**CURRICULUM STUDIES IN AGRICULTURE**

**Course Code**: EBS 236J; EBS 236

**Course level**: 200

**Credit Value**: 3

**Semester**: 2

**Course Coordinator**: Prof. Festus Annor-Frempong

**Background**

Agriculture has been taught as disjointed subjects and topics for ages. Crops production is taught differently from animals, and soil management is taught differently from fish farming, without placing emphases on the interconnections among them. It is important for the teachers of agriculture to rethink agriculture as a system comprising a number of closely interrelated component enterprises, which influence and take resources from each other in an ever-continuing cycle. This is the only way to really understand and plan for agricultural enterprises, programmes and activities for success.

**Course Delivery Modes**

The course will be delivered using Face-to Face, Practical Activity, Independent Study, Seminar,

Work-Based Learning, E-Learning and Practicum

**Course Description**

This course seeks to enable students to understand the nature of agriculture as a system that is made up of various components existing in an integrated manner. The nature of agriculture as a business enterprise will also be discussed. The linkages between agriculture and different sciences and applied science subjects (such as Engineering, Home Economics, Biology, Soil and Management, Environmental Science, etc.) will be discussed. The course will further expose students to how to sequence and integrate the teaching of the various components of agriculture at the JHS levels in order to make learning easier, faster and interesting. The approaches that would be used in the delivery of this course would prepare trainees to ensure the learning progress of all students by projecting gender roles and issues relating to equity and inclusivity

**Outcomes**

Upon successful completion of this course, the student will be able to:

* demonstrate understanding of the concept of a system
* show understanding and appreciation of why agriculture is a system
* show the ability to identify the various components of agriculture and the relationships connecting them as a system
* apply the concept of system to introduce balance and interrelationships in the planning of agricultural curriculum.

