



# **REQUIREMENTS AND SPECIFICATIONS FOR STANDARDISATION, STATISTICAL MODERATION AND RESULTING**

**Version 5**

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## Acronyms

ABET	Adult Basic Education and Training
AET	Adult Education and Training
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
FET	Further Education and Training
GET	General Education and Training
HESA	Higher Education South Africa
LOLT	Language of Learning and Teaching
NSC	National Senior Certificate (schools)
NQF	National Qualifications Framework
GETC	General Education and Training Certificate
ISAT	Internal summative Assessment Task
ICASS	Internal continues assessment task
NC(V)	National Certificate (Vocational)
SBA	School Based Assessment/Site Based Assessment

## Introduction

Section 17A of the General and Further Education and Training Act stipulates that:

- Umalusi may adjust raw marks during the standardisation process,
- The Council must, with the concurrence of the Director-General and after consultation with the relevant assessment body or education institution, approve the publication of the results of learners if the Council is satisfied that the assessment body or education institution has:
  - (i) conducted the assessment free from any irregularity that may jeopardize the integrity of the assessment or its outcomes;
  - (ii) complied with the requirements prescribed by the Council for conducting assessments;
  - (iii) applied the standards prescribed by the Council which a learner is required to comply with in order to obtain a certificate; and
  - (iv) complied with every other condition determined by the Council

Section 18 stipulates that an Assessment Body

- May recommend to the Council during the standardisation process that raw marks be adjusted

The GENFETQA Act mandates the Umalusi Council to assure the quality of assessments at exit points and to issue certificates to successful candidates. A key function of the Council in this process is the approval of results.

## Purpose and application of this document

The *Requirements and Specifications for Standardisation, Statistical Moderation and Resulting* (v.3) must be read in conjunction with the *Umalusi Policy: Requirements for the Approval of Results* (v.1). These documents are intended to provide assessment bodies with a detailed outline of what Umalusi requires from them in the development and implementation of the standardisation and resulting processes. It applies to all qualifications quality assured by Umalusi. Exceptions will be communicated to assessment bodies.

## Requirements

In order to standardise and result candidates correctly the following must be in place.

- a) A computer system capable of capturing candidate details and resulting candidates correctly.
- b) Marks must be captured accurately, on time and verified. Please note that in the case of the National Senior Certificate (NSC) where marks are not out of a maximum of 300 marks, the marks must be converted to a mark out of 300. In the case of the National Certificate Vocational (NCV), GETC (ABET L4) (as from November 2013) and



N1 to N3 the maximum mark is 100. In the case of the latter, please note that for standardisation, marks must be converted to a mark out of 100 where the captured mark is not out of 100. Marks must be rounded using the basic principle of rounding as described in this document and result in an integer.

- c) Data in the form of booklets and computer generated data sets must be submitted for standardisation.
- d) Data in the form of computer generated data sets must be submitted for the statistical moderation and resulting processes.
- e) Standardisation meetings will be held at which Assessment bodies may propose adjustments to raw marks.
- f) Reports to complement and motivate adjustment proposals must be submitted before the standardisation meetings.
- g) All adjustments must be captured accurately and verified.
- h) Resulting of candidates must be done according to the specifications and formulas supplied by Umalusi.
- i) Data sets and reports of results must be submitted to Umalusi immediately after resulting on the computer system for verification.
- j) All verification and monitoring reports are to be submitted to the Approval Committee who may approve the release of the results.

## **1. Minimum requirements for a computer system**

- 1.1. Users must be able to view e.g. candidate information, subject information, centre information, Standardisation data, results.
- 1.2. Candidate registrations must be completely captured and verified
- 1.3. The system must be able to generate mark sheets based on candidate registrations. Marks can only be captured for mark sheets generated.
- 1.4. All results must be processed by the computer system according to the specifications and formulas supplied by Umalusi
- 1.5. Approved adjustments must be captured on the system and processed
- 1.6. Irregularities must be captured on the system and marks of these candidates with irregularities must be monitored to ensure that there are not released before the irregularity is cleared.
- 1.7. All statistics pertaining to Standardisation, resulting, pass/failure rates, entries, outstanding marks (in various categories), and irregularities can be extracted per province per region, per centre and made available to Umalusi for its quality assurance processes
- 1.8. The following records may not be changed/adjusted after verification by Umalusi
  - 1.8.1. Mark adjustments as approved and accepted at standardisation meetings.
  - 1.8.2. Moderation records per centre, per subject after the main resulting run.
  - 1.8.3. Certified candidate records unless requested as a re-issue of the certificate already issued.
- 1.9. Security measures around Users: Audit trail on processing, candidate maintenance, and on marks captured must be implemented. The computer system must be secured against unauthorized access, viruses and information leaks. All audit trials must be made available to Umalusi when requested.
- 1.10. The system must be able to generate all necessary reports or data sets required by Umalusi to be used for quality assurance and for certification.

## **2. Subject structures**

It is important that subject structures are correctly entered on the resulting computer system. The subject structures outline the various components of each subject as well as the weighting of each component. Umalusi therefore has to annually verify that the structures are correct on the computer system. The following process will be used to verify that subject information is according to the policy and subject guidelines. All calculations to be done during all processes will be done based on these subject structures

### **2.1 Receiving of information**

Subject structure information must be supplied to Umalusi by not later than 30 May of each year for the NSC and NC(V). For all other qualifications by no later than 2 months before the commencement of each examination. Umalusi requires that the assessment body submit the subject structures electronically.

### **2.2 Change in subject structures**

The assessment body may change subject structures subject to the approval of Umalusi. Such changes must be done 18 months for public assessment bodies or 12 months for private assessment bodies prior to the writing of the examination. A letter of motivation must be submitted outlining reasons for the change.

### **2.3 Feedback from Umalusi**

Confirmation of the correctness of the subject structure will be sent to Assessment bodies not later than 30 days after receipt of the information.

## **3 Registration Data**

Umalusi requires each assessment body to submit registration data for each qualification two months after the closing date of registration. In cases of late registrations and deregistration Umalusi requires a second set of registration data comprising of all learners a week before the commencement of the examination. In cases of registration data changes after the examination, these will be dealt with during the mop processes.

Submission of registration data will be introduced as follows

QUALIFICATION		Grade /Level	Implementation Date
NSC		12	2016
		10	2017
		11	2018
ASC		12	2017
NC(V)		L4	2016
		L2 and L3	2017
GETC:ABET L4	June Examination	L4	2017
	November Examination	L4	2016

#### 4 Recording and capturing of marks

The accurate recording and capturing marks of candidates is one of the functions/actions that ensure the validity and the credibility of any assessment. Umalusi therefore lays a heavy emphasis on this aspect and the following principles and procedures must be strictly adhered to:

- 4.1 Examination marks must be recorded by the marker and verified by a marking assistant or other responsible assessment body official. All mark sheets must be approved and signed off. All these procedures should be reflected in the assessment body/provincial procedural manuals. The verification here again includes checking that all calculations are correct.
- 4.2 For SBA/ICAS/Year/Term marks, schools/centres/colleges must ensure that each mark is verified by a responsible person other than the teacher/lecturer/facilitator who enters the mark. The verifier should preferably be another teacher/lecturer/facilitator or Head of Department but not a learner. Marks entered must correspond with the marks on the candidate's portfolios. Further verification should be conducted by the province/assessment body. Mark sheets, portfolios and any other necessary schedules must be made available to Umalusi external moderators for verification. Verification includes checking that all calculations are correct.
- 4.3 Only computer generated mark sheets must be used to capture marks. In the case where e.g. a candidate was incorrectly registered for a wrong subject, the process must be controlled and audit trail of these must be made available to Umalusi on request.
- 4.4 The double-capture method is the preferred method of capturing of marks on the computer system. Any other system in which the marks captured are verified may also be used. The computer system must not process any marks until they are verified. The same person, however, should not verify the marks he/she has captured. Assessment Bodies must ensure that reports on the status of the capturing of marks are made available to Umalusi on request.
- 4.5 Assessment bodies must ensure that candidates with guilty or pending irregularities be captured as an irregular mark before the Standardisation process starts.
- 4.6 The assessment body must ensure that enough suitably qualified data capturers are employed to complete the capturing within the time available before the Standardisation meetings are held.

**4.7** As part of the quality assurance process Umalusi may send a verifier to the different assessment bodies to verify the following processes:

- Registration of candidates
- Generation of mark sheets
- Capturing of marks

Verification exercises by Umalusi may also be conducted whilst outstanding marks are being processed. Provincial Education Departments/Assessment Bodies must make specified samples of the following documents available to the verifiers when and if required. The samples required will be specified by the verifier. These samples may include the following:

- ✓ Candidate registration forms
- ✓ Final Candidate Registration Lists
- ✓ Mark Sheets
- ✓ Completed (Recorded) Mark Sheets
- ✓ Answer scripts
- ✓ Access to view captured marks on the computer system
- ✓ For candidates marked as immigrant proof of immigrant status
- ✓ Candidates with special conditions

## **5 Statistics on SBA-/ICAS-/Year-/Term marks captured and outstanding examination marks**

Umalusi requires that assessment bodies submit information about the capturing of SBA/ICAS/Year/Term marks to ensure that 100% SBA/ICAS/Year/Term marks are captured before schools/colleges/ABET centres close.

### **5.1 Receiving of information**

- Umalusi requires that assessment bodies submit the information on either a Word, Excel or PDF document.
- The report should only include subjects where the percentage captured is less than 100%

### **5.2 Information required of assessment bodies**

The following information must be on the report.

- Subject code (as in the policy for each of the various qualifications)
- Subject name
- Examination date. For example, 200911.
- Number of marks expected
- Number of marks captured
- Percentage of marks outstanding

### **5.3 Due dates for submission reports on November examinations i.e (NSC, NCV, GETC) will be three times submitted as follows:**

- ✓ 15 November
- ✓ 30 November

✓ 31 January (after the release of results of the November examination)

**Dates for other examinations will be forwarded to the relevant assessment bodies**

## 6 Standardisation process

The standardisation process ensures that the results obtained by candidates are fair, valid and reliable. The process will also ensure an equivalence of the standard of the qualification across years and within subjects and examination authorities.

### 6.1 Historical average (Norms)

The assessment body develops the historical average and submit to Umalusi for verification. Umalusi verifies and identifies outliers, if any, and submits the final set of approved norms to the assessment body in two different excel spreadsheets as indicated in Table 6.1.1 (i.e. from 0-300 for NSC) and Table 6.1.2 (norm per interval) below. The historical average is calculated using the previous three to a maximum of five examination sittings approved during the standardisation process, where applicable. In the case where a distribution contains outliers, the historical average is calculated excluding data from the outlying examination sitting. However, the distribution which contains an outlier remains part of the three to five examination sittings on the statistics table. The outlying year is indicated as in Table 6.1.3 below. Refer to 6.1.3 for the process of identifying outliers

In the case of N2 to N3 a six exam sitting is used for calculating the historical average but only five exam sittings are reflected on the statistics table in booklet 1. In the GETC (ABET L4), the previous five June examination sittings are used to calculate the historical average for all June examinations while the previous five November examination sittings are used for the November examinations

- **The date of submission will be 30 June for NSC and 30 days before the commencement of each examination for the other qualifications.**

Subject	Subject desc	201111		201211		201311		201411		201511		Total	CumTot	Hist Aver
		Raw	RawDist	RawDist	RawDist	RawDist	RawDist	RawDist	RawDist					
10361024	Equine Studies	0	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	1	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	2	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	3	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	4	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	5	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	6	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	7	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	8	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	9	0	0	0	0	0	0	0	0	0	0	0	0
10361024	Equine Studies	10	0	0	0	0	0	0	0	0	0	0	0	0

**Table 6.1.1**

10361024 Equine Studies		00-09	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	Mean	Median	
Raw mark	201111	0	0	0	0	0	0	4	0	0	0			4
	201111	0	0	0	0	0	0	100	0	0	0	65.41	65.33	
	201111	0	0	0	0	0	0	100	100	100	100			
Raw mark	201211	0	0	0	0	7	3	2	4	0	0			16
	201211	0	0	0	0	43.75	18.75	12.5	25	0	0	56.37	52.83	
	201211	0	0	0	0	43.75	62.5	75	100	100	100			
Raw mark	201311	0	0	0	4	4	3	3	1	0	0			15
	201311	0	0	0	0	0	0	50	50	0	0	67	67	
	201311	0	0	0	0	0	0	50	100	100	100			
Raw mark	201411	0	0	0	0	2	4	2	2	1	0			11
	201411	0	0	0	0	0	0	0	50	50	0	77.5	77.5	
	201411	0	0	0	0	0	0	0	50	100	100			
Raw mark	201511	0	0	0	0	1	2	3	4	4	0			14
	201511	0	0	0	0	7.14	14.29	21.43	28.57	28.57	0	70.19	72.83	60
	201511	0	0	0	0	7.14	21.43	42.86	71.43	100	100			
Norm	201611	0	0	0	4	14	12	14	11	5	0			60
	201611	0	0	0	6.67	23.33	20.00	23.33	18.33	8.33	0.00	64.08	65.66	
	201611	0	0	0	6.67	30.00	50.00	73.33	91.67	100.00	100.00			

**Table 6.1.2**

11022082 Welder's Theory		00-09	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	Mean	Median	
Raw mark	201408	14	26	35	39	43	32	21	9	3	0			
	201408	6.31	11.7	15.77	17.57	19.37	14.41	9.46	4.05	1.35	0	38.25	38	
	201408	6.31	18.2	35	51.35	70.72	85.14	94.59	98.65	100	100			
Raw mark	201411	15	25	42	51	61	50	22	2	1	0			
	201411	5.58	9.2	15.61	18.96	22.68	18.59	8.18	0.74	0.37	0	38.07	40	
	201411	5.58	14.8	42	49.44	72.12	90.71	98.88	99.63	100	100			
Raw mark	201504	38	32	42	32	29	7	6	0	0	0			
	201504	20.43	17.2	22.58	17.2	15.59	3.76	3.23	0	0	0	25.78	25	201504 is an Outlier
	201504	20.43	37.6	42	77.42	93.01	96.77	100	100	100	100			
Raw mark	201508	12	30	42	53	77	53	19	6	1	0			
	201508	4.1	10.2	14.33	18.09	26.28	18.09	6.48	2.05	0.34	0	38.64	40	
	201508	4.1	14.3	42	46.76	73.04	91.13	97.61	99.66	100	100			
Raw mark	201511	6	16	35	40	58	57	32	12	0	0			
	201511	2.34	6.2	13.67	15.63	22.66	22.27	12.5	4.69	0	0	43.29	44.5	
	201511	2.34	8.5	35	37.89	60.55	82.81	95.31	100	100	100			
Norm	201604	85	129	196	215	268	199	100	29	5	0			
	201604	6.93	10.5	15.99	17.54	21.86	16.23	8.16	2.37	0.41	0	37.47	39	
	201604	6.93	17.46	33.44	50.98	72.84	89.07	97.23	99.59	100	100			

**Table 6.1.3**

**6.1.2 Formula for calculation of the historical average/norm  
(Distribution refers to frequency distribution)**

Step 1: Draft the raw mark distribution per mark for each year. (Mark from 0 to 300 for NSC and 0 to 100 for NCV, GETC (ABET L4) (as from November 2013) and N1 to N3)

- Step 2: Add the raw mark distribution per mark for each year to get the total distribution (td) over the historical period. (Mark from 0 to 300 for NSC and 0 to 100 for NCV, GETC (ABET L4) (as from November 2013) and N1 to N3)
- Step 3: Calculate the cumulative mark distribution (tcd) over the historical period. (Mark from 0 to 300 for NSC and 0 to 100 for NCV, GETC (ABET L4) (as from November 2013) and N1 to N3)
- Step 4: Convert the cumulative mark distribution (tcd) to a percentage (rounded to seven decimal points.  $(nap = tcd(m) * 100 / tcd(mm) \text{ where}$

tcd(m) = distribution at a particular mark and tcd(mm) = cumulative distribution at the maximum mark.

Table 1: Subject: Accounting

Subject	Subject desc	Mark	Raw mark distribution Year A	Raw mark distribution Year B	Raw mark distribution Year C	Total Distribution (td)	Total Cumulative Distribution (tcd)	Converted to % (nap)
Accounting	11351144	0	2	0	1	3	3	1.3392857
Accounting	11351144	1	5	1	4	10	13	5.8035714
Accounting	11351144	2	6	7	4	17	30	13.3928571
Accounting	11351144	3	8	4	6	18	48	21.4285714
Accounting	11351144	4	10	9	8	27	75	33.4821428
Accounting	11351144	5	16	14	12	42	117	52.2321428
Accounting	11351144	6	14	16	13	43	160	71.4285714
Accounting	11351144	7	12	13	11	36	196	87.5
Accounting	11351144	8	4	8	6	18	214	95.5357142
Accounting	11351144	9	1	4	2	7	221	98.6607142
Accounting	11351144	Maximum	0	2	1	3	224	100

### 6.1.3 Process of identifying outliers

Umalusi will use the following process in identifying outliers for a national subject with more than three years of history:

- Compute the medians for the historical years;
- Arrange the medians in an ascending order;
- Compute the differences between the first two and the last two medians;
- If the difference is greater than 10% then the extreme median (lowest or highest or both) is regarded as an outlier.

The year's examination results for which the median has been identified as an outlier are excluded from the calculation of the norm.

### 6.1.4 Presentation of the historical average to the assessment bodies

The norms will be provided to the assessment body in an Excel spreadsheet containing the following fields (columns):

## 6.2 Standardisation booklets (See examples in Annexure B)

Two booklets must be prepared (Mark distribution, graph and computer adjustments (booklet 1) and The Pairs Analysis (booklet 2). N. B Please note:

- Page numbers in booklet 1 and booklet 2 must be aligned
- Both booklets should have a contents page
- In the case of NCV, booklets should be arranged alphabetically per qualification level (L2; L3 & L4) i.e. 3 sets of booklet 1 and 3 sets of booklet 2.
- In the case of the NATED, booklets should be arranged alphabetically for all levels in one booklet. i.e. 1 (booklet 1) and 1 (booklet 2) for all N courses.

