



آغا خان یونیورسٹی ایگزامینیشن بورڈ
AGA KHAN UNIVERSITY EXAMINATION BOARD

**Secondary School Certificate
Examination Syllabus**

**FOOD AND NUTRITION
CLASSES IX-X**

(based on National Curriculum 2007)

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**Secondary School Certificate
Examination Syllabus**

**FOOD AND NUTRITION
CLASSES IX-X**

**This subject is examined in the
May Examination session only**

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PREFACE

In pursuance of National Education Policy (1998-2010), the Curriculum Wing of the Federal Ministry of Education has begun a process of curriculum reform to improve the quality of education through curriculum revision and textbook development (Preface, National Curriculum documents 2000 and 2002).

AKU-EB was founded in August 2003 with the same aim of improving the quality of education nationwide. As befits an examination board it seeks to reinforce the National Curriculum revision through the development of appropriate examinations for the Secondary School Certificate (SSC) and Higher Secondary School Certificate (HSSC) based on the latest National Curriculum and subject syllabus guidance.

AKU-EB has a mandate by Ordinance CXIV of 2002 to offer such examination services to English and Urdu medium candidates for SSC and HSSC from private schools anywhere in Pakistan or abroad, and from government schools with the relevant permissions. It has been accorded this mandate to introduce a choice of examination and associated educational approach for schools, thus fulfilling a key objective of the National Curriculum of Pakistan: “Autonomy will be given to the Examination Boards and Research and Development cells will be established in each Board to improve the system” (ibid. para. 6.5.3 (ii)).

AKU-EB is committed to creating continuity of educational experience and the best possible opportunities for its students. In consequence it offered HSSC for the first time in September, 2007 to coincide with the arrival of its first SSC students in college or higher secondary school. Needless to say this is not an exclusive offer. Private candidates and students joining AKU-EB affiliated schools and colleges for HSSC Part 1 are eligible to register as AKU-EB candidates even though they have not hitherto been associated with AKU-EB.

This examination syllabus exemplifies AKU-EB’s commitment to national educational goals.

- It is in large part a reproduction, with some elaboration, of the Class IX and X National Curriculum of the subject.
- It makes the National Curriculum freely available to the general public.
- The syllabus recommends a range of suitable textbooks already in print for student purchase and additional texts for the school library.
- It identifies areas where teachers should work together to generate classroom activities and materials for their students as a step towards the introduction of multiple textbooks, another of the Ministry of Education’s policy provisions for the improvement of secondary education (ibid. para. 6.3.4).

This examination syllabus brings together all those cognitive outcomes of the National Curriculum statement which can be reliably and validly assessed. While the focus is on the cognitive domain, particular emphasis is given to the application of knowledge and understanding, a fundamental activity in fostering “attitudes befitting useful and peaceful citizens and the skills for and commitment to lifelong learning which is the cornerstone of national economic development” (Preface to National Curriculum documents 2000 and 2002).

To achieve this end AKU-EB has brought together university academics, teacher trainers, writers of learning materials and above all, experienced teachers, in regular workshops and subject panel meetings.

AKU-EB provides copies of the examination syllabus to subject teachers in affiliated schools to help them in planning their teaching. It is the syllabus, not the prescribed text book which is the basis of AKU-EB examinations. In addition, the AKU-EB examination syllabus can be used to identify the training needs of subject teachers and to develop learning support materials for students. Involving classroom teachers in these activities is an important part of the AKU-EB strategy for improving the quality of learning in schools.

The Curriculum Wing of the Federal Ministry of Education has recently released new subject specifications and schemes of study to take effect in September, 2008. These documents are a major step forward towards a standards-related curriculum and have been welcomed by AKU-EB. Our current SSC syllabuses have been revised to ensure conformity with the new National Curriculum 2006.

We stand committed to all students entering the SSC course as well as those who have recently embarked upon the HSSC course in facilitating their learning outcome. Our examination syllabus document ensures all possible support.



Dr. Thomas Christie
Director,
Aga Khan University Examination Board
July 2009

1. Aims/Objectives of the National Curriculum (2007)¹

Aims

The curriculum for Food and Nutrition for grades IX-X aims to help individual students to:

- Develop knowledge of food and Nutrition with special reference to healthy living
- Develop professional attitude towards meeting food needs of the family
- Build capacity for utilization of available resources to meet human needs (production, consumption, and services)
- Develop skill in planning, preparing and serving meals.

