

Students Record Analysis And Examination Result Computation Algorithm (SRAERCA)

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ABSTRACT: There are different computer programs in different tertiary institutions for computing examination results. However, beyond examination result computation, not many programs in use provide multi-level aggregated data of student population and academic progress at various stages of studentship. The need for data use to inform administrative decisions in tertiary institutions have been emphasized. Analysis of students' data and academic record can promote data-informed decisions for the purposes of better planning. The "Student Record Analysis and Examination Result Computation Algorithm" (SRAERCA) is a comprehensive solution for use in tertiary institutions. The algorithm incorporates the entire computational process related to a student from admission to graduation and beyond. The algorithm is modified with the flexibility to accommodate future needs and eliminate delays in examination result computation, preparation of examination result summaries and generation of academic transcripts. A test of resilience, accuracy and analytic capabilities of the algorithm produced expected results. The stages of computation are simple and fast. With a proper file naming system, the output files in all stages are arranged meticulously. The algorithm provides an array of output data that satisfies the needs of the students themselves, the course instructor, the department, and the Faculty/College. The computational processes progressively catalog important statistics about student population and their academic performances to encourage data use and for future reference. Ultimately, the algorithm provides information and analysis for data-informed decisions toward a more professional culture in tertiary institutions.

Keywords: Algorithm, Student Data Analysis, Academic Record Analysis, Transcript, Fast, Resilient.

I INTRODUCTION

Given the continuous rise in student population, tertiary institutions calculate examination result of students with the help of computer programs. Analysis of students' information and their academic record is as important as examination result computation. The need for data use to inform decision-making in tertiary institutions cannot be overemphasized. The works of many researchers have described a variety of ways in which data has supported educational decisions in schools [4]. Over the years, many algorithms and programs to compute examination result of students have been developed. However, the use of programs that extends capabilities beyond examination result computation is not widespread. This work presents an algorithm we call SRAERCA which is an acronym for "Student Record Analysis and Examination Result Computation Algorithm". The algorithm provides a comprehensive solution to the demand of examination result computation as well as student information and academic record management. The algorithm is resilient and written with the flexibility to accommodate future needs. It is expected to encourage data use in tertiary institutions. Information from such data can facilitate decision-making and improve educational standards in tertiary institutions. In section two, we give a brief review of some work related to examination result computation and some research that emphasize the need for data use in schools. In section three, we discuss the algorithm and the computational stages from the commencement of examinations to generation of academic transcript. Using the Five-Point Grading System, established by the Nigerian Universities Commission (NUC) in 1989, we test the algorithm. Section four presents analysis of the computed results. Finally, we conclude this article in section five.

1. LITERATURE REVIEW

Encouraged by the need to facilitate the process of calculating examination results of students, many programs

have been developed for use in schools and colleges. An Intelligent Knowledge-Based System (IKBS) was built using the programming capabilities in Microsoft Excel [9]. In the program, cell referencing tracks students' performances in hard coded Excel cells [9]. Another related work used a combination of MYSQL Server, Adobe Dreamweaver and Personal Home Page Pre-Processor [3]. The database tables and data are created with the use of MYSQL Server, the codes and Graphical User Interface is created with the use of Adobe Dreamweaver, while communication and manipulation of the database is by the help of Personal Home Page Pre-Processor (PHP). An updated version of the program developed in Java was reported [2]. A similar work was done for application in Nigerian Colleges of Education [7]. On the other hand, many researchers have strongly supported data use in the educational sector. Many case studies have described a variety of ways in which data has supported educational decisions. Research on school improvement and school effectiveness has shown data use to be central to the school improvement process [5], [6]. Data can be used in exploring group differences and growth over time [5]. Educators and their study became more collaborative [8]. School leaders involved in the use of data often develop a mindset of being in charge of their own destiny [5]. Data are most useful in educational decision-making when the purpose extends beyond vertical accountability [4]. Data use is widespread and has become indispensable in business, banking and industry [4]. Data use is now not a choice for school leaders, but a must [5]. A comprehensive solution for both examination result computation and analysis of student record for widespread use in tertiary institutions has been under-explored. Recently introduced is "Data Analysis and Result Computation (DARC)", an algorithm that extends capabilities beyond examination result computation [1]. The algorithm gives analysis of student population and academic progress. However, computational stages before and after examination result were not captured. More so, the program did not have the ability to generate academic

transcripts. In this work, significant improvements have been made to include the entire computational process from admission through to graduation. In the process, important statistical information will be available on demand.

