

A PROPOSED PLAN FOR THE ACADEMIC PREPARATION OF  
THE DIETITIAN IN THE COLLEGE OF HOME ECONOMICS,  
KARACHI, PAKISTAN

by

SHAHIDA WASIM

M. Sc., College of Home Economics, Karachi, Pakistan, 1966

---

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

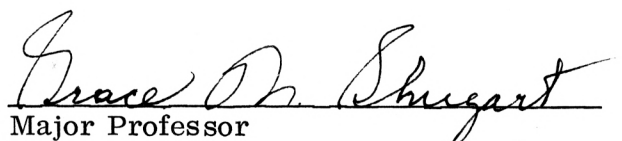
MASTER OF SCIENCE

Department of Institutional Management

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1971

Approved by:

  
Major Professor

2662  
R4  
1971  
W3

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION . . . . .	1
REVIEW OF LITERATURE . . . . .	3
History of Dietetics . . . . .	3
The Dietitian . . . . .	4
Definitions. . . . .	4
Responsibilities of the Dietitian . . . . .	5
Qualifications of the Dietitian . . . . .	8
Dietetic Education in the United States . . . . .	10
College Preparation for Dietetics . . . . .	11
Dietetic Internship . . . . .	14
Evaluation of the Dietitian's Education . . . . .	16
Dietetics and Institutional Management Conferences . . . . .	19
Recommendations for Dietetic Education . . . . .	23
Education of Women in Pakistan . . . . .	30
The Changing Role of Women in Pakistan . . . . .	31
Dietetics in Pakistan. . . . .	32
PROPOSED PROGRAM IN DIETETICS . . . . .	34
Outline of the Academic Plan in Dietetics . . . . .	38
Institutional Management I . . . . .	38
Institutional Management II . . . . .	43
Institutional Management III . . . . .	48

Supervised Work Experience . . . . .	56
ACKNOWLEDGMENTS . . . . .	57
LITERATURE CITED . . . . .	58
APPENDIX . . . . .	64
Duties and Responsibilities in the Department of Dietetics . . . . .	65
Academic Requirements for ADA Membership. . . . .	76
Goals of the Lifetime Education of the Dietitian . . . . .	84
ADA Position Paper on Education for the Profession of Dietetics . . . . .	89
Books and Periodicals Recommended. . . . .	94
Suggested Job Description of a Hospital Dietitian in Pakistan . . . . .	97

## INTRODUCTION

Dietetics as it is known today is a development of the twentieth century and has grown from the time of the visiting diet instructor to the present concept of the science of nutrition and art of management (Lipscomb, 1966). Over the years the emphasis on administrative abilities has increased as the complexities of management have continued to mount for the dietitian.

Responsibilities and qualifications of the dietitian have been defined and standards for academic preparation have been established in the United States and to varying degrees in other countries.

Colleges and universities through their educational programs for food service management are playing an important role in identifying and developing dietetic personnel. Studies done in the United States revealed that provision needs to be made for effective preparation in administration without minimizing general education or lessening competence in the other three areas of dietetic department responsibility: therapeutic, education and research. As a result, educators are continually revising and strengthening the institutional management curricula to prepare students to perform a complex of duties.

In Pakistan the field of dietetics has not grown to its full potential. The first two full-fledged colleges of home economics were started in 1955 and today there are four colleges in the country that offer courses leading to Bachelor and Master of Science degrees in home economics. As yet, there is no program directed toward the preparation of a hospital dietitian. Hospital food service still is in the hands of unqualified personnel. However, the rapid expansion of dietetics in other countries

and the growing awareness of food shortage, rising costs and malnutrition in Pakistan now pose a problem. Educators and medical practitioners of the country are realizing the need for a professional person expertly trained in the science of nutrition and dietetics.

A need exists for specialization to permit better service to patients and customers, improvement in techniques, material and personnel. It is the responsibility of the colleges of home economics to supply dietetic personnel in Pakistan. One approach to the preparation of the dietitian would be to introduce a well-balanced dietetics program at the college level.

Dietetics as a profession will be a new venture in Pakistan. Foremost among the many problems faced will be to prove the worth and place of dietetics as a professional field. It is, therefore, essential that high standards of dietetic education be set up and maintained. Demand for nutritionists and therapeutic dietitians seems to be more pronounced in Pakistan than that for the administrative dietitian, but their roles are overlapping; consequently, students need to be prepared not only for technical roles but for leadership and administrative roles as well.

The purpose of this report was to develop and integrate the existing courses at Karachi College of Home Economics, Pakistan, into an academic program for students of dietetics with major concentration on institution management courses required for the hospital dietitian. The study was designed to fit the needs of students and existing conditions at Karachi College of Home Economics, though it may have implications for similar programs in other colleges in Pakistan.

## REVIEW OF LITERATURE

### History of Dietetics

In spite of the youth of the dietetics profession it is difficult to ascertain who first filled the role similar to that of a dietitian (Lipscomb, 1966); MacEachern (1948) said that even in the days of Hippocrates proper diet was stressed. The first dietitian to resemble the modern use of the term was Florence Nightingale who by realizing the importance of properly chosen food in the treatment of disease laid the foundation for the development of dietetics (Clark, 1934). During the Civil War women in hospitals in different parts of the United States began to develop the work of a dietitian in connection with nursing. It was not until 1890, however, that a dietitian trained in home economics appeared (Lipscomb, 1966). As in the early days dietitians were needed to teach simple cookery to the nurses, so the cooking schools of the 70s, 80s and 90s could be said to have laid the groundwork for dietetics in the United States (Clark, 1934). The art of dietetics, however, was to join the science of nutrition before the dietitian achieved a distinct professional status, according to Huddleson (1947). Establishment of a national organization in 1917 stabilized and professionalized dietetics and led to a full recognition of the professional status by the dietitian's colleagues and the public (Isch, 1964).

The development of dietetics as a profession in the United States is closely related to the development of society as a whole. A century ago the idea of women creating a profession would have been unthinkable but the industrial and social revolutions of the 19th century laid the foundation for a profession for women in the United

States. For this reason Northrop (1960) called the dietitian a "Johnnie-come-lately" among the professions. The development of dietetics in other countries followed a pattern similar to that in the United States and, according to Ohlson (1952), differences exist only in the degree to which the pattern has been completed.

The first dietitians were employed by hospitals, and the hospital field still remains the largest employer of qualified dietitians. Approximately 50 percent of the members of The American Dietetic Association (hereafter known as ADA) are employed in hospitals (Newton, 1962).

## The Dietitian

### Definitions.

Dietetics, as defined by The ADA, "is a profession concerned with the science and art of human care, an essential component of health sciences. It includes the extending and imparting of knowledge concerning foods which will provide sufficient nutrients for health and during disease throughout the life cycle and the management of group feedings for these purposes" (ADA, 1969).

A dietitian was defined as "a specialist educated for a profession responsible for the nutritional care of individuals and groups" (ADA, 1969). LeTourneau (1957) and Huddleson (1947) considered the dietitian as the ideal person to head a food service department.

The Dictionary of Occupational Titles, Third Edition (ADA, 1964) indicated that a dietitian:

Plans and directs food service programs in hospitals, schools, restaurants and other public or private institutions. Plans menus and diets providing re-

quired food and nutrition to feed individuals and groups. Supervises workers engaged in preparation and service of meals. Purchases or requisitions food, equipment and supplies. Maintains and analyzes food cost control records to determine improved methods for purchasing and utilization of food, equipment and supplies, inspects work areas and storage facilities to insure observance of sanitary standards. When employed in schools, hospitals or similar organizations, instructs individuals and groups in application of principles of nutrition to selection of food. May prepare educational material on nutritional value of foods and methods of preparation.

### Responsibilities of the Dietitian.

The dietitian's role prior to World War I was largely limited to the diet kitchen. Clark (1934) listed the administrative duties of a hospital dietitian as: food purchasing, menu making, food preparation and service, control of food and labor costs, computation of costs of the entire dietary department and housekeeping in the dietary department. The hospital dietitians' therapeutic responsibilities listed were: preparation of food; charting of food intakes; interviews with the patient and giving diet instruction; and adaptation of the diet to the patient's racial, religious, family and financial situation. The dietitian's educational responsibilities included the instruction of student nurses; teaching nurses, interns and student dietitians; instruction of private and ward patients in the hospital; instruction of patients in clinics and public health agencies; and prophylactic and curative work.

Godfrey (1941), referring to the Rochester study made by Benedict, listed the following duties of a dietitian: supervision of plant, purchasing, food production and service, personnel management, financial management, diet therapy-hospital only, and teaching-hospital only.

Dietary departments of today's hospitals reflect great changes taking place. From the primitive food science and makeshift food service of 1913 to heated pellets,



microwave cookery, computerized menus, complete outside catering and vestigial kitchens, hospital food service has kept pace with developments in other hospital services (Whitcomb, 1963). Consequently, the dietitian's work over the years has evolved into a professional position with increased responsibilities. The versatility demanded of today's dietitian was well summarized by Zugich at the 44th annual meeting of The ADA (Anon, 1961):

Demands on the dietitian to satisfy the physicians, their sick and convalescing patients, the hospital administrator and even the lunching employee are formidable. Some expect quality, some expect economy, some want sympathy and others want scientific knowledge.

