



BABCOCK UNIVERSITY

COURSE OUTLINE TEMPLATE PREPARED BY THE AVP, INSTITUTIONAL EFFECTIVENESS

SCHOOL: School of Science and Technology

DEPARTMENT: Agriculture and Industrial Technology

SEMESTER /SESSION: 2017-2018 (First Semester)

COURSE CODE AND TITLE: STATISTICAL METHODS & FIELD EXPERIMENTATION (**AGRI 425**). **DAY OF CLASS:** WEDNESDAY

NO OF UNITS: 2

TEACHER'S NAME: Babalola, D. Akinola. (PhD) – Main
Ayo-Bello, AT (Assisting)

VENUE FOR CLASS: Animal Lab

OFFICE ADDRESS: C001,
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OUR VISION STATEMENT

A first-class Seventh-day Adventist institution, building servant leaders for a better world

OUR MISSION STATEMENT

Building leadership through Christian education; transforming lives, impacting society for positive change. To achieve our mission, we are committed to:

- Achieving excellence in our teaching, research program, and service delivery
- Imparting quality Christian education
- Instilling Christ-like character to the members of our Community

OUR CORE VALUES

- | | |
|-------------------------------|-----------------|
| • Excellence | -Our Culture |
| • Integrity | -Our Promise |
| • Accountability | -Our Moral |
| • Servant Leadership | -Our Strength |
| • Team Spirit | -Our Dignity |
| • Autonomy and Responsibility | -Our Passion |
| • Adventist Heritage | -Our Commitment |

OUR PHILOSOPHY

Babcock University's philosophy is anchored on the harmonious development of the intellectual, physical, social, and spiritual potentials of our students, inspiring stable and noble character needed for effective leadership and service in the society.

CORPORATE IMAGE STATEMENT: A center of excellence for character development and scholarship; a socially responsive, responsible, and accountable institution in matters of commitment and action.

COURSE DESCRIPTION

Introduction to field experiments; selection of designs for specific situations; collection and analysis of data; interpretation of results of the following designs- partial plot completely randomized, randomized complete block,

Latin square, split plot and factorial experiments; Statistical inference; Test of hypothesis; correlation and regression analysis; Goodness of fit; formulation of research objectives.

COURSE CONTENT/GOAL

This course is designed to introduce students to the basic experimental designs, data collection methods, analysis and interpretation. The application of a world view that is biblically and faith based is also incorporated into the course presentation and teaching approach.

COURSE OBJECTIVES

At the end of the course, students should be able to:

1. Select appropriate designs for specific field experiment.
2. Understand how to collect and analyze data
3. Make statistical inferences, formulate and test for hypotheses

REQUIRED TEXTBOOKS/JOURNALS

Reading Materials

- Experimental Design and Analysis by Howard J. Seltman. Available online
- Dominick S and Derrick, R (2002). Statistics and Econometrics. Schaum's outline series, McGRAW-HILL, New York.
- Cochran, W. G. Sampling Technique
- Guenther, W C: Analysis of Variance
- A First Course in Design and Analysis of Experiments by Oehlert, Gary W. *available online*

COURSE REQUIREMENTS:

CLASS ATTENDANCE: - "Every student is required to attend classes regularly and punctually, unless ill or prevented by some recognized emergency. Students who absent themselves from class for more than three weeks during the semester shall merit an F grade. Authorized leave of absence from campus does not excuse the student from classes, or relieve the student of the required course work' (*BU Academic Bulletin 2012-2015 p.13*).

PARTICIPATION: -Students are to actively engage in topic discussion and sharing of ideas in class.

TARDINESS/CONDUCT OF STUDENTS IN CLASS: - Lateness to class is unacceptable; students are not allowed to operate their cell phones, iPods and other electronic mobile gargets during classes, except with the permission of the teacher. Eating and chewing off bubble gums and drinking (water exempted) is also not allowed except with the permission of the teacher. Very importantly, students are required to dress in compliance with the university dress code and wear their identity cards while in class.

SHORT DEVOTIONALS/PRAYER: - Spiritual nurture is a part of whole person development, and team spirit is our strength; thus, every student is required to participate in the devotional exercise and prayer in class.

SUBMISSION OF ASSIGNMENT: The teacher will give directive for submission of assignment.

LATE ASSIGNMENTS: Assignments could be turned in earlier, but not later than the deadline set by the teacher.

GUIDELINE FOR WRITTEN WORK: Guidelines will be set for specific assignments.