### 6.2.1.1 Raw and Cumulative mark distribution (in tabular form)

The cumulative raw mark distribution should include the following:  
(Distributions in percentages and intervals as indicated below)

- a) The Historical Average distribution and the cumulative frequency distribution (**if available**) as determined calculated/ generated by Umalusi and verified by the Assessment Body on an annual basis;(including the year identified as the outlier
- b) The raw mark distribution and the cumulative frequency distribution for each of the past 3 - 5 years/examinations (**if available**) including the outlier highlighted in grey; and
- c) After the approved adjustments have been applied, the actual adjusted mark distribution and cumulative frequency distribution thereof for each of the past 3 - 5 years/examinations (**if available**).
- d) The raw mark distribution and the cumulative frequency distribution of the current examination; and
- e) The computer adjusted mark distribution and the cumulative frequency distribution thereof for the current examination.
- f) Percentage Candidates standardized = (Candidates Entered minus Absent minus Outstanding minus candidates marked irregular) divided by (Candidates Entered minus absent minus candidates marked irregular) multiplied by 100.
- g) The mean and median of each distribution that must be calculated using the actual (raw) mark and then converted to a percentage.
- h) Formula for calculating the mean

$$\bar{X} = \frac{\Sigma X}{N} \quad \text{or} \quad \bar{X} = \frac{(3+9+10+8+5+6)}{6} = 6.83$$



i) Formula for calculating the median:

- The median is found by listing the data from lowest to highest or highest to lowest and finding the middle score. If there is no middle, but two values then the median is the average of these two values.
- The **median** is defined as the middle value when the numbers are arranged in increasing or decreasing order e.g. 50,100,150,350, 350. The middle value is 150, and therefore 150 is the median.
- If there is an even number of items in a set, the median is the average of the two middle values. For example, if we had four values—4, 10, 12, 26—the median would be the average of the two middle values, 10 and 12; thus, 11 is the median.

j) All numbers in the tables must be right aligned.

k) Raw mark distribution (per subject and actual distribution not percentage).  
(Below (Tables 2 and 3: is an example of the distribution required.

l) All the tables must be based on 10 levels together with the mean and median as follows

**Table 2: Cumulative raw mark distribution**

(ASSESSMENT BODY NAME)		NOVEMBER 2009 FINAL EXAMINATION										(Date of Printing of ?) book)		
Subject 01042		ENGLISH HOME LANGUAGE												
Candidates Entered: 999999 Outstanding: 999 Absent: 999 Irregular: 999 Percentage Candidates Standardised: 99														
	1C	1B	1A	2	3	4	5	6	7B	7A				
% Interval	00-09	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	Mean	Median	Candidates	
Norm Cumulative	00.00 000.0	00.03 000.0	00.80 000.8	.07 002.0	06.55 008.6	28.16 036.7	38.76 075.5	20.23 095.7	04.00 099.7	00.30 100.0	54.2	53.43	6090	
Raw 08 Cumulative	00.00 000.0	00.25 000.3	03.07 003.3	03.51 006.8	17.31 024.1	46.12 070.3	25.81 096.1	03.81 099.9	00.11 100.0	00.00 100.0	45.3	45.61	6090	
Adjusted 08 Cumulative	00.00 000.0	00.02 000.00	00.82 000.8	01.17 002.0	07.01 009.0	28.00 037.0	43.86 080.9	17.39 098.3	01.72 100.0	00.02 100.0	53.00	52.96	6090	
Raw 09 Cumulative	00.00 000.0	00.16 000.2	06.55 006.7	07.58 014.3	29.29 043.6	42.57 086.2	12.78 098.9	01.01 099.9	00.06 100.0	00.00 100.0	42.1	41.51	6242	
Computer 09 Cumulative	00.00 000.0	00.03 000.0	00.79 000.8	01.09 001.9	06.54 008.5	35.13 043.6	42.57 086.2	12.78 098.9	.01 099.9	00.06 100.0	51.06	51.51	6242	

**Table 3: Raw mark distribution (per percentage)**

%Interval	0%	1%	2%	3%	4%	5%	6%	7%	8%	9%	Cum Total
<b>00-09%</b>	1				3	4	1	8	8	7	32
10-19%	12	17	17	17	25	28	39	42	32	61	290
20-29%	53	73	67	63	102	83	84	90	102	103	820
30-39%	113	115	123	129	136	138	150	139	133	161	1337
40-49%	161	139	156	128	124	144	138	145	120	127	1382
50-59%	121	110	98	116	84	90	87	70	101	62	939
60-69%	58	62	59	50	40	51	43	33	36	28	460
70-79%	31	21	28	16	10	9	18	11	3	3	150
80-89%	2	1	5	1		2					11
90-99%											
100%											
Total											5421

### 6.2.1.2 Graphical representation and computer adjustments

- a) The subject number and name must be displayed at the top of the graph together with the examination date i.e. Month and Year;
- b) The x axis must be labelled **Percentage Marks** (Major gridlines in 10 % intervals and Minor gridlines in 2 % intervals) and the y axis **Percentage Candidates** (Scale the y axis as shown in the Annexure B for the intervals 0 to 20 and 80 to 100, From 20 to 80 apply 10 % interval for Major Gridlines and 2 % interval for Minor gridlines);
- c) The Historical Average cumulative frequency distribution (**if available**) as determined by Umalusi and calculated/ generated by the Assessment Body on an annual basis; or
- d) Where no historical average is available the raw mark cumulative frequency distribution for each of the past 3 - 4 years/examinations (**if available**);
- e) The raw mark cumulative frequency distribution of the current examination and the raw mark cumulative frequency distribution of the past two years/ examinations;
- f) The computer adjusted mark cumulative frequency distribution of the current year;
- g) Lines for each distribution must be in different colours and must be legible and the legend must be indicated on either side of the graph. In order to standardise the colours across Assessment Bodies, the line colours must be:
  - Raw marks = red
  - Norm/Historical Average = Dark blue
  - Preceding year 1 = Light Blue
  - Preceding year 2 = Black
  - Computer Adjusted mark = Green)

- h) The suggested computer adjustments must be reflected on the right of the graph per mark (from 0 – 300 for NSC and GETC (ABET L4) and 0 to 100 for NCV and N1 to N3); and
- i) The Computer adjustments must be done according the principles and formulas specified in 6.2.1.3
- j) On the graph, if the year identified as an outlier is one of the preceding years, the year will be plotted as it is, it will not be omitted.

### 6.2.1.3 Calculation of the Computer Adjustment.

$d$  = difference.

$m$  = The mark for which the adjustment is being calculated.

$mm$  = The maximum mark for the subject. It is assumed that  $mm$  is the same for the current marks and the norm.

$ap$  = The accumulative raw mark distribution percentage of candidates.

$ap(m)$  = The accumulative raw mark distribution percentage of candidates for  $m$ .

$nap$  = The accumulative percentage of the norm distribution **(See 6.1.2 (step 4) above)**.

$nm(m)$  = The norm mark for which the  $nap$  is closest to  $ap(m)$ .

$ntc$  = The total candidates in the norm.

$d(x) = |nap(x) - ap(m)|$  **(ROUND up to the seventh decimal and calculate the absolute value)**.

$adj$  = adjustment

Calculations:

1. Calculate  $ap$  (NB: First \* 100 then / by total candidates).
2. Calculate  $nap$ .
3. Now, to determine  $nm(m)$ , simply do the following:
  - For each mark from 0 to  $mm$
  - Let  $x$  = the mark
  - Calculate  $d(x)$
  - Let  $nm(m)$  = the value of  $x$  which produced the lowest value for  $d(x)$
  - $adj(m) = nm(m) - m$
  - Lastly apply the rules:
    - ✓ Candidates marks may not be adjusted by more than 50% up or down
    - ✓ Candidates marks may not exceed the maximum mark of the subject
    - ✓ Adjustments may not exceed 10% of the maximum mark

## Example

m	ap	nap	Adj	Final Adj	d(x) =  nap(x) - ap(m)	d(x) =  nap(x) - ap(m)	d(x) =  nap(x) - ap(m)
0	0.0005401	0.0002878	1	0	0.0002523	0.0013326	0.0169965
1	0.0016204	0.0005755	3	1	0.0000354	0.0010449	0.0167088
2	0.0172843	0.0009592	8	1	0.0004191	0.0006612	0.0163250
3	0.0291672	0.0013429	9	2	0.0008028	0.0002775	0.0159414
4	0.0475318	0.0016307	9	2	0.0010905	0.0000103	0.0156536
5	0.0891222	0.0037410	10	3	0.0032008	0.0021206	0.0135433
6	0.1166690	0.0044124	11	3	0.0038723	0.0027920	0.0128719
7	0.1479969	0.0044124	11	4	0.0038723	0.0027920	0.0128719
8	0.2209150	0.0094963	12	4	0.0089562	0.0078759	0.0077880
9	0.2571041	0.0128536	12	5	0.0123135	0.0112332	0.0044307
10	0.2976142	0.0164028	11	5	0.0158626	0.0147823	0.0008816
11	0.4029404	0.0242684	12	6	0.0237283	0.0226480	0.0069841

Where m=0 nm(m) = 1 (d(x) is lowest at nm(m)1 = 0.0005755 - 0.0005401 = 0.0000354

Adj(m): mark at 0 = nm(m) - m = 1 - 0 = 1  
 Mark at 1 = nm(m) - m = 4 - 1 = 3  
 Mark at 2 = nm(m) - m = 10 - 2 = 8

To calculate final adjustment:

### (Apply normal rounding)

1. At a mark of 0 the adjustment may not exceed 50% of 0 = 0
2. At a mark of 1 the adjustment may not exceed 50% of 1 = 0,5 and rounded = 1
3. At a mark of 2 the adjustment may not exceed 50% of 2 = 1
4. NB: a mark of -0.49 = 0, a mark of -0.5 = -1
5. In the case of duplicate lowest marks, use the mark at the first occurrence.
6. The above principles also apply when ½ computer adjustments are calculated.

### 6.2.2 Pairs Analysis

Pairs Analysis (comparisons) is done between an Anchor Subject and all other Subjects.

The average percentage which a certain group of candidates receive for a Subject (the anchor subject) is compared to the average percentage the same group of candidates received for another subject. The correlation coefficient for each comparison must also be reflected as according the following **principle and formulas:**

#### 6.2.2.1 Correlation formula

$$r = \frac{\sum(x - (1/n)(\sum x))(y - (1/n)(\sum y))}{\sqrt{(\sum(x - (1/n)(\sum x))^2)(\sum(y - (1/n)(\sum y))^2)}}$$

where:  $1/n(\sum x)$  is just the mean of x and the same for y.

Key

x = Anchor subject  
y = Other subject  
n = Number of candidates

**Table 4: Pairs Analysis (To be printed in black)**

**Anchor Subject:** 11351144 ACCOUNTING

Other Subjects						
Code	Subject	No Candidates	Mean Anchor	Mean Other	Difference	Correlation
13301024	Afrikaans Home Language	2844	038.64	030.03	-008.06	-0.12

The **anchor subjects** in the case of the NSC includes all the subjects whilst the **other** subjects to be used for this comparison will **exclude** all B4 subjects as recorded in the NSC qualifications policy, first and second additional languages with the exception of English and Afrikaans first additional language.

In the case of the NC(V) the fundamental subjects will be compared with each other and subjects in each programme will be compared with each other excluding the fundamentals.

In the case of the GETC (ABET L4) and N1 to N3, all subjects will be compared with each other.

The difference = Mean Anchor – Mean Other.

### 6.3 Presentation of data

The above information should be presented in 2 books as follows:

6.3.1 Tables of mark distributions and graphs (for all the subjects);

6.3.2 Pairs analysis and the raw mark and cumulative raw mark distribution per mark (from 0 – 300 NSC and GETC (ABET L4) and 0 to 100 for NCV and N1 to N3)

6.3.3 **In all of the above booklets, the subjects must be arranged and grouped as required by Umalusi. The requirements will be communicated to the Assessment Bodies on an annual basis. In the case of the NATED both N2 and N3 will be arranged in alphabetical order in one booklet irrespective of being N2 or N3. Whilst in NC(V) booklets will be arranged in alphabetical order per level and in 3 different booklets. Please note booklet 1 and booklet 2 should be aligned.**

6.3.4 **Any other specific requirements with regard to the above data and the national subjects will be made available to Assessment Bodies, prior to the examination.**

## 6.4 General principles applied in the standardisation of the examination marks

### These principles are applied in order to achieve the purpose of standardisation

- 6.4.1 In general no adjustment should exceed 10% of the historical average (Norm).
- 6.4.2 In the case of the individual candidate, the adjustment effected should not exceed 50% of the mark obtained by the candidate.
- 6.4.3 If the distribution of the raw marks is below the Historical Average, the marks may be adjusted upwards, subject to the limitations in 6.4.1 to 6.4.2.
- 6.4.4 If the distribution of the raw marks is above the Historical Average, the marks may be adjusted downwards, subject to the limitations in 6.4.1 to 6.4.3.
- 6.4.5 In all the above cases 6.4.1 – 6.4.4, the result of the adjustments may not exceed the maximum mark or less than zero of a subject or subject component.
- 6.4.6 The computer adjusted mark is calculated based on the above principles.
- 6.4.7 Raw marks would generally be accepted for subjects with small enrolments
- 6.4.8 Umalusi, however, retains the right to amend these principles when deemed to be necessary based on sound educational principles.

## 6.5 Standardisation data

Umalusi requires a set of data that was used to compile the two Standardisation booklets. Umalusi requires the following datasets:

- a) Electronic file containing Candidate information specified in Annexure A1. All data must be included in this dataset (irregular candidates, outstanding, absent, not captured).
- b) Electronic file containing the adjustments as calculated during the standardisation process. (**See Annexure A2**)
- c) The datasets must be verified and approved by Umalusi before the booklets can be printed for the standardisation meetings.

## 6.6 Important information for the standardisation process

- 6.6.1 The marks of all candidates Full-time and Part-time must be included in the datasets submitted to Umalusi. The marks of only **Full-time** NSC candidates must be included in the data presented at standardisation meetings. The marks of Part-time NSC candidates are adjusted based on the adjustments approved for the Full-time candidates. (See exclusions below)
- 6.6.2 The marks of all NC(V), GETC and N1 to N3 candidates must be included in the datasets presented at standardisation meetings. (See exclusions below)
- 6.6.3 Candidates guilty of an irregularity or marked as a pending irregularity must be included in the total number of candidates enrolled for the subject as well as counted that the mark is captured but must not be included in standardisation data, statistical moderation or calculation of computer adjustments.
- 6.6.4 If a subject has more than one external component and one of the components is marked as outstanding or absent, the external examination mark must be either absent or outstanding.

- 6.6.5 If a component of a subject is not yet captured it should be marked as outstanding (777) and not left blank (0), as zero is regarded as a valid mark, when submitting the data to Umalusi.
- 6.6.6 For the NSC, Life orientation must be included in the standardisation process.
- 6.6.7 All calculations for the Standardisation process must be calculated using raw marks (If not out of 300 then converted to a mark out of 300 for NSC and GETC (ABET L4) and for the NCV and N2 to N3 if not out of 100 then converted to a mark out of 100. The converted mark must be an integer. The basic principle of rounding should be applied..

## **6.7 Minimum marks to be captured**

Umalusi requires that a certain percentage marks must be captured before the standardisation process can be done successful.

- 6.7.1 National Senior Certificate and GETC (ABET L4)
- Department of Basic Education a minimum of 95% must be captured per subject per province
  - Private assessment bodies a minimum of 95% must be captured nationally per subject
- 6.7.2 National Certificate (Vocational) and N1 to N3
- A minimum of 95% must be captured nationally per subject

## **6.8 Due dates for the submission of standardisation booklets**

**At least 24 hours before the pre-standardisation meeting**

## **7. Approval of adjustments**

### **7.1 Standardisation meeting**

- 7.1.1 Assessment bodies will be given the opportunity to make recommendations for adjustments to raw marks at standardisation meetings as and when determined by Umalusi Council. At these meetings an Umalusi team comprising of statisticians, education specialists and Umalusi staff will evaluate recommendations by assessment bodies
- 7.1.2 Meetings will be held as follows:
- 7.1.2.1 National Standardisation meetings – for all examinations set by the National Departments of Education
- 7.1.2.2 Private Assessment bodies meetings – for each private assessment body
- 7.1.3 All the standardisation meetings will be hosted by Umalusi. Umalusi Council members will chair these meetings.
- 7.1.4 The National Department of either Basic or Higher Education and Training will be invited to the National Standardisation meetings and are responsible for inviting Provincial representation to these meetings.
- 7.1.5 National Teacher Union representatives, as well as representatives from

SAQA, FET Colleges and HESA may be invited to attend the standardisation meetings as observers.

- 7.1.6 A representative from Umalusi and a representative from the National Departments of Education will record all decisions taken at the national standardisation meetings. The accuracy of the record must be confirmed by the meeting and signed by the Chairperson of the meeting and the Director General or his representative prior to the termination of the meeting.
- 7.1.7 A representative from Umalusi and a representative from the Private Assessment body will record all decisions taken at the Private Assessment Body standardisation meetings. The accuracy of the record must be confirmed by the meeting and signed by the Head of the Assessment body and the Chairperson of the meeting.
- 7.1.8 All financial costs relating to the participation of the assessment bodies at these standardisation meetings must be borne by the assessment bodies. Umalusi will provide lunch and tea.

## 7.2 Final decisions for adjustments

Recommendations must be presented as follows and in this order as prescribed by Umalusi.

### STANDARDISATION – NOVEMBER YYYY NSC/NC(V) EXAMINATIONS

#### SUBJECTS EXAMINED AT NATIONAL LEVEL

*Day and date of meeting*

	Subject Code	Subject	Mark Range		Adjustment		
			From	To	Type	From	To
1							
	Subject Code	Subject	Mark Range		Adjustment		
			From	To	Type	From	To
2							
	Subject Code	Subject	Mark Range		Adjustment		
			From	To	Type	From	To
3							

ASSESSMENT BODY: \_\_\_\_\_

PROPOSER: \_\_\_\_\_

DESIGNATION: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_



### 7.2.1 Clarification of adjustments

(a) Mark range should be from 0 to 300 for NSC and GETC (ABET L4) and 0 to 100 for NC(V) and N1 to N3.

(b) Type of adjustments:

- i. No adjustments (Raw) – No adjustments will be applied and raw marks are accepted as is
- ii. Computer adjustments (CA) – This is the adjustment as proposed and calculated programmatically during the Standardisation process (Refer to 6.2.1.3. of this document)
- iii.  $\frac{1}{2}$  CA – half of the computer adjustment (The principle of rounding must be applied.)
- iv. Block adjustments (Block) – Adjustment either upwards or downwards by the same percentage point. Please remember that basic principles of adjustment must still be applied during the block adjustments, for example a mark may not be adjusted by more than 50%. A mark of 10 can only be adjusted +5 even if the block adjustment is +10.
- v. Scaled adjustments (Scale) – Adjustments either upward or downward

(c) Upward adjustments are indicated as e.g. + 4

(d) Downward adjustments are indicated as e.g. – 4

(e) Formula for scaling of adjustments

**Table 5:**

	Subject Code	Subject	Mark Range		Adjustment		
			From	To	Type	From	To
1	01401	Accounting	0	100	Raw		
			100	108	Scaled	1	+3
			108	115	Scaled	+3	1

The adjustments above must be applied as follows

**Formula:**  $sv = (at-af)/(mt-mf)$

sv is added to af. sv is then added to each adjustment up to mt. See example below.