Huntzinger's (1963) idea of the dietitian implied more than a food expert and identified her as a supervisor as well as a nutritionist. Johnson (1960) stated that it is the administrative dietitian whose role has undergone the greatest change but the roles of therapeutic and teaching dietitians have changed as well. The present concept is that all patients, not only those on modified diets, should have the benefit of the dietitian's services. As such, therapeutic dietitians are members of the professional team. They accompany doctors on rounds and teach patients, student nurses and medical students on formal and informal bases. Their responsibilities include also the service of food to patients, which carries the administrative responsibilities of supervision. They counsel with the doctor to accomplish the diet therapy he desires. The administrative dietitian of today must be an executive responsible for planning, organizing and directing the activities of the entire department. She is responsible for providing the best possible nutrition in a manner acceptable to patients, employees and staff and at a cost acceptable to the hospital administrator (Anon, 1970).

The ADA (1963), recognizing the importance of dietary standards for food service hospitals, developed some guidelines to aid both dietitians and administrators in setting goals and appraising the effectiveness of administration of departments of dietetics.

Daza (1956) in a study of the relationship between institutional management courses at Cornell University and the hospital dietitian reported the following activities generally performed by dietitians:

- Menu planning: was the sole responsibility of the dietitian.
- Food purchasing: in all cases the ultimate responsibility for the quality and quantity of food purchased and used by the department was in the hands of the dietitian. However, this activity was sometimes shared with a central office or with a purchasing agent.
- Food production: in this area the dietitian's major responsibility included instruction of employees, human relations, and personnel management.
- Personnel management: the central office recruited employees in some cases. However, the dietitian interviewed and made the final decision to hire employees in all cases.
- Record keeping: this duty was delegated usually to nonprofessional personnel
- Consulting: consultation with the staff was one of the functions of the dietitian.
- Diet therapy: this function was still the major one for the dietitian.
- Education: the dietitian in most cases was responsible for on-the-job training of employees and pupils; teaching student nurses and student dietitians; and instructing patients.

The ADA, in an effort to meet the demands of the profession and the constantly expanding sphere of responsibility, suggested that the dietitian concentrate on tasks requiring specialized knowledge and delegate routine tasks to nonprofessional personnel. This led to a revision of the duties of a hospital dietitian and placed emphasis on

policy making and overall supervision.

In 1965 a joint committee of American Hospital Association and The ADA, recognizing the changes taking place in hospitals and the importance of effective administration of the dietary department, identified activities and responsibilities of the dietitian on the basis of present day concepts and current practices. The role of the director of a department is to plan, organize and direct the activities, educational and research programs of the department. Duties and responsibilities of a staff of dietitians in therapeutics, administration and research were outlined (Appendix). Although the term "director" implies a large department in which a staff of dietitians is employed, the activities also are applicable where there is a single dietitian designated as a department head (ADA, 1965).

#### Qualifications of the Dietitian.

A knowledge of the qualifications for dietitian is important in guiding the selection of students, in planning educational experiences, and as a guide for the evaluation of students' progress (Galster, 1953).

At the 8th Lake Placid Conference on Home Economics in 1906 a dietitian was described as one who possessed great executive ability, an abnormal amount of common sense, infinite patience, tact, a strong personality and an up-to-date knowledge of the science of food and service with the ability to adapt to the needs of the institution (Lipscomb, 1966).

Godfrey (1941) indicated that success as a dietitian does not automatically follow grades in high school or college. Personality requirements essential to success were identified in a survey of 34 dietitians as: ability to handle people, initiative, health,

ability to analyze situations, capacity for hard work, self confidence, tact, pleasing appearance, organizing ability, maturity and enthusiastic ability in housekeeping (ADA, 1936).

According to Godfrey (1941) the personal qualities needed by a person entering the field of dietetics are: sufficient intellectual capacity and interest to enable her to acquire knowledge concerning certain masses of subject matter and the ability to use this knowledge in the solution of actual problems. It is difficult to select students who give promise of professional success in home economics and institutional management since there is insufficient evidence of correlation between individual's characteristics that can be known before college entrance or the selection of a major in college with success after college in the field of specialization chosen by the student.

Koehne (1930) considered good health and endurance among the most desirable personal qualifications for a dietitian. Furthermore the personality of the dietitian should be pleasing and general scholarship should be at least average. Enthusiasm about the work and willingness to work, ability to accept responsibility and carry it through to the best of her abilities were thought to be necessary also. The author suggested that department heads should watch closely for indication of executive ability on the part of students who are planning to become dietitians.

From an administrator's point of view a dietitian needs the following qualifications (Ross, 1967):

1. Technical competency: can she produce food economically and tastefully and fulfill her obligations and responsibilities in the field of education?
2. People proficiency: is she up to date on her professional practices? Is she compatible with her associates and with the medical staff?

3. Problem solving quotient: is she able to recognize problems and solve them?
4. Salesmanship: can she communicate her ideas well to both subordinates and superiors?

The hospital dietitian is thought of as an executive, according to Northrop (1960), and being an executive means being a buoyant, happy, well-informed and effective person. Gleiser (1960) listed five characteristics necessary for a dietitian to be an executive: creative and analytical thinking, good judgement in thought and action, initiative, confidence, and vision.

Hornaday (1963) considered the following areas favorable to the success of a dietitian:

1. A level of intelligence necessary to grasp the technical training in the field.
2. Some specific aptitudes such as ability to deal with people and figures.
3. Certain personal qualities.
4. Motivation toward interest in doing this specific work.

West et al. (1966) gave the following qualifications for a dietitian: "The task requires administrative ability, responsibility for delegation, good food sense, aptitude for science, accuracy, enthusiasm, good memory, adaptability, good judgement, good health . . . among others."

### Dietetic Education in the United States

Educational requirements for dietitians have been influenced by membership standards of The ADA, adopted as employment requirements by many hospitals and employers of dietitians.

The basic professional education for the dietitian includes a baccalaureate degree from an accredited college or university with a major in foods and nutrition, food service management or institutional management plus successful completion of a dietetic internship approved by ADA or a preplanned professional experience approved by ADA in lieu of an internship; or successful completion of an undergraduate coordinated dietetic educational program, which includes professional clinical study in dietetics, leading to a baccalaureate degree (Wilson, 1970).

According to Patterson (1964) dietetic education can be divided into three related phases: undergraduate preparation, internship and/or graduate study. The undergraduate education fulfills the requirements of attaining basic knowledge and stimulates the desire for further study. The internship is considered the primary seat of professional education where the intern has opportunities to translate with meaningful practice the knowledge acquired at the baccalaureate level (Wenberg et al., 1969). Graduate study is advanced education for specialists (Robinson, 1965).

#### College Preparation for Dietetics.

Educators agree that in a democratic society higher education should include both general and specialized education. A general education does not necessarily qualify one to meet the economic demands of life efficiently, whereas, specialized education tends to give a narrow viewpoint inconsistent with the goals of education in a democratic society (American Home Economics Association, 1949).

The role of higher education in home economics was stressed at the French Lick Conference (1961):

The individual's total education has significance in preparing him for dealing with the problems which he and his society face. The role of professional education is to prepare the individual for solving or dealing with the problems of his chosen field.

The education of the dietitian has been based on the same concept and can be

considered in two parts: one, providing general education and the other, providing professional or specialized education. Each area contributes to the other, and as such they cannot be definitely separated. Specifically, the education of dietitians, Lipscomb and Donaldson (1964) reported, has been directed toward a broad basic background in home economics with emphasis on science of nutrition and art of management enabling them to assume the demands and accept the challenges of hospital dietetics.

Interest in a broad training for the hospital dietitian was manifested early. Corbett (1910) outlined requirements for a trained dietitian as: a liberal education, the equivalent of college work; executive ability developed by opportunities for practical work; expert training in household management founded on the exact and natural sciences, the social sciences and education; and business knowledge.

Wheeler (1925) in her presidential address to The ADA recommended as a desirable background for dietitians a combination of broad general academic preparation, highly specialized intensive preparation, and education in the form of successful experience. She recommended a standard for new members of four years of general academic study, including science and some professional courses plus, a six-month professional training course of known and approved character. At the same annual meeting the following motion defining the educational requirements for active membership in The ADA was passed:

Active membership: any person possessing the following qualifications may be an active member of the association by vote of the membership committee, subject to the approval of the executive committee.

A. A bachelor's degree with a major in foods and nutrition from a recognized college or university, effective October 1, 1926.

This was the first time that a bachelor's degree was mentioned as a requirement for Association membership (ADA, 1925).

Marlatt (1926) reported the results of a study of college courses for prospective dietitians. An A, B, C standard was suggested for use by hospitals in evaluating the undergraduate work of students applying for dietetic training. To meet all requirements in the A class, 50 percent of the undergraduate work was to be in liberal education; 20 percent in general sciences, a group composed of physics, chemistry and biology, to provide the foundation for specialized courses; and 30 percent in home economics, including institutional management, nutrition and dietetics, experimental cookery, and foods.

The American Home Economic Association (1949) stated that the department of Home Economics should provide opportunities for all home economics majors to accomplish a well integrated program of home economics education, assuming the major responsibility for courses related specifically to the problems of family living. Furthermore, these courses should form the basis for all professional curricula offered in home economics. In addition to achieving the home economics core objectives some additional objectives for the dietetic curriculum were mentioned.