2. THE ALGORITHM AND DATA PREPARATION

2.1 The Algorithm

The algorithm hereafter referred to as **SRAERCA** is written in Fortran, a programming language especially suited to numeric computation with great speed and precision. Fortran, now a proper name of its own was previously written as FORTRAN which stands for *formula translation* originally developed by a team of researchers at IBM in the 1950s. Many new programmers relegate Fortran to antiquity but according to Wikipedia, the free encyclopedia, Fortran has been in continuous use for over half a century in computationally intensive areas such as numerical weather prediction, finite element analysis, computational fluid dynamics, computational physics, computational chemistry and that it is the language used for programs that benchmark and rank the world's fastest supercomputers. To catch up with programming demands, successive versions have evolved from FORTRAN 77 to Fortran 2008. The next expected version is Fortran 2015. An impartial observer might say about FORTRAN, as Mark Twain did after reading his own obituary in a newspaper, "The rumors of my death have been greatly exaggerated" [10]. Fortran remains an excellent choice for high-performance applications in scientific and statistical computation. **SRAERCA** is the main algorithm but supported by three other sub-programs namely: **Grade**, **SORT** and **TGEN**.

- **Grade** is a sub-program designed for course instructors to compute letter grades and course performance percentages for presentation at the departmental board meeting.
- **SORT** is a sub-program for departmental examination officers. **SORT** makes use of specific output format from **Grade** to create semester examination score datasheet for all students in the department. **SORT** also outputs grade performances for all courses written in that semester.
- **TGEN** is a sub-program designed for the Examinations and Record Unit to generate academic transcript.

SRAERCA computes among others: semester examination results, grade statistics for each semester, separate students into the various classes of degrees, keep log of academic progress of each student in a department. Only the course instructor enters scores in the entire process which makes it fast and efficient. In addition to examination result computation and analysis, **SRAERCA** provides a platform to check for possible errors or missing information about a student, generate important statistics about students such as gender and demographic representation over a period of time.

2.2 Data Preparation and Computational Stages

A spreadsheet that contains all necessary information about students is expected to exist in any department. For the purpose of simple nomenclature in this paper, we shall refer to the spreadsheet as "Student Information Datasheet" (SID). After admission, SID is updated every session. Another spreadsheet we shall call "Course Information Datasheet" (CID), contains information about all possible courses that can be registered in a department. CID can be updated when new courses are introduced or when courses are renamed. Although files can be read directly from MS Excel sheet, it is preferable to save all files with the '.dat' file extension. For WEB application, the files are saved with the '.html' file extension. We can edit the files with an editing package like *UltraEdit*. Future correction(s) to SID (e.g., Student name, marital status, etc.) or correction(s) to grades automatically reflect in all subsequent **SRAERCA** output. There should be standard format for SID and CID. A standard file naming system (FNS) should be established during data preparatory stages to facilitate easy access to any required file by any authorized person. After semester examinations are concluded, the stages of computation are illustrated in an organogram as shown in **Figure 1**. The three stages include the course instructor, the departmental examination officer and the academic office. Some of the output files of one stage provide the required input files of the next stage.

The stages for result computation are as follows:

- a) After semester examinations are concluded, the course lecturer enters the continuous assessments and examination scores of students in a standard format with information such as; the name of the lecturer, the course, date of examination, department and the number of students that wrote the examination. Afterwards, the course lecturer uses the sub-program "**Grade**" to compute students' grade and grade percentages. An example is illustrated in **Appendix I**. After approval at the departmental examination board, a standard output format is forwarded to the departmental examination officer.
- b) The departmental examination officer uses another sub-program "**SORT**" to arrange the output files sent in from different course lecturers. A sample of the input is shown in **Appendix II**. It is noteworthy that the departmental examination officer doesn't have to re-enter any score. "**SORT**" does the work for all students in the department. The output files from "**SORT**" include— grade percentages for all courses written in that semester (**Appendix III**), and a standard spreadsheet format of the raw examination scores which are recorded against appropriate courses for all students. Depending on the availability of semester results, the spreadsheet can be for a particular academic year, a range of academic years or for all students in a department.
- c) After re-arranging with the use of "**SORT**", the departmental examination officer uses the main program "**SRAERCA**" to compute examination result and give analysis of the result

- d) Using one of the output files from “**SRAERCA**”, the department or Examination and Record unit uses “**TGEN**” to generate academic transcript of all students.

3. COMPUTATIONAL RESULT AND ANALYSIS

We perform a test of accuracy and analytic capabilities of **SRAERCA** using synthetic record of some students assumed to be in the department of Physics, University of Abuja, Nigeria. From the Student Information Datasheet, **SRAERCA** performs the following:

- i. Integrity check for omission(s) or error(s) in data entry. This can help to correct omission(s) or error(s) in the student information spreadsheet data.
- ii. Classify students into their various academic sessions.
- iii. Generate gender representation over academic sessions and from the beginning of the reference academic session to date. This data can be very useful to researchers and to decision makers for planning purposes.
- iv. If required, generate age-group, regional or religious demography which can also provide information to researchers and administrators.