**Methods of Instruction, Tools and Materials to study Course Content in curriculum studies each week**

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| **Week**  | **Course content** | **Topics**  | **Teaching and learning activities, Methods of instruction and key information to achieve learning outcomes** |
| Week 1 | Introduction to curriculum studies in agriculture | Overview of the course What is a curriculum? What is the Syllabus?What are the elements of curriculum (syllabus)?The meaning of curriculum studiesThe course description, course outcomes, course outline to the students.Explain the course delivery modes. * Face-to Face
* Practical Activity
* Independent Study
* Work-Based Learning
* E-Learning
* Practicum
 | Use the Lecture, and Question and Answer methods to enable students understand the concept of curriculum, syllabus, curriculum and curriculum studies.The set of courses and lessons used by teachers or trainers to educate learners. The curriculum materials include the syllabus, pupils’ textbook and teacher’s handbook or manual. Syllabus refers to the outline or description of the main contents of a subject matter that is taught in a subject. In other words, a syllabus a summary of a course of study or programme of the main topics for a subject to be taught in the school. **Elements in curriculum (syllabus) include the following:****The preamble**: It is the introductory aspect of the syllabus and consists of rationale for teaching the subject, general aims, scope of content, pre-requisite skills and allied subjects, organization of the syllabus, time allocation, suggestions for teaching the syllabus, profile dimensions, definition of profile dimensions, forms of assessment, grading procedure and guidelines for continuous assessment. **Rationale for teaching the subject**. This section states the outline of the underlying reason or philosophy for teaching the subject. **General aims**. This lists the general purposes that the syllabus will achieve. The aims of the syllabus reveal the purpose and reasons for teaching the subject.**Scope of content**. This is the extent to which the contents of the syllabus address the depth and breadth of the content of the syllabus; the balance between cognitive, affective and psychomotor learning domains, the needs of the subject, learners and society. **Pre-requisite skills***.* Here the various skills and subjects that learners have to acquire or study before they can effectively learn the subject are indicated. **Organization of the syllabus***.* This shows structure of the syllabus. The structure of the syllabus is such that its contents are arranged to ensure solid continuity in learning and a number of years each topic is divided. **Time allocation**. This part shows the number of periods (and their duration) that may be used in each week in teaching the topics in the syllabus**Suggestions for teaching the syllabus***.* Recommendations for the strategies, techniques and methods that may be used in teaching the subject are made.**Profile dimension***.* A dimension is a learning behaviour that the teacher makes effort to help the learner to acquire. **Forms of assessment***.* This shows how pupils should be assessed. The type of assessment to use, the type of tests to use, number of examination papers and distribution of examination marks over the various dimensions are indicated here.**Grading procedure.** This part shows the way tests that are done by learners should be graded. The letter grade system and the numerical grade system are indicated **Guidelines for continuous assessment.** How continuous assessment would be used to assess the learners are indicated**The body:** The body of the syllabus show how the units are broken down into specific objective, content, teaching and learning activities and evaluation. The unit shows the divisions of the major topic of the section in the syllabus. Specific objectives show the objective that should be achieved at the end of teaching a topic in a unit. The content is the body of knowledge or information that would be dealt with in teaching the topics in a unit. Teaching and learning activities show the various exercises and activities used to evaluate the topics of each unit. Suggestions are made for the teacher to use to effectively evaluate the topics in the units. Curriculum studies is about the study of the methods and systems used by teachers to build knowledge in learners. We study curriculum to assist students to learn how to design, develop, and improve the set of courses and lessons (Curriculum) to educate learners.An important component of the curriculum study which is pedagogy (instruction). Curriculum studies is concerned with issues of equity, access, and voice.The Curriculum studies for agriculture will focus on the **JHS integrated Science syllabus material.