With the increase in knowledge, development of new technology and expansion of education opportunities for food service supervisors The ADA recognized a need for change in the academic requirements for membership to the Association and to introduce depth and diversity in the academic pattern (Robinson, 1965). In 1958 an academic plan known as Plan III was implemented (Appendix). Listed in the plan were subjects required for membership in The ADA and entrance to approved dietetic



internship. Specific goals for the program and the basic minimum semester hours also were indicated. Plan III provides opportunities for greater emphasis in management, therapeutics, and education by allowing a choice among concentrations A, B and C. Concentration A stresses nutrition, personnel management or industrial psychology, and principles of learning which offers the best background for a "generalist" i. e. dietitian prepared for both therapeutic and administrative responsibilities. Concentration B placed greater emphasis on business and is important for the food service administration specialist. Concentration C put strong emphasis on the science of foods and nutrition and is of value for those who become specialists in the therapeutic area. To qualify for entrance to a food service administration internship either concentration A or B may be followed (Robinson, 1965).

#### Dietetic Internship.

Today the dietetic internship constitutes an important part of the dietetic education. A planned period of education and experience in an accredited hospital, under the supervision of experts, the internship is regarded as an orientation to professional life (Ross, 1961). The goal of the internship is to stimulate and accelerate the professional growth of the intern through experiences of the internship (Robinson, 1965).

In the early days the internship was regarded as an on-the-job training, considered at that time as an effective method of education. The course was for three months, in which the system and procedures used by the dietitians in charge were learned by students. By 1927 many hospitals were offering training programs for student dietitians, and consequently a definite curriculum emerged. A definite course outline was developed and approved by The ADA (Robinson, 1961). The entrance

requirements for approved hospital internship were set at 21 years of age and a baccalaureate degree in food and nutrition from a college or university of recognized rank. Until that time students from two year programs were accepted (ADA, 1927).

In 1963 The ADA revised its minimum standards for internship programs. The program, content, subject matter and terminology were updated.

The length of internship period has undergone many changes from the original three months to six months and eventually to one year (Robinson, 1961). At present many internships are again modifying their program which, according to Wilson (1970), entails not only a shortening of the program to six, eight, nine or ten months but also a strengthening experience for students. Dietetic internships coordinated with the undergraduate curriculum also are emerging (Lewis and Lachner, 1963), as are dietetic programs leading to a master's degree (Robinson, 1965).

Most internship programs are sponsored by hospitals and provide a broad program of study, including administrative, therapeutic and educational phases of dietetics. In addition, hospital internships include class sessions. Depending on the subject matter these are planned as seminars, lectures, conferences and demonstrations.

The changing role of the dietitian has affected the internship and today, as management has become more complex, emphasis is placed on food administration. Robinson (1961) stated that if the internship graduate is to meet the challenge of hospital administration emphasis should be placed on personnel management, financial management, cost control, human relations, and development of executive ability. Experience in menu planning and its evaluation, purchasing, quality food production

and distribution, planning of food service facilities, development of skill in training and supervising employees, and knowledge of modern equipment are essential.

Robinson (1961) further suggested that internship experiences in therapeutic dietetics should include planning and modifications of normal diet, visiting and instructing patients, cooperating with other members of the team, and studying the relationships between diet therapy and total medical care. To prepare the intern for the role of the dietitian the intern must be given an insight into effective working relationships with the doctor, nurse, and other members of the medical team.

Development of proficiency in teaching was recognized also as important by Robinson (1961). Approved internships include the study of teaching methods and practice in teaching patients, employees, student nurses, and others with whom she works and associates professionally. Experience in a metabolic research unit also is recommended in a hospital internship. Furthermore, Robinson (1961) stressed the need to provide an opportunity for the intern to understand the scope of dietetics and a general concept of the extent of the function of health and welfare agencies in the community.

#### Evaluation of the Dietitian's Education.

Relatively few studies have been reported in which the effectiveness of college or university curricula as related to post graduate professional job requirements and performance in the hospital food service has been considered.

Daza (1956) studied the relationships between the required courses in institutional management at Cornell University and the hospital dietitians. She concluded that the academic units were inadequate in these areas: menu planning, food purchasing,

supervisory function of food production involving training of employees, human relations, personnel management, production and cost control.

In a study of attitudes of recent graduates toward their educational preparation Moore (1959) found that the areas criticized for lack of coverage were personnel administration and cost control. The majority of dietitians were preoccupied with nutrition and diet therapy, although they had managerial responsibilities. Ninety-two percent of the respondents agreed that work experience should be required before graduation. She recommended that:

1. Professional schools provide adequate opportunities for a broad general education as well as specialized education.
2. Professional education be based on a mastery of fundamentals rather than specific techniques and current practices.
3. Students be allowed some freedom in the selection of courses to develop their special interests and abilities.

Miller (1960a, b, c, d) conducted an extensive study to appraise the effectiveness of academic preparation of institutional management graduates in relation to managerial responsibilities in the food service industry. Opinions were sought from graduates, employers, and educators. Close correlation was found between the inadequacies expressed by graduates and by the employers of those graduates. More competence was considered necessary in the areas of personnel management, effective communication, and organizational control. Inadequacies in these subject areas appeared to result from inadequate coverage rather than omission. In general, the educators agreed that their programs did not include enough work in the areas of organizational methods and practices, communication skills, and personnel administration.

Evaluating the educational experiences of food production managers, Johnson (1960) found that greater emphasis was needed in the development of understanding of general personnel relations, labor relations, knowledge of unions and delegation of responsibilities, business management, cost control, principles of purchasing, and use of equipment. Areas of strength were knowledge of food, food standards, food combinations, and quality. She indicated that too much emphasis had been given to the areas of chemistry and diet therapy.

In a survey of administrators and dietitians of five hospitals, Newton (1962) reported that dietitians thought they devoted too much time and training to diet therapy and recognized the need for more emphasis on food production and personnel administration. Results of a study of 118 hospitals of New York state by Bloetjes et al. (1962) indicated a need to strengthen courses that would prepare students for professional aspects of dietary administration.

Lanctot (1966), in a study of the working population of dietitians in Quebec, found that most of the dietitian's time was spent in activities related to institutional management and that their college education had been only fair in these areas. She recommended that changes be made in university institutional management curricula to prepare dietitians for managerial responsibilities in institutional food service. Lipscomb and Donaldson (1964) suggested a need for increased emphasis on managerial functions and skills in the education of a dietitian who is or will become director of a dietary department.

### Dietetics and Institutional Management Conferences.

College and university faculties have shown great interest and cooperation in preparing students for the dietetic profession. Conferences of educators have been held periodically to assist in focusing on the total educational program for dietetic students. In April 1962 a group of Home Economics faculty and dietetic internship directors assembled at the University of Wisconsin to appraise dietetic education. The objectives of the conference were: (1) to evaluate the total educational preparation and experiences of the dietitian in view of changing conditions of higher education and the changing role of the dietitian, and (2) to explore methods of learning and programs of professional experience to allow for acceleration and enrichment of the dietitian's education (Robinson, 1963). At the same conference some thought provoking questions were presented for group discussion (Cederquist and Shugart, 1962).

1. Do we need to shorten the time it takes to educate the dietitian? Is five years too long?
2. If we shorten the time how can we include all that we need to teach?
3. Would integration of the internship in the curriculum help to attract more students in the field of dietetics?
4. Is there too much variation in the basic preparation of students entering internships? Would it be feasible to have all graduates of one school intern at one place?

These questions stimulated educators to analyze and evaluate dietetic education.

In April 1962 the first conference of college and university faculties of institutional management was held at Kansas State University to evaluate the present curriculum and course content in various institutional management programs and to develop long range plans for future meetings (Robinson, 1963). The following short-

comings of the educational program were disclosed by the educators:

1. The gap between academic and the world of work remains wide.
2. The drive for professional status has distorted the educational enterprise as well as many parts of the world of work.
3. More teachers need to be developed to handle the increasing number of students who will become interested in health occupations.
4. Formal schooling is still regarded as the end of learning rather than the beginning, hence the difficulty in selling program for continuing education.
5. Health practitioners and professional educators have to get together to develop criteria by which educational equivalency values can be offered for specialized kinds and amounts of job experiences.
6. Reluctance and inability to develop the potential and apply newer educational technologies.

Throughout the meeting, Robinson (1963) noted an awareness for the need to prepare students that will enable them to adapt to a rapidly changing world. It was stressed that teachers should be aware of the meanings of current trends and should be flexible enough to adapt and change.

The second conference on Institution Management (Proceedings, 1963) was convened at the University of Illinois in 1963. The theme of the meeting was "A New Approach to Teaching." In a group discussion the educators agreed that areas in which the teaching was strong were menu planning, nutrition, food production and diet therapy because these may be standardized and routine. Areas of weakness were personnel management, cost control, purchasing, human relations because of lack of maturity (Bennel, 1963). In the same conference Alexander (1963) made the following remarks and conclusions regarding institution management education.

There is a need to find ways to educate college students to the limit of their talents. Some of the ways to explore or experiment with educating the college

students to the limit of their talents include: self-directed or independent study; use of proficiency examinations; programmed instruction; group learning; integration of courses or integrated experiences within courses; and cooperative programs with other departments, and, in some situations, with other colleges and/or universities.

Some methods of teaching that have been found particularly effective in institution management field are role playing situations and use of case studies.

There continues to be a need to explore ways to strengthen the areas of human relations and personnel management.

