Republic of the Philippines
OFFICE OF THE PRESIDENT
COMMISSION ON HIGHER EDUCATION

CHED MEMORANDUM ORDER (CMO)
No. 54
Series 2006

SUBJECT: POLICIES, STANDARDS AND GUIDELINES FOR NUTRITION AND DIETETICS EDUCATION

In accordance with pertinent provisions of Republic Act (RA) No. 7722, otherwise known as the "Higher Education Act of 1994", and for the purpose of rationalizing Nutrition & Dietetics Education in the country as per Commission en Banc Resolution Number 729-2006 dated October 30, 2006 with the end in view of keeping at pace with the demands of global competitiveness, the following Policies and Standards for Nutrition & Dietetics Education are hereby adopted and promulgated by the Commission on Higher Education, thus:

ARTICLE I
INTRODUCTION

Section 1. **Mission Statement.** Adequate nutrition is essential to total wellness and national development. The nutrition and dietetics profession is committed to the promotion and maintenance of optimal nutrition of individuals and groups in the population.

Total wellness is achieved through an application of the integrated knowledge in foods, nutrition and allied fields. The development of a human resource base equipped with appropriate knowledge, attitude and skills in the aforementioned areas through quality formal education is imperative in fulfilling this mission.

ARTICLE II
AUTHORITY TO OPERATE

Section 2. All private higher education institutions (PHEIs) intending to offer Bachelor of Science in Nutrition and Dietetics must first secure proper authority from the Commission in accordance with existing rules and regulations. State universities and colleges (SUCs), and local colleges and universities should likewise strictly adhere to the provisions in this policies and standards.

ARTICLE III
PROGRAM SPECIFICATIONS

Section 3. **Degree**-Graduates of this program shall be conferred the degree of Bachelor of Science in Nutrition and Dietetics (BSND).

Section 4. **Program Description.**

Bachelor of Science in Nutrition and Dietetics is a four-year program consisting of general education subjects and professional subjects.

Objectives: The nutrition and dietetics education in the undergraduate level is designed to adequately equip the students with the fundamental knowledge, attitudes and skills in foods, nutrition, dietetics, management, and allied fields in order to prepare them for entry level professional responsibilities in education and communication, food and nutrition research, clinical dietetics, food service industries, wellness programs and public health/ community nutrition. The nutrition and dietetics education is responsive to Philippine society and takes into account its needs, resources and potentials. The professional envisioned herein is imbued with the ideals, aspirations and traditions of the Filipinos and in keeping with global developments.

a) **Statement of Objectives**. The BSND education program is equally committed to total formation of the human person. At the end of the course, the graduates are able to do the following:

1. Promote the role of nutrition and the nutrition and dietetics profession for human well-being in relation to the needs, resources and potentials of individuals, groups and communities.

2. Assess, plan, manage, evaluate nutrition programs for individuals, groups and institutions.

3. Integrate nutrition concerns with development efforts including community extension services.

4. Apply the concept of comprehensive nutritional care for the total wellness of individuals.

5. Undertake research and utilize research results in the performance of their job.

6. Take responsibility for continuing personal and professional development.

7. Conduct themselves in a manner consistent with the ethical standards of the profession.

b) Specific professions/careers/occupations or trades that the graduates of this program may go into.

1. In Government Hospitals and Other Agencies as:

1.1 Dietary Director
1.2 Chief Nutritionist-Dietitian
1.3 Therapeutic Nutritionist-Dietitian
1.4 Administrative Nutritionist-Dietitian
1.5 Teaching Nutritionist-Dietitian
1.6 Research Nutritionist-Dietitian
1.7 Public Health Nutritionist-Dietitian
1.8 Clinical Dietitian
1.9 Nutritionist-Dietitian
1.10 Consultant

2. In Private Hospitals and Other Agencies as:

2.1 Dietary Director
2.2 Chief Nutritionist-Dietitian
2.3 Therapeutic Nutritionist-Dietitian
2.4 Administrative Nutritionist-Dietitian
2.5 Teaching Nutritionist-Dietitian
2.6 Research Nutritionist-Dietitian
2.7 Public Health Nutritionist-Dietitian
2.8 Clinical Dietitian
2.9 Nutritionist-Dietitian
2.10 Consultant

3. In Food Industries as:

3.1 Nutritionist-Dietitian in Quality Control Department
3.2 Nutritionist-Dietitian in the Test Kitchen (Product Development)
3.3 Teaching Nutritionist-Dietitian (Product Demonstrator, etc.)
3.4 Research Nutritionist-Dietitian
3.5 Consultant

4. In Schools as:

4.1. Administrator (Dean/Director/Chief/Head/Chairperson, etc.)
4.2. Teacher
4.3. Researcher

5. In Food Service Establishments (e.g. Hotels/Restaurants/Cafeteria)

5.1 Food Service Manager
5.2 Canteen Supervisors
5.3 Food Service Supervisors
5.4 Menu Planner

5.5 Food Checker
5.6 Consultant/Adviser
5.7 Nutritionist-Dietitian

ARTICLE IV
COMPETENCY STANDARDS

Section 5. Exit Level Competencies of BSND Graduates

The graduates of the BSND curriculum are expected to perform the following competencies:

A. In Public Health/Community Nutrition:

1. Identify existing nutrition problems in different settings.
2. Plan appropriate nutrition programs/projects including financial requirements for a given target group/area.
3. Coordinate, implement and monitor nutrition programs/projects.
4. Evaluate the results of nutrition programs/projects.
5. Document and report the nutrition programs/projects.
6. Network with existing health and nutrition delivery services and related programs to bring about the desired change.
7. Participate in advocacy efforts.
8. Utilize results of studies in the conduct of nutrition programs/projects.
9. Plan and conduct studies related to public health nutrition.
10. Write and present a technical report on studies conducted.
11. Select, plan, prepare and assess effective nutrition teaching-learning activities including teaching aids and materials appropriate for various audiences.
12. Participate in continuing education activities relevant to the discharge of responsibilities in public health nutrition.
13. Carry out day-to-day tasks in an ethical manner.
14. Manifest good interpersonal relations, self-confidence and maturity in all endeavors.

B. In Nutrition Therapy

1. Assess the nutritional status of individual clients/patients in health and disease throughout the life cycle.
2. Plan and/or implement all aspects of nutrition care including identification of short and long term goals, selection of treatment modalities and monitoring of client/patient's progress.
3. Plan and provide appropriate nutrition counseling/education to the individual/families/groups.
4. Discuss individual client/patient nutrition care needs with the health team members.
5. Devise mechanisms for appropriate individual client/patient/follow-up.
6. Provide nutrition information and education to the health care team.
7. Utilize results or studies related to nutrition therapy.

8. Plan and conduct studies related to nutrition therapy.
9. Write and present a case study and other scientific reports.
10. Select, plan, prepare and assess effective teaching aids and materials for nutrition counseling and in communicating pertinent information to the health care team.
11. Plan programs applying the concept of comprehensive nutrition care for the total wellness of individuals.
12. Participate in continuing education activities relevant to the discharge of responsibilities in nutrition therapy.
13. Carry out day-to-day tasks in an ethical manner.
14. Manifest good interpersonal relations, self-confidence and maturity in all endeavors.

C. In Foodservice:

1. Plan and manage a foodservice program with specific nutrition and environmental considerations.
2. Plan, evaluate and modify menus according to the set criteria.
3. Supervise food preparation, storage and service.
4. Maintain proper sanitation and safety in foodservice operations.
5. Control food, labor and operational costs.
6. Train and manage foodservice personnel.
7. Utilize results of studies in foodservice.
8. Plan and conduct studies related to foodservice with nutrition and environmental considerations.
9. Write and present scientific report on studies conducted.
10. Plan, conduct and evaluate food formulation and recipe development.
11. Select, plan, prepare and assess effective teaching aids and materials in informing individuals and groups regarding food preparation, storage, sanitation and safety.
12. Participate in continuing education activities relevant to the discharge of responsibilities in foodservice management.
13. Carry out day-to-day tasks in an ethical manner.
14. Manifest good interpersonal relations, self-confidence and maturity in all endeavors.

ARTICLE V
CURRICULUM

Section 6. Curriculum Description. The curricula for the Bachelor of Science in Nutrition and Dietetics should reflect the mission statement expressed in Article II. The total unit requirements required for graduation shall be a minimum of one hundred sixty-five (165) academic units categorized into general education and professional courses. A sample curriculum is hereunder presented.

English II (Writing in the Discipline)	3 units
English (Speech)	3 units
English (Technical Writing)	3 units
Philippine Literature	3 units
World Literature	3 units
Filipino I (Sining ng Pakikipagtalastasan)	3 units
Filipino II (Pagsulat at Pagbasa)	3 units

2. Mathematics/ Computer ---------- 9 units

College Algebra	3 units
Basic Statistics	3 units
Computer	3 units

3. Natural Sciences ---------- 11 units

General & Inorganic Chemistry	5 units
Gen. Biology w/ Environmental Issues	3 units
Physics	3 units

4. Humanities and Social Sciences ---------- 27 units

Humanities	3 units
Philippine History	3 units
Politics & Gov. w/ Phil. Constitution	3 units
General Psychology	3 units
Socio-Anthropology	3 units
Philosophy of Human Person	3 units
Logic	3 units
Rizal's Life, Works and Writings	3 units
Health Economics with TLR	3 units

6. Additional GE Courses ---------- ---------- 5 units

Health Care with RLE	5 units

7. Physical Education ---------- 8 units

Gymnastics	2 units
Rhythmic Activities	2 units
Dual Sports	2 units
Team Sports	2 units

8. National Service Training Program (NSTP) --------- ----------6 units

A. Pre-requisite Courses ---------- 24 units

Anatomy & Physiology	5 units
Microbiology & Parasitology	3 units
Organic Chemistry	5 units
Biochemistry	5 units
Basic Accounting	3 units
Principles & Strategies of Teaching	3 units

B. Core Courses ---------- 39 units

1. Nutrition and Dietetics ---------- 24 units

Basic Nutrition	3 units
Nutrition in the Life Stages	3 units
Nutrition Therapy I	3 units
Nutrition Therapy II	3 units
Public Health Nutrition	3 units
Assessment of Nutritional Status	3 units
Food & Nutrition Research	3 units
Nutrition Education	3 units

2. Foods ---------- 9 units

Basic Foods	3 units
Meal Management	3 units
Fundamentals of Food Technology	3 units

3. Institutional Management Subjects ---------- 6 units

Foodservice System I	3 units
Foodservice System II	3 units

C. Practicum/Supervised Field Experiences ---------- 12 units

Hospital Dietetics	4 units
Foodservice	3 units
Public Health Nutrition	5 units

Total Number of Units **165 units**

Section 8. Sample Program of Study:

Proposed Curriculum
for Bachelor of Science in Nutrition and Dietetics

FIRST YEAR

First Semester

		LEC	LAB	UNITS
ENG	Communication Skills I	3	0	3
FIL	Sining ng Pakikipagtalastasan	3	0	3
CHEM	Gen/Inorganic Chemistry	3	2	5
BIO	Gen Biology w/ Environmental Issues	2	1	3
MATH	College Algebra	3	0	3
NSTP	NSTP	3	0	3
PE	Gymnastics	0	2	2
	Total	**17**	**5**	**22**

Second Semester

		LEC	LAB	UNITS
ENG	Communication Skills II	3	0	3
FIL	Pagsulat at Pagbasa	3	0	3
CHEM	Organic Chemistry	3	2	5
PSY	General Psychology	3	0	3
SOC	Socio-Anthropology	3	0	3
PHILO	Philosophy of Human Person	3	0	3
PE	Rhythmic Activities	2	0	2
NSTP	NSTP	3	0	3
	Total	**23**	**2**	**25**

SECOND YEAR

First Semester

		LEC	LAB	UNITS
ZOO	Anatomy/Physiology	3	2	5
CHEM	Biochemistry	3	2	5
FDS	Basic Foods	2	1	3
PE	Dual Sports	2	0	2
MATH	Basic Statistics	3	0	3
PHILO	Logic	3	0	3
COMP	Computer	3	0	3
	Total	**19**	**5**	**24**

Second Semester

		LEC	LAB	UNITS
LIT	Philippine Literature	3	0	3
PHY	Physics	2	1	3
HECO	Health Economics w/ TLR	3	0	3
NUTR	Basic Nutrition	2	1	3
BIO	Gen. Microbiology and Parasitology	2	1	3
SOCSCI	Philippine History	3	0	3
HUM	Humanities	3	0	3
PE	Team Sports	2	0	2
	Total	**20**	**4**	**24**

THIRD YEAR

First Semester

		LEC	LAB	UNITS
HC	Health Care with RLE	3	2	5
ACCT	Basic Accounting	3	0	3
NUTR	Nutrition in the Life Stages	2	1	3
FDS	Meal Management	2	1	3
FDS	Fundamentals of Food Technology	2	1	3
ENG	Effective Speech	3	0	3
ENG	Technical Writing	3	0	3
	Total	**18**	**5**	**23**

Second Semester

		LEC	LAB	UNITS
FSS	Foodservice System I	2	1	3
NUTR	Nutrition Therapy I	2	1	3
NUTR	Assessment of Nutritional Status	2	1	3
EDUC	Principles & Strategies of Teaching	3	0	3
SOCSCI	Politics & Gov. with Phil. Cons.	3	0	3
LIT	World Literature	3	0	3
HIST	Rizal's Life, Works and Writings	3	0	3
	Total	**18**	**3**	**21**

FOURTH YEAR

First Semester

		LEC	LAB	UNITS
NUTR	Nutrition Education	2	1	3
NUTR	Nutrition Therapy II	2	1	3
IM	Foodservice System II	2	1	3
NUTR	Public Health Nutrition	3	0	3
NUTR	Food and Nutrition Research	2	1	3
	Total	**11**	**4**	**15**

Second Semester

	LEC	LAB	UNITS
Supervised Field Experiences			
Hospital Dietetics Practicum (200 hrs.)		4	4
Foodservice Practicum (150 hrs.)		3	3
Public Health Nutrition Practicum (250 hrs)		5	5
Total		**12**	**12**

Section 9. Thesis/research/project requirements

The college/school/department shall encourage independent or joint research activities in nutrition or allied fields.

Nutrition-dietetics students shall be required to present a research proposal incorporating the principles of research methods.

Section 10. On-the-job-training or practicum requirements

The school with a college/school/department of nutrition-dietetics must be affiliated with an appropriate hospital, a public or private institution/agency and/or a food service establishment where the practical experiences of the students will be conducted.

An appropriate institution is one which can provide practical training to BSND students based on the following criteria:

a. presence of a qualified training supervisor, i.e. a registered nutritionist dietitian or equivalent in case of food service practicum.
b. adequate facilities
c. suitable program implemented by the affiliating school

Guidelines for required supervised field experiences are given in **Appendix A.**

ARTICLE VI
COURSE SPECIFICATIONS

Section 11. The syllabi for the various courses in the BSND curriculum are shown in **Appendix B.**

ARTICLE VII
GENERAL REQUIREMENTS

Section 12. Program Administration

a). Qualifications of Head of the BSND program

The BSND program shall be administered by a faculty member with a full-time appointment with the following qualifications:

1. a master's degree holder preferably with a major in nutrition-dietetics. The Bachelor's degree must be in Nutrition-Dietetics and a registered nutritionist-dietitian (RN-D);

2. must have at least three (3) years of teaching experience in nutrition or allied fields; and

3. must have at least two (2) years of experience in nutrition-dietetics profession other than teaching.

b) Responsibilities of the Head of the BSND program

The general responsibilities and functions of the head of the BSND program are:

1. To assist the school heads/president in all matters affecting the general academic and administrative policies of the institution and particularly those pertaining to the college/school/department of nutrition and dietetics;

2. To direct and coordinate all matters related to academic programs including the:

   a. development and implementation of curricular programs in nutrition and dietetics with the assistance of qualified faculty members, and in making these programs attuned to current trends and developments in nutrition and dietetics education;

   b. admission, classification and advising of students;

   c. selection, appointment, promotion or separation of faculty members in his college/school/department;

d. assignment of teaching loads of faculty members in his college/school/department;

e. plan and implement a faculty development program;

f. implement a program of supervision and evaluation of classroom and practicum teaching methodologies and strategies, and instructional materials in order to improve teaching effectiveness, to identify areas of faculty development and consequently raise the standards of instruction;

g. establishment of linkages with other schools and other agencies related to Nutrition and Dietetics.

3. To encourage and initiate research and extension activities among faculty and students;

4. To coordinate co-curricular and extracurricular programs within the college/school/department;

5. To coordinate with other deans/heads of other units in the institution regarding academic programs, faculty activities as well as student affairs and services.

6. To actively participate in the resource generation and management of the college/school/department.

Section 13. Faculty

a) Qualifications

- Section 1. The teaching personnel in Nutrition-Dietetics education must be a holder of a master's degree in Nutrition or allied fields. Professional courses in Nutrition and Dietetics must be taught by a registered Nutritionist-Dietitian.

b) Load

- The teaching load of full-time faculty member shall not exceed 24 units per semester. Part-time faculty member may be allowed to carry a maximum of twelve (12) units.