**Refer to introductory part of the course outline to consider the course description, course outcomes.Explain the course delivery modes as follows. Face to face: This is the traditional classroom instruction. Teachers and the students will be devoted to teaching and learning at the same time. The lecture method in which the teacher will present students with an organized in-depth presentation on the topics/subtopics, accompanied by audiovisuals and questions and answers. Practical Activity: Students will be put in small groups to discuss aspects of the JHS agriculture syllabus and to order the topics in acceptable sequence and assign time and weighting. Group discussions involving about six to ten students. The teacher will provide the group with information / knowledge on topics to be discussed to encourage them to share ideas, and to interact with each other.Independent study: Inform students that the teacher and student will agree upon a topic for the student to research with guidance from the teacher. Or at times students will be allowed to take a class one-to-one with a teacher and/or little supervision. Students will be asked to find out relationships between agriculture and other sciences from books and internet.Work-based learning will be used to help students apply real-life work experiences with academic and technical skills and develop their own strategies to teach agriculture effectively. E-learning involves the use of computers and the Internet to facilitate learning. Students will be asked to search for information and use e-resources such as from You Tube etc. to study topicsThe practicum will be designed to give students a supervised practical application of what is studied in the field and or theory. |
| Week 2 | What is a system? | Explanation of a system and theoretical basis to understand a systemThe principles of systems theory.Use of the principles of systems theory to explain agriculture as a systemExplanation of the holism and hierarchy principles of systems theory. The principle of holismThe hierarchy principle of the systems | Use face to face interactions with lecture and illustrations with drawings, pictures and objects in Agriculture to enable students understand the concept of a system. A system is a procedure, process, method, or course of action designed to achieve a specific result. A system also deals with how parts work together.The JHS Integrated Science syllabus is organized into themes. One of the themes in JHS1 Unit 2 under systems is titled: Farming Systems (shifting cultivation, land rotation, crop rotation, mixed cropping, mixed farming, extensive, intensive, pastoral farming, monoculture, monocropping, and ecological farming)Use Question and Answer session to show each of these acts as a system. **Note that there is much more to the explanation of a system. Remember the study of curriculum among others is to ensure that students understand the nature of agriculture as a system that is made up of various components existing in an integrated manner. Agriculture has been taught as disjointed subjects and topics for ages**. **The introduction of systems theory will help in this direction.**  Draw students’ attention to the fact that curriculum studies is about the study of the methods and systems used by teachers to build knowledge in learners. As part of the study, students will be required to link agriculture and different sciences and applied science subjects in the JHS syllabus. Furthermore, they will be required to sequence and integrate the teaching of the various components of agriculture. The understanding of the **systems’ principles** will help achieve these objectives. Explain the fact that a theory consists of principles. **Principles** are basic facts used to explain a phenomenon. The systems theory consists of many principles such as holism, input-output-transformation, hierarchy and emerging principles, communication, and control. However, for the purpose of the course use the principle of holism and hierarchy to help students appreciate agriculture as a system made up of various components existing in an integrated manner. Use the lecture method to illustrate the concept of holism.Holism suggests that:* It is important to look at an issue or anything as composed of systems.
* A system is made up of components called subsystems.
* The subsystem could also be made up of other subsystems and so on.
* The system and subsystems could also form part of other larger system or subsystems.
* A system maintains **its existence** and **functions** as a whole through the **interactions** of its parts.
* The behaviour of different systems depends on how the parts are related, rather than on the parts themselves. Therefore, in system thinking we normally say the performance of any entity is the sum of the independent performance of its parts as well as the product of their interaction.
* It is important to synthesize the parts into whole so as to gain understanding of the system. This is unlike the logic thinking where we normally study parts and do not consider the interactions and interrelations to understanding of the whole system.