In view of the rapid social and technological developments taking place today it is imperative that in curriculum planning emphasis be given to flexibility, adaptability, and continued learning.

The theme of the third conference (Proceedings, 1965) was "Curriculum Development for the Profession." Its objectives were: "to clarify and identify the concepts, generalizations, and principles that are vital in the teaching of institution management on the college and university level; to formulate the structural framework that will serve a basis for curriculum planning and teaching."

In 1967, the fourth annual conference was held at University of Chicago (Proceedings, 1967). The objective of this conference was: "to formulate generalizations of previously identified concepts in institution management which form the structural framework for the curriculum planning on the university and college level." As a result a tentative structural framework for institution management curriculum was developed. This tentative guide was designed to serve as an experimental basis for all decisions made in relation to determining stages of development leading to professional competence, courses required for developing competence and sequence of course experience that lead to expected behavioral outcomes. The working material consisted of three aspects of a program structure: (1) a statement of expected outcomes,



(2) identified major concepts and subconcepts, and (3) major generalizations of the identified concepts (Ostenso and Hunzicker, 1967).

The purpose of the fifth conference (Proceedings, 1969) convened at the University of Nebraska was: "to work with previously identified generalizations and concepts of institution management and organize them for teaching." The objectives were listed as: (1) to develop curriculum designs for teaching institution management at the university level, (2) to identify ways in which technology is used for effective learning by students, and (3) to establish a basis for evaluation of instruction.

Education for the dietitian of the future was explored by directors and staff of dietetic internships at a 1963 workshop sponsored by The ADA in cooperation with Michigan State University. Curriculum review and teaching of management practices were emphasized. Sabine (1963) in discussing the characteristics of college students stated:

On college campuses all over America, we need to make drastic revision in how we help students learn. Perhaps the same could be true of your internship program.

Do you expect more skills from your interns than the college intends to supply?

Do you have a systematic way of keeping closely informed about students and student characteristics of each year?

Are you adapting to meet today's student, not someone like you were in the ever dimming past?

The total education of dietitians can be enhanced by joint curriculum planning by professional educators and internship directors. Each year a conference of faculties of approved dietetic internships and of colleges and universities is held in conjunction with the annual meeting of The American Dietetic Association.

### Recommendations for Dietetic Education.

In the past 25 years education has taken big steps toward higher levels of knowledge and toward more specialization. As a result, educators of the dietitian for tomorrow are continually faced with the problem of breadth versus depth and general education versus specialization (Scott, 1960).

Several underlying philosophies have been suggested. Eppright (1960) believed that there is a need for strengthening the education for the profession of dietetics and listed four essentials for such education:

1. Broad liberal education with strong basic understanding in basic sciences and arts.
2. Development of social consciousness.
3. Development of effective communication.
4. Establishment of worthwhile values.

Discussing the views of present day educators in business, medicine, and engineering McFadden and Hart (1962) emphasized the need for strengthening and integrating the humanities and social sciences in the college program in dietetics. They further recommended that the teaching of specific skills be left to the internship program or industry.

Mongeon (1964) studied the adequacy, degree and place of emphasis in attainment of management competencies by dietetic students. Both internship directors and educators in the study believed that technological operations were best taught at the college level and management competencies should receive greatest emphasis during the year of internship or through practical experience.

Wilson (1970) cited three concerns in educating tomorrow's leaders:

1. We must be concerned with education for the profession of dietetics not for membership in the association.
2. We must be concerned with educating the dietitian for her role tomorrow, remembering that tomorrow is now.
3. We must be concerned with building socially relevant education.

Scott (1960) indicated that teaching must give emphasis first to educating an individual then a dietitian; the curriculum should allow sufficient breadth and flexibility for educating a person rather than a technician; students and faculties need to broaden their concept of college education. She noted a trend toward greater concern for the intellectual and emotional maturity of the individual and his motivation for continual education than for the simple storage of knowledge.

Educators and students must recognize the changing concept of education for the dietitian (Donaldson, 1965). Four years of undergraduate study and one year of internship, she believes, is not enough for providing the technical and managerial skills necessary for tomorrow's leaders. Today the new concept would distribute over a lifetime the amount and kind of formal education necessary. Such an education needs to include a proper combination of general and professional knowledge and managerial skills. Continuing education, graduate study, and research will be necessary for the dietitian to avoid obsolescence. Wilson (1970) agreed that professionals cannot expect to keep up to date on the progress in professional knowledge without supplementary study. This can be an individual's own scheduled reading, an evening class, tapes, active participation in workshops, or graduate study.

Hunscher (1963) stressed that "if an individual and the profession is to maintain excellence, a philosophy of life-time learning must be instilled and sustained."

According to Labosky (1960) in order to develop proper professional attitudes educationally a sufficient breadth must be developed at some level in the process of education. A four year college curriculum cannot include all necessary courses and still give breadth of human understanding. Tyler (1962) stated: "The educational aim of any school and college cannot safely and constructively be focused on the specific requirements of occupations today. The emphasis should be upon helping students widen their horizons and develop into life long learners, interested in and capable of acquiring new knowledge and skills."

To give direction for basic professional and continuing education The ADA (1969) developed goals of the life-time education of the dietitian (Appendix). The nine goals stated in terms of achievement pertain to the total education of the dietitian. Some of these goals in particular have implications for the education in the area of institution management.

To keep pace with the rapid changes taking place in the world and the prospect of what is important today may be obsolete tomorrow requires continual readjustment of teaching methods and redefinition of educational objectives. For this reason Wilson (1970) recommended flexibility at all levels of dietetic education. Donaldson (1965) and Hannah (1963) stressed that more emphasis in college education should be placed on principles and less on techniques. Principles change slowly whereas techniques may be quickly outmoded. Further Donaldson (1965) pointed out that at the internship level principles and theories relating to decision making, control and use of resources, innovation and adaptation to accelerated changes must be taught. Wilson (1970) recommended that substantial field experience be made part of the undergraduate

work and should not be undertaken until additional field experience had been acquired. Also, there should be other channels than internships for clinical and administrative dietitians.

A suggestion that sensitivity training and behavioral science methods be introduced early into dietetic education programs was reported by Cabot (1970). Also pointed out was a need to reexamine and redefine all the roles of dietitians for restructuring the profession to permit vertical as well as lateral opportunities and to recognize that the diploma is only the beginning of learning.

In the early days dietetic education was too specialized, in the forties common requirements began to emerge. Now this pattern of dietetic training is being questioned by leaders in education (Scott, 1960). Wilson (1970) declared that because of greater breadth of knowledge encompassed in the dietetics field, practitioners need to develop a depth of knowledge, and an expertise in one or more of these areas: food administration, nutrition care, education and research. For sound education planning for the dietitian of tomorrow career speciality should begin early in the total education of young people.

Todhunter (1965) remarked "the dietitian may need to consider specialization at an early stage in her education." Robinson (1965) believes that a dietitian cannot be "all things to all people," therefore opportunities for specialization need to be developed further. At the same time the educational pattern for a dietitian who plans to practice as a generalist needs to be broadened. She further stated that attention should be given to strong emphasis on: (1) business administration to prepare dietetic specialists in food service administration; and (2) science of nutrition, chemis-

try, physics, the social and behavioral sciences to prepare dietetic specialists in therapeutic nutrition, nutrition education and nutrition research.

In a recent position paper on the education for the profession of dietetics The ADA (1971) stressed that in-depth knowledge of the subject matter is essential for proficiency in dietetics. Such proficiency can be acquired only by restricting the scope of one's pursuit to a single area of specialty--general practitioner of dietetics, administrator of dietetic services, clinical nutrition specialist and nutrition educator. A new educational framework that integrates clinical experience with dietetic training to provide knowledge of principles of nutrition, communication skills, conceptual thinking, research orientation, and the sciences was presented by The ADA. It was suggested that the practitioner at the undergraduate level work under the guidance of a specialist. Career advancements to the level of specialist be obtained through in-depth study leading to an advanced degree in a particular area of specialization (Appendix).

Such an educational plan, The ADA believes, would accommodate the profession to the advances in knowledge and technology, improve nutritional care and raise the performance standards of the profession.

Young (1965) stated that as the physician's basic background in biologic and physical sciences increases it is important that the therapeutic dietitian's background be simultaneously strengthened. She suggested a stronger and broader spectrum of background in biologic, physical, and social sciences; humanities; and a great deal of applied work. Robinson (1966) also believed that therapeutic dietetics must become a true specialty, which implies specialization in education and in function.

Dietitians and nutritionists who possess the potential for clinical research are needed and should have additional graduate preparation with strong emphasis on biochemistry.

The fast expanding and changing food industry and technological, social and economic developments are continually making new demands on the administrative dietitian. The role of this new executive in a different environment has implications for a different education than has been provided.

Blaker (1968) listed trends in the food service industry that have implications for future institutional management education:

1. Increased size of food service systems.
2. Greater diversification of the services being offered in individual enterprises.
3. Increased government control evidenced by medicare, fair labor standards, legislation and matching funds for building or improvements.
4. Less on-premise preliminary processing and production and greater use of partially or totally prepared food.
5. Increased use of disposable table and tray appointments, utensils and pans.
6. Increased costs and unionization.
7. Increased use of automatic data processing equipment.

An important aspect of education for food administration is the development of the potential of younger dietitians. There is a need to keep the interns on the move to new and challenging assignments if their mental processes are to be stimulated and maintained at a level to prevent obsolescence (Donaldson, 1965).