**The calculated adjustments are then rounded** i.e. normal is applied as shown below.

mf = mark from		
mt = mark to		
af = adjustment from		
at = adjustment to		
sv = step value		
Mark from 101 to 108		
$sv = (at-af)/(mt-mf)$		
$sv = (3-1) / (8-1)$		
$sv = 2/7$		
0.285714286		
Mark from 108 to 115		
$sv = (at-af)/(mt-mf)$		
$sv = (1-3) / (15-8)$		
$sv = -2/7$		
-0.285714286		
Mark	Unrounded	Rounded
101	1	1
102	1.2857143	1
103	1.5714286	2
104	1.8571429	2
105	2.1428571	2
106	2.4285714	2
107	2.7142857	3
108	3	3
109	2.7142857	3
110	2.4285714	2
111	2.1428571	2
112	1.8571429	2
113	1.5714286	2
114	1.2857143	1
115	1	1

7.2.2 Example of recommendation for adjustments

**STANDARDISATION – NOVEMBER 2009 NSC EXAMINATION**

**SUBJECTS EXAMINED AT NATIONAL LEVEL**

**Monday, 30 December 2009**

	Subject Code	Subject	Mark Range		Adjustment		
			From	To	Type	From	To
1	13301024	Afrikaans Home Language	0	180	Raw		
			181	243	Scale	0	-3
			244	2300	Scale	-3	0
	Subject Code	Subject	Mark Range		Adjustment		
			From	To	Type	From	To
2	13301084	Afrikaans First Additional Language	0	300	Raw		
	Subject Code	Subject	Mark Range		Adjustment		
			From	To	Type	From	To
3	13301144	IsiNdebele Home Language	0	300	Block	-12	

**ASSESSMENT BODY:** \_\_\_\_\_

**PROPOSER:** \_\_\_\_\_

**DESIGNATION:** \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

## 8. Approval of adjustments

- 8.1 The approved/signed adjustment decisions must be captured on the computer system by the assessment body.
- 8.2 A data set from the computer system must be generated to reflect the adjustments captured. This data set must be submitted to Umalusi to verify the correct capturing of the adjustments. **For specifications refer to Annexure A2**
- 8.3 As soon as possible after the Standardisation meeting and capturing of approved adjustments the data set must be presented to Umalusi.
- 8.4 After verification of the capturing of the adjustments, Umalusi will provide the Assessment body with a report and an approval letter to proceed with the statistical moderation and resulting process.

## 9 Statistical Moderation Process

The statistical moderation must take place before the final resulting of candidates can be done and after the approval of the adjustments has been finalised.

### 9.1 Important information

- 9.1.1 All calculations for the statistical moderation must be done out of a mark of 300 for NSC and 100 for NCV, GETC and NATED N1-N3, and to the 7<sup>th</sup> decimal point (This means rounded to the 7<sup>th</sup> decimal). Only the Final Percentage must be rounded (Normal rounding). Calculations are done using the raw actual or converted marks to 300 for NSC and to 100 for NCV, GETC and NATED N1-N3 and not percentages i.e. the mark (raw examination mark and raw SBA/ICAS/Term/Year mark must be an integer) as used to calculate the standardisation data. Percentages must be converted to marks and the basic principle of rounding should be applied ( $1.499 = 1$  and  $1.5 = 2$ ).
- 9.1.2 Marks for candidates who are absent in either the examination component or SBA/ICAS/Term/Year mark component should be excluded in the moderation process
- 9.1.3 Candidates marked as guilty of or pending irregularity must be excluded during the moderation process
- 9.1.4 For candidates enrolled as repeaters and who opted to use the SBA/ICAS mark from the previous examination, or for whom new, verified and internally moderated SBA marks have not been submitted, the following procedures must be followed:
  - 9.1.4.1 The external adjustments as approved at the Standardisation meeting of the current examination must be applied to the raw examination mark of the repeater candidate in the current year
  - 9.1.4.2 The same Transformed SBA/ICAS mark as calculated in the previous examination must be used in the current year. Do **not** re-calculate the previous Transformed SBA/ICAS mark on the basis of the current year.
  - 9.1.4.3 Calculate the promotion mark for the candidate. (See 9.5.3.5) This represents the Final mark (F) of the repeater candidate who opted not to redo SBA. No final adjustment must be added to this mark.

9.1.4.4 If the candidate's SBA mark was disregarded in the previous examination, it must be disregarded in the current examination and the candidate must be resulted as per 9.7 below

9.1.4.5 Where a candidate had an SBA mark from the previous examination but could not be resulted due to being absent in one or more other examination component, the candidate would have received an incomplete result. The candidate's SBA mark must be disregarded in the current examination and the candidate must be resulted as per 9.7 below.

**PLEASE NOTE THAT 9.1.4 IS ONLY APPLICABLE TO THE NSC**

**9.2 Minimum marks to be captured**

Statistical moderation can only be done once the percentage captured is a certain percentage or more per subject per centre. If these requirements are not met the statistical moderation process cannot be done for the specific centre and subject, and resulting cannot be done for these candidates.

The percentage calculated is based on the number of candidates who wrote the examination per subject and NOT the number of candidates that enrolled. (Candidates that are absent will not be included in the count)

9.2.1 National Senior Certificate and National Certificate (Vocational) and GETC (ABET L4) and N1 to N3:

- If there are more than 14 candidates per subject per centre the percentage captured for both the Examination mark and SBA/ICAS mark must be 80%. Please note that this percentage may be reviewed by Umalusi annually and assessment bodies will be informed of any changes.
- If there are 14 or fewer candidates, the following number of marks must be captured

Number of candidates	Number of candidates that must be captured
10 or less	<b>All candidates</b>
11	<b>Minimum of 10</b>
12	<b>Minimum of 10</b>
13	<b>Minimum of 10</b>
14	<b>Minimum of 11</b>

- If the minimum percentage or the numbers indicated above for a subject in a particular centre has not been met, the statistical moderation cannot be done for the specific centre and subjects and marks should be published as outstanding. Moderation should be done as soon as the minimum requirements have been met.

### 9.3 Statistical moderation principles

The formulae utilised in the statistical moderation process are set up to promote the principle of equity and fairness to all learners for subjects at all centres.

The statistical moderation can be divided into two main processes:

9.3.1 Calculate the following on subject centre level:

- Mean of external exam mark (ME)
- Mean of the SBA/ICAS mark (MS)
- Standard deviation of the exam mark (SDE)
- Standard deviation of the SBA/ICAS mark (SDS)
- Number of candidates

9.3.2 Using the values calculated (ME, MS, SDE, SDS and number of candidates) calculate adjustments for each individual candidate. Depending on the number of candidates and the standard deviation a further breakdown is done according to the following

- Eight or more candidates per subject per centre
- Less than eight candidates per subject per centre
- SDS less than 5% and less than  $\frac{3}{4}$  of the SDE
- SDS less than 5% and SDE smaller than the SDS

### 9.4 Calculation of the Mean and Standard deviation

**Please note:** for the calculation of the mean and standard deviation, only marks where both the exam and SBA/ICAS are mark are captured, must be included. Absent, outstanding and irregular candidates must not be included.

a) **Formula for calculating of the mean (The resultant mean must be rounded to the required 2<sup>nd</sup> or 7<sup>th</sup> decimal)**

$$\bar{X} = \frac{\sum X}{N} \quad \text{or} \quad \bar{X} = \frac{(3+9+10+8+5+6)}{6} = 6.83$$

b) **Formula for calculation of the standard deviation**

$$\sigma = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

$\sigma$  = lower case sigma  
 $\sum$  = capital sigma  
 $\bar{x}$  = x bar

Lower case sigma means 'standard deviation'

Capitals sigma means 'the sum of'

$\bar{x}$  means 'the mean'

$x$  is the mark of each candidate

$n$  is the total number of candidates

### c) Calculation of the number of candidates

For the calculation of the number of candidates, only candidates that have a valid SBA/ICAS and Exam mark as well as candidates with outstanding marks must be counted. Candidates with absent and irregular marks must not be included.

## 9.5 Eight or more candidates offering the subject at an assessment/examination centre

9.5.1 All SBA/ICAS marks will be statistically moderated per subject, per centre to a mean according to the formula listed below and to a standard deviation that is the same as that of the adjusted examination mark, provided the SBA/ICAS standard deviation is not both below 5%, and less than three quarters of the standard deviation of the adjusted examination mark. SBA/ICAS means of a centre that are:

- Between 5 – 10% above the adjusted examination mean will be accepted as is.
- Less than 5% above the adjusted examination mean must be brought up to 5% above the adjusted examination mean.
- More than 15% above the adjusted examination mean must be brought down to 5% above the adjusted mean.
- Between 11% and 15% above the adjusted mean of the examination mark will be scaled down as follows:

11% scaled down to 9%

12% scaled down to 8%

13% scaled down to 7%

14% scaled down to 6%

15% scaled down to 5%

### 9.5.2 Formula to calculate the transformed SBA/ICAS mark

SBA/ICAS marks are linearly adjusted for a particular subject within a centre and the adjusted SBA/ICAS marks are then combined with the adjusted examination marks. This is done in three steps as follows:

$$TS = \frac{SDE}{SDS} (S - MS) + ME + TF$$

Where:

TS = Transformed (adjusted) SBA/ICAS mark.

S	=	Raw SBA/ICAS/Term/Year mark of the candidate (an integer)
SDE	=	Standard deviation of the adjusted examination marks of a school/examination centre
SDS	=	Standard deviation of the raw SBA/ICAS marks of a school/centre
ME	=	Mean of the adjusted examination mark of a school/centre
MS	=	Mean of the raw SBA/ICAS marks of a school/centre
TF	=	Tolerance Factor

**For NSC:**

- If  $MS - ME < 15$  then  $TF = 15$   
 $MS - ME \geq 15$  and  $\leq 30$ , then  $TF = MS - ME$   
 $MS - ME > 30$  and  $\leq 45$ , then  $TF = 60 - (MS - ME)$   
 $MS - ME > 45$  then  $TF = 15$

**For NC(V), N1 to N3 and GETC (ABET L4):** (GETC (ABET L4 as from November 2013))

- If  $MS - ME < 5$  then  $TF = 5$   
 $MS - ME \geq 5$  and  $\leq 10$ , then  $TF = MS - ME$   
 $MS - ME > 10$  and  $\leq 15$  then  $TF = 20 - (MS - ME)$   
 $MS - ME > 15$  then  $TF = 5$

9.5.3 Once the transformed SBA/ICAS/Term/Year mark is calculated, the TS SBA/ICAS/Term/Year mark must be combined with Adjusted Examination mark in the following ratio:

9.5.3.1 National Senior Certificate

- Adjusted Examination mark: 75% (an integer)
- Transformed SBA mark: 25%

9.5.3.2 National Certificate Vocational

**Fundamental Subjects:**

As for the NSC

**Other Subjects:**

- Adjusted Examination mark: 50% (an integer)
- Transformed ICAS mark: 50%
- Or as indicated in the policy document

9.5.3.3 GETC (ABET L4)

- Adjusted Examination mark: 50% (an integer)
- Transformed SBA mark: 50%

9.5.3.4 N1 to N3

- Adjusted Examination mark: as indicated in the policy (an integer)



b) Term mark/Year mark: As indicated in the policy

#### 9.5.3.5 Formula to be used

The adjusted SBA/ICAS mark and the adjusted examination mark are then combined in the ratio of 25:75 for NSC and 50:50 for NC(V). This is done as follows

$$P = (a \times TS) + (b \times E)$$

Where:

P = Preliminary promotion mark of the candidate

TS = Transformed (adjusted) SBA/ICAS mark of the candidate

E = Adjusted examination mark of the candidate (an integer)

a = weight of the SBA/ICAS mark

e.g. NSC= 0.25

e.g. NC(V)= 0.50 or 0.25 for Fundamental Subjects

b = weight of the examination mark

e.g. NSC=0.75

e.g. NC(V)=0.50 or 0.75 for Fundamental Subjects

9.5.4 After the adjusted SBA/ICAS/Term/Year mark is combined with the adjusted examination mark, a further adjustment will be carried out to correct for the change in standard deviation. The following must be done to reduce the standard deviation of the promotion marks:

9.5.4.1 For each subject and centre calculated the following

- Mean of pre-promotion mark (MP)
- Standard deviation of the pre-promotion mark (SDP)
- Use the formula described in 9.4 for calculation of the Mean and Standard deviation

9.5.4.2 Use the following formula to calculate the final adjustment

$$F = \frac{SDE}{SDP} (P - MP) + MP$$

Where

F = The final promotion mark of the candidate

P = The preliminary promotion mark of the candidate

MP = The mean of the preliminary promotion mark of a school/centre

SDE = Standard deviation of the adjusted examination marks of a school/centre

SDP = Standard deviation of the preliminary promotion marks of a school/centre.

## 9.6 Less than eight candidates offering the subject

If there are less than eight candidates offering the subject, the mean of the SBA/ICAS/Term/Year mark is adjusted.

In the case where only the mean of SBA/ICAS/Term/Year mark must be adjusted, the following must be used to calculate a Block adjustment.

- 9.6.1 Calculate the difference between the Mean of the Exam mark (ME) and the Mean of SBA/ICAS/Term/Year mark (MS). Depending on the value use one of the following method to calculate the block adjustment:

### For NSC

9.6.1.1 If  $MS - ME < 15$   
SBA/ICAS adjustment =  $ME + 15 - MS$  therefore  
 $TS = ME + 15 - MS + S$

9.6.1.2 If  $MS - ME \geq 15$  and  $\leq 30$   
SBA/ICAS adjustment = 0 therefore  
 $TS = S$

9.6.1.3 If  $MS - ME > 30$  and  $\leq 45$   
SBA/ICAS adjustment =  $60 - 2(MS - ME)$  therefore  
 $TS = 60 - 2(MS - ME) + S$

9.6.1.4 If  $MS - ME > 45$   
SBA/ICAS adjustment =  $ME + 15 - MS$  therefore  
 $TS = ME + 15 - MS + S$

where:

MS – Mean of SBA/ICAS mark

ME – Mean of adjusted exam mark

S – Raw SBA/ICAS mark

TS – Transformed SBA/ICAS mark

### For NC(V), N1 to N3 and GETC (ABET L4) (GETC (ABET L4 as from November 2013)

9.6.1.5 If  $MS - ME < 5$   
SBA/ICAS adjustment =  $ME + 5 - MS$  therefore  
 $TS = ME + 5 - MS + S$

9.6.1.6 If  $MS - ME \geq 5$  and  $\leq 10$   
SBA/ICAS adjustment = 0 therefore  
 $TS = S$

9.6.1.7 If  $MS - ME > 10$  and  $\leq 15$   
SBA/ICAS adjustment =  $20 - 2(MS - ME)$  therefore  
 $TS = 20 - 2(MS - ME) + S$

9.6.1.8 If  $MS - ME > 15$

SBA/ICAS adjustment = ME + 5 – MS therefore

TS = ME + 5 – MS + S

where:

MS – Mean of SBA/ICAS mark

ME – Mean of adjusted exam mark

S – Raw SBA/ICAS mark

TS – Transformed SBA/ICAS mark

### **9.7 SDS less than 5% and less than $\frac{3}{4}$ of the SDE (This is only applicable to where there are 8 or more candidates at a centre.)**

When the standard deviation of SBA/ICAS is very small, it is an indication that the assessor was not really able to distinguish the abilities of the candidates. The continuous assessment marks will be ignored if their standard deviation is less than 5% and also less than three quarters of the exam standard deviation. These candidates will be compensated by 1.25% added to the adjusted exam mark. The SBA/ICAS mark will be ignored.

#### 9.7.1 Formula to be used for NSC

E + (3.75)

where:

E = Adjusted examination mark

#### 9.7.2 Formula to be used for NC(V), N1 to N3 and GETC (ABET L4)

E + (1.25)

Where:

E = Adjusted examination mark

### **9.8 SDE less than 5% and SDE smaller than the SDS (This is only applicable where there are 8 or more candidates at a centre.)**

When the standard deviation of the examination marks is less than 5% and also less than the SBA/ICAS standard deviation only the mean of the SBA/ICAS mark will be adjusted.

#### 9.8.1 Calculate the difference between the Mean of the Exam mark (ME) and the Mean of SBA/ICAS mark (MS). Depending on the value use one of the following method to calculate the Block adjustment:

##### **For NSC**

9.8.1.1 If MS – ME < 15

SBA/ICAS adjustment = ME + 15 – MS therefore

TS = ME + 15 – MS + S

9.8.1.2 If MS – ME ≥ 15 and ≤ 30

SBA/ICAS adjustment = 0 therefore  
TS = S

9.8.1.3 If  $MS - ME > 30$  AND  $\leq 45$   
SBA/ICAS adjustment =  $60 - 2(MS - ME)$  therefore  
TS =  $60 - 2(MS - ME) + S$

9.8.1.4 If  $MS - ME > 45$   
SBA/ICAS adjustment =  $ME + 15 - MS$  therefore  
TS =  $ME + 15 - MS + S$

where:

MS – Mean of SBA/ICAS mark

ME – Mean of adjusted exam mark

S – Raw SBA/ICAS mark

TS – Transformed SBA/ICAS mark

#### **For NCV, N1 to N3 and GETC (ABET L4) (GETC (ABET L4 as from November 2013)**

9.8.1.5 If  $MS - ME < 5$   
SBA/ICAS adjustment =  $ME + 5 - MS$  therefore  
TS =  $ME + 5 - MS + S$

9.8.1.6 If  $MS - ME \geq 5$  and  $\leq 10$   
SBA/ICAS adjustment = 0 therefore  
TS = S

9.8.1.7 If  $MS - ME > 10$  and  $\leq 15$   
SBA/ICAS adjustment =  $20 - 2(MS - ME)$  therefore  
TS =  $20 - 2(MS - ME) + S$

9.8.1.8 If  $MS - ME > 15$   
SBA/ICAS adjustment =  $ME + 5 - MS$  therefore  
TS =  $ME + 5 - MS + S$

where:

MS – Mean of SBA/ICAS mark

ME – Mean of adjusted exam mark

S – Raw SBA/ICAS mark

TS – Transformed SBA/ICAS mark

## **9.9 Other principles applicable to the adjustment of the SBA/ICAS mark**

### 9.9.1 *The adjustment of SBA/ICAS marks limited to 50% of the mark obtained by the candidate*

The adjustment of an individual candidate's SBA/ICAS marks, either upwards or downwards, is limited to 50% of the mark obtained by the candidate. The adjustment is further limited that the maximum mark may not be exceeded e.g. a mark of 280 may not have an adjustment of +40 but is limited to +20.

### 9.9.2 *Incomplete Result*

Candidates that fail to present themselves for SBA/ICAS will be regarded as 'incomplete' and not have a zero mark awarded. This implies that the candidate has an incomplete result. A zero is regarded as a mark and is awarded based on the evaluation of evidence provided.

## **10 Resulting of candidates**

After statistical moderation process was successfully completed the resulting run can be done.

### **10.1 Important information regarding the resulting of candidates**

10.1.1 All calculations up to and including the pre-promotion mark must be done out of e.g. a mark of 300 for NSC and a mark out of 100 for NCV, GETC (ABET L4) and N1 to N3, (GETC (ABET L4 as from November 2013) and to the 7<sup>th</sup> decimal point. Calculations are done using actual or converted marks and not percentages.

Candidates final results must be calculated according to the admission and promotion requirements set out in the Policy Document, *The National Senior Certificate: A qualification at Level 4 on the National Qualifications Framework and the Policy for the National Certificate (Vocational) Qualifications at Level 2,3 and 4 on the National Qualifications framework*, Government Gazette No. 28677 of 29 March 2006.

## **11. Verification of statistical moderation and resulting process**

After assessment bodies have completed the statistical moderation process and result process the following data must be submitted to Umalusi for verification.

Umalusi will only approve the results once all data has been submitted.

### **11.1 Approval of results**

Umalusi will only approve the results if the following conditions are met:

11.1.1 The Curriculum meets Umalusi minimum requirements

11.1.2 Question Papers and Marking Memoranda are of the required standard.

11.1.3 Writing of the Examination has been conducted as per policy/regulations and free from any irregularity which would jeopardize the credibility of the assessment.