**Key lesson in the use of the holism principle**In describing complex situation/problem or issue, one needs to pay attention to the components of the system as well as interactions with components with each other and as others larger or subsystem. For the curriculum studies, it will be important to study curriculum in parts, and look at the interactions for analysis. **Independent study**: Teacher should agree with students to select agriculture topics, guide them to classify it subsystem and the interaction within the system. The principle states that there is a pecking order or chain of commands in every system. This comes with the observation of a flock of poultry where each bird pecks another lower in the scale without fear of retaliation and submits to pecking by one of higher rank broadly. The principle also stipulates that smaller systems (subsystems) are nested in larger systems. For example, the biosphere consists of ecosystems, ecosystems consist of communities, communities consist of local species populations, populations consist of individual organisms and so on.Higher systems may provide inputs to lower systems because they form their environment but it cannot totally control it. Application: Liaise with students to conduct group discussion to determine if the topics in the syllabus are ranked or ordered. Find out if some topics are part of others and so on.  |
| Week 3 | Consideration of agriculture as a natural system. | Definition of the nature of agriculture | Note that Agriculture could be defined from many perspectives. Explain the various meanings of agriculture to students.The elementary definition is as: The rearing of animals and cultivation of crops to meet the needs of human beings. Agriculture in this case is about crops and animals but certain activities, methods, processes and strategies are combined to produce the animals, crops and/or their products.Agriculture goes beyond crops and animals. It is also about protecting the natural resources, hunting, fishing, harvesting, forestry and natural pasture.Modern agriculture is not limited to farming. It embraces marketing, farm management, engineering, home economics etc. This leads to the talk about the branches of agriculture namely: Fisheries, animal science, forestry, soil science, agricultural economics and farm management, crop science, horticulture, agricultural extension, agricultural education. Veterinary, processing and post-harvest, and others. Another definition of agriculture explains it as the art, science and business of rearing animals and cultivation of crops. The art aspect denotes the use of skills to produce crops or rear animals. The science aspect connotes the use of science and technology in agricultural activities. In fact, agriculture is described as an applied science. No wonder the JHS syllabus to be studied is termed integrated science. Agriculture as a business system and linkages with other sciences will be discussed in this course. It will be considered in the next unit. Let us look at the relationships between science and arts components which will be studied in the curriculum studies. Independent study: The application of holism principle to look at an issue or anything as composed of systems or a system is made up of components called sub-systems and the interactions (principles). Assist students to apply this to the study of JHS syllabus. Clearly isolate aspects which are described as agriculture. Refresh your knowledge on various definition of the branches of agriculture in the syllabus. Use the e-learning to describe the following subjects: Physics, chemistry, biology, economics, Geography, mathematics, psychology and sociology. Group discussion: Look at how agriculture is related to these subjects. Another definition of agriculture explains it as the art, science and business of rearing animals and cultivation of crops. The art aspect denotes the use of skills to produce crops or rear animals. The science aspect connotes the use of science and technology in agricultural activities. In fact, agriculture is described as an applied science. No wonder the JHS syllabus to be studied is termed integrated science. Agriculture as a business system and linkages with other sciences will be discussed in this course. It will be considered in the next unit. Let us look at the relationships between science and arts components which will be studied in the curriculum studies. Independent study: The application of holism principle to look at an issue or anything as composed of systems or a system is made up of components called sub-systems and the interactions (principles). Assist students to apply this to the study of JHS syllabus. 1. Clearly isolate aspects which are described as agriculture.