From the semester examination spreadsheet data, **SRAERCA** performs the following:

- i. Integrity check for possible errors in examination scores. This is to avoid values that are out of range.
- ii. Generate examination scores of a list of courses written by each student. This provides a platform to validate scores recorded against respective courses and to make corrections if need be.
- iii. Integrity check for credit units registered by students. This ensures that credit units registered by students are within the lower and upper limits set by the department.
- iv. Generate semester examination result showing among others, grade point average (GPA), cumulative grade point average (CGPA), carry over courses (if any), outstanding courses (if any) to be given to each student (**AppendixIV**). This provides a record of academic progress for each student. In the event of complains in computed results, students can provide evidence of such to assist in tracing the source of error.
- v. Generate a summary of grade statistics of all courses written in a particular semester. Over time, this will provide data to inform decision at both the department and Faculty.
- vi. Provide an up-to-date record of students’ academic progress by generating summaries. This is for the

various result presentation meetings. Two examples are shown in **AppendixV** and **AppendixVI**.

- vii. Separate students into class of degrees showing students without carry-over and students with (at least one) carry-over course(s) as illustrated in **AppendixVII**. This will facilitate identification of graduating students and their class of degrees without extra work.
- viii. Provide the data required to generate transcript. This is done by keeping log of courses that have been passed by each student. Afterwards, the sub-program **TGEN** is used to generate academic transcript for all students. An example of a generated transcript is shown in **AppendixVII**. Note that the transcript generation process can capture any carry-over or outstanding course(s) that a student may have.

SRAERCA can read spreadsheets in MS-Excel format and can use the security features in MS-Excel to restrict accessibility of computed results. However, third party utility software like “*Folder Lock*” can also be used to restrict access.

4. CONCLUSION

We have presented an algorithm using a computer language especially suited to numeric computation with speed and precision. A test of accuracy and analytic capabilities of the algorithm produced result consistent with expectations. The algorithm is resilient and can handle any student population. Following some computational stages, the algorithm proffers a comprehensive solution to examination result computation as well as analysis of student information and their academic record. It provides aggregated data of student population and their academic progress from admission to graduation and beyond. Such data can be available on demand. Data entry is done once which makes the entire process simple and fast. The algorithm also incorporates the ability to generate academic transcript of any/all students. The computational process leaves in its trail, important statistical data to inform decisions toward a more professional culture in tertiary institutions.

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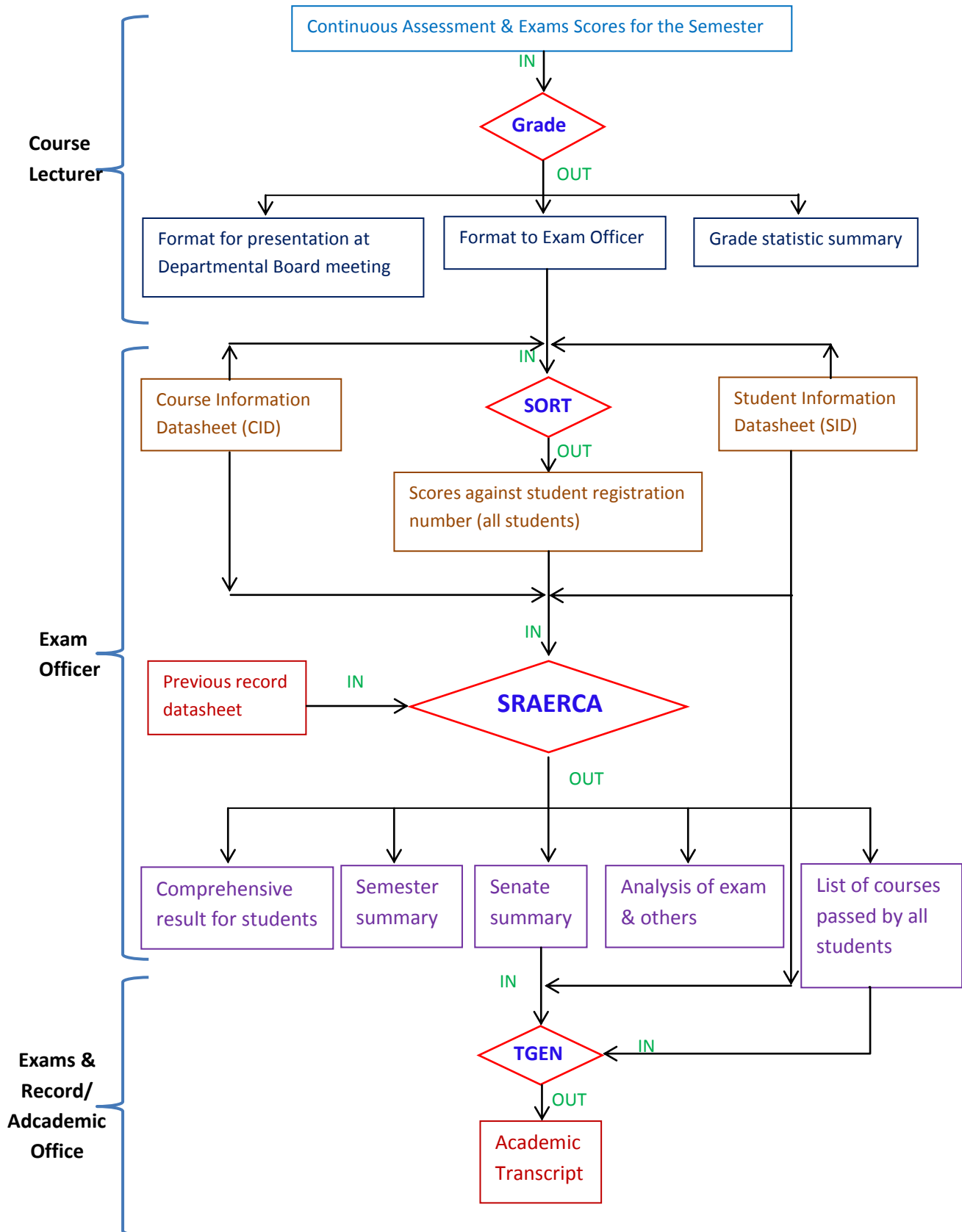