- For full-time faculty members who are teaching in another school shall have a permit to teach from the head of the mother institution. The total faculty load from the mother institution and other institutions shall not exceed 24 units per semester.

c) Employment status

- When vacancies occur in the teaching force of the college/school/department during the school year, substitutes or replacements with equal or higher qualifications shall be employed.

- The following conditions of employment shall be observed.

  a. The remuneration paid to college instructors in nutrition-dietetics shall be comparable to current salary rates for college instructors in government schools with similar professional qualifications. Such remuneration must be paid in full, regularly and on time. Remuneration should not be based on enrollment, i.e. number of students in class, nor should remuneration be paid in the form of stocks.

  b. The ratio of full-time faculty members to part-time instructors should be at least 2:1, in order to encourage the development of commitment of instructors to the school and the employment of more full-time instructors.

  c. At least 60% of the professional courses shall be taught by permanent full-time faculty members who are provided with security of tenure and other fringe benefits.

d) Faculty ranks

The faculty members in the colleges/schools/departments of nutrition-dietetics through a faculty ranking system, shall be assigned academic ranks in accordance with their educational qualifications experience, training and performance. The academic ranks are professor, associate professor, assistant professor and instructor.

1. Professor

   a. Training- A holder of at least master's degree in nutrition-dietetics, but a doctoral degree is preferred.

   b. Experience- Ten or more years of experience in the nutrition-dietetics field and preferably in teaching. Training or eminence in a profession of highly specialized nature may also be considered.

   c. Registered, licensed nutritionist-dietitian

   d. Outstanding performance in positions held, past and present.

   e. Productive scholarship in terms of research and publication.

   f. Abides by the ethics of the profession.

2. Associate Professor

   a. Training - A holder of at least master's degree in nutrition-dietetics but a doctoral degree is preferred
   b. Experience – At least seven (7) years of experience in the nutrition-dietetics field preferably in teaching. Training or eminence in a profession of a highly specialized nature may also be considered.
   c. Registered, licensed nutritionist-dietitian
   d. Successful performance in positions held, past and present.
   e. Productive scholarship in terms of research and publication
   f. Abides by the ethics of the profession

3. Assistant Professor

   a) Training - A holder of a master's degree in nutrition-dietetics or related fields such as Education, Health Education, Food Service Administration, Food Science, Public Health.
   b) Experience – At least three (3) years of experience in nutrition-dietetics field preferably in teaching too. Training or eminence in a profession of a highly specialized nature may also be considered.
   c) Registered, licensed nutritionist-dietitian
   d) Successful performance in positions held, past and present.
   e) Productive scholarship in terms of research and publication
   f) Abides by the ethics of the profession

4. Instructor

   a) Training - A holder of a master's degree in nutrition-dietetics preferred, or one who is pursuing graduate studies or completed at least fifty percent (50%) of academic requirements for a Master's degree in Nutrition-Dietetics
   b) Has engaged in the practice of the profession for at least one (1) year
   c) Registered, licensed nutritionist-dietitian
   d) Abides by the ethics of the profession

As a general rule, a faculty member starts with the rank of instructor with possible promotion in accordance with the ranking system. A faculty member may start as assistant professor, associate professor or professor if his appointment/designation is warranted by his professional status, experience, training and scholarship.

e) Faculty development program

Each academic institution offering nutrition-dietetics must have a faculty development program within the financial capabilities of the school. The following are suggested:

1. Every school of nutrition-dietetics shall provide one scholarship grant for at least one (1) year graduate study in nutrition.
2. The school shall make available thesis grants to deserving members of the faculty.
3. If the school offers a doctoral or master's program, faculty members shall be given tuition free privileges for the pursuance of a degree in their field of specialization.
4. Attendance at in-service training programs on official time shall be encouraged and records of such attendance shall be filed at the office of the dean.
5. The school shall encourage the professional development of its faculty in activities such as the pursuant of further studies, in the practice of their profession and involvement in the national development endeavors. The school shall also encourage and involve faculty members in nutrition research and community extension activities. In relation to research and community activities, an arrangement for honorarium and/or reduced teaching load without prejudice to his regular salary shall be instituted. The procedure of granting faculty development privileges shall be defined in the school's faculty manual.

f) Faculty Manual. Every school shall have a faculty manual which provides guidelines, rules and regulations for faculty compliance and shall define the faculty rights and obligations.

g) Consultation Hours. Faculty members, full-time and part-time, are encouraged to render hours of consultation with students.

h) Improvement of Instruction. Faculty members shall take upon themselves the continuing development of the BSND program in areas such as the quality of teaching, field placement, development of appropriate teaching materials, etc., which are related in the delivery of quality education in nutrition-dietetics.

i) Tenure. Security of tenure may be given to faculty members without prejudice to the existing rules of the government.

Section 14. Library

a) Library Service

Every college/school/department offering a degree program in nutrition-dietetics shall have an adequately equipped library providing competent services and containing academic, research and extension activities of the faculty and students in the program. Administrative procedures and equipment shall conform to modern practices, including cataloguing methods, arrangements of books and periodicals, and adequate hours of accessibility.

b) Library collection:

1. A basic collection of well-selected relevant publications in the following ratio of students to volume of books is required:

Enrollment	Copies per Title	Total Collection
100 or less	2	200
200-300	4	800-1,200
400-500	6	2,400-3,000

2. A minimum of 3 book titles, published within the last 10 years per subject for the general education courses and at least 3 book titles published within the last 10 years for each of the professional subjects in the nutrition-dietetics program shall be provided.

3. A minimum of 5 up-to-date professional publications including scientific/technical journals, monographs, periodicals, magazines and any electronic/digital medium shall be available for use by students and faculty.

Section 15. Facilities and Equipment

a) Classroom requirements

Colleges/schools/departments offering nutrition-dietetics program should provide adequate facilities and equipment for both General Education and Professional Courses to include:

1. The minimum classroom floor space should be 1.5 square meter per student.

2. Besides laboratories required for General Education courses, there should be laboratories for Food and Nutrition courses which should accommodate a maximum of 25-30 students at a time. The laboratories should measure 2.3 sq.m. per student. In addition to floor area requirements, the laboratory should:

   a. be well-lighted, well-ventilated and screened
   b. have a good source of water supply
   c. have a storeroom for kitchen equipment utensils and supplies within the laboratories
   d. should be divided into completely equipped kitchen units. Each unit must accommodate a maximum of seven (7) students and must be equipped with a range, sink, a work table, cabinets and drawers for kitchen utensils and accessories.

3. The school cafeteria should be supervised by a licensed Nutritionist-Dietitian or the head of the Nutrition-Dietetics department, where Foodservice System I and II classes may be held.

b) Laboratory requirements – Please See Attached

1. The minimum equipment and utensils for the Foods and Nutrition laboratory are in **Appendix C.**

2. The minimum equipment and supplies for the audiovisual room are in **Appendix D.**

Section 16. Admission and Retention

1. Every student has the right to enroll in any college/university upon meeting its specific requirements and regulations. Except in the case of academic delinquency and/or violation of disciplinary regulations, the student is presumed to be qualified for enrolment for the entire period he/she is expected to complete his course without prejudice to his right to transfer.

2. As a general rule, no applicant shall be enrolled in any approved course unless he/she presents the proper credentials required by the school before the end of the enrolment period.

3. The requirements for admission and/or retention of a student in the nutrition-dietetics program shall be determined by the dean/head of the college/school/department and/or admission committee of the institution.

Section 17. Residency and Unit Requirements

1. No degree shall be conferred upon a student unless he/she has taken the last curriculum year of the course in the institution which is to confer the degree.

2. No student shall be permitted to take any subject until he/she has satisfactorily passed the pre-requisite subjects. Special classes should be referred to the Commission on Higher Education through the Regional Office for decision/approval.

3. A student may be allowed to carry a maximum study load of twenty-five (25) units each semester. Units in excess of this requirement shall need an approval from the Commission on Higher Education through the Regional Office. Only graduating students shall be allowed overload of not more than six (6) units.

4. If a student obtains a grade of incomplete for non-compliance of some requirements of the course, he should not be given credit for the subject or course unless he satisfactorily removes the incomplete grade within one year which automatically becomes a failing grade. The completion grade and the incomplete grade not removed within one year shall be recorded

and submitted immediately on a supplementary Form XIX. No school shall give a final grade of "4" or its equivalent or "conditioned".

Section 18. Instructional Standards

1. The college/school/department of nutrition shall maintain a high standard of instruction at all times. A system of supervision and evaluation should be instituted and implemented for the purpose of measuring teacher performance and competence as well as student learning.

2. Instructional materials such as textbooks, scientific journals, audiovisual aids, etc., should reflect recent and current trends in nutrition and dietetics. Materials and books authored by Filipino practitioners should be given preferences. Both instructors and students should have access to such textbooks/materials.

Section 19. Extension Services

1. The college/school/department shall encourage active participation among its students and faculty in independent and/or joint activities relevant to nutrition problems involving any of the various segments of the national community.

2. These extension activities may be incorporated as part of the practicum experience in the community, hospital and/or food service establishment.

ARTICLE VIII
REPEALING CLAUSE

Section 20. This Order supersedes all previous issuances concerning nutrition and dietetics education which may be inconsistent or contradictory with any of the provisions hereof.

ARTICLE IX
EFFECTIVITY

Section 21. This set of Policies and Standards for Nutrition-Dietetics Education shall take effect beginning school year 2007 -2008.

For strict compliance.

Pasig City, Philippines
December 8, 2006

CARLITO S. PUNO, DPA
Chairman

APPENDIX A

GUIDELINES FOR REQUIRED SUPERVISED FIELD EXPERIENCES

1. The new BSND curriculum provides that the supervised field experiences shall be offered during the second semester of the fourth year.

2. The participating accredited agency may collect directly from the school a reasonable affiliation fee.

3. The schools and the practicum institutions shall establish guidelines for the conduct of the practicum.

4. The guidelines for practical field experiences shall be implemented in all schools and colleges as curricular requirements for the BSND course and as pre-requisite to admission to the licensure examinations given by the Professional Regulation Commission for nutritionist-dietitians.

5. Supervised field experiences shall cover three (3) areas, namely:

AREA I PRACTICAL EXPERIENCES IN PUBLIC HEALTH NUTRITION

The two (2) main tasks of a public health nutritionist in a community are to define the nutritional problems and take appropriate actions to address them. These tasks include the assessment of the nutritional status and planning of the appropriate program for improving the nutritional status.

Suggested experiences:

1. Assessment of nutritional status using anthropometric and dietary methods.

2. Interpret vital statistics in assessing nutritional status of the community.

3. Plan and undertake activities to be integrated with existing programs in the community.

4. Write and present a report about the activities undertaken.

Total number of hours - 250 hours [6 weeks or the equivalent of at least five (5) practicum units]

AREA II PRACTICAL EXPERIENCES IN FOODSERVICE

The five (5) aspects to be included are: food production, foodservice, personnel management, cost control, sanitation and safety. Food production includes menu planning and purchasing.

Suggested experiences:

a. In menu planning:
   (1) Plan cycle menus and menus for different occasions
   (2) Main menu adjustments
   (3) Evaluate menus

b. In purchasing
   (1) Prepare food specifications
   (2) Identify and compare different methods of purchasing

c. In storeroom control
   (1) Prepare requisition
   (2) Receive goods and supplies
   (3) Issue storeroom goods and supplies
   (4) Store food supplies properly

d. In food production
   (1) Standardize recipes
   (2) Prepare quantity recipes
   (3) Make a food production sheet to know the quantity and yield to order for a given number of clients within a given budget.
   (4) Minimize and utilize leftovers.

e. In foodservice
   (1) Present aesthetically acceptable food
   (2) Control food portion size

f. In personnel management
   (1) Explain the relationship of functional organization chart in a food service establishment
   (2) Prepare work schedules
   (3) Assist in the planning and conduct of a training program for personnel

g. In equipment management
   (1) Identify and describe existing equipment specifications, operations, care and maintenance
   (2) Operate and maintain existing equipments

h. In cost control
   (1) Use appropriate forms for control such as inventories, invoices and delivery receipts, requisitions, stock cards
   (2) Prepare and analyze income statement, gross and net profit, operating expenses
   (3) Cost recipes

i. In environmental management
   (1) Practice proper waste management and resources conservation

j. In food sanitation and safety
   (1) Apply sanitation and safety procedures (including HACCP)

Total number of hours - 150 hrs. [18 days or the equivalent of three (3) practicum units]

AREA III PRACTICAL EXPERIENCES IN HOSPITAL DIETETICS

Suggested Experiences:

a. Interview patients on their diet history
b. Read and interpret nutrition-related data in medical charts
c. Participate in ward rounds
d. Interpret and carry out diet prescriptions
   (1) Compute diet
   (2) Fill out diet cards
   (3) Modify/Adjust diets as necessary (from full to therapeutic diets or vice versa)
   (4) Provide diet instructions of patients and follow up
   (5) Prepare instructional materials
   (6) Plan and prepare special diets including tube feedings
   (7) Supervise tray assembly and distribution of diets
   (8) Prepare and present case studies

Total number of hours - 200 hrs. [24 days or the equivalent of four (4) practicum units]

6. The hospital practicum should be in a tertiary level hospital with at least one hundred (100) bed capacity and accredited by the Department of Health (DOH) supervised by a registered nutritionist-dietitian.

APPENDIX B -SYLLABI FOR THE BSND CURRICULUM

Course Title: **BASIC FOODS (Lecture/Laboratory)**

Course Description:

This course contains the principles in the preparation and cooking of different classes of food, their composition, structure and market forms. Emphasis is given on the principles underlying preparation and cooking in order to maintain quality, palatability, nutritive value and acceptability of meals. Laboratory experience will include the preparation of basic recipes to apply the above principles.

Number of units: 3 (2 hours lecture & 3 hours laboratory per week)

Pre-requisites: General and Inorganic Chemistry

Course objectives:

Lecture

1. Identify the fundamental principles in the preparation of different types of foods
2. Explain the changes and interactions of foods and their components during preparation
3. Identify basic physical and chemical principles affecting the behavior of food
4. Discuss common problems in food preparation and ways of preventing/ remedying these
5. Discuss minimum standards for the acceptability of foods and ways to achieve these standards

Laboratory

1. Apply the principles of food preparation.
2. Follow a recipe
3. Develop proper and efficient technique in the preparation of specific foods
4. Present prepared foods properly
5. Evaluate foods according to acceptable standards
6. Handle and operate the tools, utensils and equipment used in food preparation
7. Manage time and resources in the preparation of foods

Course Outline:

Topic	No. of Hours
Introduction to Food Science 1. Physical and Chemical Properties of Food 2. Heat in food Preparation 3. Assessment of Food Quality	3
Sugar and Sugar Cookery 1. Classification and occurrence 2. Manufacture of sugar 3. Properties and Characteristics: crystallization, caramelization & hydrolysis 4. Functions of sugars in food preparation 5. Artificial and synthetic sweeteners	2

Topic	No. of Hours
Rice, corn and other cereals 1. Kinds and market forms of cereals 2. Structure and composition 3. Pointers in buying cereals 4. Storage and care of cereals	2
Starch and alimentary pastes 1. Food sources and kinds of starches 2. Preparation of starch powders 3. Chemical composition of starch molecules 4. Properties of starch and applications in cooking: gelatinization, gelation, syneresis, retrogradation, dextrinization, enzyme reaction 5. Functions of starch in food preparation 6. Proper cooking of starchy products 7. Storage of starch and starchy products 8. Alimentary pastes and noodles	2
Flour and flour mixtures 1. Wheat and wheat flour: structure, composition and properties 2. Production of wheat flour 3. Market forms and kinds of wheat flour 4. Flour mixtures: types and ingredients 5. Gluten: elasticity and bread making quality	3
Doughs: 1. Yeast bread: kneading, fermentation and baking Biscuits and Pastry: method of mixing	2
Batters: 1. Shortened cakes and chemical leavens 2. Unshortened cakes 3. Methods of mixing cakes 4. Common problems in mixing and baking cakes	3
Egg and Egg Cookery 1. Structure and composition of eggs 2. Changes in eggs during storage 3. Tests for egg quality 4. Properties of eggs 5. Functions of eggs in food preparation 6. Storage of eggs 7. Safe handling of eggs in food preparation	2
Fats and Oils 1. Structure and composition of fats and oils 2. Kinds of Fats and oils used in food preparation 3. Properties of fats and oils: melting, smoke, flash and fire points 4. Fat absorption in fried foods 5. Emulsion systems: mayonnaise, salad dressings, cream puffs	2