- 11.1.4 Marking has been done consistently and per the Memorandum and free from any irregularity which would jeopardize the credibility of the assessment.
- 11.1.5 The results have been standardized and resulted as per the requirements of Umalusi.
- 11.1.6 Resulting has been accurate and correct and in terms of policies and procedures pertaining to the assessment and qualification.
- 11.1.7 The Assessment Body has provided Umalusi with a report and evidence that all irregularities have been dealt with appropriately.

## **11.2 Receiving of information**

- 11.2.1 Information must be submitted to Umalusi via a dataset that can be uploaded onto the mainframe system.
- 11.2.2 The National Departments of Education must submit the datasets directly onto the mainframe.
- 11.2.3 Other assessment bodies must submit the datasets electronically to Umalusi as arranged.

## **11.3 Information to be supplied**

The following datasets should be submitted

### *11.3.1 National Senior Certificate*

The DBE must submit separate datasets for each province, while the private assessment bodies can submit the dataset per assessment body

- 11.3.1.1 Dataset containing the Statistical moderation records – See Annexure A3 for specifications
- 11.3.1.2 Dataset containing the candidate information – See Annexure A1 for specification

### *11.3.2 National Certificate (Vocational), and N1 to N3*

The DHET must submitted datasets per assessment body (not per province)

- 11.3.2.1 Dataset containing the Statistical moderation records – See Annexure A3 for specifications
- 11.3.2.2 Dataset containing the candidate information – See Annexure A1 for specifications

### *11.3.3 General Education and Training Certificate (ABET Level 4)*

The DHET must submit separate datasets for each province, while the private assessment bodies can submit the dataset per assessment body

- 11.3.3.1 Dataset containing the Statistical moderation records – See Annexure A3 for specifications

11.3.3.2 Dataset containing the candidate information – See Annexure A1 for specification

## 12 REPORTS AND STATISTICAL INFORMATION REQUIRED BY UMALUSI

### 12.1 STATISTICAL REPORT 1 (A Provisional Report)

#### 12.1.1 *Due Date*

Immediately or soonest after resulting but before the Approval of results Meeting.

#### 12.1.2 *Important information*

**12.1.2.1** This report excludes supplementary examination results, re-marks and pending irregularities and can be provided in electronic format.

**12.1.2.2** This report should provide the final overall results of the candidates. The data must be presented as national figures and also per province/assessment body.

**12.1.2.3** The data must include tables which include: (Full time and Part time candidates and separately for the National Senior Certificate and the National Certificate Vocational)

- a) The number of candidates who enrolled for the assessment;
- b) The number of candidates who wrote the examination;
- c) The number of candidates from b) who obtained a National Certificate/GETC (ABET L4);
- d) The percentage of candidates from b) who obtained a National Certificate/GETC (ABET L4);
- e) The number of candidates from b) who obtained university entrance in each category; (not applicable to GETC)
- f) The percentage of candidates from b) who obtained university entrance in each category; (not applicable to GETC)
- g) The number of candidates from b) who did not obtain university entrance but obtained a National Certificate; (not applicable to GETC)
- h) The number of candidates that failed;
- i) The percentage (%) candidates from b) that failed;
- j) The number of candidates from a) that did not sit for the examination at all

- k) The percentage (%) of candidates from a) that did not sit for the examination at all
- l) The number of candidates from b) with outstanding marks in 1 or more subjects
- m) The percentage (%) of candidates from b) with outstanding marks in 1 or more subjects
- n) The number of candidates from b) with outstanding marks in 1 or more subjects due to being absent for one or more components of the assessment
- o) The percentage (%) of candidates from b) with outstanding marks in 1 or more subjects due to being absent for one or more components of the assessment
- p) The number of outstanding marks in all subjects
- q) The percentage (%) of outstanding marks in all subjects
- r) The number of outstanding marks per subject
- s) The percentage (%) of outstanding marks per subject.

12.1.3 A table containing final results for each subject

(ASSESSMENT BODY NAME)		NOVEMBER 2009 FINAL EXAMINATION									(Date of Printing of book)		
Subject 01042		ENGLISH HOME LANGUAGE											
Candidates Entered: 999999		Outstanding: 999			Irregular: 999			Absent: 999			Percentage Candidates		
Standardised: 999													
	1C	1B	1A	2	3	4	5	6	7B	7A			
% Interval	00-09	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100	Mean	Median	Candidate
Norm Cumulative	0.00 0.0	00.03 000.0	0.80 000.8	.0.07 002.0	6.55 008.6	28.16 036.7	38.76 075.5	20.23 095.7	4.00 99.70	0.30 100.00	54.20	53.43	6090
Raw 09 Cumulative	0.00 0.00	00.25 0.30	03.07 3.30	03.51 6.80	17.31 24.10	46.12 70.30	25.81 06.10	03.81 99.90	00.11 100.00	00.00 100.00	45.30	45.61	6090
Adjusted 09 Cumulative	0.00 0.00	0.02 0.00	0.82 0.80	1.17 2.00	7.01 9.00	28.00 37.00	43.86 80.90	17.39 98.30	1.72 100.00	00.02 100.00	53.00	52.96	6090
Combined 09 Cumulative	0.00 0.00	00.16 0.20	06.55 06.70	07.58 14.3	29.29 43.6	42.57 86.20	12.78 98.90	1.01 99.90	0.06 100.00	00.00 100.00	56.10	44.50	6090

**The Combine 09 row is the final results i.e. after statistical moderation and condonations.**

12.1.4 For the NSC and GETC (ABET L4) nationally and for each province and for the NCV and N1 to N3 nationally:

Number of examination centres with:

- a) SBA/ICAS/Term/Year mark mean below examination mean;
- b) SBA/ICAS/Term/Year mark mean between examination mean and 5% above examination mean;



- c) SBA/ICAS/Term/Year mark mean between 5 % and 10 % above examination mean;
- d) SBA/ICAS/Term/Year mark mean between 10 % and 15 % above examination mean;
- e) SBA/ICAS/Term/Year mark mean between 15 % and 20 % above examination mean; and
- f) SBA/ICAS/Term/Year mark mean more than 20 % above examination mean.

12.1.5 *The above table should also include:*

- a) The total number of schools/centres per subject; and
- b) The number of examination centres per subject with standard deviation less than five percent and also less than three quarters of the examination standard deviation.

## **12.2 STATISTICAL REPORT 2 (Intermediate Report)**

### *12.2.1 Due date*

After remarks and re-checks have been completed and irregularities have been resolved.

### *12.2.2 Important information*

The report must be as the report indicated in 12.1 but remarks, re-checks and irregularities must be included while supplementary results must be excluded.

## **13.1 STATISTICAL REPORT 3 (Final Report)**

### *13.1.1 Due date:*

After the supplementary examination.

### *13.1.2 Important information*

The report must be as the report indicated in 12.1 but remarks, rechecks and irregularities and supplementary results.

## **14 MOP UP DATA**

Umalusi requires all assessment bodies to submit mop-up data as of January 2017. This data includes, the capturing of marks for candidates not completed during the resulting process, re-marks and re-checks, instances where marks have changed and late registrations.

In all instances only the records of the affected candidates should be submitted to Umalusi.

## 14.1 Submission of datasets

Please refer to Annexure A for the format of the dataset to be submitted.

Unless otherwise indicated the following principles for the submission of mop-up datasets applies:

- 14.1.1 The principle to be followed in all instances is that for one month after the release of results, one mop-up dataset can be submitted per week, thereafter one mop-up dataset can be submitted per month for the examination sitting concerned.
- 14.1.2 For the Supplementary examinations one mop-up dataset can be submitted per week for the first month after the release of the Supplementary results.
- 14.1.3 Thereafter only one mop-up dataset can be submitted per month.
- 14.1.4 Once the re-mark, re-check, capture of outstanding marks, including missing script marks and changed marks have been concluded, Umalusi requires a dataset containing **only** the candidate records affected by this process. Not all candidate records must be submitted.
- 14.1.5 Umalusi requires a candidate file containing all records that were re-marked, re-checked, changed and outstanding as per the specifications in Annexure A1.
- 14.1.6 In the case of re-mark, re-check records, this dataset will be an RE type dataset.
- 14.1.7 In the case of outstanding marks, including missing script marks, and changes to quality assured marks that are not the result of the re-mark and re-check process, will be an OM dataset
- 14.1.8 In the case of centres where the statistical moderation record was not created due to insufficient numbers, only the statistical moderation records for the affected subject and centres that were created after the initial process should be included. See Annexure A3 for the specifications. This will be an SR dataset.

## 14.2 Outstanding marks and late registrations

Marks that were outstanding during the initial resulting process must be captured as soon as possible and the resulting of these candidates must be done.

The same principle applies to late registrations, which should be completed as soon as possible and the candidates appropriately resulted.

### 14.2.1 Principles for outstanding marks with regard to statistical moderation processes

- 14.2.1.1 If outstanding marks were captured after the statistical moderation records were created for the specific subject/centre these moderation records must be used to calculate the Transformed SBA/ICASS mark as explained in section 9 of this document.
- 14.2.1.2 If no moderation record has been created (because insufficient marks were captured) the statistical moderation process, as explained in section 9, must be completed for the specific centre and subject.

### 14.3 Re-marks, re-checks and changed marks

14.3.1 In the case of the re-marking and re-checking of examination scripts, the Transformed SBA/ICASS marks will remain the same for these candidates. The same principles as in 15.1 below must be used.

14.3.2 In the case of changed marks the same principles as in 15.1 below must be used.

### 14.4 Concession for a missing script

A missing script is regarded as being a script that cannot be accounted for, although all evidence points to the fact that the candidate indeed sat for and wrote the examination.

As of January 2017 Umalusi will provide assessment bodies with the mark to be used in the event of a script having gone missing.

This mark will be verified during certification of candidate records where applicable.

#### 14.4.1 Formulae for the calculation for the missing script

##### 14.4.1.1 Subjects with two or more question papers.

When one of the scripts of a candidate is lost, the following procedure will apply:

- Rank the marks of the paper for which the candidate has a script. The marks are ranked provincially.
- Identify the marks of candidates that are to a maximum of 5% above and the same percentage below the mark of the candidate whose script is lost, and use the maximum range possible.
- Identify the marks of these candidates on the second set of scripts.
- The average mark of these candidates will be the mark awarded to for the lost script.

##### 14.4.1.2 Subjects with only one question paper

- The candidate's adjusted CASS mark is used as the mark of the second paper and the procedure as described above is applied.

### 14.5 Electronic process for unstandardized subjects:

In order to process subjects that were not approved during the initial standardisation meeting the following information must be submitted. Please note that only the information with regard to the specific subject must be submitted on the file, for example: If the candidate wrote 7 subjects and only one is not standardised only the subject not standardised must be submitted in the files.

#### 14.5.1 Standardisation process:

Submit the following files for the electronic checking of the standardisation process:

- SP file – The updated standardisation candidate file containing all the subject(s) not standardised.
- ST-file – Statistical information with regard to the Norm, previous history and current year – Only the subject(s) not standardised
- PR-file - Percentage raw mark distribution - Only the subject(s) not standardised
- RD-file Raw mark distribution information - Only the subject(s) not standardised
- PA – Pairs analysis – The updated PA file for all the subject(s) including the not standardised subjects.

After the approval meeting for the “unstandardized subject(s)” the approved adjustments must be captured.

### **14.5.2 Approval of adjustments**

Submit the electronic dataset with the approved external adjustments to be uploaded and checked. Note only the “unstandardized subject(s)” must be submitted.

### **14.5.3 Statistical moderation process**

Submit the SM (candidate file) and SR (Statistical moderation records) to Umalusi – Note only the subject(s) that are involved must be submitted and not all the subjects and candidate records already approved.

## **15 Supplementary examination – Subject results**

### **Supplementary examination – Combined results November and supplementary (Supplementary examinations are not applicable to GETC for adults and N1 to N3)**

### **15.1 Principles for the supplementary exam resulting**

- 15.1.1 The external adjustments as approved at the Standardisation meeting of the main exam must be applied to the raw supplementary examination mark
- 15.1.2 The Transformed SBA/ICAS mark as calculated in the main exam must be used – do not re-calculate the Transformed SBA/ICAS mark.
- 15.1.3 Calculate the promotion mark for the candidate. (See 9.5.3.5)
- 15.1.4 Calculate the final mark(F) using the moderation records of the November examination (See 9.5.4.2)
- 15.1.5 Apply language compensation and or condonation if applicable.

### **15.2 Verification of supplementary examination**

After resulting was done for the supplementary exam, Umalusi requires a dataset containing all the candidates that enrolled for the Supplementary examination. This dataset must be submitted before the supplementary results are released. See Annexure A1 for specifications.

### 15.3 Approval of supplementary examination

All supplementary results will be released following an approval meeting that will be held by Umalusi. All assessment bodies may not release the results for the supplementary examination before the approval meeting.

### 15.4 Verification of combined results

After the verification of the subjects results a dataset including the combined results for November and Supplementary exam must be submitted. This dataset will be used for verifying policy compliance for the combined results. See Annexure A1 for specifications.

## 16 Verification of EORs (examination on Request)

### 16.1 Submission of subject structures

- Subject structures for all EOR examinations should be submitted once on the 10<sup>th</sup> of January every year.
- If there are any changes in the subject structures, these should be communicated with Umalusi two calendar months before the examination in question.

### 16.2 Submission of registration data.

- The assessment body should submit a description of the cohort before the 14<sup>th</sup> of every month of the examination

### 16.3 Submission of historical averages (norms)

- Norms should be submitted to Umalusi for verification by the 10<sup>th</sup> of every month of the examination
- Norms will be calculated using the formula for the calculation of the historical average/norm (see page 14 of the directive)
- The assessment Body will submit the norms in the same format as other examinations (see directives page 1)
- A final set of norms will be submitted to the assessment body by Umalusi following the approval of the norms by the ASC committee.

### 16.4 Standardisation Process

- The assessment body will submit **only** the standardisation process file (SP) for Umalusi's verification and approval.
- The assessment body will then submit the electronic booklets once the SP file has been approved.
- The assessment body will submit the internal moderators reports to Umalusi a week before the standardisation meeting
- The assessment body will submit a profile of the candidates two weeks before the standardisation meeting.

- The assessment body will submit standardisation booklets in cases where the standardisation meeting will not be done by teleconferencing. When done by teleconferencing electronic booklets will be used.
- Standardisation of the EOR will be done after every EOR examination.

#### **16.5 Approval of adjustments.**

- Umalusi will submit standardisation decisions to the assessment body after standardisation.
- The assessment body will apply the adjustments and submit to Umalusi for approval.

#### **16.6 Statistical moderation and resulting process**

- The assessment body will submit the SM and SR file only after the approval of the adjustments by Umalusi
- Umalusi will verify and approve the SM and SR file.

#### **16.7 Approval of results**

- Umalusi will approve the release of results for the EOR during an approval meeting if results were standardised during a standardisation meeting.
- If the standardisation meeting is done through teleconferencing standardisation and approval will take place at the same time.
- A letter of approval of results will be sent to the assessment body through the CEO's office.
- The assessment body will only release results once the results have been approved by Umalusi.

Please note all the format of the registration data, SP, SM and SR files will be the same as all the other qualifications. Please refer to annexure A for details.

## ANNEXURE: A

This section provides information regarding the datasets to be submitted to Umalusi. Different types of datasets are required for the process of quality assurance.

- Datasets containing candidate information
- Datasets containing external adjustments
- Datasets containing statistical moderation records
- Datasets containing standardisation information:
  - cumulative raw mark distributions
  - percentage raw mark distribution
  - raw mark information per subject
  - pairs analysis
- Dataset containing subject information

The datasets required for the candidate information has only one data structure that will be used for the different processes as indicated below. The last five columns in the data structure indicate the different process and whether the data field is required (compulsory) to be submitted for the related process. The abbreviations used for the processes are:

- SP – Standardisation process
- SM – Statistical moderation and resulting process
- RE – Re-mark, Re-check and Outstanding marks
- SE – Supplementary results – Subject results only for supplementary exam
- SC – Supplementary results – Combined results for November and supplementary exam
- RG – Registration data of candidates
- OM - Candidate file containing marks that were outstanding or were changed after the SM file was submitted.

If the column is marked with an "X" it means that specific field is compulsory for the process. Fields not marked with an "X" for the specific process can be left blank for alphanumeric fields and populated with zeros (0) for numeric fields.

### A1 Electronic data set for candidate information

#### A1.1 Province codes and Assessment body codes

##### a) Province codes

The following province codes must be used:

- 01 - Western Cape Education Department
- 02 - Northern Cape Education Department
- 03 - Free State Education Department
- 04 - Eastern Cape Education Department
- 05 - KwaZulu-Natal Education Department
- 06 - Mpumalanga Education Department
- 07 - Limpopo Education Department
- 08 - Gauteng Education Department
- 09 - North West Education Department
- 99 - For Private assessment bodies
- Z9 - For subsystem NCV and N2-N3

Please note: Datasets submitted from DBE for subsystem SSC and from DHET for subsystem GET must be submitted per province meaning that in total 9 datasets should be submitted per process.

b) Assessment body codes

- 08 - Department of Higher Education: FET COLLEGES
- 11 - Independent Examination Board (IEB)
- 13 - Eastern Cape Education Department
- 14 - Free State Education Department
- 15 - Gauteng Education Department
- 16 - KwaZulu-Natal Education Department
- 17 - Mpumalanga Education Department
- 18 - Northern Cape Education Department
- 19 - Limpopo Education Department
- 20 - North West Education Department
- 21 - Western Cape Education Department
- 24 - Department of Basic Education
- 30 - DHET: General Education and Training certificate (ABET Level 4)
- 31 - SACAI
- 32 - BENCHMARK

A1.2 Naming convention for datasets – Candidate file

Format for dataset containing candidate information:

**OZaaa.bcc.dzzeefnn.DAyymmdd**

Where

- aaa = SRT – For datasets submitted by Private assessment bodies  
EKS – For datasets submitted by DBE and DHET (GET)  
OZ9 – For datasets submitted by DHET (NCV and N2-N3)  
AET – For datasets submitted by DHET (GET)
- b = A – For datasets submitted by DHET (GET)  
E – For datasets submitted by DBE and Private assessment bodies  
O - For datasets submitted by DHET (NCV and N2-N3)
- cc = Province code – See paragraph A1.1 for assessment bodies submitting data per province  
Z9 – For NCV and N2-N3  
99 – For Private assessment bodies
- d = S for subsystem SSC  
V for subsystem NCV  
G for subsystem GET  
N for subsystem N2-N3
- zz = Assessment body code
- ee = SP – Standardisation candidate file  
SM – Statistical moderation and resulting candidate file  
RE - Re-mark, Re-check and outstanding marks  
SE – Supplementary results – Subject results  
SC – Combined supplementary results – November and



supplementary exam

RG – Registration data for candidates

OM – Candidate file containing marks that were outstanding or were changed after the SM file was submitted.

f = NQF level, for example 4 for level 4  
For subsystem N2-N3, please enter the N-level, for example 2 for N2

nn = Sequential run number

yy = The year the dataset is created. Example 11 when created in 2011

mm = The month the dataset is created

dd = The day the dataset is created

For example:

Dataset from DBE for SSC subsystem for standardisation process.