Figure 1: An Organogram of computational stages of input and output files for Grade, SORT, SRAERCA and TGEN

APPENDIX I: COURSE LECTURER OUTPUT from Grade (SAMPLE)

UNIVERSITY OF ABUJA
DEPARTMENT OF PHYSICS

2012/2013 1ST SEMESTER EXAMINATIONS :PHYSICSCOURSE LECTURER : DR. MALIK SAKO M.
COURSE TITLE : PHY102 (Heat and Thermodynamics)

REG. NO CA Exam Total

13284001 11 32 43E

13284002 19 55 74A

13284003 21 53 79A

13284004 15 46 61B

13284005 14 38 52C

NUMBER OF STUDENTS WITH SCORES = 5

Grade	A	B	C	D	E	F	TOTAL
	2	1	1	0	1	0	5
	40.0%	20.0%	20.0%	0.0%	20.0%	0.0%	

UNIVERSITY OF ABUJA
DEPARTMENT OF PHYSICS

2012/2013 1ST SEMESTER EXAMINATIONS :PHYSICS EDUCATIONCOURSE LECTURER : DR. MALIK SAKO M.
COURSE TITLE : PHY102 (Heat and Thermodynamics)

REG. NO CA Exam Total

13234001 20 45 65B

13234002 16 25 41E

13234003 20 47 67B

13234004 21 56 77A

13234005 19 38 57C

NUMBER OF STUDENTS WITH SCORES = 5

Grade	A	B	C	D	E	F	TOTAL
	1	2	1	0	1	0	5
	20.0%	40.0%	20.0%	0.0%	20.0%	0.0%	

APPENDIX II: EXAMINATION OFFICER INPUT TO SORT (SAMPLE)

2015/2016 1ST SEMESTER EXAMINATIONS : DEPARTMENT OF PHYSICS

4YEAR 1 STUDENTS

1 16284001 PHY10343D

2 16284002 PHY103 76A

3 16284003 PHY103 60B

4 16284004 PHY10351C

	A	B	C	D	E	F
PHY1034	25.0%	25.0%	25.0%	0.0%	0.0%	25.0%

PHYSICS

4

1 16284001 PHY10454C

2 16284002 PHY10416F

3 16284003 PHY10450C

4 16284004 PHY10448D

	A	B	C	D	E	F
PHY1044	0.0%	0.0%	40.0%	40.0%	0.0%	20.0%

PHYSICS

!

5YEAR 2 STUDENTS

1 15284001PHY20553C

2 15284002PHY20524F

3 15284003PHY205 78A

4 15284004PHY205 61B

5 15284005PHY205 52C

	A	B	C	D	E	F
PHY205	5	20.0%	20.0%	40.0%	0.0%	0.0%

PHYSICS

!