LeTourneau (1957) recommended that management skills be taught early if the professional dietitian wishes to retain his preeminence in the field of administration. The dietetic education curriculum must be reorganized to allow students to devote

some of their time and mental power to administration even if some technical knowledge has to be sacrificed.

Moore (1968) presented the following recommendations for a curriculum for undergraduate preparation in hospital food service administration at the fifth conference of college and university faculties of institution management.

1. Every individual graduating from college today should have a broad general education to enable him to lead a more interesting and resourceful life and make aware of his responsibilities to society and himself.
2. Specialization is necessary, beginning at the undergraduate level in order to perform satisfactorily because of the expansion of knowledge and the complexity of functions in our profession, and in any other.
3. Each student should be allowed some freedom in the selection of courses so that he can develop his special interests and abilities even within specialized curricula which are based on a broad general education.
4. Bridges of understanding between the various specialities within the profession and between allied professions must be built into the educational experience, not left to chance because specialization tends to narrow our professional interests and to create an esoteric jargon.
5. The undergraduate curriculum should be designed to support a graduate program because of the insatiable demand for more highly qualified people, which will eventually make it almost mandatory for every qualified individual to continue his formal education.
6. Education should stress developmental skills such as problem solving, analysis, evaluation and the understanding of basic principles rather than the mastery of specific techniques and current practices.
7. The pre-employment period should be made as short as possible because of the expanding need for qualified practitioners coupled with an already insufficient supply plus the fact that in a rapidly changing environment dietitians will need to return to school at fairly frequent intervals in order to prevent obsolescence.
8. An undergraduate educational program should equip the graduate with the basic skills essential for competence in his profession and should establish habits for continuing self-education. Training in the application of funda-



mental principles to specific types of positions should be the function of the internship or on-the-job training programs.

### Education of Women in Pakistan

Pakistan is a comparatively new nation which came into existence on August 14, 1947. Since independence higher education has been rapidly expanding. New colleges have been opened and improvements made in the old ones. In 1959 the national government appointed a Commission on National Education to suggest changes in the existing educational system to orient education to the needs of the country. Legally speaking, women had equal access to education as men; however, recommendations made by the Commission afforded women even greater opportunities in the educational and vocational field. While stressing equal opportunities for women the Commission laid special emphasis on both the home economics and professional education (Faridi, 1962).

Until 1947 there were only a few educational institutions offering domestic science at the undergraduate level in India. But with partition, Pakistan lost these facilities as most of them were located in Indian territory. The government, recognizing the need and importance of home and family living instruction for women, set up a college of home economics at Karachi. Mrs. Eleanor Roosevelt laid the foundation stone for this school during her visit to Karachi in 1952 and admissions were made in 1955. Four year courses leading to Bachelor of Science degree were offered. Subjects in food and nutrition, education, home management, child development and family relationships, clothing and textiles, arts and crafts, social sciences, and physical sciences were included. As new career opportunities become available

through socio-economic development of the country new majors and new programs are added. In 1962 the college introduced a master's program. Majors in food and nutrition, home management, clothing and textiles, and child development and family relationships were offered. Recently a program leading to Bachelor of Education degree has also been added.

The enrollment of the college has shown considerable increase over the years. In 1961 the college offered Bachelor's degrees to 25 students, with the number rising to 110 in 1970. The number of students admitted to the Bachelor of Science program in 1967 was 117; whereas, in 1970 the number of students entering the program rose to 257.<sup>1</sup> In addition to the College of Home Economics at Karachi there are three more colleges functioning in other parts of Pakistan.

### The Changing Role of Women in Pakistan

Since the independence of Pakistan in 1947 a great change has taken place in the lives of Pakistani women both in the cities and in the rural areas. Faridi (1962) stated that while the challenge of industrialization is being met women face a variety of new roles as mother, wife, professional partner, and community worker. Although in Pakistan there is no legal bar to women earning a living, custom and tradition have been barriers to women in the middle and upper income levels from becoming wage-earners. With the rising cost of living, technological changes and the uprooting of eight million refugees the traditional attitudes are undergoing a slow but steady change.

---

<sup>1</sup>Private communication from S. Sewjee, Lecturer, Karachi College of Home Economics, July 26, 1971.

The Business and Professional Women's Club which includes doctors, nurses, home economists, business women, teachers, and research workers reflects a growing desire for women to enter professional fields (Faridi, 1962). The 1951 census of Pakistan revealed a total number of 10,501 women engaged in professional fields and 2,829 in the area of administration (Govt. of Pakistan, 1951). In 1961 these figures rose to 39,788 and 5,553 for women working in the professional and administrative fields, respectively (Govt. of Pakistan, 1961).

### Dietetics in Pakistan

The profession of hospital dietetics will be a new venture for the women of Pakistan. As yet, food service in hospitals still is in the hands of unqualified persons with no specific training in food and nutrition. Therapeutic diets are ordered by medical staff according to western literature, but the food is prepared and supervised by lay people, some of whom are illiterate. Until now the procedure was considered appropriate. However, with the rapid development of the science of dietetics in other countries and an awareness of the rising costs, food shortages and malnutrition in Pakistan a need for professional people with scientific knowledge is being felt in the country, both among the educators and medical practitioners.

Rahimtoola et al. (1969) stated that the majority of hospital cases among children in Pakistan are those of diseases which can be prevented either by good hygiene and cleanliness or by preventive inoculations or by adequate food. Planned effort on the part of the entire health team is required to meet this challenge.

In the mentality of a patient in the Indo-Pakistan subcontinent, according to

Selzer (1948), the therapeutic importance of the dietary part in the treatment of any disease is of paramount importance and the physician is often unable to give right dietetic suggestions in relation to his pathological condition, his social customs, economic condition and food habits.

The Commission on National Education of Pakistan (Govt. of Pakistan, 1959) expressed the need for professional dietitians and their education:

A high priority must be given to the opening of departments of home economics in women's colleges and in the universities and the establishment of additional institutions designed specifically for the study of home economics. These departments and colleges would not only become the primary source of teachers for home economics in the secondary schools but they would also provide training to qualify women for positions as dietitians and nutrition experts in hospitals, schools and large organizations, supervisors in village aid programs and the public health services, directors of women's hostels and in a number of positions in private industry . . .

Further support for the need for qualified and trained dietitians was provided by the Protein Committee appointed by the National Science Council of Pakistan. A better understanding of the nutritional problems of Pakistan has led to the realization that malnourished people are a social and economic liability and when they number many million they can effectively retard national progress of the country. Cooperative efforts on the part of dietitians, nutritionists, food technologists and others in the field of health, nutrition, education and foods is thus required to solve one of the most difficult problems facing the country today (National Science Council, 1968).

## PROPOSED PROGRAM IN DIETETICS

At the present time hospital dietetics is not recognized as a professional field in Pakistan. Although there appears to be a growing concern for the need of experts in dietetics and nutrition both among the educators and medical practitioners, it will require hard work and earnest effort on the part of individuals interested in and concerned with the field of dietetics to prove the worth and place of dietetics as a professional field. Of prime importance would be to establish and maintain high standards of education for the dietitian. The purpose of this report was to develop and integrate the existing courses at the Karachi College of Home Economics, Pakistan, into an academic program for dietetic students with major concentration on institutional management courses required for the hospital dietitian.

In formulating this academic program for dietetic students in Pakistan a traditional approach has been followed, based on the current curriculum of the Karachi College of Home Economics. It is recommended that the program be accelerated to bring in the new educational trends and to meet the demand for dietitians in a shorter period of time. One approach to reduce the period for the preparation of a dietitian could be to introduce a concentrated one year certificate program which could be undertaken by a student holding a Bachelor of Science (Home Economics) degree. This accelerated program would involve the management of food service systems and therapeutics.

A need for therapeutic dietitians is more evident in Pakistan at the present time than that for an administrative dietitian. However, the roles of therapeutic and administrative dietitian are overlapping and students need to be prepared not

only for technical roles but for leadership and administrative roles as well. This program was directed toward the preparation of students in general dietetics who will be qualified to assume a variety of beginning positions in hospital dietetics involving both the management of food service systems and therapeutics. It is anticipated that as colleges in Pakistan are able to offer majors in specialized areas of dietetics--administration, nutrition, education and research--positions for these specialists will develop in the hospitals.

In setting up the present program the plan of The ADA, well-known for its high standards of training for nutritionists and dietitians, was used as a guide. However, adjustments were made when formulating the plan for dietetic education in Pakistan because of the differences in the socio-economic conditions of the country. Course outlines of various subjects for dietetic students utilized by different universities in the United States, and the post high school curriculum guide for institutional food service developed by The ADA were studied as a source of content in the subject matter area.

In the existing curriculum of the Karachi College of Home Economics, Pakistan, the basic educational courses and preprofessional home economics core courses comprise the major portion of the first three years. Thereafter, choice of courses is offered along with some compulsory subjects. This pattern was used as a basis for the present plan in dietetic education.

The program was designed to suit the needs of students and existing conditions at the Karachi College of Home Economics, though it may have implications for similar programs in other colleges in Pakistan. The entire program includes four years

of undergraduate and two years of graduate study. On successful completion students will earn Bachelor of Science and Master of Science degrees. The first three years of study will be the same as for any student of home economics. The professional phase of the program will begin in the fourth year. To enter the program a student should have earned at least a good second division in the first three years. Courses listed in the program were included both from the general and professional field to prepare students adequately for the profession of dietetics as well as for their role in society. The courses start from the most fundamental and broad matters to form a background for advanced courses.