**OZEKS.E08.S15SP401.DA110612**

Dataset from IEB for SSC subsystem for statistical moderation and resulting process

**OZSRT.E99.S11SM401.DA110612**

Dataset from DHET for GET subsystem for statistical moderation and resulting process

**OZAET.A08.G15SM101.DA110612**

Dataset from DHET for NCV subsystem, level 2 for supplementary results

**OZOZ9.OZ9.V08SE201.DA110612**

Dataset from DHET for N1-N3 subsystem, N2 for standardisation process

**OZOZ9.OZ9.N08SE201.DA130915**

### A1.3 *Composition of data records*

All incomplete data elements must be filled with spaces (for alpha-numeric elements) or zeroes (for numeric elements).

A1.3.1 Alphanumeric data elements e.g. A10 must be left justified with trailing spaces to fill the field.

A1.3.1 Numeric data elements must be right justified with leading zeroes to fill the field.

### A1.4 *Submitting of data to Umalusi*

The DBE and DHET must submit datasets directly onto the mainframe.

Other assessment bodies with few candidates may submit the dataset electronically to Umalusi as arranged.

### A1.5 *Data structure*

The total length of the data record will be 1923 characters.

### 1.5.1 Record type 1 – Assessment body detail.

Field description	Type and length	Field descriptions and values	Process						
			SP	SM	RE	SE	SC	RG	OM
Record type	N(01)	Value = "1"	X	X	X	X	X	X	X
Assessment body code	N(02)	Refer to paragraph A.1	X	X	X	X	X	X	X
Assessment body name	A(100)	Refer to paragraph A.1	X	X	X	X	X	X	X
Date dataset created	N(08)	Format CCYYMMDD	X	X	X	X	X	X	X
Subsystem	A(03)	SSC – National Senior Certificate NCV – National Certificate Vocational GET – General and further training certificate NSC – N2-N3	X	X	X	X	X	X	X
Filler	A(1809)	Value spaces	X	X	X	X	X	X	X

### A1.5.2 Record type 2 – Examination centre detail

Field description	Type and length	Field descriptions and values	Process						
			SP	SM	RE	SE	SC	RG	OM
Record type	N(01)	Value = "2"	X	X	X	X	X	X	X
Examination centre number	N(10)	Unique number of school/centre	X	X	X	X	X	X	X
Examination centre name	A(80)	Name of school/centre	X	X	X	X	X	X	X
District number	N(4)		X	X	X	X	X	X	X
Name of District	A(30)		X	X	X	X	X	X	X
Region Number	N(4)		X	X	X	X	X	X	X
Name of Region	A(30)		X	X	X	X	X	X	X
EMIS Number	N(10)		X	X	X	X	X	X	X
International/Local (SA)	A(01)	Indicate if centre is located within SA Borders – I – International S – Within SA's borders	X	X	X	X	X	X	X
Type of Centre	A(01)	Indicate type of centre: 1 = Private 2 = Public 3 = Independent School (Note – type must be discussed with Assessment bodies)	X	X	X	X	X	X	X
Postal address 1	A(30)		X	X	X	X	X	X	X
Postal address 2	A(30)		X	X	X	X	X	X	X
Postal address 3	A(30)		X	X	X	X	X	X	X
Postal address 4	A(30)		X	X	X	X	X	X	X
Postal code	A(04)		X	X	X	X	X	X	X
Physical address 1	A(30)		X	X	X	X	X	X	X
Physical address 2	A(30)		X	X	X	X	X	X	X
Physical address 3	A(30)		X	X	X	X	X	X	X
Physical address 4	A(30)		X	X	X	X	X	X	X
Area code	A(04)		X	X	X	X	X	X	X
Full Time	A(01)	Does the school offer full time tuition? Y = Yes; N = No	X	X	X	X	X	X	X
Part Time	A(01)	Y = Yes; N = No	X	X	X	X	X	X	X
Private	A(01)	Y = Yes; N = No	X	X	X	X	X	X	X
LSEN	A(01)	Y = Yes; N = No	X	X	X	X	X	X	X
Filler	A(1500)		X	X	X	X	X	X	X

### A1.5.3 Record type 3 – Candidate detail

Field description	Type and length	Field descriptions and values	Process						
			SP	SM	RE	SE	SC	RG	OM
Record type	N(01)	Value = "3"	X	X	X	X	X	X	X
Examination number	N(10)	The centre number where candidate registered and wrote the exam.	X	X	X	X	X	X	X
Examination date	N(06)	Format CCYYMM	X	X	X	X	X	X	X
Transaction status and transaction type	N(02)	Only for subsystem SSC, NCV and GET 0 First issue 1 Replacement (Change of Status) 2 Replacement (Original certificate) 3 Re-issue (Correction of errors) 4 Replacement (post irregularity) 5 Not used 6 Combination certificate Y → Transaction type 1 National Certificate (Vocational) 2 Subject statement/Learning area certificate 3 NSC/NC(V): Bachelors Degree 4 NSC/NC(V): Diploma 5 NSC/NC(V): Higher Certificate 6 National Senior Certificate 7 Withdraw/Absent/Outstanding 8 Failed all subjects 9 GETC		X	X	X	X		X
Instructional programme code	N(10)	SSC: Program code: 8100000000 NCV: Program codes for the NC(V) programmes as published in the Policy GET: Program code 7700000000 N2-N3: NATED 02-550 Code right padded with zeroes.	X	X	X	X	X	X	X
Candidate examination no	N(13)		X	X	X	X	X	X	X
Attendance type	N(01)	1=Full-time 2=Part-time 3=Repeat	X	X	X	X	X	X	X
Surname	A(55)		X	X	X	X	X	X	X
Given name(s)	A(55)		X	X	X	X	X	X	X
Date of birth	N(08)		X	X	X	X	X	X	X
Gender	N(01)		X	X	X	X	X	X	X
ID-number	N(13)		X	X	X	X	X	X	X
Immigrant	A(01)	Y=Candidate is an immigrant N=Candidate is not an immigrant		X	X	X	X	X	X
Special conditions	N(02)	For Subsystem SSC and NCV 00 = None		X	X	X	X	X	X

Field description	Type and length	Field descriptions and values	Process						
			SP	SM	RE	SE	SC	RG	OM
		10= Dyscalculia 01 = Hearing impaired 02 = Visual impaired 03 = Dyslexia 05 = Aphasia 06 = Other 11 = Hearing impaired and dyscalculia 12 = Visual impaired and dyscalculia 13 = Dyslexia and dyscalculia 15 = Aphasia and dyscalculia 16 = Other with dyscalculia For Subsystem GET 00 = None 17 = Dyscalculia For Subsystem N2-N3 00 = None 02 = Hearing impaired 03 = Blind person							
Endorsed Certificate (Only for SSC)	A(1)	Y= Yes (candidate with a special educational need who has requested an endorsed certificate) N= No (candidate with a special need who has not requested an endorsed certificate) Space= N/A		X	X	X	X	X	X
Race	A(01)		X	X	X	X	X	X	X
Language of learning and teaching <b>(LOLT)</b>	N(02)	Only for subsystem SSC, NCV and GET							
Irregularity indicator	N(01)	0 = no irregularities 1 = guilty of examination irregularity 2 = Irregularity pending (Indicator not to be used for certification)	X	X	X	X	X		X
Irregularity date	N(08)	Format CCYYMMDD The date when the irregularity will be lifted	X	X	X	X	X		X
Level obtained	N(02)	For subsystem SSC, NCV and GET 01 National Senior Certificate/National Certificate (Vocational)/GET 02 To few subjects for NSC/NC(V)/GET qualification 03 Failed all subjects 04 Candidate Withdrawal (A candidate who enrolled for the examination but who did not write any subject) For subsystem N2-N3 00 = Too few subjects/instructional offerings 05 = N3 certificate		X	X	X	X		X

Field description	Type and length	Field descriptions and values	Process							
			SP	SM	RE	SE	SC	RG	OM	
		06 = NSC								
Higher education admission	A(01)	Only for SSC and NC(V) B = Bachelor's Degree D = Diploma H = Higher Certificate ' ' = Space		X	X	X	X			X
Level 3 and 4 pre-requisite (NC(V) only) For SSC: Progressed learner	N(01)	0 = Complied with requirements for Level 1 = Pre-requisite not achieved  1 = Candidate is a progressed learner		X	X	X	X	X	X	X
Date with effect from	N(06)									
Previous certificate number	A(12)									
Cancellation code	N(02)									
Cancellation date	N(08)	Format CCYYMMDD								
Number of subjects	N(02)	The number of subjects the candidate has offered	X	X	X	X	X	X	X	X
Certificate Language preference	N(02)									
Filler	A(01)				X					
<b>Subject information (occurs up to 15 times)</b>		N(113) * 15 = 1695 characters								
Subject code	N(10)	Subject codes as in the policy for the National Senior Certificate, National Certificate (Vocational) and General and further training certificate subjects For subsystem N2-N3 NATED subject code	X	X	X	X	X	X	X	X
Percentage obtained	N(03)	The percentage the candidate has obtained 999/444 : Candidate absent for subject 777 : Outstanding mark. 333 : Candidate was irregular for subject	X	X	X	X	X			X
Rating obtained	N(01)	<b>NSC subjects (not applicable for GETC and N1 to N3)</b> 7 = 80-100 (Outstanding achievement) 6 = 70-79 (Meritorious achievement) 5 = 60-69 (Substantial achievement) 4 = 50-59 (Adequate achievement) 3 = 40-49 (Moderate achievement) 2 = 30-39 (Elementary achievement) 1 = 0-29 (Not achieved) 0 = for absent, withdrawal, outstanding external marks, A-level subjects and irregular subjects		X	X	X	X			X

Field description	Type and length	Field descriptions and values		Process								
				SP	SM	RE	SE	SC	RG	OM		
		<b>NC(V) subjects</b> <b>Fundamental subjects</b> 7 = 80%-100% 6 = 70%-79% 5 = 60%-69% 4 = 50%-59% 3 = 40%-49% 2 = 30%-39% 1 = 0%-29%	<b>Vocational subjects</b> 5 = 80%-100% 4 = 70%-79% 3 = 50%-69% 2 = 40%-49% 1 = 0%-39%								X	
Rating adjusted	N(01)	<b>NSC subjects (not applicable to GETC and N1 to N3)</b> 7 = 80-100 (Outstanding achievement) 6 = 70-79 (Meritorious achievement) 5 = 60-69 (Substantial achievement) 4 = 50-59 (Adequate achievement) 3 = 40-49 (Moderate achievement) 2 = 30-39 (Elementary achievement) 1 = 0-29 (Not achieved) 0 = for absent, withdrawal, outstanding external marks, A-level, External subjects and irregular subjects			X	X	X	X				X
		<b>NC(V) subjects</b> <b>Fundamental subjects</b> 7 = 80%-100% 6 = 70%-79% 5 = 60%-69% 4 = 50%-59% 3 = 40%-49% 2 = 30%-39% 1 = 0%-29%	<b>Vocational subjects</b> 5 = 80%-100% 4 = 70%-79% 3 = 50%-69% 2 = 40%-49% 1 = 0%-39%		X	X	X	X				X
Subject indicator	N(02)	1 = obtained minimum percentage 2 = condoned to minimum percentage 3 = did not obtain minimum percentage 5 = irregular in subject 7 = Mark is outstanding – any component 9 = Absent in any subject component			X	X	X	X				X
Date subject offered	N(06)	Format CCYYMM			X	X	X	X				X
Subject irregularity indicator	N(01)	Indicator if a candidate was guilty of irregularity for specific subject. 0=Not Guilty of irregularity 1=Guilty of irregularity 2=Irregularity pending		X	X	X	X	X				X

Field description	Type and length	Field descriptions and values	Process							
			SP	SM	RE	SE	SC	RG	OM	
Include SBA raw mark for Statistical moderation process. <b>For NATED: Indicated the subject attendance type</b> (Subject statement or certificate number – for Certification only)	A(12)	Y = Include SBA raw mark N = Exclude SBA raw mark (Left justified with trailing spaces) 01 = Full time 02 = Part (Left justified with trailing spaces)		X	X	X	X	X		X
Paper 1 – raw mark	N(03)	Raw mark for paper 1 999/444 = Absent 777 = Outstanding	X	X	X	X	X			X
Paper 2 – raw mark	N(03)	Raw mark for paper 2 999/444 = Absent 777 = Outstanding	X	X	X	X	X			X
Paper 3 – raw mark	N(03)	Raw mark for paper 3 999/444 = Absent 777 = Outstanding	X	X	X	X	X			X
Paper 4 – raw mark	N(03)	Raw mark for paper 4 999/444 = Absent 777 = Outstanding	X	X	X	X	X			X
Paper 5 – raw mark	N(03)	Raw mark for paper 5 999/444 = Absent 777 = Outstanding	X	X	X	X	X			X
Practical Assessment Task (PAT)/ISAT – raw mark	N(03)	Raw mark for PAT/ISAT 999/444 = Absent 777 = Outstanding	X	X	X	X	X			X
School based assessment (SBA/ICAS) – raw mark	N(03)	Raw mark for SBA/ICAS 999/444 = Absent 777 = Outstanding	X	X	X	X	X			X
External Standardisation mark	N(03)	This is the external Standardisation mark calculated for the Standardisation process 999/444 = Absent 777 = Outstanding	X	X	X	X	X			X
SBA/ICAS statistical moderation mark	N(03)	This is the SBA/ICAS mark calculated for the Statistical moderation process 999/444 = Absent 777 = Outstanding		X	X	X	X			X
Disregard SBA/ICAS mark	A(01)	A "Y" should be in this field if the SBA/ICAS mark must be disregarded during the calculation of the final percentage due to the standard deviation being less than 5% during the Statistical moderation process.		X	X	X	X			X
Sign (Positive/Negative adjustment)	A(01)	+ or – sign, space for zero adjustment		X	X	X	X			X
Adjustment: External assessment	N(3.7)			X	X	X	X			X



Field description	Type and length	Field descriptions and values	Process							
			SP	SM	RE	SE	SC	RG	OM	
Sign (Positive/Negative adjustment)	A(01)	+ or – sign; space for zero adjustment		X	X	X	X			X
Adjustment: Practical assessment task (PAT)	N(3.7)			X	X	X	X			X
Sign (Positive/Negative adjustment)	A(01)	+ or – sign; space for zero adjustment		X	X	X	X			X
Adjustment: School Based Assessment tasks (SBA/ICAS)	N(3.7)			X	X	X	X			X
Sign (Positive/Negative adjustment)	A(01)	+ or – sign; space for zero adjustment		X	X	X	X			X
Final adjustment on pre-promotion mark	N(3.7)			X	X	X	X			X
Language Compensation (Only for NSC)	A(01)	Y=Yes/N=No		X	X	X	X			X
End of subject information										

#### A1.5.4 Record type 4 – Control record detail

Field description	Type and Length	Field descriptions and values	SP	SM	RE	SE	SC	RG	OM
Record type	N(01)	Value = "4"	X	X	X	X	X	X	X
Number of type 2 records	N(06)	Number of examination centres.	X	X	X	X	X	X	X
Hash total type 2 records	N(06)	Last 6 characters of the total of the last three characters of the examination centres numbers. E.g. 5418332 thus 418332	X	X	X	X	X	X	X
Number of type 3 records	N(06)	Number of candidate records	X	X	X	X	X	X	X
Hash total type 3 records	N(06)	Last 6 characters of the total of the last three characters of the examination centres numbers. E.g. 765419632 thus 419632	X	X	X	X	X	X	X
Hash Total	N(06)	Total number of records on dataset excluding record type 4.	X	X	X	X	X	X	X
Filler	A(1892)		X	X	X	X	X	X	X

## A2 Electronic dataset for the transfer of external adjustments

### A2.1 Naming convention for dataset. :

Format for dataset containing external adjustments at:

**OZaaa.bzz.Adfn9999.DAyyymmdd**

Where

aaa	=	SRT – For datasets submitted by Private assessment bodies EKS – For datasets submitted by DBE and DHET (GET) OZ9 – For datasets submitted by DHET (NC(V) and N2-N3) AET – For datasets submitted by DHET (GET)
b	=	A – For datasets submitted by DHET (GET) E – For datasets submitted by DBE and Private assessment bodies O - For datasets submitted by DHET (NC(V) and N2-N3)
zz	=	Assessment body code
d	=	S for subsystem SSC V for subsystem NCV G for subsystem GET N for subsystem NSC (N2-N3)
f	=	NQF level, for example 4 for level 4 For subsystem N2-N3, please enter the N-level, for example 2 for N2
n	=	Sequential run number
9999	=	Examination date (Ex 1111)
yy	=	The year the dataset is created. Example 11 when created in 2011
mm	=	The month the dataset is created
dd	=	The day the dataset is created

For example:

Dataset from DBE for SSC subsystem for submitting external adjustments.

**OZEKS.E24.AS411011.DA110612**

### A2.2 Composition of data records

All complete data elements must be filled with spaces or zeroes, as follows

- (a) Alpha-numeric data elements, ex A(10) must be left justified with trailing spaces
- (b) Numeric data elements, ex. N (15) must be right justified with leading zeroes.

All incomplete data elements must be filled with spaces (alpha-numeric elements) or zeroes (numeric elements)

### A2.3 Submitting of data to Umalusi

The NDOE (for NSC and NC(V) system) must submit dataset directly onto the mainframe.

Other assessment bodies may submit the dataset electronically to Umalusi as arranged. For each assessment body only one dataset has to be submitted as adjustments are national and not provincial.

## A2.4 Data structure

The total length of the data record will be 901 characters.

### A2.4.1 Record type 1 – Header

Record type	N(01)	Value = "1"
Assessment body Code	N(02)	See paragraph A.1
Assessment body Name	A(100)	See paragraph A.1
Date created	N(08)	Format CCYYMMDD Date dataset was created
Subsystem	A(03)	Indicate the subsystem: <b>SSC</b> (NSC system) <b>NCV</b> (NC(V) system) <b>GET</b> (General Education Certificate) <b>NSC</b> (N2-N3 subsystem)
Filler	A(787)	Value = spaces

### A2.4.2 Record type 2 – Subject information

Record type	N(01)	Value = "2"
Subject code	N(10)	The subject code as indicated in the National Policy
Exam date	N(06)	Examination date
Filler	A(884)	Value = spaces

### A2.4.3 Record type 3 – Raw mark

Record type	N(01)	Value = "3"
<b>Raw Information (Occurs 1:300)</b>		3 * 300 = 900 characters
Raw marks: 1 to 300	N(03)	Ex. 001002003004005006007008009010

### A2.4.4 Record type 4 – Adjustments

Record type	N(01)	Value = "4"
<b>Adjustment information (Occurs 1:300)</b>		3 * 300 = 900 characters
Sign (Positive/Negative adjustment)	A(1)	+ or – sign; space for zero adjustment.
Adjustment s: 1 to 300	N(02)	Ex. 00+01+05-04 00-08+07+08-01 00+12

#### A2.4.5 Record type 5 – Control record

Record type	N(01)	Value = "5"
Total subjects on dataset	N(06)	The total number of subjects on the dataset (total number of type 2 records)
Hash total	N(06)	The total number of records in the dataset (excluding record type 5)
Filler	A(888)	

### A3 Electronic dataset for the transfer of statistical moderation records

#### A3.1 Naming convention for Statistical moderation records

##### **OZaaa.bcc.dzzeefnn.DAyyymmdd**

Where

- aaa = SRT – For datasets submitted by Private assessment bodies  
EKS – For datasets submitted by DBE and DHET (GET)  
OZ9 – For datasets submitted by DHET (NC(V))  
AET – For datasets submitted by DHET (GET)
- b = A – For datasets submitted by DHET (GET)  
E – For datasets submitted by DBE and Private assessment bodies  
O - For datasets submitted by DHET (NC(V) and N2-N3 subsystem)
- cc = Province code – See paragraph A1.1 for assessment bodies submitting data per province  
Z9 – For NCV and N2-N3  
99 – For Private assessment bodies
- d = S for subsystem SSC  
V for subsystem NCV  
G for subsystem GET  
N for subsystem NSC (N2-N3)
- zz = Assessment body code
- ee = SR – Statistical moderation records
- f = NQF level, for example 4 for level 4  
For subsystem N2-N3, please enter the N-level, for example 2 for N2
- nn = Sequential run number
- yy = The year the dataset is created. Example 11 when created in 2011
- mm = The month the dataset is created
- dd = The day the dataset is created

For example:

Dataset from DBE for SSC subsystem for statistical moderation process.