Topic	No. of Hours
Vegetables and Fruits 1. Structure and composition of plant cells 2. Color pigments; enzymatic and non-enzymatic browning in fruits and vegetables 3. Flavor and texture substances and their characterization	3
Pectin in fruits for jellies, jams and preserves and other gelling agents 1. Structure and composition of fruit jellies 2. Role of ingredients in jelly formation 3. Quality of a good jelly	2
Meat, Fish and Poultry 1. Meat: Kinds and market forms, Structure and composition, changes in a meat carcass after slaughter, the parts and uses of a meat carcass, factors affecting tenderness in meats, stages of doneness of meats 2. Fish: Kinds and quality of fish, structure and composition, deterioration and changes in quality during storage, identification of local fishes 3. Poultry: Market forms and problems in poultry cookery, safe poultry handling	2 1 1
Frozen Desserts	1
Beverages	
Seasonings and condiments	1

Suggested Laboratory Activities:

Exercise 1	Orientation to the Kitchen as a Work Area
Exercise 2	Measuring Techniques
Exercise 3	Preparation and Evaluation of Crystalline and Non-Crystalline Sugar Products/ Stages of Sugar Cookery
Exercise 4	Application of Principles of Starch Cookery in the Preparation of Foods/ Effects of Ingredients and Dextrinization on the Thickening and Gelling Ability of Starches
Exercise 5	Preparation and Evaluation of Yeast Breads
Exercise 6	Preparation and Evaluation of Pie Crusts and Pasta
Exercise 7	Preparation and Evaluation of Shortened Cakes
Exercise 8	Assessment of Freshness of Eggs/Preparation and Evaluation of Egg Dishes (egg as a Thickening and Gelling Agent)
Exercise 9	Egg as a Foaming Agent
Exercise 10	Use of Oils in Deep-fat Frying
Exercise 11	Preparation and Evaluation of Fruit and Vegetable Dishes/ Effect of Sugar, Acid, Base and Salt on Color and Texture of Fruits and Vegetables
Exercise 12	Preparation and Evaluation of Fruit Jellies and Jams/ Effects of Sugar on the Quality of Fruit Jellies
Exercise 13	Preparation and Evaluation of Meat/Fish/Poultry Dishes/ assessing the Shrinkage in Meats/Poultry/ Assessing Doneness in Meats/Poultry
Exercise 14	Preparation and Evaluation of Frozen Desserts

References:

Recommended Basic References

- Bennion M. and B. Scheule. 2004. *Introductory Foods 11th ed.* Upper Saddle River, New Jersey: Pearson/Prentice Hall.
- De Leon, S.Y., Claudio, V.S. Chavez, L.L. and Guzman, M.P. 1999. *Basic Foods for Filipinos.* 3rd ed. Manila: Merriam and Webster.
- Luna MVF. 2005. Guzman's *Introduction to Food Preparation 6th ed.* Manila: Merriam and Webster Bookstore, Inc.

Suggested Additional References

- Brown, Amy. 2000. *Understanding Foods.* Belmont, CA: Wadsworth Publ. Co.
- Charley, H. and C. Weaver 1998. *Foods A Scientific Approach.* Upper Saddle River, New Jersey: Prentice-Hall, Inc.
- Freeland-Graves, J.H. and G.C. Peckham. 1995. *Foundations of Food Preparation.* Englewood Cliffs, New Jersey: Merill by Prentice Hall, Inc.
- Labensky S.R. and A.M. Hause. 2003. *On Cooking: Techniques from Expert Chefs 3rd ed.* Upper Saddle River, NJ: Prentice Hall Pearson Education, Inc.
- McWilliams M. 2001. *Food Fundamentals 3rd ed.* New York: John Wiley and Sons, Inc.
- McWilliams M. 2005. *Foods: Experimental Perspectives 5th ed.* New Jersey: Upper Saddle River, Prentice-Hall, Inc.

Course Requirements and Grading system: (subject to modification based on university/ college policy

Example:

Lecture: 60%of course grade

Recitation	30%
3 exams	60%
Assignments	10%
	100%

Laboratory: 40% of course grade

Assignments/Quizzes	20%
Evaluation sheets	40%
Laboratory performance	
Peer evaluation	20%
Teacher evaluation	20%
Total	100%

Class policies:

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **FUNDAMENTALS OF FOOD TECHNOLOGY (Lecture/Laboratory)**

Course Description:

Principles of physical, chemical and biochemical changes in Foods as they undergo various stages of food processing and storage are discussed in this course. Emphasis is given to food preservation techniques at the home and community levels using indigenous foods in the laboratory for applying the principles and methods of processing.

Number of Units: 3 units (2 hours lecture and 3 hours laboratory per week)

Prerequisites: Basic Foods
General Microbiology or its equivalent

Course Objectives:

Lecture:

1. Identify the causes of physical, chemical and bio-chemical changes in foods.
2. Explain the principles and methods of food preservation.
3. Evaluate the effects of food preservation methods on food quality.
4. Describe the trends in food technology.

Laboratory:

1. Apply the principles and methods of food preservation.
2. Evaluate the acceptability of the preserved products.

Course Outline:

Topic	No. of Hours
1. Introduction to Food Technology Description of the course, its objectives, scope content and requirements.	2
2. Food Spoilage: Causes, types, signs of spoilage	2
3. Food Poisoning: Types, Causes, Symptoms	2
4. General Principles and Methods of Food Preservation	2
5. Refrigeration and Freezing A. Requirements of Food Refrigeration B. Methods of Freezing C. Types of Home Freezing Equipment D. Selection and Preparation of Foods for Refrigeration and Freezing E. Changes during Freezing F. Thawing of Frozen Products	3
6. Canning A. Principles of Heat Preservation – Pasteurization, Sterilization B. History of Canning C. Canning Equipment D. Containers for Canning	4

E. Steps/Procedures in Canning
F. Problems in Canning

7. Drying of Foods 2
   A. Differences between Sun Drying and Dehydration
   B. Advantages of Sun Drying and Dehydration
   C. Selection and Preparation of Foods for Drying
   D. Problems
8. Salting, Curing and Smoking 3
   A. Principle/s in salting, Curing and Natural Smoking
   B. Functions of Each Curing Ingredients
   C. Methods of Curing
   D. Selection and Preparation of Foods for Salting, Curing and Smoking
   E. Problems Encountered in Preparing Cured Products
9. Fermentation and Pickling 3
   A. Types of Fermentation: Alcoholic, Acetous, Lactic Acid
   B. Selection and Preparation for Fermentation and Pickling
   C. Requirements for Obtaining Successful Fermented and Pickled Products: Brine Concentration, Grain Strength of Vinegar, etc.
   D. Problems Encountered in Fermentation and Pickling
10. High Sugar Preservation 3
   A. Principle
   B. Types of High Sugar Preservation Products
   C. Selection and Preparation of Fruits/ Some Vegetables for Jam, Jelly, Marmalade, Preserve, Conserve, Butter, Fruit Paste Candies and Fruit Leather Making
   D. Problems Encountered in Preparing and Cooking High Sugar Preservation Products
11. Radiation Preservation 2
   A. Theories in radiation Preservation of Foods
   B. Sources of Radiation
   C. Applications of Radiation in Food Preservation
   D. Advantages and Disadvantages of Radiation
   E. Packaging of Irradiated Foods
12. Food Additives in food Preservation 2
   A. Justified and Unjustified Uses of Food Additives
   B. Classifications of Food Additives – the GRAS List
   C. Hazards of Food Additives
   D. Regulations on the Use of Food Additives – RA 3720
13. Food Packaging 2
   A. Types and Properties of Packaging Materials
   B. Methods of Food Packaging: MAP, MAC, Vacuum Packaging
14. Trends in Food Processing 2

Suggested Laboratory Activities:

1. Application of Refrigeration and Freezing
   A. Comparison of shelf life between refrigerated and frozen foods using the same food items (one week storage period)

A1. Freezing local vegetables (blanched vs. unblanched, in brine/without brine)
A2. Freezing local fruits (sugar packed, syrup packed, without sugar)
A3. Freezing fruit concentrates (kamias, mango, strawberries, etc.)

2. Application of Canning/Bottling
   A. If a manual can sealing machine and pressure canner are available in the laboratory: canning of dinuguan, pork-chicken adobo, bangus sardines, bagoong, laing, other vegetable and fruit products
   B. If can sealing machine is not available in the laboratory: bottling of sardines, bagoong, fruit juices, halo-halo mix, fruit cocktail, fruit concentrates
   Note: These products must be evaluated before the end of the semester.

3. Application of Drying/ Dehydration
   A. Preparation and Evaluation of saba banana chips, shrimp kropeck, chicharon, mussel (tahong), chips, etc.

4. Application of Salting, Curing and Smoking
   A. Preparation and Evaluation of Hams (Chicken, Pork, Fish) Bacon, Tapa, Tocino, Longanisa, Corned Beef, Salted Eggs (Brine or Clay method), bagoong, tinapa

5. Application of Fermentation and Pickling
   A. Preparation and Evaluation of Nata, Vegetable Pickles (Papaya, Chayote, Cucumber, etc.) Mango chutney, Catsup (Tomato, Banana, Chayote), Vinegar (Nipa sap, coconut water, rice washing, sugar cane, etc.) wines (cashew, bignay, duhat, etc.)

6. Application of Sugar Preservation
   A. Preparation and Evaluation of jellies, jams, marmalades, conserves, paste candies, preserves, candied fruits, candied peels, fruit leather using local fruits in season.

References:

Recommended Basic References:

- De Leon, S. et.al. *Introduction to Food Technology.* Latest Ed. Manila: Merriam and Webster Publishing, Co.
- Gatchalian, M. *Sensory Evaluation Methods for Quality Assessment and Development.* 2nd Ed. 1989. UP College of Home Economics, Diliman, Quezon City.
- Lagua, R. et. al. *Food Preservation for Filipinos.*1977. GMS Publishing, QC: (on revision)

Suggested Additional References:

- Bowers, George. 1992. *Food industry and Trade.* New York: Macmillan Publishing Co.
- Bowers, J (ed.). *Food Theory and Applications 2nd ed.* 1992. New York. Macmillan Publishing, Co.

- Claudio, V. et al. *Food Sanitation.* Latest Edition. Manila: Merriam and Webster Publishing Co.
- De Leon, Sonia. *Fruits and Vegetables Dehydration Manual.* 1988. Manila: National Bookstore,
- Fell, Beverly Burnett and Kim Stutchbury, 2000. *Food Technology In Action, Australia*: John Wiley and Sons.
- Fellows, PJ. 1994. *Food Processing Technology*: *Principles and Practices for the Safe Processing of Foods.* London: Butterworth Heinemann Ltd.
- Finley, John. 1992. *Food Safety Assessment.* Library of Congress Publication, Washington.
- Garbutt, John. 1997. *Essentials of Food Microbiology.* London: Hodden Headline Group.
- Gould, GW Ed. 1995. *New Methods of Food Preservation.* Unilever Research Lab., Bedford: Blackie Academic Professional, Inc.
- Jay, James M. 1991. *Food Microbiology.* New York: Van Nostrand.
- Larousse, Jean and Brown, Bruce E. Ed. 1997. *Food Canning Technology.* Canada: Wiley – VCT. Inc.
- McWilliams M. 2001. *Food Fundamentals 3rd ed.* New York: John Wiley and Sons, Inc.
- McWilliams M. 2005. *Foods: Experimental Perspectives 5th ed.* New Jersey: Upper Saddle River, Prentice-Hall, Inc.
- Shapton, Nora. 1994. *Principles and Practices for the Safe Processing.* Oxford, London: Butterworth Heinemann Ltd.
- Vaclavik, V. and Christian, E. 2003. *Essentials of Food Science*. NYC, NY: Chapman and Hall.

Journals

- Food Technology Journal
- Journal of Food Science
- Food Packaging Journal

Course Requirements*:

Quizzes and long tests
Recitation/Reports
Assignments
Mid-term and Final exams

***Course Requirements and Grading system**: (subject to modification based on university/ college policy

Lecture: 60%of course grade		Laboratory: 40% of course grade	
Recitation	30%	Assignments/Quizzes	20%
3 exams	60%	Evaluation sheets	40%
Assignments	10%	Laboratory performance	
	100%	Peer evaluation	20%
		Teacher evaluation	20%
		Total	100%

Class Policies

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **FOODSERVICE SYSTEM I (Lecture/Laboratory)**

Course Description:

The course includes the principles, techniques and management of large-scale food production particularly on the phases of foodservice cycle: menu planning, purchasing, receiving, storage and issuance, pre-preparation, production, merchandising and service, food safety and sanitation and cost control.

Laboratory experiences include cycle menu planning, standardization and quantification of recipes, portion control and utilization of leftover food.

Number of Units: 3 units (2 hrs lecture; 3 hrs laboratory)

Prerequisites: Meal Management
General Microbiology and Parasitology
Basic Financial Accounting

Course Objectives:

1. Trace the historical background of the industrial and institutional food service.
2. Explain the different principles applied in menu planning, purchasing, receiving and storage, food production and service of food.
3. Articulate the objectives and policies in volume feeding.
4. Apply principles and techniques of sanitation in foodservice institutions.
5. Appreciate the value of cost control in all phases of the food service cycle.
6. Apply the general principles of food selection and preparation in quantity food production.
7. Plan, prepare and serve meals using acceptable standards of preparation.
8. Apply the different principles of menu pricing and menu merchandising.

Course Outline

Topic	No. of Hours
Introduction	2
1. Course Objectives	
2. Historical Background and Development of the Foodservice Industry	
2.1. Food Service Through the Ages	
2.2. Segments of the Foodservice Industry	
The Foodservice System	2
1. Definition of Terms	
2. Foodservice as a System	
3. Classification of Foodservice	
4. Types of Foodservice System	
5. Legal Aspects of Foodservice	
5.1 Professional Ethics	

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* From Health Ethics Course

Topic	No. of Hours
Sanitation, Food Safety Energy and Waste Management 1. Definition of Terms 2. Causes of Food borne Illnesses 3. Sanitation in Purchasing, Receiving, Storing, Preparation and Serving of Food 4. Hazard Analysis and Critical Control Point (HACCP) 5. Cleaning, Sanitizing and Pest Control 6. Safety Precautions and Accident Prevention 7. Waste Management	6
Menu Planning 1. Factors to Consider in Menu Planning 2. Maximizing Food utilization in Menu Planning 3. Types of Menu 4. Food Characteristics and Combinations 5. Menu Pattern, Design and Format 6. Mechanics of Menu Planning 7. Menu Analysis and Evaluation	4
Purchasing 1. Requisites of a Good Buyer 2. Ethics of a Good Buyer 2.1 Professional Ethics 3. The Vendor or Supplier 4. Types of Purchasing 5. Methods of Purchasing 6. Product Selection (Market Forms and Food Quality) 7. Purchasing Procedure	2
Receiving 1. Types of Receiving 2. The Receiving Personnel 3. The Receiving Process 4. Facilities, Equipment and Sanitation in the Receiving Section	1
Storage and Issuance 1. Types of Storage 2. Facilities and Equipment 3. Guidelines for Storage and Issuance 4. Security 5. Records and Control 6. Training and Storage Personnel	2
Quantity Food Production 1. Quantity Cookery Principles and Techniques 2. Cookery Process 3. Important Aspects of Food Production 4. Quantification, Stan*dardization and Evaluation of Recipes 5. Forecasting 6. Production Schedule	4

* From Health Ethics Course

Topic	No. of Hours
Assembly, Distribution and Service 1. Factors Affecting Choice of Distribution Systems 2. Equipment needs 3. Styles of Service	1
Cost Control 1. Definition of Terms 2. Step in the Control Process 3. Factors Affecting Cost Control 3.1. Food Cost Control 3.2. Labor Cost Control 3.3. Operating Cost Control 4. Financial Report	2
Merchandising and Sales Promotion in Foodservice Operation 1. Professional Ethics	2
Foodservice Trends and Issues	1

Suggested Laboratory Activities:

1. Cycle Menu Planning
2. Standardization of recipes
3. Quantification of recipes
4. Portion control
5. Utilization of leftover food

References:

Recommended Basic References:

- Jamorabo-Ruiz Adela, Grace P. Perdigón and Virginia S. Claudio. 2006. *Quantity Food Production in the Philippines.* Nutritionist-Dietitians' Association of the Philippines and Merriam & Webster Bookstore Inc., Manila, Philippines.
- Perdigon Grace P, Libia L Chavez and Virginia S. Claudio. 2006. *Food, Water and Environmental Sanitation and Safety.* Merriam & Webster Bookstore Inc., Manila, Philippines.
- Perdigon Grace P. 1999. *Foodservice Management in the Philippines 2E.* U.P. Publications.
- West, Bessie and Le Ville Wood. Revised by Harper, Virginia F. et al. 6th ed. New York: Macmillan, 1988

Suggested Additional References:

- Cremer, Marion L. 1998. *Quality Food in Quantity: Management and Science.* McCutchan Publishing Corp., Berkeley, CA.