Refresh your knowledge on various definition of the branches of agriculture in the syllabus. Use the e-learning to describe the following subjects: Physics, chemistry, biology, economics, Geography, mathematics, psychology and sociology. Group discussion: Look at how agriculture is related to these subjects.  |
| Week 4 | Consideration of agriculture as a natural system. | Explain why agriculture is considered as a natural system. | A natural system is the one that exists in “nature” i.e. consisting of **physical and biological materials** independent of any human involvement. Agricultural systems of production include the pastoral farming, shifting cultivation, crop rotation, mono-cropping, mixed cropping, mixed farming, livestock production systems such layer production, broiler production, free range and the battery cage systems. An agricultural system is considered as a particular arrangement of agricultural enterprises (cropping and livestock) that are managed in response to physical, biological and socio-economic environment and in accordance **with farmer’s goals, preferences, resources** and external factors (political, institutional) to produce desired outputs. Applying the principle of holism, we could look at this definition in terms of components as the farmer, input, physical, biological and socio-economic environment of farmers, political and institutional. Lets us break this further.The farmer is an important part of agricultural system since the basis of every system depends on the farmer’s decision. The farmer may choose and manage the system to respond to the available resources and environment. Farmers are part of the society in which they live. Inputs are described as the resources that go into the development/production of crop and livestock products. These include land, labour (farmer, family, hired workers and draught animals) and capital (form of cash, seed, feed for animals, fertilizers, pesticides, farm tools and implements, bullocks, tractors, crops and animals.Environment represents things observed in the surroundings or locations around the farmer, plant or animals. The environment is manipulated to create suitable condition for growth and performance of animals and crops. There are biological, physical and institution and socio-economic environment. The living organisms constitute the biological aspects of the environment. The non-living things such as land forms (altitude and slope), rocks, soil and climate constitute the physical environment of agricultural production system. **Institutional and political factors** provide essential support services and leadership to production systems. These include policies, strategies and information; market, transport and credit. The socio-economic environment includes social and economic aspects. The social aspect consists of the organization of the communities and relationships between their members, family structures and lineages. The social affects the attitude, goals, cooperation and motivation of farmers in any production system. The economic environment includes decisions on availability of production factors such as land, labour and farm implements, crops, livestock, and money.**Group work**: A natural system exists in “nature” and is made up of **physical and biological materials** independent of any human involvement. 1. Brainstorm to delineate aspects of the agriculture system that do not involve the farmer to show why agriculture is considered as a natural system.2. Outline the agriculture production system in the JHS syllabus and isolate aspects independent of any human involvement.  |
| Week 5 | Consideration of agriculture as a business system | Definition of a business system | Business is about making money by producing or buying and selling products (such as goods and services). Agriculture as an activity or enterprise, is entered into to make profit and therefore could be looked as a business system. The business system also denotes the use of various economic, management and banking principles, in agricultural production. Business is also about entrepreneurship. Entrepreneurship is the process of starting a business or other organization. Entrepreneurs are venturesome and fully responsible for success or failure of businesses.Looking at agriculture as business involves use of agrichemicals, breeding, crop production, distribution, farm machinery, processing, and seed supply, as well as marketing and retail sales to make profit.Agriculture as business system connects all aspects of agriculture and the interrelated steps to work together for the achievement of the goals of agricultural enterprise. **Independent study:** Students should study **the JHS syllabus**. Clearly identify the various aspect of agriculture in the syllabus and suggest the process that could be used or a delivery mechanism for providing specific agricultural goods or services to customers for **profit**.Students present their findings for assessment and discuss in class. |
| Week 6 | The linkages between agriculture and different sciences and applied science subjects  | Agriculture described as applied science.   | Use the e-learning to describe the following basic sciences: Physics, chemistry, and biology.Note that biology is the **branch of science that primarily deals with the structure**, **function**, **growth**, **evolution** and **distribution of organism. It is** natural science that studies life and living organisms, including their physical structure, chemical processes, molecular interactions, physiological mechanisms, development and evolution.Physics is concerned with the nature and properties of matter and energy.Physics is different from chemistry and biology. It is made up of mechanics, heat, light radiation, sound, electricity, magnetism, and the structure of atoms.Chemistry the branch of science with emphasis on the identification of the substances of which matter is composed; the investigation of their properties and the ways in which they interact, combine, and change; and the use of these processes to form new substances.Agriculture is an applied science. For example: Crop science animal science, soil science, processing and storage which are agriculture have relationships with **biology**. Crop science, animal science, soil science, veterinary, processing and storage which are agriculture have relationships with **chemistry**Mechanization of farm operations, processing and storage of products, operation of farm equipment have relation with **physics**.**Independent study:** Agriculture is an applied science. It is also an integrated subject that brings together the elements of wide areas of other subjects including the basic sciencesGuide students find out relationships between agriculture and other sciences from **the JHS syllabus**. Students present their findings for assessment and discussion in class. |
| Week 7 | How to sequence the teaching of the various components of agriculture.  | Explanation of the sequencing of the teaching of the various components of agriculture  | The understanding of the words sequencing is very important. To sequence means to order, arrange or categorize. In other words, the **sequence** is the order in which the information is presented to the student in the syllabus. The systems principle of “hierarchy” can serve as the theoretical basis on how to sequence the teaching of the various components of agriculture. The hierarchy principle indicates that there a pecking order or chain of commands in every system.However, how to sequence the teaching of the various components of agriculture depends on many factors. These include:* The development of the students cognitively.
* The goals and purpose of the syllabus.
* From the provision of simple-to-complex information. The simpler concepts are presented before more complex ones
* Ensure pre-requisite learning where certain knowledge must come before more advance knowledge.
* Assuring chronological learning. The curriculum is sequenced by the order the concept happened historically.
* Whole-to-part learning provides students with an overview of the subject before going into specific details.
* Availability and plans for use of resource materials to support learning experiences.
* The needs of students.
* What students learn each year and builds on what was there before.
* To deliver the necessary learning aligned with what will be done in the workplace.
* To make sure that students successfully go through the agricultural programme in a timely.