**OZEKS.E08.S15SR401.DA110612**

Dataset from DHET for GET subsystem for statistical moderation and resulting process

**OZAET.A08.G15SR101.DA110612**

Dataset from DHET for NSC (N2-N3) subsystem for statistical moderation process

**OZOZ9.OZ9.N08SR101.DA130916**

### A3.2 Composition of data records

All complete data elements must be filled with spaces or zeroes, as follows

- (c) Alpha-numeric data elements, ex A(10) must be left justified with trailing spaces
- (d) Numeric data elements, ex. N (15) must be right justified with leading zeroes.

All incomplete data elements must be filled with spaces (alpha-numeric elements) or zeroes (numeric elements)

### A3.3 Submitting of data to Umalusi

The National Departments of Education (for NSC and NC(V) must submit dataset directly onto the mainframe.

Other assessment bodies may submit the dataset electronically to Umalusi as arranged.

Please note: Datasets submitted from DBE for subsystem SSC and from DHET for subsystem GET must be submitted per province meaning that in total 9 datasets should be submitted per process

### A3.4 Data structure

The total length of the data record will be 132 characters.

#### A3.4.1 Record type 1 – Header

Record type	N(01)	Value = "1"
Assessment body Code	N(02)	See paragraph A.1
Assessment body Name	A(50)	See paragraph A.1
Date created	N(08)	Format CCYYMMDD Date dataset was created
Subsystem	A(03)	Indicate the subsystem: <b>SSC</b> (NSC system) <b>NCV</b> (NC(V) system) <b>GET</b> (General Education and Training Certificate) <b>NSC</b> (N2-N3 subsystem)
Filler	A(86)	Value = spaces

#### A3.4.2 Record type 2 – Exam Centre information

Record type	N(01)	Value = "2"
Exam centre	N(10)	The exam centre number
Exam date	N(06)	Examination date
Filler	A(133)	Value = spaces

### A3.4.3 Record type 3 – Raw mark (**Not for NATED**)

Record type	N(01)	Value = "3"
Exam centre number	N(10)	
Subject code	N(10)	
Number enrolments	N(6)	Total number of enrolments for the subject for the exam centre
Number of marks captured	(N6)	Total number of marks captured (All raw marks must be captured) The total number of candidates to be included when calculating the MP and SDP, and final adjustments.
Number of marks (candidates) outstanding	(N6)	Total number of candidates marks outstanding – The total number of candidates that will not be included in the statistical moderation process
Number of marks (candidates) absent	(N6)	The total number of marks absent - The total number of candidates absent.
Number of irregularities	(N6)	The total number of irregularities.
SDE	(N3.7)	The standard deviation of the adjusted examination mark of the exam centre for the subject
SDS	(N3.7)	The standard deviation of raw SBA/ICAS mark of the exam centre for the subject
ME	(N3.7)	The mean of the adjusted examination mark of the exam centre for the subject
MS	(N3.7)	The mean of the raw SBA/ICAS mark of the exam centre for the subject
TF	(N3.7)	The tolerance factor
MP	(N3.7)	The mean of the preliminary promotion mark
SDP	(N3.7)	The standard deviation of the preliminary promotion mark
Formula	(A2)	A1: Eight or more candidates A2: Eight or more candidates and $SDE < 5\%$ and $SDE < SDS$ A3: Eight or more candidates but $SDS < 5\%$ and $SDS < \frac{3}{4} SDE$ NO: Statistical moderation cannot be executed due to outstanding marks
Conditions	(A2)	For subjects where raw marks = 100 C1: $ME-MS < 5$ C2: $ME-MS = 5$ thru 10 C3: $ME-MS > 10$ and $\leq 15$ C4: $ME-MS > 15$ For subjects where raw marks = 300

		C1: ME-MS < 15 C2: ME-MS = 15 thru 30 C3: ME-MS > 30 AND ≤ 45 C4: ME-MS > 45
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#### A3.4.3.1 Record type 3 – Raw mark (**Only for NATED**)

Record type	N(01)	Value = "3"
Exam centre number	N(10)	
Subject code	N(10)	
Number enrolments	N(6)	Total number of enrolments for the subject for the exam centre
Number of marks captured	(N6)	Total number of marks captured (All raw marks must be captured) The total number of candidates to be included when calculating the MP and SDP, and final adjustments.
Number of marks (candidates) outstanding	(N6)	Total number of candidates marks outstanding – The total number of candidates that will not be included in the statistical moderation process
Number of marks (candidates) absent	(N6)	The total number of marks absent - The total number of candidates absent.
Number of irregularities	(N4)	The total number of irregularities.
Attendance type	(N2)	1 = Full time 2 = Part time
SDE	(N3.7)	The standard deviation of the adjusted examination mark of the exam centre for the subject
SDS	(N3.7)	The standard deviation of raw SBA/ICAS mark of the exam centre for the subject
ME	(N3.7)	The mean of the adjusted examination mark of the exam centre for the subject
MS	(N3.7)	The mean of the raw SBA/ICAS mark of the exam centre for the subject
TF	(N3.7)	The tolerance factor
MP	(N3.7)	The mean of the preliminary promotion mark
SDP	(N3.7)	The standard deviation of the preliminary promotion mark
Formula	(A2)	A1: Eight or more candidates A2: Eight or more candidates and SDE < 5% and SDE < SDS A3: Eight or more candidates but SDS < 5% and SDS < ¼ SDE NO: Statistical moderation cannot be executed due to outstanding marks

Conditions	(A2)	<p>For subjects where raw marks = 100</p> <p>C1: ME-MS &lt; 5</p> <p>C2: ME-MS = 5 thru 10</p> <p>C3: ME-MS &gt; 10 and ≤ 15</p> <p>C4: ME-MS &gt; 15</p> <p>For subjects where raw marks = 300</p> <p>C1: ME-MS &lt; 15</p> <p>C2: ME-MS = 15 thru 30</p> <p>C3: ME-MS &gt; 30 AND ≤ 45</p> <p>C4: ME-MS &gt; 45</p>
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#### A3.4.4 Record type 4 – Control record

Record type	N(01)	Value = "4"
Total centres on dataset	N(06)	The total number of centres on the dataset (total number of type 2 records)
Total subjects on dataset	N(06)	The total of subjects on the dataset (total number of type 3 records)
Hash total	N(06)	The total number of records in the dataset (excluding record type 4)
Filler	A(131)	



## A4 Electronic dataset for the transfer of standardisation information

In order to submit the standardisation information five different datasets need to be submitted

- Dataset for the cumulative raw mark distributions - Table 2 (as in Booklet 1)
- Dataset containing the raw mark distribution per percentage mark Table 3 (as in Booklet 1)
- Dataset containing raw mark distribution information per raw mark (as in Booklet 2)
- Dataset containing the pairs analysis information (Booklet 2).

### A4.1 Dataset naming convention for the **Cumulative raw mark distributions**

#### **OZaaa.bcc.dzzeefnn.DAyymmdd**

Where

- aaa = SRT – For datasets submitted by Private assessment bodies  
EKS – For datasets submitted by DBE  
OZ9 – For datasets submitted by DHET (NCV and N2-N3)  
AET – For datasets submitted by DHET (GET)
- b = A – For datasets submitted by DHET (GET)  
E – For datasets submitted by DBE and Private assessment bodies  
O – For datasets submitted by DHET (NCV and N2-N3)
- cc = DBE/Private assessment bodies = 99 (these datasets are NOT submitted per province) NC(V) = 08, NSC = 08  
Z9 – For NC(V) and N2-N3  
99 – For Private assessment bodies
- d = S for subsystem SSC  
V for subsystem NCV  
G for subsystem GET  
N for subsystem NSC
- zz = Assessment body code  
08 - Department of Higher Education: FET Colleges  
11 - Independent Examination Board (IEB)  
24 - Department of Basic Education  
30 - DHET: General Education Certificate (ABET Level 4)
- ee = ST – Statistical information with regard to the Norm, previous history and current year  
PR – Percentage raw mark distribution  
RD – Raw mark distribution information  
PA – Pairs analysis information
- f = NQF level, for example 4 for level 4  
For subsystem N2-N3, please enter the N-level, for example 2 for N2
- nn = Sequential run number
- yy = The year the dataset is created. Example 11 when created in 2011
- mm = The month the dataset is created
- dd = The day the dataset is created

For example:

Dataset from DBE for SSC subsystem for statistical information with regard to the norm, previous history and current data.

**OZEKS.E99.S24ST401.DA110612**

Dataset from DHET for GET subsystem for information with regard to the Pairs analysis

**OZAET.A99.G30PA101.DA110612**

#### A4.2 Composition of data records

All incomplete data elements must be filled with spaces or zeroes, as follows

- (a) Alpha-numeric data elements, ex A(10) must be left justified with trailing spaces
- (b) Numeric data elements, ex. N (15) must be right justified with leading zeroes.

All incomplete data elements must be filled with spaces (alpha-numeric elements) or zeroes (numeric elements)

#### A4.3 Submitting of data to Umalusi

The National Departments of Education (for NSC and NC(V) must submit datasets directly onto the mainframe.

Other assessment bodies may submit the dataset electronically to Umalusi as arranged.

#### A4.4 Data structure – File containing the statistical information with regard to Norm, history and current year’s raw mark distributions

The total length of the data record will be 159 characters.

##### A4.4.1 Record type 1 – Header

Record type	N(1)	Value = "1"
Assessment body Code	N(02)	See paragraph A.1
Assessment body Name	A(50)	See paragraph A.1
Date created	N(08)	Format CCYYMMDD Date dataset was created
Subsystem	A(03)	Indicate the subsystem: <b>SSC</b> (NSC system) <b>NCV</b> (NC(V) system) <b>GETC</b> (General Education and Training Certificate) <b>NSC</b> (N2-N3 subsystem)
Filler	A(95)	Value = spaces

#### A4.4.2 Record type 2 – Subject information

Record type	N(1)	Value = “2”
Subject code	N(10)	Subject codes as in the policy for the National Senior Certificate, National Certificate (Vocational) and General and further training certificate subjects
Exam date	N(06)	Examination date
Number enrolments for subject	N(07)	Total number of enrolments for the subject
Number of outstanding marks for subject	N(07)	Total number of outstanding marks for the subject
Number of absent marks for subject	N(07)	Total number of candidates absent for the subject
Number of irregularities	N(07)	
Percentage standardised	N(3.2)	The total number of irregularities
Filler	A(108)	

#### A4.4.3 Record type 3 – Raw mark distributions per year

Record type	N(1)	Value = “3”
Subject code	N(10)	Subject codes as in the policy for the National Senior Certificate, National Certificate (Vocational) and General and further training certificate subjects
Exam date	N(6)	999999 – For the Norm distributions (for Raw mark distribution types 01 and 02) Ccyymm – the specific exam date for the applicable examination. Ex. 200911 (for Raw mark distribution types 03 to 06)
Raw mark distribution type	N(02)	See Table 6 (Raw mark distribution types)
% Interval 00-09	N(3.7)	The interval distribution between 00-09
% Interval 10-19	N(3.7)	The interval distribution between 10-19
% Interval 20-29	N(3.7)	The interval distribution between 20-29
% Interval 30-39	N(3.7)	The interval distribution between 30-39
% Interval 40-49	N(3.7)	The interval distribution between 40-49
% Interval 50-59	N(3.7)	The interval distribution between 50-59
% Interval 60-69	N(3.7)	The interval distribution between 60-69
% Interval 70-79	N(3.7)	The interval distribution between 70-79
% Interval 80-89	N(3.7)	The interval distribution between 80-89
% Interval 90-100	N(3.7)	The interval distribution between 90-100
Mean	N(3.7)	The mean for the specific subject
Median	N(3.7)	The median for the specific subject
Nr of candidates	N(8)	The total number of candidates for the specific subjects

Table 6

Code	Raw mark distribution Description
01	Norm distribution
02	Cumulative Norm distribution
03	Raw mark percentage distribution
04	Cumulative Raw mark percentage distribution
05	Adjusted Raw mark percentage distribution
06	Adjusted Cumulative Raw mark percentage distribution

#### A4.4.4 Record type 29 – Control record

Record type	N(1)	Value = "9"
Total centres on dataset	N(06)	The total number of subjects (total number of type 2 records)
Hash total	N(06)	The total number of records in the dataset (excluding record type 29)
Filler	A(146)	

#### A4.5 Data structure – File containing the percentage raw mark distribution

The total length of the data record will be 607 characters.

##### A4.5.1 Record type 1 – Header

Record type	N(01)	Value = "1"
Assessment body Code	N(02)	See paragraph A.1
Assessment body Name	A(100)	See paragraph A.1
Date created	N(08)	Format CCYYMMDD Date dataset was created
Subsystem	A(03)	Indicate the subsystem: <b>SSC</b> (NSC system) <b>NCV</b> (NC(V) system) <b>GETC</b> (General Education and Training Certificate) <b>NSC</b> (N2-N3 subsystem)
Filler	A(493)	Value = spaces

#### A4.5.2 Record type 2 – Subject information

Record type	N(01)	Value = "2"
Subject code	N(10)	Subject codes as in the policy for the National Senior Certificate, National Certificate (Vocational) and General and further training certificate subjects
Exam date	N(06)	Examination date
Filler	A(590)	

#### A4.5.3 Record type 3 – Percentage mark indicators

Record type	N(01)	Value = "3"
<b>Percentage information (Occurs 1:101)</b>		6 * 101 = 606 characters
Percentage indicator	N(06) * 101	Ex. 000001000002000003000004..etc

#### A4.5.4 Record type 4 – Number of candidates per percentage mark

Record type	N(01)	Value = "4"
<b>Percentage information (Occurs 1:101)</b>		6 * 101 = 606 characters
Nr of candidates for each percentage mark	N(06) * 101	

#### A4.5.5 Record type 5 – Totals for interval

Record type	N(01)	Value = "5"
Interval 00-09	N(06)	Total number of candidates for percentages between 00-09
Interval 10-19	N(06)	Total number of candidates for percentages between 10-19
Interval 20-29	N(06)	Total number of candidates for percentages between 20-29
Interval 30-39	N(06)	Total number of candidates for percentages between 30-39
Interval 40-49	N(06)	Total number of candidates for percentages between 40-49
Interval 50-59	N(06)	Total number of candidates for percentages between 50-59
Interval 60-69	N(06)	Total number of candidates for percentages between 60-69
Interval 70-79	N(06)	Total number of candidates for percentages between 70-79
Interval 80 -89	N(06)	Total number of candidates for percentages between 80-89

Interval 90 -99	N(06)	Total number of candidates for percentages between 90 -99
Interval 100	N(06)	Total number of candidates for percentages 100
Total number of candidates	N(06)	Total number of candidates
Filler	A(534)	

#### A4.5.6 Record type 6 – Control record

Record type	N(01)	Value = "6"
Total centres on dataset	N(06)	The total number of subjects (total number of type 2 records)
Hash total	N(06)	The total number of records in the dataset (excluding record type 6)
Filler	A(594)	

### A4.6 Data structure – File containing the raw mark information per subject

The total length of the data record will be 3313 characters.

#### A4.6.1 Record type 1 – Header

Record type	N(02)	Value = "01"
Assessment body Code	N(02)	See paragraph A.1
Assessment body Name	A(100)	See paragraph A.1
Date created	N(08)	Format CCYYMMDD Date dataset was created
Subsystem	A(03)	Indicate the subsystem: <b>SSC</b> (NSC system) <b>NCV</b> (NC(V) system) <b>GETC</b> (General Education and Training Certificate) <b>NSC</b> (N2-N3 subsystem)
Filler	A(3198)	Value = spaces

#### A4.6.2 Record type 2 – Subject information

Record type	N(02)	Value = "02"
Subject code	N(10)	Subject codes as in the policy for the National Senior Certificate, National Certificate (Vocational) and General and further training certificate subjects
Exam date	N(06)	Examination date
Filler	A(3295)	

#### A4.6.3 Record type 3 – Raw mark information

Record type	N(02)	Value = "03"
<b>Raw mark information (Occurs 1:301)</b>		3 * 301 = 903 characters
Raw mark indicator	N(03) * 301	Ex. 001002003004005006007... etc.
Filler	A(2408)	

#### A4.6.4 Record type 4 – Number of candidates per raw mark

Record type	N(02)	Value = "04"
<b>Number of candidates information (Occurs 1:301)</b>		6 * 301 = 1806 characters
Number of candidates for each raw mark	N(06) * 301	
Filler	A(1505)	

#### A4.6.5 Record type 5 – Percentage raw mark distribution

Record type	N(02)	Value = "05"
<b>Percentage candidate information (Occurs 1:301)</b>		11 * 301 = 3311 characters
Percentage of candidates per raw mark	N(3.7)* 301	

#### A4.6.6 Record type 6 – Cumulative raw mark distribution

Record type	N(02)	Value = "06"
<b>Cumulative raw mark distribution (Occurs 1:301)</b>		6 * 301 = 1806 characters
Cumulative number of candidates per raw mark	N(6) * 301	
Filler	A(1505)	

#### A4.6.7 Record type 7 – Cumulative raw mark distribution percentage

Record type	N(02)	Value = "07"
<b>Cumulative percentage raw mark distribution (Occurs 1:301)</b>		11 * 301 = 3311 characters
Cumulative percentage of candidates per raw mark	N(3.7)*301	

#### A4.6.8 Record type 8 – Accumulative percentage of the norm distribution

Record type	N(02)	Value = "08"
<b>Nr of cand information (Occurs 1:301)</b>		11 * 301 = 3311 characters
Nr of candidates for each raw mark	N(3.7)*301	

#### A4.6.9 Record type 9 – Computer adjustments

Record type	N(02)	Value = "09"
<b>Adjustment information (Occurs 1:301)</b>		3 * 301 = 903 characters
Sign (Positive/Negative adjustment)	A(1)	+ or – sign; space for zero adjustment.
Adjustments: 1 to 301	N(02)	Ex. " 00+01+05-04 00-08+07+08-01 00+12"
Filler	A(2408)	

#### A4.6.10 Record type 10 – Control record

Record type	N(02)	Value = "10"
Total subjects on dataset	N(06)	The total number of subjects (total number of type 2 records)
Hash total	N(06)	The total number of records in the dataset (excluding record type 10)
Filler	A(3299)	

### A4.7 Data structure – Pairs analysis information

The total length of the data record will be 114 characters.

