analytical	± 15%
Q 2	Descriptive geometry	± 15%	Q 2	Geometrical construction + Ellipse	± 25%
Q 3	Solid geometry	± 25%	Q 3	Isometric drawing	± 25%
Q 4	Civil working drawing	± 45%	Q 4	Mechanical working drawing	± 35%

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Summary: (as on 15 November 2020) Examination Structure for 2021 Grade 11 Final Examination

ENGINEERING GRAPHICS & DESIGN

GRADE 11 2021 FINAL Promotional Examination

PAPER 1 -CIVIL- (3 hours) In first-angle orthographic projection			PAPER 2 -MECHANICAL- (3 hours) In third-angle orthographic projection		
Q 1	Civil analytical	± 15%	Q 1	Mechanical analytical	± 15%
Q 2	Solid geometry <u>and/or</u> Interpenetration and development	± 20%	Q 2	Loci of a Cam	± 20%
Q 3	2-point perspective drawing	± 25%	Q 3	Isometric drawing	± 25%
Q 4	Civil working drawing	± 40%	Q 4	Mechanical assembly	± 40%

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Summary: (as on 15 November 2020) Examination Structure for 2021 Grade 12 Preparatory Examination

ENGINEERING GRAPHICS & DESIGN

GRADE 12 2021 Preparatory Examination

PAPER 1 -CIVIL- (3 hours) In first-angle orthographic projection			PAPER 2 -MECHANICAL- (3 hours) In third-angle orthographic projection		
Q 1	Civil analytical	± 15%	Q 1	Mechanical analytical	± 15%
Q 2	Solid geometry <u>and/or</u> Interpenetration and development <u>and/or</u> Develop. of transition piece	± 20%	Q 2	Loci of a Cam <u>and/or</u> Loci of point(s) of a mechanism <u>and/or</u> Loci of a Helix	± 20%
Q 3	2-point perspective drawing	± 20%	Q 3	Isometric drawing	± 20%
Q 4	Civil working drawing including electrical features	± 45%	Q 4	Mechanical assembly	± 45%

Summary: (as on 15 November 2020) Examination Structure for 2021 Grade 12 Final NSC Examination

ENGINEERING GRAPHICS & DESIGN

GRADE 12 2021 FINAL NSC Examination

PAPER 1 -CIVIL-			PAPER 2 -MECHANICAL-		
(3 hours)			(3 hours)		
In first-angle orthographic projection			In third-angle orthographic projection		
Q 1	Civil analytical	± 15%	Q 1	Mechanical analytical	± 15%
Q 2	Solid geometry <u>and/or</u> Interpenetration and development <u>and/or</u> Develop. of transition piece	± 20%	Q 2	Loci of a Cam <u>and/or</u> Loci of point(s) of a mechanism <u>and/or</u> Loci of a Helix	± 20%
Q 3	2-point perspective drawing	± 20%	Q 3	Isometric drawing	± 20%
Q 4	Civil working drawing including electrical features	± 45%	Q 4	Mechanical assembly	± 45%

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Summary: Practical Assessment Task (PAT) for 2021

ENGINEERING GRAPHICS AND DESIGN						
GRADE 11	GRADE 12					
 Phase 1: Design Brief Research 2 x Freehand Solutions Selection Phase 2: Orthographic Drawing: 3 x views 3D Drawing 	 Phase 1: Design Brief Research 2 x Freehand Solutions Selection Phase 2: Orthographic Drawing No 1: 4 x views Orthographic Drawing No 2: 1 x view Civil & 3 x views Mechanical 3D Drawing 					
Phase 3:Self-assessment &Deadlines	Phase 3:Self-assessment &DeadlinesPresentation					
	 GRADE 11 Phase 1: Design Brief Research 2 x Freehand Solutions Selection Phase 2: Orthographic Drawing: 3 x views 3D Drawing Phase 3: Self-assessment & 					

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Thank you!