Objectives

- To inculcate clear understanding of the terminology used in food science
- To give the knowledge to students for the special nutrient needs of people through the life cycle-expectant and lactating mothers, infancy, preschool, teenagers and old age
- Understanding the principles of nutrition and ability to use this knowledge in the feeding of normal and sick persons of all ages
- To describe the essential components of a nutritionally adequate diet
- To be able to plan a variety of nutritionally adequate meals
- To build capacity of the students to plan appropriate meals in accordance with the body needs and available resources
- Monitor and control the changes occurring in food during preparation and cooking
- To select appropriate equipment and be able to use it in a safe and appropriate manner
- To create understanding and ability for storage of food

2. Rationale of the AKU-EB Examination Syllabus

2.1 General Rationale

2.1.1 In 2007, the Curriculum Wing of the Federal Ministry of Education (MoE) issued a revised part-wise Scheme of Studies according to which the total marks for the SSC examination have been increased from 850 to 1100 from the year 2008 and onwards. All subjects are to be taught and examined in both classes IX and X. It is therefore important for teachers, students, parents and other stakeholders to know:

- (a) that the AKU-EB Scheme of Studies for its SSC examination (Annex A) derives directly from the 2007 Ministry of Education Scheme of Studies;
- (b) which topics will be examined in Class IX and in Class X;

¹ Government of Pakistan (2007), *National Curriculum; Food and Nutrition Classes IX-X*, Islamabad, Ministry of Education (Curriculum Wing)

- (c) at which cognitive level or levels (Knowledge, Understanding, Application and other higher order skills) the topics and sub-topics will be taught and examined;
- 2.1.2 This AKU-EB examination syllabus addresses these concerns. Without such guidance teachers and students have little option other than following a single textbook to prepare for an external examination. The result is a culture of rote memorization as the preferred method of examination preparation. The pedagogically desirable objectives of the National Curriculum which encourage “observation, creativity and other higher order thinking [skills]” are generally ignored. AKU-EB recommends that teachers and students use multiple teaching-learning resources for achieving the specific objectives of the National Curriculum reproduced in the AKU-EB examination syllabuses.
- 2.1.3 The AKU-EB examination syllabuses use a uniform layout for all subjects to make them easier for teachers to follow. Blank sheets are provided in each syllabus for writing notes on potential lesson plans. It is expected that this arrangement will also be found helpful by teachers in developing classroom assessments as well as by question setters preparing material for the AKU-EB external examinations. The AKU-EB aims to enhance the quality of education through improved classroom practices and improved examinations.
- 2.1.4 The Student Learning Outcomes (SLOs) in Section 3 start with command words such as list, describe, relate, explain, etc. The purpose of the command words is to direct the attention of teachers and students to specific tasks that candidates following the AKU-EB examination syllabuses are expected to undertake in the course of their subject studies. The examination questions will be framed using the same command words or the connotation of the command words to elicit evidence of these competencies in candidates’ responses. The definitions of command words used in this syllabus are given in Section 8. It is hoped that teachers will find these definitions useful in planning their lessons and classroom assessments.
- 2.1.5 The AKU-EB has classified SLOs under the three cognitive levels Knowledge (K), Understanding (U) and Application of knowledge and skills (A) in order to derive multiple choice questions and constructed response questions on a rational basis from the subject syllabuses ensuring that the intentions of the National Curriculum should be met in full. The weighting of marks to the Multiple Choice and Constructed Response Papers is also derived from the SLOs, command words and cognitive levels. In effect the SLOs derived from the National Curriculum determine the structure of the AKU-EB subject examination set out in Section 4.
- 2.1.6 Some topics from the National Curriculum have been elaborated and enriched for better understanding of the subject and/or to better meet the needs of students in the twenty-first century. These additional topics have been italicized in Section 3 of this syllabus.

2.2. Specific Rationale of the AKU-EB Food and Nutrition Examination Syllabus

2.2.1 The Curriculum Development team for Food and Nutrition for grades IX-X was framed involving subject experts and teachers of Food and Nutrition from colleges all over Pakistan.

Following strategies were adopted in designing/revising the curriculum:

- Need assessment by critically reviewing current curriculum
- Consultative meetings with the working teachers and professors to get feedback and comments on existing curriculum
- Identification of eminent areas of study
- Identification of standards for communicating the impending areas
- Study of foreign curricula for comparison and guidelines
- Drafting of contents
- Preparation of detailed contents in the light of competencies to be developed
- Preparation of specific learning outcomes according to the contents
- Preparation of study and evaluation scheme for implementing the curriculum

2.2.2 The requirement to revise and update Food and Nutrition curriculum is based on the aspirations of the government and the society envisages vibrant and responsive curriculum.