5YEAR 3 STUDENTS

1 14284001PHY311 67B
 2 14284002PHY311 51C
 3 14284003PHY311 49D
 4 14284004PHY311 87A
 5 13284003PHY311 57C
 A B C D E F
 PHY311 5 20.0% 20.0% 40.0% 20.0% 0.0% 0.0% PHYSICS
 !

5YEAR 4 STUDENTS

1 13284001PHY41246D
 2 13284002PHY41241E
 3 13284003PHY41247D
 4 13284004PHY41243E
 5 13284005PHY41265B
 A B C D E F
 PHY412 5 0.0% 20.0% 0.0% 40.0% 40.0% 0.0% PHYSICS
 !

APPENDIX III: GRADE STATISTICS OUTPUT FROM SORT

(SAMPLE)

S/N COURSE TOTAL A B C D E F DEPARTMENT

YEAR 1 STUDENTS

1 PHY103 4 25.0% 25.0% 25.0% 0.0% 0.0% 25.0% PHYSICS
 2 PHY10440.0% 0.0% 40.0% 40.0% 0.0% 20.0% PHYSICS
 3 PHY109 4 0.0% 25.0% 50.0% 25.0% 0.0% 0.0% PHYSICS
 4 MTH102 4 25.0% 25.0% 25.0% 25.0% 0.0% 0.0% PHYSICS
 5 MTH104 4 25.0% 25.0% 25.0% 25.0% 0.0% 0.0% PHYSICS
 6 CHM151 4 0.0% 25.0% 25.0% 25.0% 0.0% 25.0% PHYSICS
 7 CHM171 4 25.0% 25.0% 25.0% 25.0% 0.0% 0.0% PHYSICS
 8 GST101B 4 25.0% 0.0% 50.0% 25.0% 0.0% 0.0% PHYSICS
 9 GST102 4 25.0% 0.0% 50.0% 25.0% 0.0% 0.0% PHYSICS

YEAR 2 STUDENTS

10 PHY202 5 0.0% 40.0% 20.0% 40.0% 0.0% 0.0% PHYSICS
 11 PHY203 5 20.0% 20.0% 40.0% 20.0% 0.0% 0.0% PHYSICS
 12 PHY204 5 0.0% 0.0% 60.0% 40.0% 0.0% 0.0% PHYSICS
 13 PHY205 5 20.0% 20.0% 40.0% 0.0% 0.0% 20.0% PHYSICS
 14 PHY209 5 40.0% 0.0% 20.0% 40.0% 0.0% 0.0% PHYSICS
 15 CSC102 5 20.0% 0.0% 60.0% 20.0% 0.0% 0.0% PHYSICS
 16 GST222 5 20.0% 20.0% 20.0% 40.0% 0.0% 0.0% PHYSICS

YEAR 3 STUDENTS

17 PHY306 4 50.0% 0.0% 50.0% 0.0% 0.0% 0.0% PHYSICS
 18 PHY307 4 25.0% 0.0% 75.0% 0.0% 0.0% 0.0% PHYSICS
 19 PHY3115 20.0% 20.0% 40.0% 20.0% 0.0% 0.0% PHYSICS
 20 PHY312 4 0.0% 0.0% 75.0% 25.0% 0.0% 0.0% PHYSICS
 21 PHY309 4 0.0% 50.0% 25.0% 25.0% 0.0% 0.0% PHYSICS
 22 CHM351 4 0.0% 25.0% 0.0% 75.0% 0.0% 0.0% PHYSICS
 23 MTH308 3 0.0% 33.3% 66.7% 0.0% 0.0% 0.0% PHYSICS

YEAR 4 STUDENTS

24 PHY411 5 20.0% 0.0% 20.0% 40.0% 0.0% 20.0% PHYSICS
 25 PHY412 5 0.0% 20.0% 0.0% 40.0% 40.0% 0.0% PHYSICS
 26 PHY409 5 0.0% 40.0% 60.0% 0.0% 0.0% 0.0% PHYSICS
 27 PHY406 5 0.0% 20.0% 80.0% 0.0% 0.0% 0.0% PHYSICS
 28 PHY415 5 20.0% 40.0% 20.0% 20.0% 0.0% 0.0% PHYSICS
 29 PHY416 5 0.0% 25.0% 75.0% 0.0% 0.0% 0.0% PHYSICS
 30 PHY419 5 0.0% 33.3% 66.7% 0.0% 0.0% 0.0% PHYSICS
 31 MTH404 2 0.0% 50.0% 50.0% 0.0% 0.0% 0.0% PHYSICS

APPENDIX IV: STUDENT SEMESTER EXAMINATION RESULT (SAMPLE)

UNIVERSITY OF ABUJA
DEPARTMENT OF PHYSICS
AGBO Chinedu MarkM Enugu 21/12/1985
Reg. No: 13284005