#### A4.7.1 Record type 1 – Header

Record type	N(01)	Value = "1"
Assessment body Code	N(02)	See paragraph A.1
Assessment body Name	A(100)	See paragraph A.1
Date created	N(08)	Format CCYYMMDD Date dataset was created
Subsystem	A(03)	Indicate the subsystem: <b>SSC</b> (NSC system) <b>NCV</b> (NC(V) system) <b>GETC</b> (General Education and Training Certificate) <b>NSC</b> (N2-N3 subsystem)



#### A4.7.2 Record type 2 – Subject information

Record type	N(01)	Value = "2"
Subject code	N(10)	Subject codes as in the policy for the National Senior Certificate, National Certificate (Vocational) and General and further training certificate subjects
Exam date	N(06)	Examination date
Candidates entered	N(06)	Number of candidates entered for anchor subject
Candidates absent	N(06)	Number of candidates absent for anchor subject
Candidates outstanding	N(06)	Number of candidates outstanding for anchor subject
Filler	A(79)	

#### A4.7.3 Record type 3 – Information other subjects Raw mark information

Record type	N(01)	Value = "3"
Subject code	N(10)	Subject code of the other subject
Number of candidates entered	N(06)	Number of candidates entered
Mean of anchor subject	N(3.7)	Mean of the anchor subject
Mean other subject	N(3.7)	Mean of the other subject
Sign for difference	A(1)	+ or – sign;
Difference	N(3.7)	Difference calculated
Sign for correlation	A(01)	+ OR + sign;
Correlation	N(3.7)	Correlation calculated
Filler	A(51)	

#### A4.7.4 Record type 4 – Control record

Record type	N(01)	Value = "4"
Total subjects on dataset	N(06)	The total number of subjects (total number of type 2 records)
Hash total	N(06)	The total number of records in the dataset (excluding record type 4)
Filler	A(101)	

## A4.8 Data structure – Subject Information

### A4.8.1 Naming convention for Subject information records

#### **OZaaa.bcc.dzzeefnn.DAyyymmdd**

Where

aaa	=	SRT – For datasets submitted by Private assessment bodies EKS – For datasets submitted by DBE OZ9 – For datasets submitted by DHET (NC(V)) AET – For datasets submitted by DHET (GET)
b	=	A – For datasets submitted by DHET (GET) E – For datasets submitted by DBE and Private assessment bodies O - For datasets submitted by DHET (NC(V) and N2-N3 subsystem)
cc	=	Province code – See paragraph A1.1 for assessment bodies submitting data per province Z9 – For NCV and N2-N3 99 – For Private assessment bodies
d	=	S for subsystem SSC V for subsystem NCV G for subsystem GET N for subsystem NSC (N2-N3)
zz	=	Assessment body code
ee	=	SI– Subject information records
f	=	NQF level, for example 4 for level 4 For subsystem N2-N3, please enter the N-level, for example 2 for N2
nn	=	Sequential run number
yy	=	The year the dataset is created. Example 11 when created in 2011
mm	=	The month the dataset is created
dd	=	The day the dataset is created

For example:

Dataset from DBE for SSC subsystem for statistical moderation process.

**OZEKS.E99.S24SI401.DA160424**

Dataset from DHET for GET subsystem for statistical moderation and resulting process

**OZAET.A99.G30SI101.DA160424**

Dataset from DHET for NSC (N2-N3) subsystem for statistical moderation process

**OZOZ9.OZ9.N08SI201.DA160424**

### A4.8.1 Composition of data records

All complete data elements must be filled with spaces or zeroes, as follows

- Alpha-numeric data elements, ex A(10) must be left justified with trailing spaces
- Numeric data elements, ex. N (15) must be right justified with leading zeroes.

All incomplete data elements must be filled with spaces (alpha-numeric elements) or zeroes (numeric elements)

#### A4.8.2 Submitting of data to Umalusi

The National Departments of Education and National department of Higher Education must submit dataset directly onto the mainframe.

Other assessment bodies may submit the dataset electronically to Umalusi as arranged.

#### A4.8.3 Data structure

The total length of the data record will be 397 characters.

#### A4.8.4 Record type 1 – Header

Record type	N(01)	Value = "1"
Assessment body Code	N(02)	See paragraph A.1
Assessment body Name	A(100)	See paragraph A.1
Date created	N(08)	Format CCYYMMDD Date dataset was created
Subsystem	A(03)	Indicate the subsystem: <b>SSC</b> (NSC system) <b>NCV</b> (NC(V) system) <b>GETC</b> (General Education and Training Certificate) <b>NSC</b> (N2-N3 subsystem)
Filler	A(283)	

#### A4.8.2 Record type 2 – Subject information

Record type	N(01)	Value = "2"
Program code	N(10)	SSC: Program code: 8100000000 NCV: Program codes for the NC(V) programmes as published in the Policy GET: Program code 7700000000 N2-N3: Nated 02-550 Code right padded with zeroes.
Program description	A(50)	Program description
Subject code	N(10)	Subject codes as in the policy for the National Senior Certificate, National Certificate (Vocational) and General and further training certificate subjects
Subject description	A(50)	Subject description

Pass Percentage	N(02)	The percentage needed to pass the subject
Credits of subject	N(02)	The number of credits to be awarded to this subject
Condone	A(01)	Indicator whether this subject may be condoned or not: Y = Yes N = No
Percentage condonation allowed	N(02)	If the subject may be condoned the percentage allowed to be condoned.
Grade of Subject (only for language subjects)	A(02)	The grade of the language subject: F = First Additional language FO = Official First Additional Language H = Home Language HO = Official Home language LO = Official language Literacy and communication (GET) S = Second Additional Language
Active	A(01)	Y = Subject is active – Candidate can enrol N= Subject inactive – Candidate cannot enrol
Phase in date	N(06)	Date subject phased in. Format CCYMM
Phase out date		Exam date subject phased out (Exam the last time the subject was offered). Format CCYMM
Language of learning and teaching	(A01)	Indication if the subject is a subject of language of learning and teaching Y = Yes N= No
Designated subject for admission of higher Education	A(01)	Recognised NSC 20 credit subject for admission to a Bachelor degree Y = Yes N – No
Number of components for subject	N(01)	The number of component that this subject has. A subject can have a maximum of five components
Components that are linked together	A(10)	Components linked together indicated with a comma for example: 1,2
Weighting of components linked together	N(02)	
<b>Component information</b>		Occurs 5 times $9 * 15 = 45$
Paper number	N(01)	

Paper type	N(01)	<p><b>SSC, GET and NSC:</b></p> <p>1=Written 2=Oral 3=Practical 4=Creative writing 5=School Based assessment (SBA) 7=WPM 8=Practical assessment task (PAT)</p> <p><b>NCV:</b></p> <p>1 = External Summative Paper 1 2 = External Summative Paper 2 3= Integrated Summative Assessment Task 4=Internal Continues Assessment 5=WPM</p>
Paper weight	N(03)	The weight of this paper
Paper maximum	N(03)	The maximum number of marks awarded to this paper
External	A(01)	Does this paper count for the external exam mark
Invalid subjects	A(100)	<p>The subject number of the subjects that may not be taken together with this subject.</p> <p>Subject number comma delimited For example: When IsiNdebele Home Language is offered, the following subjects may not be offered 13311174, 13351754, 13311294</p>
Pre-requisite subject	A(100)	<p>Subject codes that are pre-requisite for this subject</p> <p>Subject numbers comma delimited. For example: If a candidate offers Sport and Exercise Science he must also offer one of the following subjects: 19351114, 19351084</p>

#### A4.8.3 Record type 4 – Control record

Record type	N(01)	Value = "4"
Total subjects on dataset	N(06)	The total number of subjects (total number of type 2 records)
Hash total	N(06)	The total number of records in the dataset (excluding record type 4)
Filler	A(384)	

## A4.9 Data structure – Approved norms

### A4.9.1 Naming convention for file to submit the approved norms to assessment bodies

#### **OZaaa.bcc.dzzeefnn.DAyyymmdd**

Where

aaa	=	SRT – For datasets submitted by Private assessment bodies EKS – For datasets submitted by DBE OZ9 – For datasets submitted by DHET (NC(V)) AET – For datasets submitted by DHET (GET)
b	=	A – For datasets submitted by DHET (GET) E – For datasets submitted by DBE and Private assessment bodies O - For datasets submitted by DHET (NC(V) and N2-N3 subsystem)
cc	=	Province code – See paragraph A1.1 for assessment bodies submitting data per province Z9 – For NCV and N2-N3 99 – For Private assessment bodies
d	=	S for subsystem SSC V for subsystem NCV G for subsystem GET N for subsystem NSC (N2-N3)
zz	=	Assessment body code
ee	=	NO– Approved norm records
f	=	NQF level, for example 4 for level 4 For subsystem N2-N3, please enter the N-level, for example 2 for N2
nn	=	Sequential run number
yy	=	The year the dataset is created. Example 16 when created in 2016
mm	=	The month the dataset is created
dd	=	The day the dataset is created

For example:

Dataset from DBE for SSC subsystem for statistical moderation process.

**OZEKS.E99.S24NO401.DA160424**

Dataset from DHET for GET subsystem for statistical moderation and resulting process

**OZAET.A99.G30NO101.DA160424**

Dataset from DHET for NSC (N-N3) subsystem for statistical moderation process

**OZOZ9.OZ9.N08NO201.DA160424**

### A4.9.2 Composition of data records

All complete data elements will be filled with spaces or zeroes, as follows

- Alpha-numeric data elements, ex A(10) must be left justified with trailing spaces
- Numeric data elements, ex. N (15) must be right justified with leading zeroes.

All incomplete data elements will be filled with spaces (alpha-numeric elements) or zeroes (numeric elements)

### A4.9.3 Submitting the data to Assessment bodies

Assessment bodies can either request that the approved norms are generated in a dataset on the mainframe according to the data structure indicated in paragraph A4.9.4 or information can be submitted to assessment bodies in an excel spread sheet in the format as indicated in A4.9.5.

### A4.9.4 Data structure

The total length of the data record will be 3313 characters.

#### A4.9.4.1 Record type 1 – Header

Record type	N(01)	Value = "1"
Assessment body Code	N(02)	See paragraph A.1
Assessment body Name	A(100)	See paragraph A.1
Date created	N(08)	Format CCYYMMDD Date dataset was created
Level	N(01)	
Subsystem	A(03)	Indicate the subsystem: <b>SSC</b> (NSC system) <b>NCV</b> (NC(V) system) <b>GETC</b> (General Education and Training Certificate) <b>NSC</b> (N2-N3 subsystem)
Filler	A(3198)	

#### A4.9.4.2 Record type 2 – Subject information

Record type	N(01)	Value = "2"
Subject code	N(10)	Subject codes as in the policy for the National Senior Certificate, National Certificate (Vocational) and General and further training certificate subjects
Exam date	N(06)	The exam date
Filler	A(3296)	

#### A4.9.4.3 Record type 3 – Raw mark information

Record type	N(01)	Value = "3"
<b>Raw mark information (Occurs 1:301)</b>		3 * 301 = 903 characters

Raw mark indicator	N(03) * 301	Ex. 001002003004005006007... etc.
Filler	A(2410)	

#### A4.9.4.4 Record type 4 – Nr of candidates per raw mark

Record type	N(01)	Value = "4"
<b>Number of candidates information (Occurs 1:301)</b>		8 * 301 = 2408 characters
Number of candidates for each raw mark	N(08) * 301	
Filler	A(904)	

#### A4.9.4.5 Record type 5 – Cumulative number of candidates per raw mark distribution

Record type	N(01)	Value = "5"
<b>Cumulative number of candidate information (Occurs 1:301)</b>		8 * 301 = 2408 characters
Cumulative number of candidates per raw mark distribution	N(08)* 301	
Filler	A(904)	

#### A4.9.4.6 Record type 6 – Historical average

Record type	N(02)	Value = "6"
<b>Historical average information</b>		11 * 301 = 3311 characters
Historical average candidates per raw mark	N(3.7)* 301	11 * 301

#### A4.9.4.7 Record type 7 – Control record

Record type	N(01)	Value = "7"
Total subjects on dataset	N(06)	The total number of subjects (total number of type 2 records)



Hash total	N(06)	The total number of records in the dataset (excluding record type 6)
Filler	A(3000)	

#### A4.9.5 Data structure for excel

Column number /name	Value
1 (Sub)	The subsystem: SSC – National Senior Certificate NCV – National Certificate (Vocational) NS3 – N1 – N3 GET – General Education and Training Certificate
2 (CI)	Assessment body code – Refer to Annexure A, paragraph A1
3 (Subj)	Subject code
4 (Subject Descr)	Subject description
5 (Raw)	Raw mark
6 (Dist)	Distribution
7 (Cum dis)	Cumulative distribution
8 (Hist aver)	Historical average

# ANNEXURE: B

## B1 Statistics – mark distributions

Department of Basic Education NSC 2013/11 (Mainframe IECS)	Standardisation Printing for NSC (v5.1.2.4) Statistics	Date : 2013/12/21 Time : 08:20 Page : 2
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Subject 19351084 Life Sciences		Group B7										Maximum marks	300
Candidates entered	307090	Outstanding	111	Absent	5330	Irregular	37	% Standardised	99.96				
Percentage distribution :	1C	1B	1A	2	3	4	5	6	7B	7A	Mean	Median	Candidates
	00-09	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-100			
Norm	0.96	12.91	26.02	23.91	16.11	9.62	5.69	3.27	1.40	0.12	36.68	33.67	1 447156
Cumulative	0.96	13.87	39.89	63.80	79.90	89.52	95.21	98.48	99.88	100.00			
Raw mark 2008/11	1.71	15.06	27.30	23.33	14.65	8.53	5.06	2.98	1.29	0.09	35.15	32.00	295839
Cumulative	1.71	16.76	44.07	67.40	82.05	90.58	95.64	98.61	99.91	100.00			
Adjusted mark 2008/11	1.71	15.06	27.30	23.33	14.65	8.53	5.06	2.98	1.29	0.09	35.15	32.00	295839
Cumulative	1.71	16.76	44.07	67.40	82.05	90.58	95.64	98.61	99.91	100.00			
Raw mark 2009/11	1.74	15.80	26.76	23.12	15.01	8.78	5.09	2.75	0.90	0.05	34.84	32.00	304286
Cumulative	1.74	17.54	44.30	67.41	82.42	91.21	96.30	99.05	99.95	100.00			
Adjusted mark 2009/11	1.74	15.80	26.76	23.12	15.01	8.78	5.09	2.75	0.90	0.05	34.84	32.00	304286
Cumulative	1.74	17.54	44.30	67.41	82.42	91.21	96.30	99.05	99.95	100.00			
Raw mark 2010/11	0.51	7.50	19.08	23.64	20.18	13.64	8.39	4.71	2.14	0.21	41.61	39.67	304726
Cumulative	0.51	8.01	27.09	50.73	70.91	84.55	92.93	97.65	99.79	100.00			
Adjusted mark 2010/11	1.58	11.17	21.43	23.27	18.22	11.92	7.06	3.93	1.38	0.04	38.61	36.67	304726
Cumulative	1.58	12.74	34.18	57.45	75.67	87.59	94.65	98.58	99.96	100.00			
Raw mark 2011/11	0.33	13.32	29.86	25.71	15.27	7.91	4.30	2.39	0.86	0.05	34.90	32.00	265157
Cumulative	0.33	13.65	43.51	69.22	84.49	92.39	96.69	99.09	99.95	100.00			
Adjusted mark 2011/11	0.15	9.56	25.54	26.63	18.49	9.95	5.21	2.93	1.41	0.12	37.64	35.00	265157
Cumulative	0.15	9.71	35.26	61.89	80.37	90.33	95.54	98.47	99.88	100.00			
Raw mark 2012/11	0.41	12.97	27.82	23.96	15.18	8.92	5.40	3.39	1.76	0.18	36.60	33.00	277148
Cumulative	0.41	13.38	41.20	65.17	80.35	89.27	94.67	98.06	99.82	100.00			
Adjusted mark 2012/11	1.03	13.16	25.16	23.83	16.79	9.73	5.65	3.22	1.32	0.10	36.68	33.67	277148
Cumulative	1.03	14.19	39.35	63.18	79.97	89.71	95.36	98.58	99.90	100.00			
Raw mark 2013/11	0.37	8.52	21.38	24.98	19.51	12.35	7.14	4.05	1.57	0.13	39.92	37.67	301612
Cumulative	0.37	8.89	30.27	55.25	74.76	87.11	94.25	98.30	99.87	100.00			
Adjusted mark 2013/11	1.00	12.61	26.08	24.23	16.11	9.36	5.89	3.19	1.41	0.11	36.66	33.67	301612
Cumulative	1.00	13.61	39.69	63.92	80.04	89.40	95.29	98.48	99.89	100.00			

### Raw mark distribution

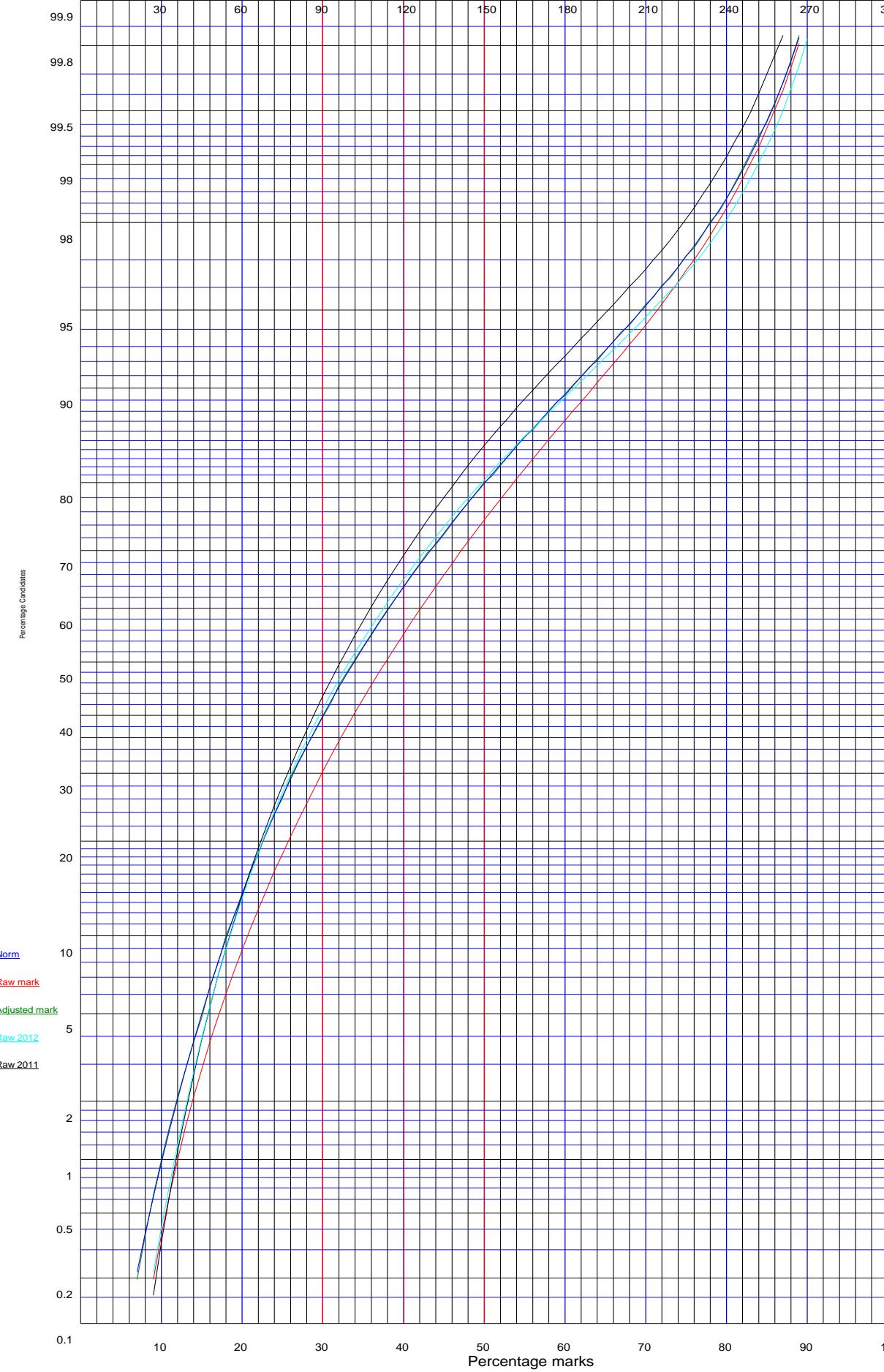
% Interval	0 %	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	9 %	Total	% of Total
0-9%	0	0	1	3	6	34	90	166	292	519	1111	0.37
10-19%	805	1093	1473	1846	2231	2819	3141	3589	4185	4519	25701	8.52
20-29%	5047	5375	5799	6129	6265	6770	6998	7118	7400	7594	64495	21.38
30-39%	7707	7771	7756	7747	7586	7645	7576	7207	7348	6990	75333	24.98
40-49%	6876	6617	6429	6236	5999	5749	5706	5376	5071	4781	58840	19.51
50-59%	4560	4397	4232	4061	3728	3658	3381	3299	3025	2921	37262	12.35
60-69%	2722	2491	2478	2387	2173	2045	1957	1914	1695	1666	21528	7.14
70-79%	1582	1545	1451	1376	1251	1095	1083	1007	974	845	12209	4.05
80-89%	796	699	658	548	520	431	340	312	245	189	4738	1.57
90-99%	149	93	64	51	18	13	4	3	0	0	395	0.13
100%	0	0	0	0	0	0	0	0	0	0	0	0.00
Total	30244	30081	30341	30384	29777	30259	30276	29991	30235	30024	301612	100.00

For statistical purposes, candidates who were absent for this subject will not be included in the calculations.