Detailed topical outlines were formulated only for the institutional management courses. Outlines previously developed and used for the first time this year at the Karachi College of Home Economics were modified to meet current management needs of dietitians.

Objectives were developed taking into consideration the attitudes that needed to be created within the students and the subject areas in which these attitudes might be developed. The behavior-subject matter plan of Tyler (1950) was employed to state the objectives. The content included in these courses was intended to supply a wide background in diverse areas of food service administration. Units were organized to provide smooth progression of students from one unit to another. A variety of time-tested instructional techniques were selected to achieve the set objectives and make teaching more efficient, viable and effective. Supervised laboratory experiences in the college residence hall food service were included to provide opportunities for practical application of skills and knowledge. In addition, field trips to

hospitals, clinics and other institutions were provided to give students better insight into the operation of food service departments of the respective institutions.

The program was designed to develop the following competencies:

1. Knowledge of the principles of nutrition, physiology and chemistry.
2. Understanding of the basic human needs, motivations and goals of individuals and groups.
3. Appreciation of the differences and similarities in family group and individual life styles in rural and urban cultures of Pakistan.
4. Awareness of the many cultural, social, religious and economic factors affecting food intake.
5. Knowledge of the nutritional requirements of people through out life cycle.
6. Understanding the physiological and psychological effects of selected disease processes on the patient.
7. Ability to apply principles of normal and therapeutic nutrition to promote health and aid in the prevention of disease in individuals and groups in different socio-cultural and economic levels.
8. Awareness of the potential contribution of a dietitian in the community.
9. Understanding the principles of education that are basic to effective teaching and learning of individuals and groups.
10. Understanding the principles of dietary interviews and instructions.
11. Knowledge of effective communication processes.
12. Knowledge of the basic principles of food preparation and service and ability to plan nutritious and attractive food combinations acceptable to families at different socio-economic levels.
13. Understanding factors which promote or inhibit growth of microorganisms in relation to food and health.
14. Ability to apply some principles of food preparation and sanitation for protection of food supply.



## Fourth Year

General

Humanities and Social Sciences  
or  
Urdu

Professional Courses

Experimental Foods  
Institutional Management I

Home Economics Core

Advanced Clothing and Textiles  
Home Mgt. , Housing and Residence  
Family Economics  
Family and Community Development

## Fifth Year

Professional Courses

Curriculum and Instruction in Home Economics  
Diet Therapy  
Institutional Management II  
Special Problems in Food and Nutrition

## Sixth Year

Professional Courses

Institutional Management III  
Advanced Community Nutrition  
Research in Foods and Nutrition  
Research Methods in Home Economics  
Supervised work experience in the residence hall food service

Institutional Management I

## Objectives:

1. Knowledge of facts, principles and factors affecting institutional types, their function and organization.
2. Understanding the management of a food service department in an institution.
3. Understanding the principles of quantity food preparation and ability to apply these in preparing quality food in quantity.

15. Knowledge of quality food standards and ability to prepare quality food in quantity within a predetermined budget.
16. Understanding the managerial processes of planning, organizing, controlling, directing, evaluating, and their relatedness to the management of human, material and financial resources.
17. Knowledge of the technical operations (menu planning, purchasing, facilities, finance) involved in the production, distribution and service of quality foods in different institutions and their relation to organizational objectives and goals.
18. Understanding the characteristics of technical report and written research.
19. Ability to interpret and apply research findings related to the field of nutrition and dietetics.

## OUTLINE OF THE ACADEMIC PLAN IN DIETETICS

### First Year

#### General

Urdu/Bengali or Pakistani Studies  
English Normal/Advanced  
Biology and Bacteriology

#### Home Economics Core

Foods and Nutrition  
Clothing and Textiles  
Applied Arts

### Second Year

Urdu/Bengali or Pakistani Studies  
English Normal/Advanced  
Chemistry and Physics

Meal Management and Food  
Preservation  
Family Clothing Problems  
Child Development and Family  
Relations

### Third Year

English  
Islamic Ideology  
Social Science  
Organic and Bio Chemistry

Related Arts  
Nutrition  
Childhood and Adolescence

4. Ability to evaluate quality food products.
5. Knowledge of the principles of motion and time economy, sanitation and safety.
6. Understanding the role of menu and ability to apply principles of menu planning.
7. Understanding the standardization of recipes.

### Content Outline

### Method

- |   |  |
|---|--|
| <p>I. Institutional types, function and organization</p> <p>A. History and background of food services</p> <p>B. Types of food service and their functions</p> <ol style="list-style-type: none"> <li>1. College or university</li> <li>2. Hospitals</li> <li>3. Public restaurants</li> <li>4. Catering services</li> </ol> <p>C. Factors influencing the growth of food services</p> <p>D. Organization structure of various food service departments</p> <ol style="list-style-type: none"> <li>1. Definition</li> <li>2. Types and purposes</li> <li>3. Factors affecting organization structure</li> <li>4. Interpretation of organization charts</li> </ol> | <p>Lecture</p> <p>Assigned reading</p> <p>Show organization charts of certain institutions</p> <p>Problem given as out-of-class assignment</p> |
| <p>II. Introduction to Management Functions</p> <p>A. Planning</p> <p>B. Controlling</p> <p>C. Organizing</p> <p>D. Delegating</p> <p>E. Directing</p> <p>F. Educating</p> <p>G. Evaluating</p> <p>H. Application of managerial functions to</p> <ol style="list-style-type: none"> <li>1. Food</li> <li>2. Personnel</li> <li>3. Fiscal control</li> </ol>   | <p>Lecture</p> <p>Assigned reading</p>   |
| <p>III. Principles of quantity food preparation</p> <p>A. Analysis of kitchen organization</p> <ol style="list-style-type: none"> <li>1. Areas of food preparation</li> <li>2. Concept of work station</li> </ol>   |  |

Content OutlineMethod

<ul style="list-style-type: none"> <li>3. Staff requirements</li> <li>B. Factors affecting quality and uniformity of food products               <ul style="list-style-type: none"> <li>1. Proper instructions</li> <li>2. High quality ingredients</li> <li>3. Efficiently planned work station and kitchen layout</li> <li>4. Standard equipment and tools</li> <li>5. Efficient work methods</li> <li>6. Well-trained employees</li> <li>7. High standards of sanitation and safety</li> <li>8. Standardized recipes and portions</li> <li>9. Effective supervision</li> </ul> </li> </ul>	<p>Tour of college cafeteria to observe preparation, storage and service of food</p>
<ul style="list-style-type: none"> <li>C. Factors related to quantity food preparation               <ul style="list-style-type: none"> <li>1. Application of basic cookery principles</li> <li>2. Application of special techniques--assembly line, cooking and preparation</li> <li>3. Weights and measures</li> <li>4. Type of equipment and utilization according to needs</li> </ul> </li> </ul>	<p>Demonstration Use a flip chart to present information</p>
<p>IV. Sanitation, kitchen safety and personal hygiene</p>	
<ul style="list-style-type: none"> <li>A. Sanitation               <ul style="list-style-type: none"> <li>1. Aims of food service sanitation</li> <li>2. Food-borne diseases                   <ul style="list-style-type: none"> <li>a. Types and causes</li> <li>b. Controls</li> </ul> </li> <li>3. Sanitation features in physical plant and equipment                   <ul style="list-style-type: none"> <li>a. Design of equipment for sanitation</li> <li>b. Maintenance of standards of sanitation</li> <li>c. Cleaning schedules and checks</li> <li>d. Training programs</li> <li>e. Flow of soiled equipment</li> <li>f. Storage of equipment</li> </ul> </li> <li>4. Sanitation in the area of food preparation, service and storage                   <ul style="list-style-type: none"> <li>a. Bacteriological, rodent and insect control</li> </ul> </li> </ul> </li> </ul>	<p>Assigned reading Discussion with charts Problem given as out-of-class assignment Display of insecticides</p>

Content OutlineMethod

- b. Temperature and humidity control
    - c. Proper handling of food during preparation, service and storage
  - B. Health and hygiene of employees
    - 1. Education of employees in essential hygiene practices
    - 2. Essential institutional facilities, equipment and supplies for use of personnel
    - 3. Enforcement of adequate policies concerning workers' compensation
  - C. Safety
    - 1. Legal and moral responsibility of management in providing safe working conditions for workers
    - 2. Common accidents in food service area
    - 3. Causes of accidents
      - a. Personal
      - b. Mechanical
    - 4. Safety rules for workers
      - a. Receiving and storage
      - b. Food preparation
      - c. Serving and clearing
      - d. Floors
      - e. Fire safety
      - f. Clothing
    - 5. Procedure in case of injury
    - 6. Importance of first aid supplies and instruction
- V. Standardization of Recipes
  - A. Value of standardized recipes
    - 1. Uniformity of high quality products
    - 2. Accuracy in production of desired quantities
    - 3. Basis for cost control
    - 4. Reduction of product failure
  - B. Recipe construction
    - 1. Food ingredients
    - 2. Amount of ingredients
    - 3. Method of preparation
    - 4. Yield and serving portions