The prime focus of this curriculum is based on the broad areas of Food and Nutrition. This document is based on three broad categories of activities that connect Food and Nutrition with health and wellbeing of people:

- Knowing how to use knowledge scientifically
- Developing an understanding of home making tasks relating to foods, based on scientific knowledge
- Utilization of all the resources of modern science to improve the nutrition of the family

2.2.3 This curriculum will broaden the horizon and vision of the students by teaching them latest techniques and developing scientific and practical approach. It will prepare the students for the world of work, as well as for pursuit of professional and specialized education.

3. Topics and Student Learning Outcomes of the Examination Syllabus

Part I (Class IX)

Topic	Student Learning Outcomes		Cognitive Level ²		
			K	U	A
1. Introduction to the Study of Food and Nutrition	Candidates should be able to:				
1.1 Introduction	1.1.1	define food and diet;	*		
	1.1.2	differentiate between food and diet;		*	
	1.1.3	define nutrition;	*		
	1.1.4	differentiate among malnutrition, under nutrition and over-nutrition;		*	
	1.1.5	define a calorie;	*		
	1.1.6	explain the term Recommended Daily Allowance (RDA) and state the RDA of different food groups (proteins, vitamin A, B ₁ , B ₂ , C and D, calcium and iron) for children, males, females, pregnant and lactating mothers;		*	
1.2 Role of Nutrition in Health	1.2.1	define nutrients;	*		
	1.2.2	explain the role of nutrition in <ul style="list-style-type: none"> physical health; mental health; preventing diseases; 		*	
1.3 Functions of Foods	1.3.1	describe the basic functions of food;		*	
	1.3.2	explain the role of food as a source of energy;		*	
	1.3.3	describe the role of food in tissue building and maintenance;		*	
	1.3.4	discuss the role of food in preventing diseases;		*	

² K = Knowledge, U = Understanding, A= Application (for explanation see Section 7: Definition of command words used in Student Learning Outcomes and in Examination Questions).

NOTES

			K	U	A
1.4 Good and Poor Nutrition	1.4.1	identify poor and good nutrition;	*		
	1.4.2	describe the effects of nutrition on growth in children;		*	
	1.4.3	list the effects of nutrition on skin, hair, nails and gums;	*		
	1.4.4	discuss the effects of weight (gain / loss) on children and adults.		*	
2. Energy and Nutrients	Candidates should be able to:				
2.1 Nutrients	2.1.1	describe basic nutrients like carbohydrates, proteins, fats, minerals (calcium and iron), vitamins (A, C and D) and water;		*	
	2.1.2	describe the functions of each nutrient;		*	
	2.1.3	identify the food sources of each nutrient;	*		
	2.1.4	discuss the effect of deficiencies of each nutrient;		*	
	2.1.5	describe the sources and functions of dietary fibre;		*	
2.2 Energy Value of Food	2.2.1	compare energy value of different foods;		*	
	2.2.2	identify proper sources of energy in daily diet;	*		
	2.2.3	describe factors affecting energy requirement of the individuals (growth, daily physical activities, pregnancy).		*	
3. Balanced Diet	Candidates should be able to:				
3.1 Importance of Balanced Diet	3.1.1	define balanced diet;	*		
	3.1.2	state the importance of balanced diet;	*		
	3.1.3	differentiate between balanced and unbalanced diet;		*	
	3.1.4	describe the different food groups (cereals, fruits and vegetables, milk products, meat);		*	

