**Question 1 -** Imagine a transcript of a student getting all categories of grades after 8 semesters at AUCA and calculate the general average and the average for major courses (This case must not be in probation).

**Transcript Not in Probation After 8 Semster**

| **Course Name** | **Type** | **Credits** | **Grade (out of 20)** | **Weighted Grade (Grade × Credits)** |
| --- | --- | --- | --- | --- |
| Applied Mathematics | Major | 31 | 16 | 496 |
| Accounting | Non-Major | 24 | 14 | 336 |
| Bible Study | Non-Major | 16 | 12 | 192 |
| General English | Non-Major | 24 | 18 | 432 |
| Intro to Computer | Major | 31 | 15 | 465 |
| Study & Research | Non-Major | 16 | 13 | 208 |
| **Total** |  | **142** |  | **2129** |

### GPA Calculation:

Total weighted grade = **2129**

Total credits = **141**

GPA = Total weighted grade / Total credits = **2129 / 142 = 14.99**

GPA of Major Courses = Total weighted grade / Total credits = **496+465/31+31=961 / 62 = 15.5**

**Question 2 -**Imagine a transcript of a student getting all categories of grades after 4 semesters at AUCA and calculate the general average and the average for major courses (this case must be in probation).

**Transcript In Probation After 4 Semster**

| **Course Name** | **Type** | **Credits** | **Grade (out of 20)** | **Weighted Grade (Grade × Credits)** |
| --- | --- | --- | --- | --- |
| Applied Mathematics | Major | 31 | 7 | 217 |
| Accounting | Non-Major | 24 | 11 | 264 |
| Bible Study | Non-Major | 16 | 9 | 144 |
| General English | Non-Major | 24 | 10 | 240 |
| Intro to Computer | Major | 31 | 8 | 248 |
| Study & Research | Non-Major | 16 | 9 | 144 |
| **Total** |  | **142** |  | **1257** |

### GPA Calculation:

Total weighted grade = **2129**

Total credits = **141**

GPA = Total weighted grade / Total credits = **1257 / 142 = 8.85**

GPA of Major Courses = Total weighted grade / Total credits = **217+248/31+31=961 / 62 = 7.5**

**Question 3 – Calendar, Diary, and Timetable**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Month** | **Week 1–2** | **Week 3–4** | **Week 5–6** | **Week 7–8** |
| **January** | Orientation, Course setup | Classes begin | Class activities | Intro assignments |
| **February** | Regular lessons | Quizzes begin | More assignments | Group work |
| **March** | Midterm revision | Midterm exams | Feedback sessions | Continue lessons |
| **April** | Project work | Quiz & small tests | Assignment deadline | Class presentations |
| **May** | Final revision | Final exams | Research submission | End of semester |

### ****Question 4 – AUCA Library****

1. **How AUCA library how it operates**

Library is a place where books, journals, digital resources, and other materials are collected, organized, and made available for reading, research, and learning.

Operation of AUCA library

Operation: hard copy resources (Academic related + book projects)

Soft copy on computers

In case of borrowing “one needs a library card to take a book”, the library is also open to none AUCA students but they obviously have to request permission from the librarian or any other faculty member.

Operation time: Monday to Thursday

From 8:30 am to 8:00 pm

: Friday

From 8:30 am to 3:00 pm

Available features: free and fast internet

Rule to respect in AUCA library:

* People using the library are supposed to keep silence to facilitate order
* They are supposed to leave their bags in the shelves

**REFFERENCE**

Librarian: Uwayo Olga

**b) The automated water reservoir management system**

Name of Resercher : KAYIRANGA Joseph

Name of the faulty advisor : Mr. MANIRAHO Laurent

Date completed: May 2023

**Quotation ,page (i)**

This system will be giving an alert to the user or admin who will be controlling it through the system alert once the preferred measurement of water has been arrived , moreover it’s roof doors will be opened and closed according to the sensor .

**Reference**:

Automated water reservoir management system book

By :KAYIRANGA Joseph (august ,2023)

**(c) Book two Authors**

***Book title*** *: The right thing to do*

***Author*** *: James Rachels*

*: Stuart Rachel*

***Edition****: 6th edition*

***Date*** *: 2011*

***Quation****:*

*"Morality is not just a matter of personal opinion"* (Rachels & Rachels, 2011, p. 25).

**Reference:**  
Rachels, J., & Rachels, S. (2011). *The right thing to do: Basic readings in moral philosophy* (6th ed.). McGraw-Hill Education.

(d)

***Book title*** *:* Land of a Thousand Hills

***Author*** *:* Rosamond Carr

***Date*** *: 01/09/2000*

***Quation****:*

*"* Rwanda, once torn by tragedy, now shines with resilience and growth.  
Strong leadership brought peace, gender equality, and green progress.  
It’s a rising model of hope, stability, and transformation.*"*

**Reference:**

* Metal ideas
* Rwanda a thousand hills book

(e)

**Quotation:**  
“Rwanda has seen impressive economic growth and is committed to sustainability and gender equality” (Reuters, 2025).

**Reference (APA Style):**

Reuters. (2025, March 19). Rwanda's economy grew 8.9% in 2024, stats office says. *Reuters*. Retrieved from https://www.reuters.com/world/africa/rwandas-economy-grew-89-2024-stats-office-says-2025-03-19/

### ****Question 5 – Research Part (Simple Version)****

**Based on our project: Smart Gate System with Face Recognition**

#### ****A. General Research Question****

How can a smart gate with face recognition help students enter AUCA faster and easier?

#### ****B. General Research Objective****

To build a smart gate that uses face recognition so students can enter AUCA without showing ID every day.

#### ****C. Null Hypothesis (H₀)****

Using a smart gate with face recognition does not make entry faster or better compared to the current way of checking IDs.

1. **Populations are** all student att at AUCA Gishushu Branch.

**Sample size:**

Where:

n = sample size

N = total population

e = margin of error (commonly 0.05 for 95% confidence)

*lets say that at AUCA branch Gishushu, there is 2000 students*

***n=2000/6 = 333 (sample size)***

#### ****E. Research Tool (How to collect data)****

We can use a **survey (questionnaire)** for students. Just a few questions like:

1. Is it annoying to show your ID every day at the gate?
2. Does the current gate process waste your time?
3. Do you think face recognition can make entry easier?
4. Would a smart gate reduce problems with security staff?
5. Do you feel safer with a system that uses face scanning?
6. Students can answer from 1 (strongly disagree) to 5 (strongly agree).