* From Health Ethics Course

- Cody, M. and E. Kunkel. 2001. *Food Safety for the Professionals.* Chicago, IL: The American Dietetic Association.
- De Leon, S., S. Meacham and VS. Claudio. 2003. *Global Handbook on Food and Water Safety.* Springfield, IL: C. C. Thomas Publishing Ltd.
- Knight, John and Lendal Kotschevar, 2000. *Quantity Food Production, Planning and Management 3rd ed.* John Wiley & Sons, Inc.
- McCormack, N. 2001. *Creative Quantity Cooking.* Gaithersburg, MD: Aspen Publ. Co.
- McSwane, D., N. Rue, and R. Linton. 2005. *Essentials of Food Safety and Sanitation 4th ed.* Upper Saddle River, NJ: Pearson/Prentice Hall Co.
- Meiselman, Herbert L. 2000. *Dimensions of the Meal: The Science, Culture, Business, and Art of Eating.* Aspen Publishers Inc.
- Molt, M. 2001. *Food for Fifty 11th ed.* Upper Saddle River, NJ: Pearson/Prentice Hall Co.
- Payne-Palacio, June and Monica Theis. 2005. *Introduction to Foodservice 10th ed.* Upper Saddle River, NJ: Pearson/Prentice Hall Co.
- Sanders, E. 2001. *Foodservice Profitability: A Control Approach.* Upper Saddle River, NJ: Pearson/Prentice Hall Co.
- Spears, M. and M. Gregoire. 2002. *Foodservice Organizations: A Managerial and Systems Approach.* 5th ed. Upper Saddle River, NJ: Pearson/Prentice Hall Co.

Others:

- Cookbooks and Food Magazines
- Websites (Instructor's recommendation)

Course Requirements:

Quizzes and long tests
Recitation
Seatwork
Assignments
Evaluation sheets
Laboratory performance
Reports
Periodic exams

Class Policies

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **FOODSERVICE SYSTEM II (Lecture/Laboratory)**

Course Description:

The course puts emphasis on personnel management, laws and regulations related foodservice institutions, catering management and emergency feeding. Basic concepts in facilities planning, layout and development of equipment specifications are included.

Laboratory experiences include application of the principles and techniques in Food Service System I in an accredited facility.

Number of Units: 3 units (2 hrs lecture and 3 hours laboratory)

Course Objectives:

1. Discuss the principles of personnel management as applied to foodservice
2. Discuss the laws and regulation related to foodservice institutions.
3. Explain the principles and techniques in catering and emergency feeding.
4. Acquire the skills in operating different types of foodservice equipment.
5. Plan a sample menu for different existing conditions during emergency situations.
6. Apply the basic principles and techniques in planning different foodservice facilities.
7. Plan and present a layout for a proposed foodservice establishment
8. Prepare a feasibility study on foodservice operations.

Course Outline:

Topic	No. of Hours
Introduction 1. Course Objectives 2.1. Review of Food Service System I 2.2. Definition of terms 2.3. Concepts	1
Organization and Management 1. Definition of Terms 2. Types of Organization 3. Theories of Management 4. Levels of Management 5. Functions of Management 6. Leadership 7. Tools of Management	2
Personnel Management 1. Recruitment 2. Selection 3. Hiring 4. Training 5. Evaluation 6. Disciplining Employees 6.1 Professional Ethics	3

Topic	No. of Hours
7. Employee Benefits*	
8. Communication	
Laws and Regulation Affecting Foodservice Institutions in the Philippines	2
1. Legal Considerations	
1.1. Zoning	
1.2. Licensing	
1.3. Workers compensation and benefit coverage	
2. Professional Ethics	
3. Basic steps to follow in obtaining permit to operate a foodservice establishment in:	
Facilities Planning	4
1. Factors to consider in facilities planning	
2. Functional requirements	
3. Planning the atmosphere of foodservice facilities	
Work Place Design	2
1. Space allocation	
2. Ergonomics or Human Engineering	
3. Environment	
Lay-out of Facilities	4
1. Space Arrangement and Flow	
2. Layout configuration	
3. Guidelines in setting a layout for the following:	
3.1. Storage Areas	
3.2. Pre-preparation Areas	
3.3. Main Cooking Area	
3.4. Service Areas	
3.5. Dishwashing Areas	
Equipment Specifications	2
1. Classification of Equipment	
2. Standard dimension of different types of equipment	
Emergency Feeding	4
1. Definition of Terms	
2. Guidelines in Planning Disaster Meals	
3. Kinds of Food needed in all Stages of Emergency	
4. Planning a sample menus for the following conditions	
4.1. No fuel, no water	
4.2. Fuel available, no water	
4.3. Water available, no fuel	
4.4. Water and Fuel available	
Catering and Banquet	4
1. Type of Catering Establishment	
2. Factors to consider establishing a catering business	

* From Health Ethics Course

3. Establishing the Market
4. Contracting
5. Catering Service – basic consideration and requirements in:
   5.1. off premise catering
   5.2. on premise catering

Feasibility Study Preparation	4
1. Basic Guidelines	
2. Components of a feasibility study	
Feasibility Study Presentation	2

Suggested Laboratory Activities:

1. In-campus catering functions
2. Educational tours
3. Case analysis of emergency feeding situations
4. Design of foodservice facility layout
5. Development of equipment specifications
6. Development of a cost control system for a foodservice facility
7. Preparation of job description for a foodservice facility staff

References:

Recommended Basic References:

- Jamorabo-Ruiz Adela, Grace P. Perdigón and Virginia S. Claudio. 2006. *Quantity Food Production in the Philippines.* Nutritionist-Dietitians' Association of the Philippines and Merriam & Webster Bookstore Inc., Manila, Philippines.
- Perdigon Grace P. 1999. *Foodservice Management in the Philippines 2E.* U.P. Publications.
- Perdigon, G. 2004. *Facilities Planning and Design for Lodging and Foodservice Operations.* Manila, Philippines: Merriam and Webster Bookstore, Inc.
- Sison, Perfecto S. 2003. *Personnel Management in the 21st Century 7th ed.* Personnel Management Association of the Philippines, Manila: Rex Book Store.
- West, Bessie and Le Ville Wood. Revised by Harger, Virginia F. et al. 6th ed. New York: Macmillan, 1988

Suggested Additional References:

- Bell, D. 2004. *Food Service Sanitation.* UNLV, Las Vegas, NV: Academic Printing Services.
- Cody, M. and E. Kunkel. 2001. *Food Safety for the Professionals.* Chicago, IL: The American Dietetic Association.
- Knight, John and Lendal Kotschevar, 2000. *Quantity Food Production, Planning and Management 3rd ed.* John Wiley & Sons, Inc.
- McSwane, D., N. Rue, and R. Linton. 2005. *Essentials of Food Safety and Sanitation 4th ed.* Upper Saddle River, NJ: Pearson/Prentice Hall Co.

- Payne-Palacio, June and Monica Theis. 2005. *Introduction to Foodservice 10th ed.* Upper Saddle River, NJ: Pearson/Prentice Hall Co.
- Sanders, E. 2001. *Foodservice Profitability: A Control Approach.* Upper Saddle River, NJ: Pearson/Prentice Hall Co.
- Spears, M. and M. Gregoire. 2002. *Foodservice Organizations: A Managerial and Systems Approach.* 5th ed. Upper Saddle River, NJ: Pearson/Prentice Hall Co.
- Steven J. and C. Scriven. 2000. *Manual of Equipment and Design for the Foodservice Industry.* 2nd ed. Weimer, TX: Chipi Books.

Others:

- Journals and Magazines on Human Resource Development
- Cookbooks and Food Magazines
- Websites (Instructor's recommendation)

Course Requirements:

Quizzes and long tests
Recitation
Seatwork
Assignments
Evaluation sheets
Laboratory performance
Reports
Layout Presentation
Periodic exams

Class Policies

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **MEAL MANAGEMENT (Lecture/Laboratory)**

Course Description:

The course deals with the principles of planning, procurement, preparation, storage and service of nutritious and adequate meals for the family, and for special occasions, emphasis on economy, sanitation, nutrition, and aesthetics. Laboratory experience will include application of the above principles using local and foreign dishes.

Number of Units: 3 units (2 hrs lecture; 3 hrs laboratory)

Prerequisites: Basic Foods
Basic Nutrition

Course Objectives:

Lecture

1. Discuss the principles of planning, procurement, storage, preparation and services of meals.
2. Characterize Philippine and International Cuisines
3. Explain the variations in meal management practices across groups in the context of culture

Laboratory

1. Plan a nutritious menu for a family considering varied occasions in both formal and informal settings.
2. Procure food supplies that conform to acceptable standards of quality.
3. Store foods observing proper conditions of storage.
4. Prepare meals highlighting Philippines and International cuisines.
5. Select table appointments appropriate for varied meal services.
6. Demonstrate the principles of varied styles of meal service.

Course Outline:

Topic	No. of Hours
1. Introduction	2
1.1 Historical Background	
1.2 Definition of Terms	
1.3 The Meal Manager and the Meal Management Process	
1.4 Importance of Food and Dining	
1.5 Factors that influences Meal Management Practices	

Topic	No. of Hours
2. Menu Planning	5
2.1 Goals in Menu Planning	
2.1.1 Nutritive Aspect in Menu Planning	
2.1.2 Economic Aspect of Menu Planning	
2.1.3 Managerial Aspect in Menu Planning	
2.1.4 Aesthetic Aspect in Menu Planning	
2.2 Mechanics in Menu Planning	
2.1.1 Rules in Menu Planning	
2.1.2 Meal Pattern	
2.1.3 Types of Menu	
2.1.4 Rules in Menu Writing	
2.3 Menu for Breakfast, Lunch and Supper	
2.4 Menu for Brunch, Merienda, Tea and Cocktail Party and other occasions	
3. Purchasing	2
3.1 Quality Characteristics of Foods to be Purchased	
3.2 How to Buy Wisely and Economically	
3.3 Food Buying Guides and Cost Analysis	
3.4 Other Food Stores	
3.5 Food Labels	
4. Food Storage	2
4.1 Importance of Proper Storage	
4.2 Types of Storage Facilities	
4.3 How to Store Specific Foods	
5. Meal Preparation	5
5.1 Management of Time and Energy in Meal Preparation	
5.1.1 Work Simplification in Meal Preparation	
5.1.2 Learning to Work Efficiently	
2.1.3 Developing Efficient Work Habits	
5.2 Standardized Recipe	
5.3 Meal Preparation Schedule	
5.4 Nutrient Conservation in Meal Preparation	
5.5 Minimizing Food and Energy Cost and Waste	
5.6 Safety and Sanitation in Meal Preparation	
5.6.1 Application of HACCP Concept	
5.7 Using appropriate tools and utensils	
5.8 Art of Plate Presentation	
5.8.1 Food Styling	
5.8.2 Tools	
5.8.3 Rules	
5.8.4 Techniques	
6. Table Appointments	2
6.1 Types and Materials	
6.2 Selection	
6.3 Care and Maintenance	

Topic	No. of Hours
7. Setting the Table	2
7.1 Characteristics for a Beautiful Table Setting	
7.2 General Pointers in Table Setting	
8. Meal Service Styles	4
8.1 Russian Service	
8.2 English Service	
8.3 Family or Compromise	
8.4 American or Country Style Service	
8.5 Tray Service	
8.6 Apartment or Blue plate Service	
8.7 Buffet Service	
8.8 Tea Service	
8.9 General Guidelines in Serving the Meal	
9. Table Etiquette	2
9.1 Seating Arrangement at the Dining Table	
9.2 Serving Food at the Table	
9.3 Proper Use of Table Appointments	
9.4 Table Manners	
9.5 Cultural Differences in Table Manners	
10. Philippines and International Cookery	10
10.1 Terminology	
10.2 Philippine Cuisine	
10.2.1 Characteristics	
10.2.2 Typical Recipes	
10.3 International Cuisine	
10.2.1 Characteristics	
10.2.2 Typical Recipes	

Suggested Laboratory Activities:

1. Planning menus: 1 meal, 1 day, 7 days for a family of six (low, middle, high income families)
2. Assessing quality of food supplies
3. Conduct of a market survey
4. Storage of Selected Food Supplies
5. Identification of table appointments
6. Setting the table for various styles of meal service
7. Planning, processing food supplies, preparing and serving meals highlighting Philippine and international cuisines using appropriate styles of meal service.

References:

Recommended Basic References:

- Claudio, V. and Joves, L. 2001. *Meal Management and Table Service*. Manila: Merriam & Webster Publishing Co.
- Claudio, V.S., L.S. Joves and A. Jamorabo-Ruiz. 2005. *Cultural Foods Around the World*. Manila, Philippines: National Book Store, Inc.
- Leocadio, C.G. 1998. *Essentials in Meal Management*. QC. RP: UP Publishing.

Suggested Additional References:

- Baskette, M. and Mainella, E. 1999. *The Art of Nutritional Cooking*. NJ: Prentice Hall, Inc.
- Centro Escolar University.1998. *Filipino Cuisine*. Manila. RP: CEU. Hug, Richard and Warfel M. 1997. *Meal Planning and Merchandising*. CS: McCutchan Publishing Corp.
- Cordero-Fernando, G. 1976. *The Culinary Culture of the Philippines*. Manila. RP: Bancom Audiovision Corp.
- Enriquez, Milagros J. 1993. *Kasaysayan ng Kaluto ng Bayan*. Manila: Legacy Publishing and Communications Corp.
- Kinder, Faye, Nancy Green and Natholyn Harris. Meal Management. 6th ed. New York: Macmillan, 1984
- McWilliams, M: 2005. *Fundamentals of Meal Management 4th ed.* Upper Saddle River, NJ: Pearson/Prentice Hall Co.
- Meyer, S. et al. 1991. *Professional Table Service*. NY: J. Wiley & Sons.
- Vaclavick, V. 1998. *Dimensions of Food*. NY: Chapman & Hall Co.
- Websites (Instructor's recommendation)

Course Requirements:

Short and Unit tests
Periodic examinations
Recitation
Seatwork and Assignment
Research/Reaction Paper
Market survey of current price of prime commodities

Class policies:

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **BASIC NUTRITION (Lecture)**

Course Description:

The course centers on the fundamentals of nutrition science as they relate to human life and growth. It includes the study of nutrients – their nature, functions, interrelationships and utilization in the body, food sources, requirements and deficiencies. Laboratory experience includes use of dietary tools in the planning of nutritionally adequate meals.

Prerequisites: Basic Foods
Health Care with RLE
Human Anatomy and Physiology

Number of Units: 3 units (2 hours lecture and 3 hours laboratory per week)

Course Objectives:

1. Define and explain the common terms and basic concepts in Nutrition;
2. Discuss and trace the development of Nutrition as a science;
3. Identify and explain the uses and functions of the basic tools in Nutrition
4. Explain energy metabolism and factors affecting energy requirements;
5. Identify and relate the nutrients according to concentration and structure, essentiality, functions, food sources, symptoms of deficiency and excessive intake.
6. Discuss and illustrate the functions of water in body metabolism;
7. Explain and relate the nutrient interrelationships in terms of digestion, absorption and utilization of food;
8. Appreciate the concepts and principles of human nutrition in sustaining optimal growth and development of individuals.

Course Outline:

Topic	No. of Hours
Introduction	6
A. Course Objectives	
B. Definitions: Food, Health, Nutrition, Nutrient, Nutritionist-Dietitian, Nutritional Status, Malnutrition, Dietary Requirement, Dietary Allowance, Estimated Average Requirement, Adequate Intake, Upper Tolerable Limit, Recommended Nutrient Intakes, Clinical Nutrition,	
C. History of Nutrition from International and National point of view (People, time, events)	
D. The Philippine Nutrition Situation	
E. The Philippine Plan of Action for Nutrition (PPAN)	
Basic concepts in nutrition	2
A. Various disciplines related to nutrition	
B. The role of nutrition in the development of a healthy mind and body	
Basic Tools of Nutrition	4
A. Description, Uses and Interpretation of:	
1. Basic Food Guides, Food Pyramids and Dietary Guidelines	
2. Recommended Nutrient Intakes	

3. Food Exchange Lists
4. Food Composition Tables
5. Nutrition Labels

B. Computer software in Nutrition

Energy Balance 4

A. Terminology (Energy, Calorie, Calorimeter, Metabolism, Basal metabolism, Basal metabolic rate)
B. Measurement of Energy Exchange of the body (Direct calorimetry; Indirect calorimetry)
C. Basal Metabolism Factors
D. Factors influencing the total energy requirement
E. Effects of energy imbalance

The Macronutrients or Energy-Giving Nutrients: 4

A. Carbohydrate, Protein and Fat will be discussed with respect to
1. Terminology
2. Classifications
3. Functions
4. Food sources
5. Digestion, absorption
6. Human requirements and RNI
7. Effects of excessive and deficient intakes

The Micronutrients: Vitamins and Minerals 6

A. Water soluble and fat-soluble vitamins will be discussed with respect to:
1. Terminology
2. Classification
3. Functions
4. Food sources
5. Digestion, absorption and metabolism
6. Human requirements and RNI
7. Effects of excessive and deficient intakes

B. Major minerals and trace elements will be discussed with respect to:
1. Functions and importance
2. Digestion, absorption and metabolism
3. Effects of deficiency and toxicity
4. Food sources and RNI

Water and Electrolyte Balance 2

A. Role of water in the body
B. Forces Influencing water distribution in the body
C. Role of electrolytes in the body and RNI
D. Maintenance of water and electrolytes balance.