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			K	U	A
	3.1.5	explain the requirement of a balanced diet; i. at different ages-infancy, pre-school, adolescence, adulthood, old age; ii. between genders; iii. in relation to intensity of daily physical activity; iv. during pregnancy and lactation;		*	
3.2 Health and Dietary Practices	3.2.1 3.2.2 3.2.3 3.2.4	define health; define dietary practices; describe the factors influencing dietary practices; discuss the role of unhealthy dietary practices on health;	* *	 * *	
3.3 Planning Balanced Diets	3.3.1 3.3.2 3.3.3 3.3.4	discuss the importance of healthy food choices; compare and contrast serving size and the concept of portion size; identify food groups in food pyramid; plan a balanced diet from basic food groups;	 *	* *	 *
3.4 Food Composition Table	3.4.1 3.4.2 3.4.3	use the food composition table; estimate energy, protein content of given foods; interpret food tables.		* *	 *
4. Nutrient Composition	Candidates should be able to:				
4.1 Nutrient Composition of the Various Foods	4.1.1	describe the nutrient composition of the various foods; (milk, eggs, meat, fish, poultry, vegetables and fruits, cereals, pulses and nuts, fats, oils and sugar);		*	
4.2 Significance of Nutrient Composition	4.2.1 4.2.2	explain the importance of knowing nutrient composition of different foods; identify food items keeping in mind nutrient composition.	 *	* 	

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			K	U	A
5. Preparation and Cooking		Candidates should be able to:			
5.1 Preparation and Cooking Methods	5.1.1	explain the effects of cooking on colour, texture, palatability and digestibility of various foods; <ul style="list-style-type: none"> • Milk and milk products • Eggs • Meat and meat products • Vegetable and fruits • Cereals and starch 		*	
	5.1.2	describe the appropriate methods of preparing food;		*	
	5.1.3	demonstrate the different cooking methods;			*P
	5.1.4	describe proper cooking methods for different foods;		*	
	5.1.5	explain cooking methods which minimizes nutrient losses;		*	
	5.1.6	plan, prepare and serve some common dishes from the following; <ul style="list-style-type: none"> • Milk and milk products (custard, kheer, etc) • Eggs (omelet, egg sandwiches, egg roll, etc) • Meat and meat products (<i>biryani, etc</i>) • Vegetable and fruits (potato and spinach <i>bhujia</i>, <i>vegetable rice</i>, <i>pea pulao</i>, etc) • Cereals and starch (paratha, cutlets, <i>daal</i>, etc) 			*P
5.2 Safety in the Kitchen	5.2.1	explain the importance of the safety measures in the kitchen;		*	
	5.2.2	<i>identify potential danger areas in the kitchen;</i>	*		
	5.2.3	<i>practise safety precautions in the kitchen;</i>			*P
	5.2.4	handle minor accidents in the kitchen.			*P

*Practical Activity

NOTES

Part II (Class X)

Topic	Student Learning Outcomes		Cognitive Level		
			K	U	A
6. Family and Community Nutrition	Candidates should be able to:				
6.1 Nutrition of Vulnerable Groups in the Community	6.1.1	define community nutrition;	*		
	6.1.2	define vulnerable groups;	*		
	6.1.3	identify nutritional problems of different vulnerable groups;	*		
	6.1.4	explain the dietary needs of the vulnerable groups: <ul style="list-style-type: none"> • pregnant and lactating females • infants • preschools • teenagers / adolescents • elderly 		*	
	6.1.5	compare the additional food requirements of pregnant and lactating mothers;		*	
	6.1.6	compare breast-feeding and bottle-feeding;		*	
	6.1.7	compare the choices between home-made and commercial baby foods;		*	
	6.1.8	compare healthy snacks vs. junk food among teenagers;		*	
	6.1.9	modify family diets to suit the food needs of elderly in the family;		*	
6.2 Preventing Malnutrition in Community	6.2.1	list various measures for preventing malnutrition;	*		
	6.2.2	discuss the prevention of nutrition disorders related to food shortage;		*	
	6.2.3	discuss the role of economics in community nutrition;		*	
	6.2.4	discuss awareness through nutrition education;		*	
	6.2.5	explain distribution of food in family and community;		*	
	6.2.6	discuss the importance of avoiding food wastage at family and community levels.		*	

NOTES

			K	U	A
7. Meal Management	Candidates should be able to:				
7.1 Principles of Meal	7.1.1	define meal planning;	*		
	7.1.2	state the principles of meal planning;	*		
	7.1.3	explain the importance of meal planning;		*	
7.2 Menu Planning for Families of Different Income Levels	7.2.1	define menu planning;	*		
	7.2.2	describe a useful format for writing a menu;		*	
	7.2.3	plan menu for three different income levels: <ul style="list-style-type: none"> • low • middle • high 			*P
7.3 Menu Planning for Different Stages	7.3.1	plan menus for different stages (pregnancy, infancy, early childhood, teenage and elderly);			*P
7.4 Menu Planning for Different Occasions	7.4.1	plan menus for different occasions like eid, birthday and wedding.			*P
8. Table Setting and Meal Services	Candidates should be able to:				
8.1 Food Service and Table Setting	8.1.1	describe food service;		*	
	8.1.2	explain significance of food service;		*	
	8.1.3	describe the different methods of food service formal, buffet, trolley and tray;		*	
	8.1.4	describe appropriate methods of food services for different occasions;		*	
8.2 Table Manners and Etiquettes	8.2.1	describe and demonstrate table manners and etiquettes, e.g. washing hands before eating meals, saying prayers while starting meal, using right hand while eating, use of table napkins.			*P