ACADEMIC INTEGRITY/HONESTY: “Babcock University has a zero tolerance for any form of academic dishonesty. Morally and spiritually, the institution is committed to scholastic integrity. Consequently, both students and staff are to maintain high, ethical Christian levels of honesty. Transparent honest behavior is expected of every student in all spheres of life. Academic dishonesty include such things as plagiarism, unauthorized use of notes or textbooks on quizzes and examinations, copying or spying the test or paper of another student (formal or take-home), talking to another student during examinations. Academic matter would automatically results in a failing grade for the examination, and suspension, or outright dismissal from the university. Academic dishonesty issues are referred to SPEAM (Senate Panel on Examination and Academic Misconduct) who investigates and makes recommendations to Senate. Penalties for examination and academic misconduct are spelt out in the *student’s handbook* and in other regulations as published from time to time” (BU Academic Bulletin2012-2015 p.18).

GRIEVANCEPROCEDURE

“Students who believe that their academic rights have been infringed upon or that they have been unjustly treated with respect to their academic program are entitled to affair and impartial consideration of their cases. They should do the following to effect a solution:

1. Present their case to the teacher(s) concerned
2. If necessary, discuss the problem with the Head of Department
3. If agreement is not reached at this level, submit the matter to the School Dean
4. Finally, ask for a review of the case by the Grievance Committee
5. A fee is charged for remarking of scripts. If a student’s grievance is upheld after an external examiner has remarked the script, the grade would be credited to the student. The lecturer will be given a letter of reprimand and will be asked to refund the fees to the student. If the student’s grievance is not sustained, the student will be given a letter of reprimand and the original grade retained” (BU Academic Bulletin2012-2015 p.18).

TEACHING/LEARNING METHODOLOGIES: Lectures and class discussions

COURSE ASSESSMENT/EVALUATION

Continuous Assessment:

Class Attendance:	5%}	}	=40%
Quizzes & Tests:	10%}		
Assignments:	10%}		
Mid-Semester Exam:	15%}		
Final Semester Exam:	60%		

GRADE SCALE

Currently, the 5-pointgradingsystemadoptedbythe University Senate translates as follows:

Grades	Marks-Quality	Range Points	Definition
A	80-100	5.00	Superior
B	60-79	4.00	Above Average
C	50-59	3.00	Average
D	45-49	2.00	Below Average
E	40-44	1.00	Pass
F	0-39	0.00	Fail

INCOMPLETE GRADE: An incomplete grade may only be assigned to a student upon request, due to an emergency situation that occurred within that semester, which prevented completion of an/some assignments, quizzes, or examination. Such a student would complete a contract form, obtainable from the Registrar, after agreement with the

teacher. The form must be signed by the teacher, the student, the HOD, the dean, the Registrar, and the Senior Vice President (SVP) before contract begins. The original copy of the incomplete form will be sent to the Registrar with copies to the teacher, the student, the HOD, the dean, and the SVP. An incomplete grade(I) reverts to the existing grade if contract is not completed by the end of the following semester (including summer semester, except for examinations), (BU Academic Bulletin 2012-2015 p. 20).

STUDENTS WITH DISABILITY

“Babcock University seeks to provide a conducive environment for optimal living and learning experience. While the university is working towards facilities that accommodate persons with disabilities, provisions will be made for students with disabilities under the following conditions. Students with disabilities are to:

- a. Report to Student Support Services for assessment, and obtain a clearance/recommendation at the commencement of the semester or as soon as disabling incidence occurs
- b. Show the clearance/recommendations to relevant university officials at the commencement of the semester or as soon as disabling incidence occurs
- c. Maintain ongoing contact with Student Support Services” (BU Academic Bulletin 2012-2015 p. 20).

PROPOSED DAILY/WEEKLY OUTLINE OF SCHEDULE:

DATE	TOPIC	CLASS ACTIVITIES & ASSIGNMENTS	ASSIGNMENT DUE
Week 1&2	Introduction to field experiments	Lecture & Class Discussion Assignment: Distinguish between- i. Experimental & observational study ii. Exploratory & confirmatory expt	assignment given due by 3 rd week
Week 3	selection of designs for specific situations	Lecture & Class Discussion Assignment: Article - Why the need to design an experiment?	assignment given due by 6 th week
Week 4 & 5	collection and analysis of data	Lecture & Class Discussion	
Week 6 - 8	Interpretation of results of the following designs- partial plot completely randomized, randomized complete block, Latin square, split plot and factorial experiments	Lecture & Class Discussion Assignment: define some of the important terms and concepts in design of experiments	assignment given due by 8 th week
Week 8	Mid Semester	Half time Examination	
Week 9	Statistical inference	Lecture & Class Discussion	
Week 10	Test of hypothesis	Lecture & Class Discussion Assignment: Case study based on worked example (Tutorials)	assignment given due by 11 th week
Week 11	Correlation and regression analysis	Lecture & Class Discussion Assignment: Case study based on worked example (tutorials)	assignment given due by 12 th week
Week 11 & 12	Correlation and regression analysis (cont'd); Goodness of fit; Formulation of research	Lecture & Class Discussion Assignment: Case study based on worked	assignment given due by

	objectives.	example (tutorials)	13 th week
Week 13	Revision		
Week 14	Examination		
Week 15	Examination		