Special Topics in Nutrition 4

A. Non Nutritional Components of Food &Other Biologically Active Substances
1.Phytochemicals, their sources and functions
B. Dental Nutrition

References:

Recommended Basic References:

- Claudio, Virginia S., Ofelia M. Dirige and Adela Jamorabo-Ruiz, 2002 (updated 2004). *Basic Nutrition for Filipinos 5th edition.* Merriam & Webster Bookstore Inc.
- Mahan, L. Kathleen and S. Escott-Stump. 2005. *Krause's Food, Nutrition, and Diet Therapy 11th ed.* St. Louis, MO: Saunders/Elsevier Co.
- Whitney, Cataldo and Rolfes. 2002. *Understanding Nutrition.* Saunders Publishing

Suggested Additional References:

- Boyle, M.A. and S.L. Anderson. 2004. *Personal Nutrition 5th ed.* Belmont, CA: Wadsworth/Thomson Learning.
- DeWitt, M. 2005. *Human Nutrition.* Bel Air, MD: Academx Publ. Services, Inc.
- Garrow, J.S. and WPT James 2000. *Human Nutrition and Dietetics.* 10th ed. Orlando, FL: Harcourt Health Sciences Publ. Co.
- Grosvenor, B.M. and A. L. Smolin. 2002. *Nutrition for Science and Life.* Fort Worth, TX: Harcourt College Publ. Co.
- Insel, Paul, R. Elaine Turner and Don Ross. 2006. *Discovering Nutrition 2nd ed.* Sadbury, MA: Jones & Bartlett Publ. Co.
- McLaren, Donald S., 1992. *A Colour Atlas and Text of Diet-Related Disorders 2E.* Wolfe Publishing Ltd.
- Sizer, Frances and Eleanor Whitney *Nutrition Concepts and Controversies 9th edition*, 2003. Wadsworth Thomson Learning.
- Wardlaw, G. 2005. *Contemporary Nutrition 6th ed.* NYC, NY: McGraw-Hill.
- Wardlaw, Gordon M. and Margaret Kessel. 2002. *Perspectives in Nutrition 5th edition* McGraw-Hill Higher Education International Edition.
- Williams, S.R. 2001. *Basic Nutrition and Diet Therapy.* 11th ed. Orlando, FL: Harcourt Health Sciences Publishing Co.
- Websites (Instructor's recommendations)

Course Requirements*:

Quizzes and long tests
Recitation/Reports
Assignments
Periodic exams

***Course Requirements and Grading system:**
(subject to modification based on university/ college policy

Lecture: 60%of course grade

Recitation & Attendance	30%
3 exams	60%
Assignments	10%
	100%

Laboratory: 40% of course grade

Assignments/Quizzes	20%
Evaluation sheets	40%
Laboratory performance	
Peer evaluation	20%
Teacher evaluation	20%
Total	100%

Class Policies

Instructor Information:
Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **BASIC NUTRITION (Laboratory)**

Course Description:
The course provide experiences in the use of basic tools in Nutrition; techniques in the planning and evaluation of nutritionally adequate meals at different economic levels, estimation of nutrient content of food based on FCT and FEL, and discussions on basic nutrition issues.

Prerequisites: Basic Foods
Health Care with RLE
Human Anatomy and Physiology

Number of Units: 3 units (2 hours lecture and 3 hours laboratory per week)

Course Objectives:

1. Explain the uses and application of basic tools in nutrition
2. Discuss the components and procedures of planning balanced diets.
3. Estimate energy and nutrient content of food.
4. Determine macronutrient and micronutrient allowances in healthy individuals
5. Develop ability to accurately interpret nutrition concepts.

Course Outline:

Topic	No. of Hours
Introduction A. Course Objectives B. Laboratory Procedures and Requirements	3
Exercises on the determinants of food eating habits, reliable sources of nutrition information, and proper interpretation of nutrition information	6
Application in the use of basic tools in the study on nutrition	9
Exercises on the calculations of energy intakes and food energy content	6
Determining carbohydrate, protein and fat in foods and estimating intakes	6
Determining vitamin contents in foods and proper conversions	6
Determining the mineral contents in foods	6
Estimating water intake of individuals according to age	3
Integration Period	3

Laboratory Exercises:

1. Basic Nutrition Information
2. Food Habits and Preferences
3. Use of Diet Guides
4. Estimating Total Energy Allowance (TEA)
5. Caloric Content of Foods
6. Protein Content of Foods
7. Vitamin Content of Foods
8. Mineral Content of Foods

References

Recommended Basic References:

- Claudio, Virginia S., Ofelia M. Dirige and Adela Jamorabo-Ruiz, 2002 (updated 2004). *Basic Nutrition for Filipinos 5th edition.* Merriam & Webster Bookstore Inc.
- FNRI-DOST. 1997. *The Philippine Food Composition Tables.*
- FNRI-DOST. 1994. *Food Exchange Lists for Meal Planning.*
- FNRI-DOST. 2000. *Nutritional Guidelines for Filipinos.*
- FNRI-DOST. 2002. *Recommended Energy and Nutrient Intakes: Philippines*
- McLaren, Donald S., 1992. *A Colour Atlas and Text of Diet-Related Disorders 2E.* Wolfe Publishing Ltd.
- Nutrition Center of the Philippines. *Vitamin A Deficiency, Amino and Goiter.* VADAG Control Handbook 2E
- Sizer, Frances and Eleanor Whitney *Nutrition Concepts and Controversies 9th edition*, 2003. Wadsworth Thomson Learning.

Course Requirements:

Assignments/Quizzes
Evaluation sheets
Laboratory performance
Reports
Periodic exams

Class Policies

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: NUTRITION IN THE LIFE STAGES (Lecture/Laboratory)

Course Description:

The course discusses the role of food, nutrition and nutritional requirements in growth and development, and the maintenance of health throughout the lifespan. Emphasis is given the nutritional needs and dietary planning for the vulnerable groups, their common nutritional problems and appropriate management.

Prerequisites: Basic Nutrition
Health Care with RLE

Number of Units: 3 units (2 hours lecture, 3 hours laboratory)
Duration: 18 weeks (36 hours lecture; 54 hours laboratory)

Course objectives:

Lecture:

1. Describe the physiological changes that occur on the different stages of life that affect the need for and utilization of nutrients.
2. Identify the nutritional needs throughout life and the factors influencing/modifying these needs.
3. Explain the influence of non-nutritional factors on the eating behavior and nutritional status of the different age and physical groups.
4. Recognize the signs and symptoms of poor nutriture and provide ways of preventing/correcting these nutritional problems.
5. Modify normal diets/plan meals to meet the special circumstances of growth, reproduction, lactation and old age.
6. Explain the importance of good nutriture and demonstrate commitment to the achievement of good nutrition and health.

Laboratory:

1. Plan, prepare and evaluate diets for the different age groups using the different tools in nutrition.
2. Plan, compute, prepare and serve adequate meals for pregnancy and lactation, for children, adolescents and older persons by applying the principles of meal planning
3. Develop and demonstrate nutrition-related activities for specific age groups.

Course Outline:

Topic	No. of Hours
Introduction 1. Role of nutrition in growth, development and aging 2. Principles and concepts in growth, development and aging	2
Review of Nutrition and Physiology 1. Concepts in Nutrition 2. Physiologic Principles	2
Pregnancy 1. Physiological changes of pregnancy 2. Maternal physiological adjustments	4

3. Nutritional requirements, meeting nutrient needs, dietary management
4. Problems of pregnancy with nutritional implications
5. Effects of maternal (environmental) agents of pregnancy i.e., alcohol, smoking, drugs
6. Relationship between maternal and fetal malnutrition

Lactation 4

1. Physiological changes – development of the breast
2. The process of lactation
3. Factors associated with successful milk production and milk secretion
4. Nutritional requirements, meeting nutrient needs
5. Maternal diet/nutrition and breast milk composition
6. Breast feeding and maternal health

Infancy 4

1. Adjustments made by the newborn
2. Growth and development during infancy
3. Nutritional requirements
4. Feeding the infant: breast feeding and formula feeding
5. Introduction of solid foods
6. Common nutritional problems and dietary management

Pre-school years and the middle childhood 6
(Toddlers, Preschoolers and School Children)

1. Physical and mental growth, physiological development
2. Psychosocial and biological interaction
3. Nutritional requirements, meeting nutrient needs
4. Problems in feeding
5. Common nutritional diseases and dietary management

Adolescence 4

1. Growth, development and maturation
2. Psychosocial and biological interaction
3. Nutritional requirements, meeting nutrient needs
4. Feeding problems
5. Nutrition-related problems and disorders; dietary management
6. Nutrition and Sports

Adulthood 2

1. Review of nutritional requirements of adults
2. Promotion of wellness and maintenance of good health

Older Persons 4

1. Life expectancy
2. The aging process; theories of aging
3. Physiological changes
4. Factors affecting food intake; nutrient utilization and nutrient needs
5. Nutritional requirements; meeting nutritional needs
6. Nutrition-related problems; diseases, dietary management
7. Other considerations in caring for older persons

Suggested Laboratory Activities:

1. Review and application of the basic tools in Nutrition
2. Evaluation of nutritional status
3. Planning for a Normal diet
4. Planning, preparing and evaluating diets for pregnant and lactating women
5. Planning, preparing and evaluating diets for infants
6. Planning, preparing and evaluating diets for preschool and school children
7. Planning, preparing and evaluating diets for adolescents
8. Packed lunches and snacks appropriate for children and adolescents
9. Planning, preparing and evaluating diets for older persons
10. Case study research

References:

Recommended Basic References

- Cameron, Margaret and Yngve Hofvander. *Manual of Feeding Infants and Young Children.* 2nd ed. New York: United Nations, 1976
- Claudio, Virginia S., Ofelia M. Dirige and Adela Jamorabo-Ruiz, 2002 (updated 2004). *Basic Nutrition for Filipinos 5th edition.* Merriam & Webster Bookstore Inc.
- Department of Health. 1991. *Helping Mother How to Breastfeed.*
- Mahan, L. Kathleen and S. Escott-Stump. 2005. *Krause's Food, Nutrition, and Diet Therapy 11th ed.* St. Louis, MO: Saunders/Elsevier Co.
- Panlasigui, L.N. 2005. *Nutrition and Physical Fitness Manual.* Manila, RP: Merriam Webster Bookstore, Inc.
- Querubin, Milagros P. and Leonora N. Panlasigui, *Nutrition in the Life Cycle Laboratory Manual.* 1994. Merriam & Webster Bookstore, Inc. Manila Philippines.
- Whitney, E., Cataldo, C., and Rolfes, S., 2002. *Understanding Nutrition.* Saunders Publishing

Suggested Additional References:

- American Dietetic Association's Practice Group: *Sports, Cardiovascular and Wellness Nutritionists.* 2006. *Sports Nutrition: A Practical Manual for Professionals 4th ed.* Chicago, IL: ADA
- Boyle, M.A. and S.L. Anderson. 2004. *Personal Nutrition 5th ed.* Belmont, CA: Wadsworth/Thomson Learning.
- Brown, Judith. 2005. *Nutrition throughout the Life Cycle 2nd ed.* Belmont, CA: Wadsworth Co.
- Grosvenor, B.M. and A. L. Smolin. 2002. *Nutrition for Science and Life.* Fort Worth, TX: Harcourt College Publ. Co.
- Hedrick, H. 2005. *Nutrition for Sports and Fitness.* Sadbury, MA: Jones & Bartlett Publ, Inc.
- Insel, Paul, R. Elaine Turner and Don Ross, 2006. *Discovering Nutrition 2nd ed.* Sadbury, MA: Jones & Bartlett Publ. Co.
- Mahan, L. Kathleen and S. Escott-Stump. 2005. *Krause's Food, Nutrition, and Diet Therapy 11th ed.* St. Louis, MO: Saunders/Elsevier Co.

- Mann, Jim and A. Stewart Truswell (editors). 1998. *Essentials of Human Nutrition.* Oxford University Press.
- McArdle, W., F.I. Katch and V.L. Katch. 2005. *Sports Nutrition and Exercise.* Philadelphia, PA: Lippincott Williams and Wilkins.
- McLaren, Donald S., 1992. *A Colour Atlas and Text of Diet-Related Disorders 2E.* Wolfe Publishing Ltd.
- Rosenbloom, C. A. 2000. *Sports Nutrition.* Chicago, IL: ADA Publications.
- Sizer, Frances and Eleanor Whitney *Nutrition Concepts and Controversies 9th edition*, 2003. Wadsworth Thomson Learning.
- Wardlaw, G. 2005. *Contemporary Nutrition 6th ed.* NYC, NY: McGraw-Hill.
- Wardlaw, Gordon M. and Margaret Kessel. 2002. *Perspectives in Nutrition 5th edition* McGraw-Hill Higher Education International Edition.
- Williams, S.R. 2001. *Basic Nutrition and Diet Therapy 11th ed.* Orlando, FL: Harcourt Health Sciences Publishing Co.
- Williams, S. and E. Schlenker. 2003. *Essentials of Nutrition and Diet Therapy 8th ed.* St. Louis, MO: Mosby, Inc.
- Wolinsky, I. and J. Driskill (eds.). 2001. *Nutrition Applications in Exercise and Sports.* Boca Raton, FL: CRC Press.
- Worthington-Roberts, Bonnie S and Sue Rodwell Williams, 2000. *Nutrition Throughout the Life Cycle 4th ed.* Mc Graw-Hill international Edition

Course Requirements and Grading system: (subject to modification based on university/ college policy

Example:

Lecture: 60%of course grade

Recitation	30%
3 exams	60%
Assignments	10%
	100%

Laboratory: 40% of course grade

Assignments/Quizzes	20%
Evaluation sheets	40%
Laboratory performance	
Peer evaluation	20%
Teacher evaluation	20%
Total	100%

Class policies:

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **ASSESSMENT OF NUTRITIONAL STATUS**

Description:

The principles and methods of measuring and evaluating the nutritional status of individuals and populations groups both in clinical and public health setting are discussed in this course.

Laboratory experience will focus on anthropometric and dietary methods of nutritional assessment

Number of Units: 3 units (2 hours lecture and 3 hours laboratory per week)
Prerequisite: Nutrition in the Life Cycle

Course Objectives:

Lecture:

1. Define the relevant terms used in the assessment of nutritional status;
2. Discuss the determinants of nutritional status of individuals and population groups;
3. Describe the nutritional status of Filipinos based on the results of the National Nutrition Survey;
4. Discuss the direct and indirect methods of assessing nutritional status in terms of:
    - Essential Features
    - Steps and procedures involved
    - Reference Standards and Cut-off points
    - Advantages and Disadvantages/limitations
5. Correctly apply the different reference standards, tools and cut-off points used in nutritional assessment;
6. Conduct actual nutrition assessment to demonstrate proper use of an anthropometric and dietary methods and interpretation of results;
7. Select appropriate method and reference standards to assess the nutritional status of adolescents, elderly and pregnant women;
8. Formulate a nutritional assessment system appropriate in a clinical setting;

Laboratory:

1. Use various tools and standards in assessing nutritional status;
2. Demonstrate proper use of anthropometric and dietary methods;
3. Interpret hypothetically generated anthropometric, dietary, clinical and biochemical data;
4. Analyze hypothetical anthropometric and dietary data.