*Practical Activity

NOTES

			K	U	A
9. Purchases and Storage of Food	Candidates should be able to:				
9.1 Purchase of Food	9.1.1	explain the principles of purchase;		*	
	9.1.2	discuss the criteria of purchasing different types of food (fruits, vegetables, bread);		*	
9.2 Storage	9.2.1	compare different types of food storage;		*	
	9.2.2	explain why food must be properly stored;		*	
	9.2.3	list correct storage procedures (refrigeration and freezing) for various food types.	*		
10. Food Preservation	Candidates should be able to:				
10.1 Food Preservation	10.1.1	define preservation;	*		
	10.1.2	discuss the importance of food preservation;		*	
	10.1.3	explain the principles of preserving food;		*	
	10.1.4	compare different methods of preservation; <ul style="list-style-type: none"> • heating–canning, bottling • removal of moisture–drying • reduction in temperature–freezing • chemical preservation–sugar, salt, vinegar • pasteurization; 		*	
10.2 Food Spoilage	10.2.1	define spoilage;	*		
	10.2.2	describe the mode of action of different spoiling agents (bacteria, fungi, action of enzyme);		*	
	10.2.3	explain different methods of controlling food spoilage at home (refrigeration, kitchen hygiene, waste disposal);		*	

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			K	U	A
10.3 Food Additives	10.3.1	define additives;	*		
	10.3.2	list the food additives;	*		
	10.3.3	discuss the role of additives in food preservation;		*	
	10.3.4	explain the role of food additives in relation to health hazards.		*	

NOTES

4. Scheme of Assessment

Class IX

Table 1: Number of Student Learning Outcomes by Cognitive Level

Topic No.	Topics	No. of Sub-topics	SLOs			Total
			K	U	A	
1.	Introduction to the study of Food and Nutrition	4	6	10	0	16
2.	Energy and Nutrients	2	2	6	0	8
3.	Balanced Diet	4	5	9	2	16
4.	Nutrient Composition	2	1	2	-	3
5.	Preparation and Cooking	2	1	5	4	10
	Total	14	15	32	4	53
	Percentage		28	60	12	100

Table 2: Allocation of Marks for the Multiple Choice Questions (MCQs), Constructed Response Questions (CRQs) and Extended Response Questions (ERQs)

Topic No.	Topics	No. of Sub-topics	Marks			Total
			Multiple Choice Questions	Constructed Response Questions	Extended Response Questions	
1.	Introduction to the study of Food and Nutrition	4	8	6	6	20
2.	Energy and Nutrients	2	10	12	6	28
3.	Balanced Diet	4				
4.	Nutrient Composition	2	4	6	0	10
5.	Preparation and Cooking	2	3	4	0	7
	Total		25	28	12	65
	Practical					10
	Total					75

Table 3: Paper Specifications

Topic No.	Topics	Marks Distribution			Total Marks
1.	Introduction to the study of Food and Nutrition	MCQs 8 @ 1 Mark CRQs 2 @ 3 Marks *ERQ 1 @ 6 Marks Choose any ONE from TWO			20
2.	Energy and Nutrients	MCQs 10 @ 1 Mark CRQs 4 @ 3 Marks each ERQ 1 @ 6 Marks Choose any ONE from TWO			28
3.	Balanced Diet				
4.	Nutrient Composition	MCQs 4 @ 1 Mark CRQs 2 @ 3 Marks			10
5.	Preparation and Cooking	MCQs 3 @ 1 Mark CRQ 1 @ 4 Marks			7
	Total	MCQs 25	CRQs 28	ERQs 12	65
	Practical				10
	Total				75

* Extended response questions (ERQs) will require answers in more descriptive form. The answers will be in a paragraph rather than a word or a single sentence.