Using patri dishes grow bacteria obtained from hands before and after washing

Discussion

Demonstration of proper costume for food service workers

Discussion with flannel board and pictures of accidents and safety rules to be observed by food service workers

Problem given as out-of-class assignment

Assigned reading

Content OutlineMethod

5. Serving and holding suggestions	Discussion
6. Portion cost	Laboratory assignments for specific items
7. Recipe forms--desirable features	Preparation and evaluation of the products with a score card
C. Enlarging a home-size recipe into a quantity recipe	
D. Evaluation of a standard product	
 VI. Work Simplification	
A. Definition	
B. Overall aims of work simplification	
1. Obtain maximum output with minimum effort	
2. Obtain a better product	Reading assignment
3. Obtain maximum satisfaction for workers with minimum expenditure of time, money, energy and equipment	Discussion
4. Procedure for work simplification	Problem on motion and time studies given as out-of-class assignment
5. Principles of motion and time economy and its application to quantity food preparation	
 VII. Menu planning	
A. Factors to be considered in menu planning	
1. Nutritional requirements	
2. Menu format	
3. Menu item cost	
4. Color and texture harmony	
5. Seasonability and availability of foods	
6. Labor and equipment available	Assigned reading
B. Application of the principles to different types of food service systems	Discussion
C. Menu planning procedures	Show pictures of menus and samples of different kinds of menus
1. Selective and nonselective menus	Problems on planning menus for hypothetical food service given
2. Cycle or rotating menus	
3. Menu format	
4. Menu conferences	
5. Substitution and use of left-overs	
D. Merchandising the menu	
1. Role of advertising	
2. Psychology of the customer	Discussion
3. Merchandising techniques	Laboratory assignment for planning and merchandising one item on the college cafeteria menu
a. Appropriate and artistic displays	
b. Use of art principles of color and design	

Content OutlineMethod

- c. Appropriate menu terminology
- d. Well groomed personnel
- e. Style foods and service

Class reports

## VIII. Quantity production methods for:

- A. Meat, fish, poultry
- B. Vegetables and salads
- C. Breads and cereals
- D. Desserts
- E. With emphasis on
  - 1. Understanding quantity recipes
  - 2. Standardization of quantity recipes
  - 3. Organization of work
  - 4. Quality control
  - 5. Portion control
  - 6. Cost control
  - 7. Estimating needs and ordering foods
  - 8. Time factor in preparation, cooking and serving

Lecture

Assigned readings

Laboratory assignments and  
evaluation

## Institutional Management II

## Objectives:

1. Knowledge of the facts, principles and factors affecting quantity food production and service.
2. Ability to apply the principles of quality and quantity food production and service.
3. Understanding of labor, quantity and waste control systems for quality food production.
4. Ability to plan for quality food in quantity food service at various cost levels.
5. Understanding of and ability to apply scientific methods of selecting and purchasing food in quantity.
6. Knowledge of procedures for receiving foods and supplies.
7. Ability to use methods of food storage.

8. Knowledge of materials, construction, use, care and maintenance of equipment.
9. Understanding the space and equipment requirement for quantity food production and service.
10. Ability to design an effective flow of work.
11. Understanding of the factors affecting layout, selection and purchase of equipment for different types of food service units.

Content Outline

Method

I. Quantity food production

A. Steps in meal production

1. Study the menu
2. Select recipes
3. Estimate quantity of food
  - a. Ingredients on hand
  - b. Advance preparation
  - c. Regular preparation
4. Requisition food
5. Plan for efficient use of time
  - a. Advantages of advanced planning
  - b. Factors determining time
  - c. Aids for efficient use of time
6. Plan of activities
  - a. Division of work according to production area
  - b. Estimating time for each phase of production
  - c. Sequence of activities

Assigned readings

Discussion

Production of an entire meal  
in the college cafeteria

Evaluation

B. Production of the meal

II. Food service

A. System of distribution from production area

B. Common types of food service

1. Tray service
2. Cafeteria service
3. Table service

C. Specific production and service problems related to:

1. Cafeteria
2. Snack bar
3. Table service



Content OutlineMethod

4. Hospitals	
5. Airlines	
D. Food service for special functions	
1. Banquet	
2. Buffet	
3. Reception	
4. Refreshment breaks	
5. Picnics	
E. Factors affecting the type of food service system	
1. Physical facilities	Assigned readings
2. Available space and equipment	Discussion
3. Type of clientele	Field trips
4. Costs involved	Class reports
F. Standards of high quality food service	
1. Well planned menus	
2. Pleasant appearance and aroma of food	
3. Good flavor and correct eating temperature	
4. Attractive and appropriate appointments	
5. Quiet, clean and attractive surroundings	
6. Courteous and efficient serving personnel	
III. High quality food at various cost levels	
A. Review of budgeted cost levels of various institutions	
1. Nutritional requirements	
2. Policies regarding food service	
3. Food preparation	
4. Type of service	
B. Factors affecting food quality as related to cost levels	
1. Selection of food as determined by use	
2. Style of food best suited to various institutions	Discussion
3. Varieties of food available	Problem on planning menus at various cost levels given
4. Number and skill of workers	Laboratory assignments and evaluation
5. Correct forecasting	
6. Estimating needs	
7. Preparation of specified quantities	

Course OutlineMethod

## IV. Methods of food procurement

- A. Ethical standards
- B. Methods of buying
  - 1. Informal or open market
  - 2. Auction
  - 3. Contracts
- C. Basic factors in food purchasing
  - 1. Knowledge of financial policies
  - 2. Knowledge of the marketing system
  - 3. Determination of quality and quantity needs
- D. Selection of foods
  - 1. Meat, eggs, fish, and poultry
  - 2. Dairy products
  - 3. Fruits and vegetables
  - 4. Grains and cereals
  - 5. Fats and oils
  - 6. Spices
  - 7. Beverages

Discussion with emphasis on:

- a. Sources of food items
- b. Characteristics
- c. Use and price
- d. Purchase units
- e. Market forms
- f. Recommended purchasing and storing procedures

## V. Receiving food supplies

- A. Receiving procedure
  - 1. Allotment of space and scales
  - 2. Checking and inspecting goods for quality, quantity, unit price and total cost
  - 3. Recording total cost

Problem given as out-of-class assignments

Assigned readings

Discussion

## VI. Care and storage of food

- A. Legal and moral responsibility of food service operators
- B. Factors affecting choice of storage facilities and storage space
- C. Storeroom organization
  - 1. Dry storage
  - 2. Refrigerator storage
- D. Characteristic of a good storeroom
- E. Procedure for receiving, storage and withdrawal of goods

Discussion

Tour of the college cafeteria storeroom

Class reports

Problem given in planning storage for a hypothetical food service

## VII. Planning food service systems

- A. Relationship of space and equipment design and placement to efficient operation of the food service unit

Content OutlineMethod

- B. Flow of work
  - 1. Analysis of sequence of operations
  - 2. Functional plan of work to be done in proper sequence
    - a. Receiving
    - b. Storage
    - c. Prepreparation
    - d. Cooking
    - e. Serving
    - f. Dishwashing and cleaning
- C. Division of kitchen operations into units
  - 1. Ingredient room
  - 2. Preparation center
  - 3. Cook's unit
  - 4. Salad unit
  - 5. Serving area
  - 6. Dishwashing
- D. Directions for operations and assembly
  - 1. Straight line
  - 2. Circle
  - 3. Parallel
  - 4. U-shape
  - 5. L-shape
  - 6. Rectangular or square shape
- E. Space and equipment requirements
  - 1. Preliminary considerations
    - a. Goals of the department
    - b. Type of menu
    - c. Type and number of persons
    - d. Style for food distribution
    - e. Food service system
    - f. Handling and storage of food
    - g. Kind of dining facilities
    - h. Staff requirements
    - i. Facility requirements for staff
  - 2. Office facilities
  - 3. Personnel facilities
  - 4. Space requirements for:
    - a. Receiving area
    - b. Storage area
    - c. Food production
    - d. Meal service
    - e. Dishwashing
    - f. Housekeeping

Assigned readings

Discussion

Show different layout plans  
Field trip to selected food service institutions

Class reports

Problems given as out-of-class assignment on designing layout for a hypothetical food service

<u>Content Outline</u>	<u>Method</u>
F. Floor plans	
1. Procedure	
a. Arrangement of work centers	
b. Combining work centers into sections	
2. Drawing the plan	
G. Factors affecting selection of kitchen and serving equipment	
1. Determination of needs	
a. Menu pattern	
b. Number and type of persons to be served	
c. Man hours available	
d. Skill of workers	
e. Utilities	
2. Budget	
3. Floor plan	
4. Features of equipment	
a. Design	Display of equipment
b. Materials	Demonstration
c. Construction	Problems on selection of
d. Size	equipment for a hypo-
e. Installation, performance	theoretical food service
5. Selection of some basic cooking and serving equipment	given
H. Maintenance and care of equipment	
1. Proper instructions	Assigned reading
2. Demonstration	Discussion
3. Inspection of cleanliness and maintenance	
4. Supervision	
5. Prompt adjustment and repair	

Special problem: Each student will be required to carry out a special problem or term paper which will involve readings, conferences, laboratory and experimental work and a written report.