No. of courses registered = 8

Code CU Grd TCP

MTH102 3 D 6.0

CHM151 3 D 6.0

GST102 2 B 8.0

PHY2023 F 0.0

PHY203 3 A 15.0

PHY204 3 C 9.0

PHY205 3 A 15.0

PHY209 1 B 4.0

TUR= 2163.0 TUE= 18

This semester GPA: 63/21 = 3.00

This semester cov= 1

PHY202 SC 200L

This semester outstanding =2

CSC102 SC 200L

GST222 SC 200L

Previous: TUR= 58 TUE= 40 TCP=147

Current CGPA (147 + 63)/(58 + 21) = 2.66

CU = credit unit

Grd= grade

TCP= total credit point

FC = 1st semester core

SC = 2nd semester core

FE = 1st semester elective

SE = 2nd semester elective

TUR= total number of units registered

TUE= total number of units earned

*** NOTE ***

* THIS IS ONLY FOR VERIFICATION AND REFERENCE PURPOSES *

* ANY ALTERATION INVALIDATES THIS RESULT *

APPENDIXV: SEMESTER SUMMARY

(SAMPLE)

REG. NO NAME COURSES

YEAR 1 STUDENTS

1 16284001 ChigbuChimezie Innocent 9 PHY103(C3) PHY104(C2) PHY109(C1) MTH102(C3) MTH104(C2)

CHM151(C3) CHM171(C3) GST101B(C1) GST102(C2)

64B 47D 64B 48D 47D 34F 47D 74A 74A

2 16284002 Oyebanji Ismail Oladayo 9 PHY103(C3) PHY104(C2) PHY109(C1) MTH102(C3) MTH104(C2)

CHM151(C3) CHM171(C3) GST101B(C1) GST102(C2)

36F 66B 56C 66B 66B 56C 66B 57C 57C

3 16284003 AkpojevwaTegaNA'omi 9 PHY103(C3) PHY104(C2) PHY109(C1) MTH102(C3) MTH104(C2)

CHM151(C3) CHM171(C3) GST101B(C1) GST102(C2)

70A 70A 53C 80A 70A 47D 70A 46D 46D

4 16284004 Seyeye Mathew Sore 9 PHY103(C3) PHY104(C2) PHY109(C1) MTH102(C3) MTH104(C2)

CHM151(C3) CHM171(C3) GST101B(C1) GST102(C2)

51C 51C 47D 51C 51C 68B 51C 51C51C

5 16284005 AkpenaDanjumaHamza 0

!

YEAR 2 STUDENTS

15284001	IBEKWE Goodness T.	7	PHY202(C3)	PHY203(C3)	PHY204(C3)	PHY205(C3)	PHY209(C1)	CSC102(C3)	GST222(C2)
		49D	54C	52C	54C	74A	54C	62B	
2	15284002 MARCUS Oluwaseun Martins	7	PHY202(C3)	PHY203(C3)	PHY204(C3)	PHY205(C3)	PHY209(C1)	CSC102(C3)	GST222(C2)
		61B	52C	46D	36F	49D	46D	46D	
3	15284003 MADUAKOLAM Francis Chinomso	7	PHY202(C3)	PHY203(C3)	PHY204(C3)	PHY205(C3)	PHY209(C1)	CSC102(C3)	GST222(C2)
		60B	60B	56C	54C	54C54C	76A		
4	15284004 ODOH Abel Onyema	7	PHY202(C3)	PHY203(C3)	PHY204(C3)	PHY205(C3)	PHY209(C1)	CSC102(C3)	GST222(C2)
		51C	71A	54C	61B	71A	71A	54C	
5	15284005 OKAFOR Emmanuel Chibuke	7	PHY202(C3)	PHY203(C3)	PHY204(C3)	PHY205(C3)	PHY209(C1)	CSC102(C3)	GST222(C2)
		49D	49D49D	71A	49D	59C	49D		

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YEAR 3 STUDENTS

1	14284001 SALIU John Junior	6	PHY306(C4)	PHY307(C3)	PHY311(C3)	PHY312(C3)	PHY309(C1)	CHM351(E4)
		54C	74A	74A	54C	64B	44E	
2	14284002 ALOZIE Rosemary Ebube	6	PHY306(C4)	PHY307(C3)	PHY311(C3)	PHY312(C3)	PHY309(C1)	CHM351(E4)
		56C	56C56C56C	46D	46D			
3	14284003 SHITTU FataiMayowa	6	PHY306(C4)	PHY307(C3)	PHY311(C3)	PHY312(C3)	PHY309(C1)	MTH308(E3)
		80A	50C	60B	50C	60B	50C	