Class X

Table 4: Number of Student Learning Outcomes by Cognitive Level

Topic No.	Topics	No. of Sub-topics	SLOs			Total
			K	U	A	
6.	Family and Community Nutrition	2	4	11	0	15
7.	Meal Management	4	3	2	3	8
8.	Table Setting and Meal Services	2	0	4	1	5
9.	Purchases and Storage of Food	2	1	4	0	5
10.	Food Preservation	3	4	7	0	11
	Total	13	12	28	4	44
	Percentage		27	64	9	100

**Table 5: Allocation of Marks for the Multiple Choice Questions (MCQs),
Constructed Response Questions (CRQs) and
Extended Response Questions (ERQs)**

Topic No.	Topics	No. of Sub-topics	Marks			Total
			Multiple Choice Questions	Constructed Response Questions	Extended Response Questions	
6.	Family and Community Nutrition	2	11	10	6	27
7.	Meal Management	4				
8.	Table Setting and Meal Services	2	4	6	0	10
9.	Purchases and Storage of Food	2	4	8	0	12
10.	Food Preservation	3	6	4	6	16
	Total		25	28	12	65
	Practical					10
	Total					75

Table 6: Paper Specifications

Topic No.	Topics	Marks Distribution			Total Marks
6.	Family and Community Nutrition	MCQs 11 @ 1 Mark CRQs 2 @ 5 Marks each *ERQ 1 @ 6 Marks Choose any ONE from TWO			27
7.	Meal Management				
8.	Table Setting and Meal Services	MCQs 4 @ 1 Mark CRQs 2 @ 3 Marks			10
9.	Purchases and Storage of Food	MCQs 4 @ 1 Mark CRQs 2 @ 4 Marks each			12
10.	Food Preservation	MCQs 6 @ 1 Mark CRQ 1 @ 4 Marks ERQ 1 @ 6 Marks Choose any ONE from TWO			16
	Total	MCQs 25	CRQs 28	ERQs 12	65
	Practical				10
	Total				75

* Extended response questions (ERQs) will require answers in more descriptive form. The answers will be in a paragraph rather than a word or a single sentence.

- 4.1 Tables 1 and 4 summarize the number and nature of SLOs in each topic in classes IX and X. This will serve as a guide in the construction of the examination paper. It also indicates that more emphasis has been given to Understanding (60% and 64%), Application and higher order skills (12 and 9%) to discourage rote memorization. Tables 1 and 4 however do not translate directly into marks.
- 4.2 There will be two examinations, one at the end of Class IX and one at the end of Class X.
- 4.3 In each class, the theory paper will be in two parts: paper I and paper II. Both papers will be of duration of 3 hours.
- 4.4 Paper I theory will consist of 25 compulsory, multiple choice items. These questions will involve four response options.
- 4.5 Paper II theory will carry 40 marks and consist of a number of compulsory, structured questions and a number of extended response questions. Each extended response question will be presented in an either/or form.
- 4.6 Practical examination will be conducted separate from the theory paper. It will be based on the practical activities indicated in the syllabus.
- 4.7 All constructed response questions will be in a booklet which will also serve as an answer script.
- 4.8 Practical exams to assess performance skills will carry 10 marks in class IX and 10 marks in class X.
- 4.9 The practicals identified by a “P” should be carried out through out the academic year. It is essential for each school to equip its laboratories with ingredients, instruments, apparatus, utensils etc. according to the requirements of the practicals. Each school will be responsible to make sure that each student is provided the opportunity to do the practicals.

5. Teaching-Learning Approaches and Classroom Activities

- The teaching learning approaches should be student centered. Teachers should enter into partnership with the students in the whole learning process, Each child's self image as a learner should be well protected, especially when classroom discussions bring the socio-cultural values of the home and the community into high relief.
- Learning should be activity based wherever possible. Some SLOs explicitly require that students bring their own experience and informal researches to the classroom, which they can share with others.
- Rote learning of the concepts and principles of Home Economics should not be encouraged. Teachers should try to develop questions requiring comprehension and higher order skills like application.

- The content has been elaborated in terms of specific learning objectives that will help to broaden student's conceptual understanding and learning of life skills directly relevant to meeting the challenges of 21st century. In particular, care has been taken to recognize the modern life.
- Finally, SLOs encourage both teachers and students to concentrate on understanding and application rather than recall and rote learning. The sequence of the topics has been developed to facilitate a deeper and more coherent understanding.