Course Outline:

Topic	No. of Hours
Overview of the course 1. Objectives and scope of the course 2. Course requirements and class policies	2
Definition of terms relevant to nutritional assessment 1. Overview of nutritional assessment 2. Purpose of nutritional assessment 3. Forms and uses of nutritional assessment systems	2

a. Nutrition screening
b. Nutrition survey
c. Nutrition surveillance

4. Introduction to the different methods of nutritional assessment
   a. Direct Methods
   b. Indirect Methods
5. Pathogenesis of the Development of Nutritional deficiency and appropriate method of detecting the condition

National Nutrition Survey of the Philippines 2

1. Objectives, coverage and components of the survey
2. Highlights of results

Different Methods and procedures used in nutritional assessment in terms of rationale, procedure, indices derived, reference standards used, cut-off points used in interpreting results, advantages and limitations

Nutritional Anthropometry 6

1. Weight Measurements
2. Linear Measurements
3. Soft Tissues measurements

Dietary Assessment 6

1. National Level
   1.1 Food Balance Sheet
2. Household Level
   2.1 Food Inventory
   2.2 Food Accounts
3. Individual level
   3.1 Quantitative Methods
      3.1.1 24-hour food recall
      3.1.2 Food Record
      3.1.3 Food weighing
   3.2 Qualitative Methods
      3.2.1 Food frequency
      3.2.2 Diet History
4. Validity, reliability and objectivity of dietary methods 2

Clinical Assessment 2

1. Signs and symptoms of the different nutritional deficiencies
2. Guide to interpretation of clinical signs of malnutrition

Biochemical and Biophysical Assessment 2

1. Appropriate biochemical tests to detect subclinical nutrient deficiencies
2. Basic considerations in conducting biochemical tests
3. Guidelines in collection of samples and specimens
4. Interpretation of results of biochemical tests to detect subclinical nutrient deficiencies

Ecological Assessment 2

1. Vital health statistics
2. Socio-economic information

3. Rapid assessment methods

Nutrition Survey: an overview 1. Objectives 2. Steps in planning nutrition survey	2
Nutritional assessment system in a clinical setting	2
Nutritional assessment of individuals in varied physiological conditions 1. Adolescents 2. Elderly 3. Pregnant Women	2

References:

Recommended Basic References:

- FNRI Committee on Nutrition Surveys. *Manual on Instructions for Nutritional Surveys,* Manila Philippines.
- FNRI-DOST *Nutrition Facts and Figures, 2000.*
- FNRI-DOST, *Nutrition Facts and Figures-Supplement.* 2002
- Gibson RS. 2004. *Principles of Nutrition Assessment 2nd ed.* Oxford University Press, New York
- Jelliffe DB. 1985.*The Assessment of the Nutritional Status of the Community,* World Health Organization, Geneva,

Suggested Additional References:

- Beghin et al. 1988. *A Guide to Nutritional Assessment,* WHO Geneva.
- Charney, P. and A. Malone. 2004. *ADA Pocket Guide to Nutrition Assessment.* Chicago, IL; ADA.
- Dunn, JT and Van der Haar F. *A Practical Guide to the Correction of Iodine Deficiency, International Council for Control of Iodine Deficiency Disorders, Netherlands, 1990.*
- FAO. Conducting Small-scale Surveys: A Field Manual, Food and Agriculture Organization, Rome 1990.
- Gillespie S and Johnston JL. 1998. *Expert Consultation on Anemia Determinants and Interventions, The Micronutient Initiative.*
- Lee RH and Nieman DC. 2003. *Nutritional Assessment,* Brown and Benchmark.
- NCP Slides on Iron Deficiency Anemia
- NCP Slides on Vitamin A Deficiency
- NCP Slides on Iodine Deficiency Disorder
- Simko MD, Coell C, and Gilbride JA. 1984. *Nutrition Assessment: A Comprehensive Guide for Planning Intervention,* An Aspen Publication, Rockville, Maryland,
- WHO/UNICEF. *Indicators for Assessing Vitamin A Deficiency and Their Application in Monitoring and Evaluating Intervention Programmes: A Report to the WHO/ UNICEF Consultation,* Geneva, Switzerland, November 1992.

Course Requirements and Grading System:
(subject to modification based on university/ college policy

Lecture: 60%of course grade	
Recitation/Report	20%
Journal Patrol	10%
3 exams	60%
Assignments	10%
	100%

Laboratory: 40% of course grade	
Laboratory Reports	60%
Assignments/Quizzes	20%
Evaluation sheets	40%
Laboratory performance	
Peer evaluation	10%
Teacher evaluation	10%
Total	100%

Class Policies

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: PUBLIC HEALTH NUTRITION

Course Description:

The course discusses the ecology of nutrition. It deals with the theories, principles and methods of community diagnosis and management of nutrition programs.

Number of Units: 3 units (3 hours lecture per week)

Prerequisite: Assessment of Nutritional Status

Course Objectives:

1. Discuss the scope and focus of public health nutrition.
2. Identify the functions and characteristics of an effective public health nutritionist.
3. Discuss the nature, magnitude and determinants of the nutrition problems of the Philippines.
4. Discuss the principles, objectives and importance of program planning and management.
5. Identify and discuss the steps in nutrition program planning and management.
6. Determine and apply the functions of management in nutrition program with emphasis on leadership qualities.
7. Discuss the Philippine Plan Action for Nutrition (PPAN) as an example of National Nutrition Program
8. Explain the salient provisions of laws/legislations relevant to public health nutrition.

Course Outline:

Topic	No of Hours
Introduction	6
1. Overview of the Course	
2. Requirements and expectations	
3. Review of Nutritional Assessment	
4. Public Health Nutrition: Definition of Terms and General Concepts	
5. Functions and Characteristics of an Effective Public Health Nutritionist	
5.1 *Professional Ethics	
5.2 Virtues of the Health Care Provider	
5.2.1 Virtues Necessary for a Health Care Provider	
5.2.2 Values and integrity in health care	
Ecology of Nutrition	6
1. Determinants of malnutrition	
2. Pathogenesis of Nutritional Deficiency	
3. Causal Framework of Malnutrition	
4. Effects of Malnutrition	
5. Malnutrition and infection	
Emerging Nutrition problems of Public Health Significance	

* From Health Ethics Course

Topic	No of Hours
The Nutrition Situation 1. The Philippine Scenario • Results of the 5th National Nutrition Survey 2. Malnutrition Worldwide: A Global Nutrition Challenge	3
The Philippine Nutrition Program: Retrospective Review Nutritional Plan Action foe Nutrition The Philippine Plan of Action for Nutrition (PPAN) Legislation in Public Health Nutrition	6
Policy, Planning and Program Management 1. Definition of Terms 2. Importance of Planning and Management 3. Approaches to Food and Nutrition Planning	3
Steps in Food and Nutrition Program Planning and Management 1. Assessing the situation and Defining the Problem 2. Goals and Objectives Setting 3. Selecting Strategies and interventions 4. Formulating a Food and Nutrition program Plan 5. Program Implementation and Management 6. Monitoring and Evaluation	15
Community Organizing 1. Principles, steps and types of Community Organizing 2. Strategies in Eliciting and Sustaining Community Participation 3. Issues in Community Organizing	3
Nutrition Advocacy and Social Mobilization 1. Concepts, Elements and Strategies 2. Nutrition Networking	3
Nutrition Concerns in Local Development 1. Nutrition in Development Approach 2. Integrating Nutrition Concerns in Local Development Plan	3
Supervision and Leadership 1. Major Roles of Supervision 2. Leadership Qualities and Characteristics of a Good Leader 3. Steps in making Effective Supervision	3

References:

Recommended Basic References

- Boyle, M. A. and D. Holben. 2006. *Community Nutrition in Action 4th ed.* Belmont, CA: Wadsworth/Thomson Learning.
- Eusebio et al. 1999. *Food and Nutrition Planning and Management.* RTP-FNP, UPLB-CHE.
- NNC, 2005. *Manual of Nutrition Program Management.*

Suggested Additional References

- Bagchi, K. 1990. *Guidelines for Management of Nutrition Programs.* WHO.
- Beghin et al. 1988. *A Guide to Nutritional Assessment*, WHO Geneva
- DILG. *The Local Government Code*
- Florencio, CA. 2004. *Nutrition in the Philippines.* Diliman, Quezon City. UP Press.
- FNRI. *Philippine Nutrition Facts and Figures*, FNRI-DOST, April 2001.
- NNC. *Philippine Plan of Action for Nutrition*, Latest Ed., Makati. NNC.
- NNC. *Medium Term Plan of Action for Nutrition*, Latest Ed., NNC Secretariat.
- NEDA. *Medium Term Development Plan of the Philippines.* NEDA, Philippines, 2004.
- Owen, A. et al. 1999. *Nutrition in the Community: The Art and Science of Delivering Services 4th ed.*1999. WCB/McGraw-Hill.
- Sizer, Frances and Eleanor Whitney *Nutrition Concepts and Controversies 9th edition*, 2003. Wadsworth Thomson Learning.
- WHO. *Emergency Feeding.* 2004

Course Requirements:

Quizzes and long tests
Recitation
Seatwork
Assignments
Evaluation sheets
Reports
Periodic exams

Class policies:

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **NUTRITION EDUCATION**

Course Description:

This course involves a study of the principles, teaching techniques and current trends applicable to the dissemination of nutrition information to individuals or groups at all levels. It includes practical training in the planning, implementation of nutrition education programs.

Number of Units: 3 units (2 hours lecture and 3 hours laboratory per week)

Prerequisites: Basic Foods, Basic Nutrition, Meal Management
Nutrition in the Life Cycle, Assessment of Nutritional Status,
Principles and Strategies of Teaching

Course Objectives:

Lecture

1. Relate nutrition education to the total nutrition program of the country;
2. State the important role of nutrition education in human development;
3. Identify the principles of teaching applied in nutrition education;
4. Identify the qualifications necessary for an effective nutrition educator;

Laboratory

1. Identify client groups for nutrition education and select appropriate content areas for client groups;
2. Prepare appropriate generalizations for specific groups;
3. Implement among the appropriate strategy/method of nutrition education for specific audience.
4. Evaluate on-going Nutrition Education activities/projects in a community.
5. Design, implement and evaluate an appropriate Nutrition Education program or activity.

Course Outline:

Topic	No. of Hours
1. Introduction	1
1. Course Objectives	
2. Overview of Nutrition Education	
2. Basic Concepts of Nutrition Education:	6
1. Definition of Terms: Health, Education, Nutrition, and Nutrition Education	
2. Role of Nutrition Education in Human Development	
3. Goals and Objectives of Nutrition Education	
4. Strategies and settings for Nutrition Education	
5. Opportunities and Challenges in Nutrition Education	
6. Qualities of a Nutrition Educator	
6.1 Personal Skills	
6.2 Technical Skills	
6.3 Communication Skills	
6.4 Professional Ethics	

* From Health Ethics Course

6.5 Virtues of the Health Care Provider*
6.5.1 Virtues Necessary for a Health Care Provider
6.5.2 Values and integrity in health care

7. Duties and Responsibilities of a nutrition educator
7.1 as an individual
7.2 as a member of the team
7.3 Professional Ethics*

Topic	No. of Hours
3. Behavior modification for Nutrition 1. Definition of Terms: Culture, Food Habits, Food Behavior, Food patterns 2. Factors that influence eating behavior 2.1 Biological Factors 2.2 Socioeconomic Factors 2.3 Psychological Factors 3. Principles of behavior modification 4. Stages in the process of change 5. Pointers in bringing about change 6. Ways to reduce resistance to change 7. Problems in promoting behavioral change	6
4. Principles of Teaching and Learning Applied to Nutrition Education 1. The Learning Process 2. Requisites to Learning 3. Principles of Learning 4. Aspects of Human personality involved in learning 5. Approaches to Nutrition Education 5.1 Social marketing 5.2 Social Mobilization 5.3 Advocacy 5.4 Community Participation 6. Principles of Successful Nutrition Education 6.1 Behavior-focused 6.2 Research-focused 6.3 Consumer-centered 7. Principles and purpose of teaching 8. The communication process	4
5. The Client Groups for Nutrition Education 1. Schools: Integrating Nutrition Education in the Curriculum for: Elementary, Secondary and Tertiary Level 2. Community: Purok and Barangay Level, Health Workers, Extension Workers 3. Hospitals and Clinics 4. Industry and Business 5. Non-Health Professionals 6. Family	3
6. Selection of Appropriate Generalizations and Subject Matter for	4

Client Groups

1. Consideration of Learner Needs and Interest
   - 1.1 Knowledge on Food and Nutrition
   - 1.2 Application of the knowledge skills to improve eating behavior and health conditions
   - 1.3 Considerations of attitudes and values influencing food acceptance/rejection
2. Developing Instructional Objectives
   - 2.1 Definition of Objectives
   - 2.2 Types of Objectives
   - 2.3 Preparation of objectives
   - 2.4 Use of Behavioral Objectives
3. Subject Matter for a Nutrition Course may be based on Identified Needs of Client Groups
   - 3.1 Nutritional Guidelines for Filipinos 2000
   - 3.2 Food management

7. The Teaching Method 5
   1. The meaning and importance of methods
   2. Factors that determine methods
   3. Characteristics of good teaching methods
   4. Approaches to methods/strategies of teaching
   5. Teaching aids
   6. The Communication process
      - 6.1 Purpose and function of communication
      - 6.2 Elements of the communication process
      - 6.3 Communication barriers
      - 6.4 Theories of communication
      - 6.5 Types of communication methods
      - 6.6 Development communication

8. Evaluation as an Integral Part of teaching and Interpreting Results 3
   1. Importance of evaluation
   2. Assessment techniques
   3. Evaluation of teaching methods and Aids

9. Designing, implementing and Evaluating a School or Community Nutrition Education Program (Laboratory) 54
   1. Concepts and Principles of Planning a Nutrition Education Program
   2. Steps in Designing a School/Community Nutrition Education Program
      - 2.1 Situation Analysis
      - 2.2 Problems Definition
      - 2.3 Objective Setting
      - 2.4 Strategy Formulation
      - 2.5 Materials and Resources
      - 2.6 Work Schedule and Programming
      - 2.7 Allocation of resources
      - 2.8 Program Evaluation
   3. Implementation of the Program
      - 3.1 Management of resources, personnel, time, supplies and

materials
3.2 Record Keeping
3.3 Monitoring
4. Evaluation of the Nutrition Education program
4.1 Types of Evaluation
4.2 Conduct of Evaluation
4.3 Utilization and evaluation of data and Information
5. Development of Instructional Materials for Nutrition

References:

Recommended Basic References:

- Eppright et al. 1963. *Teaching Nutrition.* Iowa State University Press.
- Ritchie, JAS. 1972. *Learning Better Nutrition.* FAO Rome.

Suggested Additional References:

- AFIC Newsletters
- Gift, Helen 1972. *Nutrition Behavior and Change.*
- Jamorabo-Ruiz. 2005. *Nutrition Education.* PUP Sta. Mesa, Manila.

***Course Requirements and Grading System:**
(subject to modification based on university/ college policy

Lecture: 60%of course grade		Laboratory: 40% of course grade	
Recitation	30%	Assignments/Quizzes	20%
3 exams	60%	Evaluation sheets	40%
Assignments	10%	Laboratory performance	
	100%	Peer evaluation	20%
		Teacher evaluation	20%
		Total	100%

Class Policies

Instructor Information:
Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **NUTRITION THERAPY 1 (Lecture/Laboratory)**

Course Description:

The course deals with the principles and procedures on the use of food for therapeutic purposes in the management of persons suffering from a disease. Emphasis will be given to dietary modifications for various therapeutic requirements. Attention will also be given on the maintenance of proper nutrition. Medical and alternative therapies of disease conditions are discussed.

Number of Units: 3 units (2 hours lecture and 3 hours laboratory per week)

Prerequisites: Basic Nutrition
Meal Management
Nutrition in the Life Stages

Course Objectives:

Lecture

1. Explain the pathophysiology and effects of the disease on patient's nutritional status and the required dietary management;
2. Discuss and apply the principles involved in the dietary management of a patient's disease through –
    a. Correlating signs and symptoms of the disease with the dietary modification and the principles or rationale involved.
    b. Defining the nutritive requirements of the sick individual and the variations that may be imposed on food needs by the disease.
    c. Outlining a dietary program for this case.
    d. Predicting consequences of deviating from the diet.
3. Familiarize with the mechanics of diet counseling and appreciate the role of the nutritionist-dietitian in patient care.

Laboratory

1. Plan, prepare and evaluate different therapeutic diets in the management of established disease.
2. Modify diet of patient considering family traditions and values.
3. Discuss the mechanics and apply the principles of diet counseling.
4. Relate diagnostic procedures, medication and other forms of treatment to nutrition care.
5. Appreciate the contribution of nutrition to the overall care of the individuals with medical problems realizing that provision of quality and cost-effective nutritional care is a key role of a nutritionist-dietitian.