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YEAR 4 STUDENTS

1	13284001 OFILI Aaron Onyekachi	7	PHY411(C3)	PHY412(C3)	PHY409(C6)	PHY406(C3)	PHY415(E3)	PHY416(E3)
		39	48D	54C	64B	74A	54C	54C
2	13284002 OSAGIE Iwinosa Smile	8	PHY311(C3)	MTH308(E3)	PHY411(C3)	PHY412(C3)	PHY409(C6)	PHY406(C3)
		59C	11F	49D	55C	55C	54C	55C
3	13284003 IJAODOLA Comfort Abiola	7	PHY411(C3)	PHY412(C3)	PHY409(C6)	PHY406(C3)	PHY415(E3)	PHY416(E3)
		54C	74A	64B	54C	64B	64B64B	
4	13284004 OLOYEDE WasiuBabatunde	7	PHY411(C3)	PHY412(C3)	PHY409(C6)	PHY406(C3)	PHY415(E3)	PHY416(E3)
		71A	51C	51C51C51C51C51C				

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APPENDIXVI: SENATE SUMMARY FOR 2ND SEMESTER 100 LEVEL TO 400 LEVEL

(SAMPLE)

S/N	Reg. No.	NAME	PREVIOUS				CURRENT				CUMMULATIVE				REMARKS				
			TUR	TUE	TCP	GPA	TUR	TUE	TCP	GPA	TUR	TUE	TCP	GPA					
4																			

YEAR 1 STUDENTS

1	16284001 UDOM MfonisoAniefiok	15	13	44	2.93	20	17	51	2.55	35	30	95	2.71	20MTH101	CHM151
2	16284002 AWA Victor Okechukwu	15	13	48	3.20	20	17	61	3.05	35	30	109	3.11	20MTH101	PHY103
3	16284003 OCHADA Ojatu Noel		15	15	53	3.53	20	20	80	4.00	35	35	133	3.80	0 PASS
4	16284004 ABDULAZEEZ Saidu	15	15	61	4.07	20	20	62	3.10	35	35	123	3.51	0 PASS	
5	16284005 BENJAMIN James													DID NOT REGISTER OR LEFT DEPARTMENT	

!

YEAR 2 STUDENTS

1	15284001 MUHAMMED Abdulazeez		57	51	166	2.91	18	18	55	3.06	75	69	221	2.95	10CHM151
2	15284002 EBEME Mercy Ufeli		54	48	156	2.89	18	15	39	2.17	72	63	195	2.71	30PHY103 GST203 PHY205
3	15284003 ADEDOKKUN Sulaiman A		54	54	206	3.81	18	18	64	3.56	72	72	270	3.75	0 PASS
4	15284004 YUSUF Abdulazeez		54	54	183	3.39	18	18	71	3.94	72	72	254	3.53	0 PASS
5	15284005 ISAH Albert Omeiza		54	54	190	3.52	18	18	48	2.67	72	72	238	3.31	0 PASS

!

YEAR 3 STUDENTS

1 14284001 ONAH Ologbo Bridget 100 94 333 3.33 ! 18 18 59 3.28 ! 118 112 392 3.32 !0 0 PASS
 2 14284002 ADEYEMI JeliliOlatunde 94 85 255 2.71 ! 18 18 49 2.72 ! 112 103 304 2.71 !20GST203 PHY205
 3 14284003 ABDULLAHI Dauda 91 91 319 3.51 ! 17 17 63 3.71 ! 108 108 382 3.54 !0 0 PASS
 4 14284004 ASSAM Romson N 91 89 341 3.75 ! 18 18 63 3.50 ! 109 107 404 3.71 !10MTH104
 !

YEAR 4 STUDENTS

1 13284001 IDEMUDIA OsaroOsaigbovo 130 127 455 3.50 ! 23 23 69 3.00 ! 153 150 524 3.42 !10GST301
 2 13284002 JIMOH O.A. Jemilatu 136 128 376 2.76 ! 26 23 62 2.38 ! 162 151 438 2.70 !12 MTH308
 PHY407 PHY416
 3 13284003 MOHAMMED Ibrahim 129 129 460 3.57 ! 23 23 89 3.87 ! 152 152 549 3.61 !0 0 PASS
 4 13284004 ONYENEKE Stephen C 136 136 520 3.82 ! 23 23 75 3.26 ! 159 159 595 3.74 !0 0 PASS
 5 13284005 SMART Iheanyichukwu M 141 118 399 2.83 ! 22 15 42 1.91 ! 163 133 441 2.71 !23CHM351 PHY411
 CSC102 PHY407 PHY418

APPENDIXVII: PASS LIST, CLASS OF DEGREE, DEPARTMENTAL GRADE STATISTICS (SAMPLE)