6. Recommended Texts and Reference Materials

1. Tull, Anita (1997). *Food and Nutrition*. Karachi: Oxford University Press.
2. Prof. Matina Zia (2006), *Food Nutrition and Diet Basic Concepts*. Lahore: Caravan Book House.
3. Mir. Zahida Yaqoob (1995-96). *Food and Nutrition*. Lahore: Salman Publishers.

Recommended Websites:

www.kidshealth.org
www.nih.gov
www.eatright.org
www.annecollins.com

7. Definition of Cognitive Levels and Command Words

7.1 Definition of Cognitive Levels

Knowledge

This requires knowing and remembering facts and figures, vocabulary and contexts, and the ability to recall key ideas, concepts, trends, sequences, categories, etc. It can be taught and evaluated through questions based on: who, when, where, what, list, define, describe, identify, label, tabulate, quote, name, state, etc.

Understanding

This requires understanding information, grasping meaning, interpreting facts, comparing, contrasting, grouping, inferring causes/reasons, seeing patterns, organizing parts, making links, summarizing, solving, identifying motives, finding evidence, etc. It can be taught and evaluated through questions based on: why, how, show, demonstrate, paraphrase, interpret, summarize, explain, prove, identify the main idea/theme, predict, compare, differentiate, discuss, chart the course/direction, report, solve, etc.

Application

This requires using information or concepts in new situations, solving problems, organizing information and ideas, using old ideas to create new ones, generalizing from given facts, analyzing relationships, relating knowledge from several areas, drawing conclusions, evaluating worth, etc. It can be taught and evaluated through questions based on: differentiate, analyze, show relationship, propose an alternative, prioritize, give reasons for, categorize, illustrate, corroborate, compare and contrast, create, design, formulate, integrate, rearrange, reconstruct/recreate, reorganize, predict consequences etc.

7.2 Definition of Command Words

Knowledge

Define:	Only a formal statement or equivalent paraphrase is required. No examples need to be given.
Identify:	Recognize with specific examples.
List:	Requires a number of points, generally each of one word, with no elaboration. Where a given number of points is specified, this should not be exceeded.
Recall:	To bring back to mind and write down, as it is given in the text that you have already memorized.
State:	A concise answer with little or no supporting argument, e.g. a numerical answer that can be obtained “by inspection”.

Understanding

Compare:	To list the main characteristics of two entities clearly identifying similarities or differences.
Demonstrate/	To show how a thing is related to another, usually it is reference to theory but sometimes it is by physical manipulation or experiment.
Describe:	To state in words (using diagrams where appropriate) the main points of the topic. It is often used with reference either to particular phenomena or to particular experiments. In the former instance, the term usually implies that the answer should include reference to (visual) observations associated with the phenomena.
Differentiate:	To identify those characteristics which always or sometimes differentiate two categories.

Discuss:	To give a critical account of the points involved in the topic.
Explain:	To reason or use some reference to theory, depending on the context.
Use	To employ a tool or skill or method in order to achieve a result.
Modify	To make changes in something in order to improve it or make it less extreme to bring it to the required criteria.
Estimate	To calculate or form an opinion by using available information.
Application	
Differentiate	To identify those characteristics which always or sometimes differentiate two categories.
Interpret	Clarify both the explicit meaning and the implications of given information.
Prepare:	A practical activity in which choice of equipment, order of procedure and accuracy of measurement will all play a part.
Plan	To design a series of actions to achieve required results.
Handle	To be able to deal successfully with a given situation.
Practise	To exercise the given instructions or rules in real situations.

SSC Scheme of Studies³

AKU-EB as a national board offers SSC and HSSC qualifications for both English and Urdu medium schools. The revised SSC Scheme of Studies issued by the Curriculum Wing was implemented from September 2007. Accordingly, each SSC subject will be taught across both the classes IX and X. The Science and Humanities group subjects are offered at SSC level. The marks allocated to subjects in the revised National Scheme of Studies of September 2007 have been followed.