Course Outline:

Topic	No. of Hours
Overview of Nutrition Therapy 1. Definitions and concepts 1.1 Definition of health, ethics, Health Ethics, Bioethics 2. Principles of Nutrition Therapy 2.1. Medical Nutrition Therapy 2.2. Complementary and Alternative Therapies 3. Nutritional Care Process	4

3.1 The Basic Ethical Principle*s
- 3.1.1 Stewardship
- 3.1.2 Totality
- 3.1.3 Double Effect
- 3.1.4 Cooperation
- 3.1.5 Solidarity

3.2 Major Bioethical Principles
- 3.2.1 Respect for Person
- 3.2.2 Justice
- 3.2.3 The Inviolability of Life
- 3.2.4 Non-maleficence
- 3.2.5 Benificence

3.3 Analysis of a Bioethical Issues
3.4 Health Professional Relationships

4. Role of Nutritionist-Dietitian in Patient Care
   4.1 The Health Care Provider*
   4.2 The Job Description of Health Care Providers

Topic	No. of Hours
Nutrition in Febrile Conditions, Infections & Communicable Diseases	4

1. Infections
   - 1.1. Nutrition and Infection
   - 1.2. Consequences of Infections
   - 1.3. Nutritional Considerations
2. Fever
   - 2.1. Definition and types
   - 2.2. Metabolic changes
   - 2.3. Dietary Management
3. Pathophysiology and dietary management of:
   - 3.1. PTB
   - 3.2. Measles
   - 3.3. Poliomyelitis
   - 3.4. COPD
   - 3.5. Diphtheria
   - 3.6. Pertussis
   - 3.7. Rheumatic Heart Disease
   - 3.8. Typhoid fever
   - 3.9. Cholera
   - 3.10. Mumps
   - 3.11. Dengue
   - 3.12. Malaria
   - 3.13. Influenza

Nutrition Therapy in Surgical Condition and Burns	4

1. Pre-operative and post-operative nutritional needs
   Progression of the Diet
   Special nutrition support:
   a. Enteral
   b. Parenteral
2. Dietary Management in Specific Surgical Conditions
   Surgery of the mouth and throat
   Surgery of the esophagus and stomach
   Surgery of the large intestine, small intestine and accessory organs
3. Dietary Management in Burns, Fractures and Mechanical Trauma

Nutrition Therapy in Disorders of the GI Tract and Accessory Organs	4

1. Review of normal anatomy and physiology of the GI tract and accessory organs

* From Health Ethics Course

2. Factors that modify acid secretion, GI motility and tone
3. Dietary considerations
4. Pathophysiology and dietary management of specific disorders of the
   - 4.1. Mouth
   - 4.2. Esophagus
   - 4.3. Stomach
   - 4.4. Small intestine
   - 4.5. Large intestines
   - 4.6. Liver
   - 4.7. Gallbladder
   - 4.8. Pancreas

Nutrition Therapy in Metabolic Disorders **12**

1. Review of energy balance and its control
2. Overweight and Obesity
   - Definitions, etiology, classification
   - Methods of assessment
   - Health implications
   - Management: dietary; nondietary
3. Underweight
   - Etiology and health hazards
   - Dietary management
4. Primary Nutritional Disease
   - Starvation
   - Common nutritional deficiency diseases
5. Review of physiology of the Endocrine System
6. Diabetes Mellitus
   1. Classification
   2. Pathophysiology
   3. Management
      - Dietary Management
      - Insulin and Drug Therapy
      - Exercise
      - Alternative Therapies
   4. Complications and their dietary management
7. Other Metabolic Disorders
   1. Hypoglycemias
      - 1.1. Classification and Pathophysiology
      - 1.2. Management
   2. Addison's Disease and Cushing's Syndrome
      - 2.1. Pathophysiology
      - 2.2. Dietary management
   3. Hypothyroidism and hyperthyroidism
      - 3.1. Pathophysiology
      - 3.2. Dietary management
   4. Inborn Errors of Metabolism
      - 5.1. Etiology and Symptoms
      - 5.2. Dietary management

Nutrition Counseling and Documentation Review **4**

1. The nutritional care process
2. Documentation for continuous quality improvement
3. Diet counseling
4. The Job description of Health Care Providers*
5. Basic Ethical Principles*
   - 5.1 Stewardship
   - 5.2 Totality

5.3 Double Effect
5.4 Cooperation *
5.5 Solidarity

6. Major Bioethical Principles*
   6.1 Respect for Person
   6.2 Justice
   6.3 The Inviolability of Life
   6.4 Non-maleficence
   6.5 Benificence
7. Applied Health Ethics
   7.1 Informed Consent

Suggested Laboratory Exercises:

1. Dietary calculations of Normal and Therapeutic diets
2. Diets Modified in Consistency and Texture
3. Tube feeding Diets
4. Diets Modified in Caloric Content
5. Diets Modified in Protein and Purine Contents
6. Diets Modified in the Quality and Quantity of Fats
7. Diets Modified in the Quality and Quantity of Carbohydrates
8. Calculated Diets
9. Exercises on Diet Counseling

References:

Recommended Basic References

- Cataldo, Corinne B., L.K. DeBruyne and E.N. Whitney 2001. *Nutrition and Diet Therapy Principles and Practice. 6E.* West/Wadsworth Publishing Co.
- Jamorabo-Ruiz, Adela, Virginia S. Claudio and Esperanza de Castro. 2004. *Medical Nutrition Therapy for Filipinos.* Merriam & Webster Bookstore Inc., Manila, Philippines.
- Mahan, L. Kathleen and S. Escott-Stump. 2005. *Krause's Food, Nutrition, and Diet Therapy 11th ed.* St. Louis, MO: Saunders/Elsevier Co.
- Whitney, Eleanor N., Corrine B. Cataldo and Sharon R. Rolfes. 2003. *Understanding Clinical Nutrition.* West/Wadsworth Publishing Co., St. Paul. MN.

Suggested Additional References:

- Alpers, D.H., W.F. Stenson and D.M. Bier, 2002. *Manual of Nutritional Therapeutics 4th edition.* Lippincott, Williams and Wilkins, Philadelphia, USA
- *Compendium of Philippine Medicine Latest ed.*, Medicomm. Pacific, Inc.
- Coulston, Ann, Cheryl L. Rock and Elaine R. Monsen (editors), 2001.*Nutrition in the Prevention and Treatment of Disease.* Academic Press, USA
- Escott-Stump, Sylvia. *Nutrition and Diagnosis-Related Care 5th edition, 2002.* Lippincott, Williams and Wilkins, Philadelphia, USA

* From Health Ethics Course

- Geissler, W. 2005. *Human Nutrition and Dietetics*. NYC, NY: Elsevier-Health Sc. Div.
- Sizer, Frances and Eleanor Whitney *Nutrition Concepts and Controversies 9th edition*, 2003. Wadsworth Thomson Learning
- The American Dietetic Assoc. 2000. *Manual of Clinical Dietetics*. 6th ed. Chicago, IL; ADA Publications.
- Thomas, B. (ed.). 2001. *Manual of Dietetic Practice*. 3rd ed. Ames, IA: Iowa State Press.
- Williams, S.R. 2001. *Basic Nutrition and Diet Therapy 11th ed.* Orlando, FL: Harcourt Health Sciences Publishing Co.
- Zeman, Frances J., and D.M. Ney. 1996. *Application in Medical Nutrition Therapy 2E*. Prentice Hall, Inc. New Jersey.

Course Requirements and Grading system: (subject to modification based on university/ college policy

Example:

Lecture: 60%of course grade

Recitation	30%
3 exams	60%
Assignments	10%
	100%

Laboratory: 40% of course grade

Assignments/Quizzes	20%
Evaluation sheets	40%
Laboratory performance	
Peer evaluation	20%
Teacher evaluation	20%
Total	100%

Class policies:

Instructor Information:

Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title: **NUTRITION THERAPY 2 (Lecture/Laboratory)**

Course Description:

This course is a continuation of Nutrition Therapy 1. It emphasizes on the latest methods in the nutritional management of various clinical disorders, Medical and alternative therapies of disease conditions are discussed.

Laboratory experience will include the calculation, planning, preparation and evaluation of therapeutic diets, preparation of dietary materials and teaching plans for instructions as well as actual instruction of modified diets.

Number of Units: 3 units (2 hours lecture and 3 hours laboratory per week)

Prerequisites: Nutrition Therapy 1

Course Objectives:

Lecture

1. Explain the pathophysiology, the effects of the disease on patient's nutritional status and the required dietary management;
2. Discuss and apply the principles involved in the dietary management of a patient's disease through –
   2.1. Correlating signs and symptoms of the disease with the dietary modification and the principles or rationale involved.
   2.2. Defining the nutritive requirements of the sick individual and the variations that may be imposed on food needs by the disease.
   2.3. Outlining a dietary program for this case.
   2.4. Predicting consequences of deviating from the diet.
3. Conduct diet counseling and appreciate the role of the nutritionist-dietitian in patient care.
4. Appreciate the important function of nutrition in disease management, prevention and its overall impact on health care cost-containment;

Laboratory

1. Plan, prepare and evaluate different therapeutic diets in the management of established disease
2. Modify diet of patient considering family traditions and values.
3. Relate diagnostic procedures, medication and other forms of treatment to nutrition care
4. Apply the principles of diet counseling.
5. Perform case presentations and evaluation of prepared diets using well-planned and self-constructed visual aids.
6. Appreciate the contribution of nutrition to the overall care of the individuals with medical problems realizing that provision of quality and cost-effective nutritional care is a key role of a nutritionist-dietitian.

Course Outline:

Topic	No. of Hours
Introduction A. Review of Nutrition Therapy Principles	2
Nutrition Therapy in Cardiovascular Disorders A. Review of heart function and structure B. Circulation of the Blood C. Pathophysiology, dietary management and prevention of: Hypertension, Hyperlipidemias, Atherosclerosis, Cerebrovascular disease, Coronary heart disease: angina pectoris and myocardial infarction, Congestive heart failure, Cardiac surgery D. Other vascular disorders: phlebitis, varicosities	6
Nutrition Therapy in Diseases of the Kidney and Urinary Tract A. Review of anatomy and physiology of the kidneys	4

B. Pathophysiology, dietary management and prevention of:
Urinary tract infection, Renal calculi, Glomerulonephritis, Nephrotic syndrome,
Renal failure (Acute and Chronic), Renal dialysis, Renal transplantation

Nutrition in Cancer and HIV 2

A. Carcinogenesis and metabolic changes in cancer
B. Medical treatment modalities and dietary implications
C. Cancer prevention
D. Medical Treatment and Dietary Management for HIV

Nutrition in Diseases of the Blood 2

A. Nutrients required in blood formation
B. Anemias: Classification and causes, Dietary management, Prevention

Nutrition in Allergy and Skin Disorders 2

A. Food Sensitivity
1. Common Food Allergies (Media of induction; Specific dietary management)
2. Food Intolerances (Etiology; Dietary management)
B. Skin Diseases
1. Pathophysiology and dietary management of:
Acne, Psoriasis, Nutrient-related skin diseases

Nutrition Therapy in Diseases of the Musculoskeletal System 2

A. Pathophysiology, dietary management, and prevention of:
1. Arthritis (Osteoarthritis, Rheumatoid arthritis, Juvenile Rheumatoid Arthritis
2. Gout
3. Osteoporosis (Risk Factors, Management, Prevention)

Nutrition Therapy in Diseases of the Nervous System 6

A. Pathophysiology, dietary management, and prevention of:
1. Malnutrition-Induced Neurologic Disorders: Neuropathies; Wernicke and Korsakoff's syndrome
2. Developmental Disabilities: Cerebral palsy; Down syndrome; Fetal Alcohol Syndrome
3. Neuromuscular Disorder: Epilepsy
4. Progressive Neurologic Disorders: Alzheimer's disease, Parkinson's disease, Multiple Sclerosis, Meniere's syndrome, ALS or Lou Gehrig's Disease, Myasthenia Gravis
5. Psychiatric Disorders: Schizophrenia, Mood Disorders, Mental Illness
6. Eating Disorders: Anorexia nervosa, Bulimia nervosa, EDNOS
6. Alcoholism and substance abuse
7. Migraine headaches

Nutrition Counseling and Documentation 4

A. The nutritional care process
B. Documentation for continuous quality improvement
C. Diet counseling

Special Topics in Nutrition Therapy 2

A. Iatrogenic malnutrition
B. Complementary and Alternative Therapies

Suggested Laboratory Exercises:

1. Diets Modified in Cholesterol and Fatty acids
2. Diets Modified in Sodium Content
3. Diets for Renal Disorders
4. Vegetarian Diets
5. Diets for Complicated Diseases
6. Analysis of Food Product's Nutrition Information
7. Documentation of Nutritional Care (Charting)
8. Nutrition Counseling

References:

Recommended Basic References

- Cataldo, Corinne B., L.K. DeBruyne and E.N. Whitney 2001. *Nutrition and Diet Therapy Principles and Practice. 6E.* West/Wadsworth Publishing Co.
- Jamorabo-Ruiz, Adela, Virginia S. Claudio and Esperanza de Castro. 2004. *Medical Nutrition Therapy for Filipinos.* Merriam & Webster Bookstore Inc., Manila, Philippines.
- Mahan, L. Kathleen and S. Escott-Stump. 2005. *Krause's Food, Nutrition, and Diet Therapy 11th ed.* St. Louis, MO: Saunders/Elsevier Co.
- Whitney, Eleanor N., Corrine B. Cataldo and Sharon R. Rolfes. 2003. *Understanding Clinical Nutrition.* West/Wadsworth Publishing Co., St. Paul. MN.

Suggested Additional References:

- Alpers, D.H., W.F. Stenson and D.M. Bier, 2002. *Manual of Nutritional Therapeutics 4th edition.* Lippincott, Williams and Wilkins, Philadelphia, USA
- *Compendium of Philippine Medicine Latest ed.,* Medicomm. Pacific, Inc.
- Coulston, Ann, Cheryl L. Rock and Elaine R. Monsen (editors), 2001.*Nutrition in the Prevention and Treatment of Disease.* Academic Press, USA
- Escott-Stump, Sylvia. *Nutrition and Diagnosis-Related Care 5th edition, 2002.* Lippincott, Williams and Wilkins, Philadelphia, USA
- Geissler, W. 2005. *Human Nutrition and Dietetics.* NYC, NY: Elsevier-Health Sc. Div.
- Sizer, Frances and Eleanor Whitney *Nutrition Concepts and Controversies 9th edition,* 2003. Wadsworth Thomson Learning
- The American Dietetic Assoc. 2000. *Manual of Clinical Dietetics.* 6th ed. Chicago, IL; ADA Publications.
- Thomas, B. (ed.). 2001. *Manual of Dietetic Practice.* 3rd ed. Ames, IA: Iowa State Press.
- Williams, S.R. 2001. *Basic Nutrition and Diet Therapy 11th ed.* Orlando, FL: Harcourt Health Sciences Publishing Co.
- Zeman, Frances J., and D.M. Ney. 1996. *Application in Medical Nutrition Therapy 2E.* Prentice Hall, Inc. New Jersey.

Course Requirements and Grading System:
(subject to modification based on university/ college policy

Example:

Lecture: 60%of course grade	
Recitation	30%
3 exams	60%
Assignments	10%
	100%

Laboratory: 40% of course grade	
Assignments/Quizzes	20%
Evaluation sheets	40%
Laboratory performance	
Peer evaluation	20%
Teacher evaluation	20%
Total	100%

Class policies:

Instructor Information:
Name of Faculty:
Consultation hours/ days:
Consultation office:
Contact No./ e-mail address

Course Title **COMMUNITY NUTRITION PRACTICUM**

Course Description:

The Community Nutrition Practicum is a supervised) practical application of principles and theories in food and nutrition in a community setting through organized community efforts.

Prerequisite: The Community Nutrition Practicum is to be taken during the last semester of the BSND Curriculum upon the completion of all professional courses.

Number of Units: 5 units (250 hours)

Course Objectives:

Students should gain knowledge; develop positive attitude and skills in applying theories into practical situations in managing community-based nutrition programs, projects and activities within the framework of the local nutrition and development plan.

Specific Objectives:

The student should be able to:

1. Identify the nature and magnitude of malnutrition in the community and explain its causes and possible consequences;
2. Assist in actual planning;
3. Organize and mobilize the community to participate actively in efforts for nutrition improvement; and
4. Generate or mobilize human, material and financial resources from government and non-government organization for selected food and nutrition programs, projects and activities.

PRACTICUM REQUIREMENTS

1. Students are required to stay in the community within the practicum period with one day off per week.
2. Submission of the student's pledge, consent of parents/guardians and student's waiver prior the practicum.
3. Secure group insurance.
4. Submission of team's framework and operational plan prior practicum.
5. Regular submission of weekly plan activities, weekly accomplishment reports and individual diary.
6. Regular attendance and participation in the mini-training, planning workshop and scheduled team activities.

PHASES OF THE FIELD PRACTICUM

A. Pre-practicum Phase

1. Assignment of faculty-in-charge and grouping of students.
2. Consultation meeting with the Mayor and the Municipal Nutrition Committee and /or Municipal Technical Action Team.