REG. NO. CGPA

16284003 3.80
 16284004 3.51
 15284003 3.75
 15284004 3.53
 15284005 3.31
 14284001 3.32
 14284003 3.54
 13284003 3.61
 13284004 3.74

Class	1st	2.1	2.2	3rd	Pas	Prb	Sum	
2012/2013	0	2	3	0	0	0	5	cov: 3 Pass: 2
2013/2014	0	2	2	0	0	0	4	cov: 2 Pass: 2
2014/2015	0	2	3	0	0	0	5	cov: 2 Pass: 3
2015/2016	0	2	2	0	0	1	5	cov: 3 Pass: 2
2016/2017	0	0	0	0	0	0	0	cov: 0 Pass: 0

Grade	A	B	C	D	E	F	SUM
2012/2013	3	5	19	3	1	3	34
2013/2014	4	4	12	3	1	0	24
2014/2015	6	5	13	10	0	1	35
2015/2016	7	7	12	8	0	2	36
2016/2017	0	0	0	0	0	0	0

 Total 20 21 56 24 2 6 129

SAMPLE VII: ACADEMIC TRANSCRIPT AFTER EIGHT SEMESTERS(SAMPLE)

STUDENT NAME :AGBO Chinedu Mark SEX : M
 DATE OF BIRTH :21/12/1985DEPARTMENT: Physics
 REG. NUMBER : 13284005
 CGPA : 2.71
 Carry-over Course(s) : 2 CHM351 PHY411
 Outstanding Course(s): 4 CSC102 PHY407 PHY418 PHY419

CODE	COURSE TITLE	Sem	CU	Grd
PHY102	Heat and Thermodynamics	F	2	C

MTH101 : Elementary Set Theory and Algebra	F 2 C
MTH103 : Trigonometry	F 1 C
MTH105 : Co-ordinate Geometry	F 1 B
GST101A: Use of English	F 2 A
CHM121 : Foundation Chemistry I	F 3 B
PHY103 : Optics, Waves & Modern Physics	S 3 A
PHY104 : Electricity and Magnetism	S 2 C
PHY109 : Basic Experimental Physics II	S 1 C
MTH104 : Vector	S 2 C
CHM171 : Foundation Chemistry III	S 3 A
GST101B: Use of English	S 1 B
GST122 : Use of Library	S 1 D
PHY101 : Mechanics and Properties of Matter	F 3 C
PHY201 : Analytical Mechanics I	F 3 B
PHY208 : Basic Experimental Physics III	F 1 B
MTH201 : Mathematical Methods I	F 3 B
MTH205 : Elementary Differential Equations I	F 3 C
GST203 : Nigerian People and Culture	F 3 C
MTH102 : Differential Calculus and Application	S 3 D
CHM151 : Foundation Chemistry II	S 3 D
GST102 : Introduction to Logic/Philosophy	S 2 B
PHY203 : Waves and Optics	S 3 A
PHY204 : Circuit Theory and Electronics	S 3 C
PHY205 : Elementary Modern Physics	S 3 A
PHY209 : Basic Experimental Physics IV	S 1 B
PHY108 : Basic Experimental Physics I	F 1 D
CSC203 : Computer Programming I	F 3 E
PHY301 : Analytical Mechanics II	F 3 B
PHY302 : Statistical and Thermal Physics	F 3 A
PHY303 : Electromagnetic Waves and Optics	F 3 D
PHY304 : Electronics I	F 3 B
PHY308 : Experimental Physics V	F 1 E
PHY202 : Thermal Physics	S 3 D
GST222 : Peace and Conflict Resolution	S 2 E
PHY306 : Solid State Physics I	S 4 B
PHY307 : Mathematical Methods in Physics	S 3 A
PHY311 : Introductory Quantum Physics	S 3 D
PHY312 : Optics I	S 3 B
PHY309 : Experimental Physics IV	S 1 B
STA101 : Introductory Statistics	F 2 D
PHY305 : Electricity and Magnetism	F 3 E
GST301 : Entrepreneurship Studies	F 3 D
PHY401 : Quantum Mechanics I	F 3 A
PHY405 : Electrodynamics	F 3 C
PHY408 : Advanced Experimental Physics	F 1 B
PHY414 : Nuclear and Particle Physics I	F 3 B
SIW300 : Student Industrial Work Experience	F 3 A
PHY417 : Applied Geophysics	F 3 C
PHY412 : Computation Physics	S 3 C
PHY409 : Student Project	S 6 C
PHY406 : Mathematical Methods in Physics II	S 3 C
PHY415 : Nuclear and Particle Physics II	S 3 D
TOTAL CREDIT UNITS EARNED: 133	