SSC I and II (Class IX and X) subjects on offer for examination

SSC Part-I (Class IX) Science Group

Subjects	Marks			Medium
	Theory	Practical	Total	
English Compulsory-I	75	-	75	English
Urdu Compulsory-I OR Urdu Aasan ^a OR History and Geography of Pakistan-I ^b	75	-	75	Urdu Urdu English
Islamiyat-I OR Ethics-I ^c	*30	-	*30	English / Urdu
Pakistan Studies-I	*45	-	*45	English / Urdu
Mathematics-I	75	-	75	English / Urdu
Physics-I	65	10	75	English / Urdu
Chemistry-I	65	10	75	English / Urdu
Biology-I OR Computer Science-I	65	10	75	English / Urdu English
Total:	*495	30	*525	

SSC Part-II (Class X) Science Group

Subjects	Marks			Medium
	Theory	Practical	Total	
English Compulsory-II	75	-	75	English
Urdu Compulsory-II OR Sindhi ^a OR History and Geography of Pakistan-II ^b	75	-	75	Urdu Sindhi English
Islamiyat-II OR Ethics-II ^c	*45	-	*45	English / Urdu
Pakistan Studies-II	*30	-	*30	English / Urdu
Mathematics-II	75	-	75	English / Urdu
Physics-II	65	10	75	English / Urdu
Chemistry-II	65	10	75	English / Urdu
Biology-II OR Computer Science-II	65	10	75	English / Urdu English
Total:	*495	30	*525	

- Candidates from the province of Sindh may appear in "Urdu Aasan" in SSC Part I and in "Sindhi" in Part II examination.
 - Foreign students may opt HISTORY and GEOGRAPHY OF PAKISTAN in lieu of Urdu Compulsory, subject to the Board's approval.
 - For non-Muslim candidates only.
- * The above will be implemented in
SSC Part I 2013 Examinations and onwards
SSC Part II 2014 Examinations and onwards

³ Government of Pakistan September 2007. *Scheme of Studies for SSC and HSSC (Classes IX-XII)*. Islamabad: Ministry of Education, Curriculum Wing.

SSC Part-I (Class IX) Humanities Group

Subjects	Marks	Medium
English Compulsory-I	75	English
Urdu Compulsory-I OR Urdu Aasan ^a OR History and Geography of Pakistan-I ^b	75	Urdu Urdu English
Islamiyat-I OR Ethics-I ^c	*30	English / Urdu
Pakistan Studies-I	*45	English / Urdu
General Mathematics-I	75	English / Urdu
Any three of the following Elective Subjects	225 (75 each)	
1. **Geography-I		English / Urdu
2. General Science-I		English / Urdu
3. Computer Science-I (65+10 practical)		English
4. Economics-I		English / Urdu
5. Civics-I		English / Urdu
6. **History of Pakistan-I		English / Urdu
7. **Elements of Home Economics-I		English / Urdu
8. **Food and Nutrition-I (65+10 practical)		English / Urdu
9. **Art & Model Drawing-I		English
10. **Business Studies-I		English
11. **Environmental Studies-I		English
Total:	*525	

SSC Part-II (Class X) Humanities Group

Subjects	Marks	Medium
English Compulsory-II	75	English
Urdu Compulsory-II OR Sindhi ^a History and Geography of Pakistan-II ^b OR	75	Urdu Sindhi English
Islamiyat-II OR Ethics-II ^c	*45	English / Urdu
Pakistan Studies-II	*30	English / Urdu
General Mathematics-II	75	English / Urdu
Any three of the following Elective Subjects	225 (75 each)	
1. **Geography-II		English / Urdu
2. General Science-II		English / Urdu
3. Computer Science-II (65+10 practical)		English
4. Economics-II		English / Urdu
5. Civics-II		English / Urdu
6. **History of Pakistan-II		English / Urdu
7. **Elements of Home Economics-II		English / Urdu
8. **Food and Nutrition-II (65+10 practical)		English / Urdu
9. **Art & Model Drawing-II		English
10. **Business Studies-II		English
11. **Environmental Studies-II		English
Total:	*525	

SSC Part-I and Part-II (Class IX-X) (Additional Subjects)

SSC Part I	SSC Part II	Marks	Medium
1. **Literature in English-I ^d	1. **Literature in English-II ^d	75 each	English
2. **Commercial Geography-I ^d	2. **Commercial Geography-II ^d		English
3. **Additional Mathematics-I ^d	3. **Additional Mathematics-II ^d		English

a. Candidates from the province of Sindh may appear in "Urdu Aasan" in SSC Part I and in "Sindhi" in Part II examination.

b. Foreign students may opt HISTORY and GEOGRAPHY OF PAKISTAN in lieu of Urdu Compulsory, subject to the Board's approval.

c. For non-Muslim candidates only.

d. Subject will be offered as Additional Subject.

* The above will be implemented in

SSC Part I 2013 Examinations and onwards

SSC Part II 2014 Examinations and onwards

****These subjects are offered ONLY in the May examination.**