**Practical Activity:** Put students in small groups and ask them to determine how:* The syllabus is organized.
* The agricultural components in the JHS agriculture syllabus are ordered.

Ask students to assign possible reasons if it is in acceptable sequence. |
| Week 8 | How to integrate the teaching of the various components of agriculture  | Integration of the teaching of the various components of agriculture | Integration is about combination, addition and incorporation. To integrate the teaching of the various components of agriculture to connects different topics to the other and or to relate relevant activities to enable students connect topics to real life or profession.You can also combine different subject areas such as chemistry, physics, economics and then teach them in relation to a singular theme or an idea.Practical Activity:Students are put in small groups and given the JHS agriculture syllabus to determine how the agricultural components are combined. The JHS syllabus is structured into thematic areas over the three years. Put the students to study the various themes and justify if the incorporation of agriculture components under each theme is alright.  |
| Week 9 | The approaches to the delivery of the Curriculum  | Identification of approaches for delivery of the components of agriculture in the syllabus.  | We have indicated that, an important component of the curriculum study is pedagogy which is most commonly understood as the approach to teaching or how knowledge and skills are imparted to learners. The key question is what approaches will be important to deliver the agriculture component of JHS syllabus? To answer this question, it is important to look at the particular learning behaviours (dimensions profile) expected of the JHS syllabus. Two key areas could be identified with this syllabus are knowledge and understanding, and the application of knowledge. Knowledge is simply the ability to remember or recall material already learned and constitutes the lowest level of learning.Knowledge has been defined as the ability to: Remember, recall, identify, define, describe, list, name, match, state principles, facts and concepts. Understanding is generally the ability to grasp the meaning of some material that may be verbal, pictorial, or symbolic.Understanding is the ability to: Explain, summarise, translate, rewrite, paraphrase, give examples, generalize, estimate or predict consequences based upon a trend.Application of Knowledge is ability to use knowledge or apply knowledge, as implied in this syllabus, and it has a number of learning/behaviour levels. These levels include application, analysis, synthesis, and evaluation. Application is the ability to: Apply rules, methods, principles, theories, etc. to concrete situations that are new and unfamiliar. It also involves the ability to produce, solve, operate, plan, demonstrate, discover etc.Analysis is the ability to: Break down material into its component parts; to differentiate, compare, distinguish, outline, separate, identify significant points etc., recognize unstated assumptions and logical fallacies recognize inferences from facts etc.Synthesis is the ability to: Put parts together to form a new whole. It involves the ability to combine, compile, compose, devise, plan, revise, design, organize, create, generate etc.Evaluation is the ability to: Appraise, compare features of different things and make comments or judgement, contrast, criticize, justify, support, discuss, conclude, make recommendations etc. Evaluation refers to the ability to judge the worth or value of some material based on some criteria.**Group Work**: To demonstrate learning behaviours in the syllabus, guide students to look the verbs used to describe the achievement of the specific objectives of the agricultural components of the syllabus. |
| Week 10 | The approaches to the delivery of the curriculum  | Identification of approaches for delivery of the components of agriculture in the syllabus.  | The student has been able to identify the key **verbs** for the achievement of the specific objectives of the agricultural components of the syllabus. It is important to study those teaching and learning approaches that could be used to achieve specific objective. Let’s consider the following: **Question and Answer Method**: Tutor encourages the use of questioning to solicit responses from learners. **Lecture/Lecturette method**: Tutor uses the Lecture / Lecturette methods to present information, facts and principles about a topic to students.**Demonstration method**: This involves showing, telling and doing something that can be observed by group of learners. There are two aspects results and method demonstration.**Work-based learning** method is used to help students apply real-life work experiences with academic and technical skills and develop their own strategies to teach agriculture effectively. **Discussion method:** Tutor uses the discussion method to get student-teachers to discuss topical issues or themes relating to the topic under discussion. It involves exchange of ideas, facts, opinions and experiences about topics in the syllabus.**Use of Educational Drama/Role playing method**: Tutor organizes the students to use educational Drama to teach certain topics that enable learners to practise a newly learned behaviour or act out a real situation or experience new perspective.