3. Formalizing the request for the practicum barangays.
4. Courtesy call and ocular visit to the practicum barangays
5. Preparation for the mini-training of the practicum students
6. Mini-training
7. Planning workshop with the municipal develop agencies and barangay leaders

B. Practicum Proper

1. Orientation meeting and presentation of team operational plans
2. Implementation of planned activities.
3. Mid-Assessment
4. Implementation of Planned Activities
5. Closing ceremonies
6. Post Assessment

C. Post Practicum

1. Evaluation of the practicum
2. Submission of course requirements
   a. Three (3) copies of the practicum
   b. Individual diary of students
   c. File copy of the memorandum of agreement
   d. Self and Peer evaluation

3. Preparation of Student's grade

Major Activities	No. of Days
Orientation	1
Community Organization/Social Preparation	3
Community Diagnosis/Nutritional Assessment	5
Program Planning	5
Training of Barangay/Implementors/Leaders	3
Implementation/Supervision	15
Monitoring Evaluation/Reporting	4
	36 days

Course Outline	Time Allotment
I. Orientation/Overview	1 day
Objectives	
• Rationale	
• Mechanics/Requirements/Responsibilities	
• Strategies/Approaches	
• Time Table	
• Student's Expectation	
II. A. Community Organization	3 days
• PPAN at national, regional provincial, municipal and barangay levels	
• Structure	
• Programs/Services	
• Resources	
• Potentials	

B. Analysis of Municipal/Barangay Nutrition Program
- Resources/Agencies
- Programs/Services

C. Social Preparation
- Social Values and Orientation
- Establishing Linkage (Communication, Personal Contact, Inter-Agencies (Tapping)

III. Community Diagnosis and Nutrition Assessment
- A. Data gathering and Interpretation — 1 day
- B. Nutritional Assessment — 4 days
  1. Clinical Signs
  2. Anthropometric Measurements
  3. Degrees of Malnutrition/Levels of Nutritional Status
  4. Dietary Survey (24 hr. food recall)
- C. Interpretation of Vital Statistics in Assessment of Nutritional Status
  1. Morbidity
  2. Mortality

IV. Barangay Program Planning and Management — 1 day
- A. Nutrition Problem based on the result of community diagnosis & causes
  1. hygiene and sanitation
  2. lack of nutrition information
  3. poverty
  4. others — 2 days
- B. Available Resources
  1. Human (Existing organization and agency, Potential leaders)
  2. Materials (Facilities, tools and equipments)
  3. Possible Fund Resources — 3 days
- C. Priority Targets
- D. Leadership training
  - Training on the role in planning and implementation of Barangay Nutrition Program
- E. Program Planning — 2 days
- F. Implementation, Prioritization

Methodologies/Strategies according to objectives:

1. Presentation/Discussion
   Brainstorming/Listing Validation of Expectations

2. Courtesy Call on Barangay Captain to Discuss Structure at Barangay Level
   Observation of Barangay Resources
   Agency Resource Persons to Present/Discuss Program/ Services Role Identification
   Lecture/Discussion by local Resource Person
   Lecturette

Pre-management Activities
Courtesy Calls
Case Follow-up

3. Consultations with Different Agencies Concerned/Gathering of Available Data
   Data Gathering on Assigned Families
   Identification of Clinical Signs
   Actual Weight/Height Taking and Interpretation into Nutritional Status
   Conduct Household Survey
   Analysis of A Given Data

4. Diet of Priority Problems/Validation by the Community
   List of Resources
   Listing Priority Targets
   Identification of potential Leaders
   Listing of the roles in the Barangay Nutrition Planning and Implementation
   Mini/Micro Barangay Plan
   Involve one Community leader plan for conduct at least 1 nutrition class.
   Refer health problems to health center/authorities/do follow-ups
   Initiate setting up of at least a model house/community garden. Assist in setting up a workable food assistance scheme for agents

5. Weekly reports
   Diary Account
   Documentation of Activities (pictorial and written)
   Weekly reports/terminal reports
   Progress Reports in activities/targets
   Pre and Post Evaluation Report

Teaching Aids
   Course Syllabus
   Brown paper/pentel pen
   Incidence report/case report
   Barangay Profile
      - Map
      - Nutrition Program Activities
      - Organizational Structure
   Blackboard, chalk, paper, pentel, masking tape
   Flip chart
   Fact Sheets, report
   Survey Forms or scale
   Barangay plan form
   Lesson Plan
   Monitoring Forms
   Weight Charts

Course Requirements

I. Compliance to Assignments/Requirements	15 %
II. Personality and Performance	40%
III. Quality of Performance	25%

IV. Group/Peer rating		20%
	Total	**100 %**

Course Title **HOSPITAL DIETETICS PRACTICUM**

Course Description:

The Hospital Dietetics Practicum is a supervised practical application of principles and theories in nutrition and dietetics in a hospital setting.

Prerequisites: The Hospital Practicum is to be taken during the last semester of the BSND curriculum upon the completion of all professional courses.

Number of Units: 4 units (200 hours)

Course Objectives:

General Objective: To provide the students with supervised practical experiences in the administrative and clinical phases of hospital dietetics.

Behavioral Objectives:

Clinical Phase

1. Develop nutritional and dietary evaluation of patients by evaluating their diet history/food intake
2. Accurately interpret and transcribe diet prescription
3. Give appropriate diet counseling and participate in ward rounds by the health team
4. Conduct at least one mothers' patients' or parents' class
5. Plan and prepare therapeutic diets
6. Assist in the supervision of the tray line
7. Prepare and present a case study.

Administrative Phase

1. Plan, evaluate and adjust menus
2. Identify and compare the different purchasing methods
3. Use appropriate measures of storeroom control and costing
4. Prepare and standardize quantity recipes
5. Develop skills in food presentation and services
6. Apply management skills in the hospital and dietary services
7. Familiarize with kitchen and dining room layout, equipment, their care, operation and maintenance
8. Evaluate and apply existing sanitation and safety practices
9. Determine food cost and per capita of one-day's menu
10. Develop skills in budgeting and preparation of monthly report

Major Activities (Clinical)	**Time Allotment/No. of Hours**
A. Nutritional and dietary history preparations	16 hours
B. Interpret diet prescription	24 hours
C. Diet counseling	24 hours
D. Ward Rounds	8 hours

E. Nutrition education	8 hours
F. Planning and preparation of therapeutic of diet	18 hours
G. Supervision of tray line	6 hours
H. Case study	24 hours
	128 hrs/16 days

Course Outline:

I. Routine Paper Work
- A. Summarize diet lists
- B. Make diet changes

II. Diet computation and interpretation – knowledge learned in school vis-a-vis that in the hospital

III. Patient Nutritional Care
- A. Interview patients
- B. Prepare Nutritional History – subject, objective, assessment, planning (SOAP)
- C. Assesses dietary intake – 24 hour recall
- D. Evaluate during taken
- E. Read charts
- F. Give dietary counseling

IV. Participation in ward rounds with dietitians and/or medical team

V. Group instructions for mothers, watchers, nursing students, medical students, parents at the nutrition clinics (OPD)

VI. Therapeutic Food Preparation:
- A. Diet modification
- B. Actual preparation of one dish
- C. Tasting of therapeutic diets
- D. Tube feeding preparation

VII. Supervision of patient's tray service: Includes giving out evaluation questionnaire on food service

VIII. Case Study preparation and presentation

Methodology/Strategies: (Clinical)
- A. Chart reading, patient's interview; preparation of nutritional and dietary history (24) hour recall, anthropometric measurements.
- B. Computation, diet modification filling out diet cards
- C. Preparation of instructional materials, Role playing
- D. Participation in ward rounds
- E. Lecture/discussion/demonstration
- F. Preparation of therapeutic diet; Recipe testing of therapeutic diet; Exercises on diet modification
- G. Participation in supervision of tray line

H. Preparation and diet presentation of case study

Evaluation Tools: (Clinical)

- Follow up of patient record of weight and height of patient
- Actual checking of diet computation
- Follow-up by dietitian of instructed patient
- Ability to answer question raised
- Score cards and panel testing
- Acceptability by the patient of the therapeutic/modified diet prepared
- Checking or exercise on diet modification
- Spot checking of tray line
- Ability to answer questions during the open forum

TEACHING AIDS: (Clinical)

- Patient chart
- Diet handout
- Type of diets
- Diet cards
- Menu
- Diet handouts
- Food models
- Actual dietary counseling conducted by dietitian
- Background reading on disease and diets; patient's a chart
- Visual aids – food models, diet handouts, actual food samples
- Cooks guide, census of therapeutic diets
- Actual testing of therapeutic diet
- Observation of tray line
- Case study format
- Sample case study
- Patient's chart

Major Activities (Administrative)	**Time Allotment/ No. of Hours**
A. Menu planning	1 day
B. Purchasing	1 day
C. Storeroom control and costing	1 day
D. Standardization	1 day
E. Food presentation and services	1 day
• Cafeteria meal	
• Patients food service	
• Others	
F. Personnel Management	1 day
G. Equipment Care Operation & Maintenance & Sanitation layout	1 day
H. Cost Accounting	1 day
• Determination of food cost and per capita of one day's menu	
• Budgeting monthly report of expenses and statement of accounts	
• Precosting of recipes	
	64 hrs/8 days

Course Outline:

I. Menu Planning
   A. Preparation of cycle menus and menus for special occasions
   B. Preparation of market orders

II. Purchasing
   A. Identification and comparison of purchasing methods
   B. Distribution of purchase order
   C. Familiarization with bid conditions
   D. Formulation of food specifications
   E. Price canvass

III. Receiving, Storage and Issuing
   A. Inspection and receiving of deliveries
   B. Checking and recording of invoices
   C. Familiarization of storeroom procedures
   D. Storage room inventory – physical and perpetual
   E. Use of control forms

IV. Production
   A. Testing/Standardizing quantity recipes
   B. Conservation and utilization of ingredients
   C. Determination of yield/unit purchase

V. Food presentation and Services
   A. Determining of portion SBE
   B. Supervision of service in Cafeteria, Patient's Food Service, Others
   C. Catering

VI. Personnel Management
   A. Familiarization with organizational set-up
   B. Supervision of employees
   C. Preparation of work schedule
   D. Familiarization with organizational set-up
   E. Conduct time and motion study, personnel training program

VII. Equipment care, operation, maintenance and sanitation
   A. Familiarization with kitchen and Dietary Service equipment care, operation and maintenance
   B. Evaluation of existing sanitation and safety practices

VIII. Cost Accounting
   A. Determination of food cost and per capita or one day's menu
   B. Budgeting, monthly report or expenses and statement of accounts
   C. Pre-costing of recipes

Methodology/Strategies (Administrative)

A. 1. Planning and Preparation of cyclic/regular menus
2. Menus for special occasions

B. Lecture/discussion
1. Identification and comparison of purchasing method
2. Distribution of purchase orders,
3. Familiarization with bid conditions
4. Formulation of food specifications
5. Price canvass

C. Discussion/Actual Demonstration
1. Inventory taking and checking of deliveries
2. Checking of invoices/delivery receipts
3. Updating stock cards
4. Familiarization of storeroom procedures
5. Storeroom inventory-physical and perpetual
6. Use of control forms
7. Recipe costing and determining food cost
8. Familiarizing with the preparation of the budget

D. 1. Tasting/standardization of quantity recipe
2. Conservation and utilization of left over
3. Checking of completeness of ingredients
4. Determination of yield/unit of purchase

E. 1. Determination of portion size
2. Supervision of service
3. Catering

F. 1. Familiarization with organizational set up
2. Supervision of employees
3. Preparation of work schedule
4. Familiarization with job description
5. Conduct of time and motion studies
6. Personnel Training Program

G. 1. Familiarization with kitchen and dining room equipment; care operation and maintenance
2. Evaluation of existing sanitation and safety practices
3. Demonstration
4. Observation

H. 1. Lecture
2. Discussion

Evaluation Tools (Administrative)

- Oral and written exam
- Supervision Tests
- Identification of the different kitchen and dining room equipment

- Recitation/Reports

Teaching Aids (Administrative)

- Guide to Good Nutrition: Food Guide Pyramid, Nutritional Guidelines for Filipinos
- Recommended Energy and Nutrient Intakes 2002 edition
- Nutrition Software
- General forms used in purchasing
- General forms in storeroom control and costing
- Standardized recipe
- Existing records
- Actual Food Samples
- Organizational chart
- Job description of employees
- Work flow chart
- Actual operation of equipment
- Blackboard/chalk

Methodologies:

1. Orientation Lecture-Discussion
2. Hands-on Learning Experiences
3. Assignments
4. Demonstration

Course Requirements	
Class standing	70%
(Recitation/paperwork; Practicum Performance; Practical Exams, Reports, Assignments, Cases)	
Project (by Group)	10%
Final examination	20%
	100%

Clinical Phase: 60% + Administrative Phase: 40%

Course Title: FOODSERVICE PRACTICUM

Course Description:

The Food Service Practicum is a supervised practical application of principles and theories in foods and foodservice management in school, commercial, industrial, hotel or hospital foodservice institution.

Prerequisites:

The Food Service Practicum is to be taken during the last semester of the BSND Curriculum upon the completion of all professional courses.

Number of Units: 3 units (150 hours)

Course Objectives:

General Objective:

To provide the students with supervised practical experiences in foodservice operation.

Behavioral Objective:

1. Plan menus according to policies and budgetary requirements of the institution towards the achievement of total customer satisfaction;
2. Identify and compare the different purchasing methods;
3. Apply cost control measures in purchasing, receiving, storing, issuing to preparation and service food;
4. Prepare and present aesthetically acceptable food;
5. Familiarize with kitchen and dining room layout;
6. Explain the relationship of functional organization chart in a food service organization equipment, their care, operation and maintenance.
7. Prepare production and employee's schedule;
8. Apply sanitation and safety procedure including HACCP.
9. Develop skills in budgeting and preparing profit and loss statement.
10. Apply management skills in food service.
11. Practice proper waste management and resources conservation.

Course Outline:

Topic	No. of Hours
1. Orientation	6
2. Menu Planning and Evaluation	8
1. Planning menus and menus for different occasions	
2. Main menu adjustments	
3. Evaluation of menus	

3. Purchasing 16
   1. Preparing market list and food specification
   2. Identification and comparison of purchasing methods
   3. Price canvass
   4. Preparation of purchase order
   5. Distribution of purchase order
   6. Familiarization with bid conditions

4. Storeroom Control: Receiving, Storing and Issuing 16
   1. Inspection and receiving deliveries
   2. Familiarization of storeroom procedures
   3. Requisitioning goods and supplies
   4. Storage room inventory – physical and perpetual
   5. Use of storeroom control forms

5. Production: Standardization of Recipes, Preparation of Quantity recipes and utilization of leftover 16

   1. Familiarization of forecasting method
   2. Preparation of production schedule
   3. Determination of yield per unit purchase
   4. Standardizing recipes
   5. Preparation of Quantity Recipes
   6. Portion Control
   7. Minimizing and utilize leftover

6. Food Presentation and Services 16
   1. Plating and Garnishing Foods
   2. Preparing and arranging the buffet table counter
   3. Waiting on the Table
   4. Supervision of Service in the dining area

7. Personnel Management 16
   1. Familiarization with organizational set-up
   2. Supervision of Employees
   3. Preparation of work schedule
   4. Conduct time and motion study, personnel training program
   5. Personnel Training Program

8. Equipment Operation, Care and Maintenance: Foodservice Layout and equipment needs, equipment care, operation, maintenance and sanitation 16
   1. Familiarization with kitchen and dining room layout, equipment operation, care and maintenance.
   2. Evaluation of existing kitchen and dining room equipment and layout
   3. Design foodservice layout and equipment needs
   4. Evaluation of existing sanitation and safety practice

9. Sanitation and Safety 16
   1. Application of sanitation and safety procedures using HACCP.
   2. Evaluation of existing sanitation and safety practices.

APPENDIX C

MINIMUM EQUIPMENT AND UTENSILS FOR FOODS & NUTRITION LABORATORIES

For Each Laboratory Room

1 Refrigerator
1 microwave
1 oven toaster
1 demonstration table with mirror boards
2 long tables for table setting with chairs
exhaust fans/hoods
tape measure/ruler
weighing scale
first aid kit
Fire extinguishers

Individual Kitchen Units - one/unit

set of measuring cups for dry and liquid ingredients
set of measuring spoons
dietetic scale
kitchen knife
potato peeler
Cleaver
Strainer
mortar and pestle
chopping board
utility plates
wooden spoons
burner/stove
Oven
rubber scraper
rotary egg beater
flour sifter
Colander
Turner
kitchen tongs
sauce pans – 2 qt., and 4 qt.
double boiler
covered skillet
dish pans
utility can for silverware
garbage can (color coded according to waste management)
can opener

General Storeroom

1	Skinfold caliper
	length boards
5	pint and quart measuring cups
1	grinder
3	steak hammer
2	kitchen scissors
2	Sets of utility bowls - 1 qt., 2 qts., 3 qts., 4 qts.
2	tea strainer
2	sets pie pans - 6", 8" & 9"
3	8" layer cake pan
3	square pans
3	rectangular pans – 8" x 13 1/2
2	tube pans 4"x10"
3	muffin pans
3	tea cake pans
5	cake coolers
5	cookie sheets
2	doz. custard cups
1	osterizer/blender
1	coffee percolator
2	pressure cookers
1	electric mixer
5	all-purpose thermometers
1	Candy
1	Meat
1	Fat
1	Oven
1	Food thermometer
1	Refrigerator thermometer
2	Timers
1	fire extinguisher/laboratory
3	rolling pins
	pastry blender
	bottle opener
1	doz. complete set of:
	Wine glasses
	Flatwares
	Chinaware
	Linens
	chafing dish
	long tables with chairs
3	Griddles
5	set racks - assorted to fit saucepans
2	tea kettles
2	Steamers
1	Pressure Cooker
1	Ice Crusher

APPENDIX D – LIST OF EQUIPMENT AND SUPPLIES FOR THE AUDIOVISUAL ROOM

A. Overhead Projector
B. Multimedia Projector
C. Slide Projector
D. TV Monitor
E. Audio-video player
F. Tape Recorder
G. Computer/s
H. Whiteboard
I. Sound System

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