# B2 Example of graph

PCGraphs - Department of Basic Education

19351084 - Life Sciences




Page : 3

November 2013  
 Number of candidates in :  
 Norm 1447156  
 Rawmark 301612  
 Adjustments(1)

- 2: -1
- 4: -2
- 6: -3
- 8: -4
- 10: -5
- 12: -6
- 14: -7
- 16: -8
- 24: -7
- 25: -6
- 26: -7
- 51: -6
- 59: -7
- 68: -8
- 76: -9
- 86: -10
- 108: -11
- 140: -12
- 162: -11
- 175: -10
- 187: -9
- 197: -8
- 208: -7
- 215: -6
- 221: -5
- 229: -4
- 236: -3
- 251: -2
- 252: -1
- 253: -2
- 271: -1
- 272: 0
- 279: -1
- 281: 0
- 287: -1
- 291: -2
- 292: -1
- 293: 2
- 294: 1
- 295: 0
- 296: -1
- 297: -2
- 298: -3
- 299: -4
- 300: -5

Norm  
 Raw mark  
 Adjusted mark  
 Raw 2012  
 Raw 2011

# B3 Pairs Analysis

 Department of Basic Education NSC 2013/11 (Mainframe IECs)		Standardisation Printing for NSC (v5.1.2.4) Pairs Analysis Report					Date : 2013/12/20 Time : 13:04 Page : 2		
Subject	19351084	Life Sciences		Maximum marks 300					
Candidates entered	307090	Outstanding	111	Absent	5330	% Standardised	99.96		
Subject	Name	Candidates	Mean Anchor/	Mean Other	Mean Differ.	Median Anchor	Median Other	Median Differ.	Correlation
14341024	Life Orientation	301191	39.92	63.91	-23.99	37.67	63.33	-25.67	0.64
13311114	English First Additional Language	243664	37.31	53.33	-16.22	35.33	53.33	-18.00	0.71
14331054	Mathematics	149476	45.57	36.65	-8.92	43.67	34.33	9.33	0.80
14351054	Geography	149513	37.80	44.32	-6.71	35.67	43.33	-7.67	0.86
14351114	Physical Sciences	140975	44.91	35.65	-9.26	43.00	32.67	10.33	0.85
14321024	Mathematical Literacy	131526	32.64	42.58	-9.92	31.00	41.33	-10.33	0.73
13301264	IsiZulu Home Language	71418	37.18	66.69	-29.51	35.67	67.33	-31.67	0.47
10351054	Agricultural Sciences	69923	36.15	38.48	-2.33	34.67	37.33	-2.67	0.87
13301084	English Home Language	57016	51.16	58.95	-7.79	50.00	58.33	-8.33	0.78
14351084	History	56105	32.94	45.18	-12.23	30.00	44.33	-14.33	0.73
13311054	Afrikaans First Additional Language	45948	51.91	56.35	-4.44	50.67	57.33	-6.67	0.62
13301204	IsiXhosa Home Language	44671	33.74	63.26	-29.50	32.00	63.67	-31.67	0.55
12351054	Business Studies	39602	39.72	49.17	-9.45	38.00	48.33	-10.33	0.80
13301324	Sepedi Home Language	38477	35.82	67.65	-31.82	34.00	68.00	-34.00	0.52
20351084	Tourism	31607	33.23	45.99	-12.77	31.33	45.00	-13.67	0.69
13301444	Setswana Home Language	22930	38.05	65.03	-26.98	36.33	65.67	-29.33	0.53
12351024	Accounting	21970	54.08	52.35	-1.73	53.67	50.33	3.33	0.85
13301024	Afrikaans Home Language	21542	46.08	57.04	-10.96	43.67	56.00	-12.33	0.85
14351024	Computer Applications Technology	17583	44.50	51.00	-6.49	43.00	49.67	-6.67	0.74
20351024	Consumer Studies	14421	37.61	49.45	-11.84	34.67	47.33	-12.67	0.83
13301384	SeSotho Home Language	13420	39.09	65.69	-26.60	37.33	66.00	-28.67	0.53
12351084	Economics	11542	36.19	38.32	-2.14	33.67	36.00	-2.33	0.81
13301434	isiTswana Home Language	11444	37.03	73.64	-36.60	35.33	74.67	-39.33	0.41
13301504	isiSwati Home Language	10303	38.38	61.49	-23.11	36.67	62.00	-25.33	0.61
13351694	Afrikaans Second Additional Language	9496	36.53	46.33	-9.80	35.00	45.33	-10.33	0.59
13301574	isiVenda Home Language	9072	40.12	72.85	-32.74	38.67	73.00	-34.33	0.57
13311294	IsiZulu First Additional Language	7481	45.17	78.74	-33.57	44.33	81.00	-36.67	0.32
14331024	Mathematics: probability, data handling	6035	71.20	58.70	-12.51	74.00	62.00	12.00	0.75
15351114	Engineering Graphics and Design	5174	48.55	54.81	-6.26	47.00	53.00	-6.00	0.71
11351084	Dramatic Arts	2605	46.04	68.97	-22.91	45.00	69.67	-24.67	0.74
11351144	Visual Arts	2423	53.64	69.67	-16.03	53.67	71.33	-17.67	0.68
20351054	Hospitality Studies	2186	39.95	60.13	-20.17	38.33	61.00	-22.67	0.83
13301144	isiNdebele Home Language	2036	36.20	63.99	-27.79	34.33	64.33	-30.00	0.54
14351054	Information Technology	1942	59.92	54.17	-5.75	61.00	52.00	9.00	0.80
14351114	Religion Studies	1754	36.56	57.73	-21.17	34.33	58.67	-24.33	0.66
15351024	Civil Technology	1384	37.73	52.74	-15.01	35.67	51.67	-16.00	0.65
13311234	IsiXhosa First Additional Language	1012	46.04	67.84	-21.81	45.33	68.67	-23.33	0.39
15351054	Electrical Technology	715	39.59	47.94	-8.35	37.33	46.00	-8.67	0.80
10351024	Agricultural Management Practices	690	38.37	57.60	-19.23	36.33	58.33	-22.00	0.71
11351114	Music	610	50.55	59.50	-8.95	50.67	61.00	-10.33	0.86
15351084	Mechanical Technology	596	37.75	41.26	-3.51	36.00	39.00	-3.00	0.69
11351054	Design	540	51.21	66.83	-15.62	50.17	69.00	-18.83	0.74
22222	Total for subject	43629	120.05	153.74	-33.69	0.00	0.00	0.00	0.00

### B4 Raw mark distribution

Department of Basic Education		NEC 2015/11 (Mainframe /ECG)					Standardisation Printing for NSC (v5.1.2.4)					Date: 2015/12/20 Time: 13:08 Page: 3							
Subject 19351084 Life Sciences										Maximum mark: 300									
Mark	Cand.	%	Cum%	Cum %	Mark	Cand.	%	Cum%	Cum %	Mark	Cand.	%	Cum%	Cum %					
0	0	0.00	0	0.00	100	2852	0.88	119717	39.69	200	837	0.21	276996	92.50					
1	0	0.00	0	0.00	101	2571	0.85	122288	40.54	201	870	0.22	279666	92.72					
2	0	0.00	0	0.00	102	2512	0.83	124930	41.38	202	830	0.21	280296	92.93					
3	0	0.00	0	0.00	103	2500	0.83	127300	42.21	203	814	0.20	280930	93.14					
4	0	0.00	0	0.00	104	2574	0.85	129874	43.08	204	588	0.19	281467	93.32					
5	0	0.00	0	0.00	105	2544	0.84	132418	43.90	205	584	0.19	282051	93.51					
6	1	0.00	1	0.00	106	2588	0.85	134988	44.75	206	573	0.19	282604	93.70					
7	0	0.00	1	0.00	107	2533	0.84	137519	45.59	207	589	0.19	283173	93.89					
8	0	0.00	1	0.00	108	2501	0.83	140020	46.42	208	586	0.19	283739	94.07					
9	1	0.00	2	0.00	109	2513	0.83	142533	47.26	209	531	0.18	284270	94.25					
10	1	0.00	3	0.00	110	2582	0.85	145095	48.11	210	537	0.18	284807	94.43					
11	1	0.00	4	0.00	111	2451	0.81	147548	48.92	211	539	0.18	285346	94.61					
12	2	0.00	6	0.00	112	2377	0.79	149923	49.71	212	508	0.17	285852	94.77					
13	1	0.00	7	0.00	113	2379	0.79	152302	50.50	213	524	0.17	286378	94.95					
14	3	0.00	10	0.00	114	2424	0.80	154726	51.30	214	517	0.17	286888	95.12					
15	3	0.00	13	0.00	115	2484	0.82	157210	52.12	215	504	0.17	287397	95.29					
16	11	0.00	24	0.01	116	2440	0.81	159650	52.93	216	514	0.17	287911	95.46					
17	20	0.01	44	0.01	117	2399	0.79	162043	53.73	217	478	0.16	288387	95.62					
18	28	0.01	72	0.02	118	2309	0.77	164352	54.49	218	481	0.16	288846	95.77					
19	26	0.01	98	0.03	119	2288	0.76	166640	55.25	219	479	0.16	289327	95.93					
20	26	0.01	134	0.04	120	2347	0.78	168967	56.03	220	482	0.16	289809	96.09					
21	26	0.01	160	0.05	121	2292	0.76	171279	56.79	221	415	0.14	290254	96.22					
22	89	0.02	259	0.08	122	2237	0.74	173516	57.53	222	436	0.14	290680	96.37					
23	71	0.02	330	0.10	123	2288	0.75	175784	58.28	223	411	0.14	291071	96.51					
24	71	0.02	371	0.12	124	2194	0.73	177978	59.01	224	404	0.13	291475	96.64					
25	108	0.04	479	0.16	125	2155	0.71	180133	59.72	225	387	0.13	291862	96.77					
26	113	0.04	592	0.20	126	2127	0.71	182260	60.43	226	349	0.12	292211	96.88					
27	167	0.08	759	0.25	127	2188	0.72	184428	61.15	227	359	0.12	292570	97.00					
28	186	0.06	915	0.30	128	2134	0.71	186562	61.85	228	352	0.12	292922	97.12					
29	198	0.08	1111	0.37	129	2090	0.69	188652	62.55	229	350	0.12	293272	97.23					
30	232	0.08	1343	0.45	130	2016	0.67	190688	63.22	230	381	0.13	293653	97.36					
31	273	0.09	1616	0.54	131	2130	0.71	192798	63.92	231	339	0.11	293992	97.47					
32	300	0.10	1916	0.64	132	2027	0.67	194825	64.59	232	347	0.12	294339	97.59					
33	317	0.11	2233	0.74	133	2020	0.67	196846	65.26	233	321	0.11	294680	97.70					
34	377	0.12	2610	0.87	134	1952	0.65	198797	65.91	234	317	0.11	294977	97.80					
35	399	0.13	3009	1.00	135	1922	0.64	200719	66.55	235	342	0.11	295319	97.91					
36	455	0.15	3464	1.15	136	1912	0.63	202631	67.18	236	315	0.10	295634	98.02					
37	501	0.17	3965	1.31	137	1915	0.63	204546	67.82	237	310	0.10	295944	98.12					
38	517	0.17	4482	1.49	138	1927	0.64	206473	68.46	238	290	0.10	296234	98.22					
39	548	0.18	5030	1.67	139	1900	0.63	208373	69.09	239	246	0.08	296479	98.30					
40	631	0.21	5661	1.88	140	1879	0.62	210252	69.71	240	288	0.10	296767	98.39					
41	667	0.22	6328	2.10	141	1833	0.61	212086	70.32	241	264	0.08	297021	98.48					
42	730	0.24	7058	2.34	142	1877	0.62	213982	70.94	242	254	0.08	297275	98.56					
43	723	0.24	7781	2.58	143	1886	0.65	215828	71.49	243	246	0.08	297521	98.64					
44	778	0.26	8559	2.84	144	1831	0.64	217729	72.03	244	236	0.08	297759	98.72					
45	932	0.31	9491	3.15	145	1710	0.57	219589	72.60	245	215	0.07	297974	98.79					
46	898	0.30	10389	3.44	146	1730	0.57	220499	73.17	246	250	0.08	298224	98.88					
47	989	0.33	11378	3.77	147	1811	0.63	222310	73.71	247	208	0.07	298432	98.95					
48	1038	0.34	12416	4.12	148	1851	0.65	223981	74.25	248	200	0.07	298632	99.01					
49	1038	0.34	13452	4.46	149	1519	0.50	225480	74.76	249	184	0.06	298816	99.07					
50	1067	0.35	14519	4.81	150	1518	0.50	226998	75.26	250	197	0.07	299013	99.14					
51	1192	0.40	15711	5.21	151	1581	0.52	228579	75.79	251	167	0.06	299180	99.19					
52	1188	0.39	16899	5.60	152	1461	0.48	230040	76.27	252	188	0.08	299368	99.26					
53	1209	0.40	18108	6.00	153	1484	0.49	231524	76.76	253	147	0.06	299515	99.30					
54	1314	0.44	19422	6.44	154	1477	0.49	233011	77.25	254	185	0.06	299700	99.37					
55	1427	0.47	20849	6.91	155	1436	0.48	234437	77.73	255	153	0.06	299853	99.42					
56	1444	0.48	22293	7.39	156	1488	0.49	235903	78.21	256	152	0.06	299995	99.47					
57	1419	0.47	23712	7.86	157	1388	0.46	237291	78.67	257	126	0.04	300131	99.51					
58	1522	0.50	25234	8.37	158	1376	0.46	238689	79.13	258	111	0.04	300242	99.55					
59	1578	0.52	26812	8.89	159	1351	0.45	240020	79.58	259	122	0.04	300364	99.59					
60	1633	0.54	28445	9.43	160	1380	0.46	241400	80.04	260	107	0.04	300471	99.62					
61	1708	0.57	30133	10.00	161	1330	0.44	242730	80.48	261	121	0.04	300562	99.66					
62	1706	0.57	31833	10.56	162	1284	0.42	243994	80.90	262	94	0.04	300636	99.69					
63	1710	0.57	33569	11.13	163	1285	0.42	245298	81.30	263	97	0.03	300786	99.73					
64	1830	0.61	35389	11.74	164	1202	0.40	246538	81.71	264	84	0.03	300857	99.75					
65	1835	0.61	37234	12.34	165	1288	0.42	247726	82.13	265	79	0.03	300946	99.78					
66	1940	0.64	39174	12.99	166	1200	0.40	248926	82.53	266	82	0.03	301028	99.81					
67	1879	0.62	41083	13.61	167	1190	0.39	250116	82.93	267	89	0.02	301097	99.83					
68	1980	0.66	43033	14.27	168	1145	0.38	251281	83.31	268	67	0.02	301164	99.85					
69	1985	0.66	45018	14.93	169	1155	0.38	252416	83.69	269	53	0.02	301217	99.87					
70	2032	0.67	47050	15.60	170	1081	0.36	253497	84.05	270	53	0.02	301270	99.89					
71	2112	0.70	49162	16.30	171	1121	0.37	254618	84.42	271	51	0.02	301321	99.90					
72	2010	0.67	51172	16.97	172	1069	0.35	255687	84.77	272	45	0.01	301366	99.92					
73	2061	0.68	53233	17.65	173	1109	0.37	256798	85.14	273	28	0.01	301394	99.93					
74	2194	0.73	55427	18.38	174	1003	0.33	257799	85.47	274	32	0.01	301426	99.94					
75	2193	0.73	57620	19.10	175	1034	0.34	258833	85.82	275	33	0.01	301459	99.95					
76	2316	0.77	59936	19.87	176	988	0.33	259821	86.14	276	18	0.01	301477	99.96					
77	2261	0.75	62197	20.62	177	988	0.32	260789	86.47	277	24	0.01	301501	99.96					
78	2269	0.75	64466	21.37	178	1009	0.33	261798	86.80	278	22	0.01	301523	99.97					
79	2305	0.76	66771	22.14	179	944	0.31	262742	87.11	279	19	0.01	301542	99.98					
80	2424	0.80	69195	22.94	180	936	0.31	263676	87.42	280	19	0.01	301561	99.98					
81	2375	0.79	71570	23.73	181	902	0.30	264590	87.72	281	13	0.00	301574	99.99					
82	2314	0.77	73894	24.50	182	884	0.29	265484	88.02	282	5	0.00	301579	99.99					
83	2425	0.81	76313	25.30	183	857	0.28	266321	88.30	283	8	0.00	301587	99.99					
84	2441	0.81	78754	26.11	184	818	0.27	267139	88.57	284	5	0.00	301592	99.99					
85	2488	0.81	81210	26.93	185	818	0.27	267965	88.84	285	6	0.00	301598	100.00					
86	2503	0.83	83713																