**Use of Resource Persons**: Tutor makes effective use of Resource Persons to teach certain agricultural topics that the tutor is not skill enough or have limited knowledge. In some cases, the resource person is used to enable the learners have access to certain equipment that tutor may not have. **Group Work**: Tutor puts student-teachers into groups and assign them tasks to perform, based on the topic. This is to encourage involvement and participation of all learners in the lesson,**Study Visits/Field trips**: Tutor organizes students to go on study tour to places outside the classroom to observe real situations to reinforce what students have learnt. **Use of ICT**: ICT is a tool that is used for creating, storing, retrieving, sending, manipulating and receiving digital information. ICT tools include Computers, Mobile Phones, Tablets, Internet, Broadcasting Devices like Radio, Television, Wi-Fi, etc. Power Point Presentation, interactive quizzes, download of audio-visual stories/techniques, visit to blogs and websites on specific topics**Brainstorming**: Tutor uses the brainstorming method to get student-teachers identify and generate alternative solutions to issues.**Problem Solving** – Students make inquiries to find solutions to problems. It also ensures that tutors generate pool the knowledge, wisdom and experience of attendees and to identify the best possible solution to the problem. **Assignment**: Tutor gives assignment to students to find the meaning of the key concepts**Independent study:** Guide students to look at the meaning, merits and demerits of the above approaches and how to use them to teach topics in the syllabus. |
| Week 11 | Projecting gender roles, and issues relating to equity and inclusivity in curriculum delivery.  | Explanation of terms: gender, equity and equality and inclusivity in curriculum delivery | Curriculum studies is concerned with issues of equity, access, and giving voice to the advantaged and disadvantaged learners. One of the main objectives of the course is identifying the approaches that would be used to delivery this course to prepare trainees to ensure the learning progress of all students by projecting gender roles and issues relating to equity and inclusivity. It is therefore important to understand these terms before appropriate approaches are identified and used.Inclusivity is broad and is about ensuring equal access, participation and learning for all learners from diverse backgrounds and abilities. In an agricultural class you are likely to encounter learners with different linguistic, ethnic, geographical, religious, and socio-economic background. To ensure inclusivity the teacher can group learners into the gifted and the talented, learners with learning difficulties and disabilities, boys and girls, learners with social, emotional and behavioural difficulties, and marginalized learners (e.g. orphans and vulnerable children, street children)Gender is responding to the needs of both males and females in class during the instructional period.Equity is giving everyone what he or she needs, so as to succeed with others.Equality is treating everyone the same by giving them equal opportunity**Independent study:** Guide students to list the topics in the syllabus to address inclusivity, gender, equity, and equality in curriculum delivery. |
| Week 12 | Projecting gender roles, and issues relating to equity and inclusivity in curriculum delivery | Application to inclusivity, gender, equity, and equality in curriculum delivery. | Note that a methodology adopted for the study of the curriculum is **Work-based learning** to help students apply real-life work experiences with academic and technical skills and develop their own strategies to teach agriculture effectively. Students have been guided to look at the meaning, merits and demerits and how to use various approaches to teach topics in the JHS syllabus. How do you then projecting gender roles, and issues relating to equity and inclusivity in curriculum delivery? The preparation of lessons plans will be the surest way to achieve this. **Outline of lessons plans for agricultural curriculum delivery.***Mechanics*: Indicate the week ending, subject, references, the topic and subtopic*Objectives* – Should emphasize:- The performer (learner or pupils)- The observable or measurable terminal behaviuor- denoted by the verb in the statement- Acceptable or expected standard of performance - Conditions under which the learning will occurAppropriate previous knowledge - skill, ideas, or knowledge that pupils that are relevant to learning of the topicAppropriate Teaching-Learning materials – The teaching aids, tool/equipment.Teacher and learner activities - The various activities that the teacher and students will do should assist to achieve the objectives of the lesson.Core Points - Main points of the content of subject matter in the topic. This should be in logical sequence and stated in clear termsEvaluation exercises - The questions, tasks and assignments should assess achievement of objectivesRemarks – Comments by teacher on effectiveness of lesson. (This may be left blank but commented on after the lesson is delivered)Group work: Tutors should guide students to develop lessons plans using the agriculture topics selected in the JHS syllabus to project:* Inclusivity
* Gender
* equity, and
* equality in curriculum delivery.

Discuss the extent which the Lesson projected the above. |

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