

ADVANCED NUTRITION PRACTICALS

4 Cr (Pr)

Objectives:

This course will enable students to use, apply and interpret various methods for assessment of nutritional status, assessment of dietary/nutrient intakes, physical activity and energy expenditure, and interpret tests used for lipid profile and glycemic control.

Contents:

Module No	Topics and Details	No of Credits
1	<p>A. Assessment of Nutritional Status- reliability, validity accuracy, precision</p> <p>Measurement of weight and height – assessment of nutritional status for adults, young and older children</p> <p>Calculation of BMI, interpretation</p> <p>Use of WHO reference standards</p> <p>Wasting, stunting, underweight, severe and moderate malnutrition</p> <p>Calculation of z-scores and use of software</p> <p>Circumference Measurements – chest, head, mid arm. Waist, hip and ratios wherever applicable</p> <p>Applications to children and adults</p> <p>B. Body Composition: Use of skinfold, bioelectric impedance, DEXA</p> <p>Calculation of body fat</p> <p>C. Dietary Protein Evaluation and Assessment of Protein Status:</p> <ul style="list-style-type: none">- Assessment of protein quality- Chemical Score, PDCAAS- In vitro protein digestibility- Estimation of serum albumin, globulin and albumin:globulin ratio	2
2	<p>Dietary assessment and Assessment of Energy Expenditure</p> <ul style="list-style-type: none">- Food frequency questionnaire- 24-diet recall, 24-hour diet record- Weighment method <p>Assessment of energy expenditure –</p> <ul style="list-style-type: none">- Indirect calorimetry : use of ergometer, treadmill, heart rate monitoring- Recording physical activities- Factorial estimation of energy expenditure: MET, PAL- Study of food labels- calculation of DV- In vitro starch digestibility	1

3	<p>Biomarkers of Carbohydrate and Protein Metabolism</p> <ul style="list-style-type: none"> - Fasting and Postprandial Blood Glucose estimation, OGTT, Glycosylated Hemoglobin, - Glycemic index and glycemic load - Insulin index - Measurement of lipid levels in serum <p>Interpretation</p>	1
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RESEARCH METHODOLOGY

4 credits (Th)

Objectives:

This course will enable students to:

1. develop a scientific approach and know the processes of research
2. develop the competence for selecting methods and tools appropriate for research topics
3. understand concepts of statistical measures of central tendency, dispersion, variability and probability

Contents:

Module No	Topics	Number of Credits
1	<p>The Research Process</p> <p>a. Scientific approach to enquiry in comparison to native, common sense approach</p> <p>b. Knowledge, theory and research</p> <p>c. Role, need and scope of research in the discipline of Home Science</p> <p><i>Assignment : Differentiate between investigative reporting and research report (with examples to be brought by students as exercise)</i></p> <p>Steps in Research Process and Elements of Research</p> <p>a. Identifying interest areas and prioritizing Selection of topic and considerations in selection</p> <p>b. Review of related literature and research</p> <p>c. Variables- types of variables including discrete and continuous</p>	1