### Institutional Management III

#### Objectives:

1. A knowledge of the facts, principles and factors affecting management and trends in business management.

2. Understanding of organization and management as applicable to food services.
3. Knowledge of the principles and factors affecting job analyses, description, and specifications and ability to utilize these tools of management.
4. Comprehension of the role of policies in the operation of a food service department.
5. Knowledge of the basic principles, factors and procedures used in the financial control of the food service department.
6. Knowledge of the principles and factors and ability to apply the current techniques to recruit, train, motivate and appraise personnel.
7. Appreciation of the importance of human relations and communications in the operation of a food service.
8. Understanding of the qualifications of a food service supervisor and the need for developing supervisory skills in Pakistan.
9. Ability to apply the principles in the management of a food service department.

### Content Outline

### Method

#### I. Review of management

- A. The management concept
  1. Evolution of management in the firm
  2. Evolution of management in the society
- B. The three schools of management thought
  1. The classical school
  2. The behavioral school
  3. The management science school
- C. Contemporary business management
- D. Management in Pakistan

Lecture  
Assigned readings  
Guest speaker

#### II. Organization structure of a food service

- A. Factors of effective organization structure
  1. Determination of objectives and goals
  2. Determination of policies and procedures
  3. Provision of adequate finances, food, equipment and environment
  4. Analysis and classification of work
  5. Description of job relationship to each other and to management
  6. Selection and assignment of workers

Assigned readings  
Discussion  
Show organization charts of different institutions

Content OutlineMethod

- B. Written plan of organization
  - 1. Types of organization charts
    - a. Line
    - b. Staff
    - c. Line and staff
    - d. Functional
    - e. Committee
  - 2. Function of an organization chart
    - a. Chart as an information tool
    - b. Advantages and disadvantages of charts
- C. Tools of management
  - 1. Job analysis, job descriptions and job specifications
    - a. Definitions
    - b. Information included
    - c. Methods of conducting job analysis
    - d. Tools of conducting studies
    - e. Utilization of data
  - 2. Work sheets
- D. Organizational policies
  - 1. Purposes of policies
    - a. Attainment of established objectives
    - b. Establishment of general directives for management
    - c. Establishment of staff cooperation
    - d. Provision of uniformity in decision-making
  - 2. Basic standards for policies
    - a. Meet established goals
    - b. Meet specific needs of the organization
    - c. Approved by the administrator
    - d. Coverage of all functions
    - e. Consistent
    - f. Well publicized
    - g. Encourage individual discretion and initiative
    - h. General application to all people
    - i. Allow for adaptation to changing conditions
- E. Considerations for policies in food service department

Show samples of analysis and description of various jobs in a food service

Problems in preparing complete job analysis, description and specifications for common jobs in a food service given

Content OutlineMethod

1. Ethics	
2. Budget	
3. Meal planning	
4. Purchasing and storage	
5. Standards for food production	
6. Standards in food service	
7. Sanitation and safety	
8. Labor and management relations	
9. Public relations	
10. Relationship between food service and other departments	
11. In-service education	
F. Value of written policies	
1. Aid to administrator	Resource person
a. Relief from routine duties	Assigned readings
b. Assurance of decision-making by standardized instruction	Panel discussion on problems relating to policies in an institution
c. Provision for standards of eval- uation	
2. Check on coverage, applicability and consistency of policies	
III. Management of the food service department	
A. Planning each phase of food service	
1. Budget	
2. Meals	
3. Facilities and equipment	
4. Personnel	
B. Purchase of food, supplies and equipment	Assigned reading
C. Production and service of nutritionally adequate meals	Discussion
D. Overall delegation and coordination of work	In-Basket
1. Assignment of personnel according to specific technical ability	
E. Educating and supervising personnel	
F. Supervision of activities	
1. Food production and service	
2. Safety	
3. Sanitation	
G. Financial management	
1. Budget	
2. Cost accounting	

Content OutlineMethod

3. Records and reports
- H. Effective communication
  1. Formal and informal channels
  2. Methods of communication
  3. Principles of communication
  4. Obstacles to communication
  
- IV. Personnel in food service
  - A. Administrative personnel
    1. Technical knowledge
    2. Personal qualifications
    3. Responsibility and authority
    4. Accountability
    5. Professional ethics
    6. Need for development of administrative skills in Pakistan
  - B. Nonprofessional personnel
    1. Recruitment of personnel
      - a. Sources
      - b. Tools for personnel selection
      - c. Procedure for selection
      - d. Orientation
    2. Scheduling
      - a. Kinds of schedules
      - b. Contents
      - c. Value of written schedules
    3. Training--initial and continuous
      - a. Advantages of training
      - b. Teaching methods
      - c. Areas of training--orientation, work procedure, sanitation and safety
      - d. Training procedure
      - e. Factors to consider in training
    4. Evaluation of employee performance
      - a. Rating of employees
      - b. Fundamentals of effective rating devices
      - c. Reliability of ratings
  - C. Personnel policies
    1. Value of written policies
    2. Major topics in personnel policy manual

Skits to demonstrate problems in communication

Class reports with audio visual aids in training food service employees

Assigned readings  
Socio dramas involving initial, evaluation and dismissal interviews

Case studies  
Discussion  
Assigned readings



Content OutlineMethod

- a. Pre-employment period
- b. Employment period
- c. Benefits
- d. Professional conduct
- e. Safety and health programs
- f. Severance
- g. Other

## V. Human relations

## A. Understanding people

- 1. Basic differences in people--mental, physical and emotional traits
- 2. Similarities in human behavior
  - a. Group instinct
  - b. Resistance to change
  - c. Need for recognition
  - d. Desire for security
  - e. Desire for growth in occupation
  - f. Fair treatment
  - g. Satisfaction of basic needs

## B. Employee morale

- 1. Characteristics of high and low morale
- 2. Factors affecting morale
- 3. Development of desirable morale
  - a. Financial incentives, job security, fringe benefits, etc.
  - b. Techniques of human relations

Reading assignments  
Case studies  
Discussion

## VI. Financial controls in food service

## A. Cost control as a management function

- 1. Establishing financial objectives
- 2. Determining existing costs
- 3. Establishing cost accounting system

## B. Food costs

- 1. Factors affecting food costs
  - a. Menu
  - b. Type of service
  - c. Purchasing methods
  - d. Storage and storeroom procedure
  - e. Standardized portions and serving, wastes
  - f. Method of pricing
- 2. Determining food costs from records
  - a. Procurement records

Discussion  
Assigned reading  
Show forms used in cost control  
Problem given as out-of-class assignment

Content OutlineMethod

- b. Production and service records
- c. Formal reports
- C. Channels of food cost control
  - 1. Purchasing control
    - a. Systematized purchasing procedure
    - b. Determining quantity to be ordered and its relation to purchasing control
    - c. Daily purchases for immediate consumption
    - d. Stock or storeroom purchases
    - e. Competitive buying
  - 2. Receiving control
    - a. Personal qualification of checker
    - b. Equipment and facilities necessary for control
    - c. Check for quality and quantity
  - 3. Storeroom control
    - a. Storeroom requirements for effective control
    - b. Channels of waste in storing control
    - c. Pilferage control
    - d. Spoilage control
    - e. Relation of low inventory turnover to storeroom control
    - f. Records in storeroom control
  - 4. Issuing control
    - a. Requisitions
    - b. Identifying stock to use
    - c. Relation of proper purchasing, receiving and storing to issuing control
  - 5. Production control
    - a. Factors in production control: method, manpower, management, materials, money and market
    - b. Relation of layout and equipment to production control
    - c. Planned preparation
    - d. Use of standard recipes
  - 6. Portion control
    - a. Importance of portion control
    - b. Factors determining the size of portion
    - c. Essentials in portion control
    - d. Common serving portions of various foods

Assigned reading  
 Assignments in the college  
 cafeteria  
 Class reports  
 Discussion

Demonstration

Content OutlineMethod

<ul style="list-style-type: none"> <li>D. Labor costs               <ul style="list-style-type: none"> <li>1. Factors affecting labor cost                   <ul style="list-style-type: none"> <li>a. Type of service</li> <li>b. Hours of service</li> <li>c. Menu pattern</li> <li>d. Physical plant</li> <li>e. Equipment and arrangement</li> <li>f. Supervision</li> <li>g. Skill of employee</li> </ul> </li> </ul> </li> <li>E. Operating and other expenses               <ul style="list-style-type: none"> <li>1. Supplies</li> <li>2. Maintenance</li> <li>3. Housekeeping</li> <li>4. Overhead</li> <li>5. Laundry</li> </ul> </li> </ul>	<p>Discussion Problems in labor cost calculation given</p>
<ul style="list-style-type: none"> <li>VII. Financial reports           <ul style="list-style-type: none"> <li>A. Daily food cost report</li> <li>B. Profit and loss statement</li> <li>C. Budgets               <ul style="list-style-type: none"> <li>1. Responsibilities in planning                   <ul style="list-style-type: none"> <li>a. Prepared as a flexible management tool</li> <li>b. Based on objectives and goals of a department</li> <li>c. Determined by the entire administrative staff</li> </ul> </li> <li>2. Procedure in recording income                   <ul style="list-style-type: none"> <li>a. Meals, clientele, personnel and guests</li> <li>b. Special services</li> <li>c. Special functions</li> </ul> </li> <li>3. Classifying expenses                   <ul style="list-style-type: none"> <li>a. Food</li> <li>b. Labor</li> <li>c. Operating expenses</li> </ul> </li> <li>4. Anticipated income</li> </ul> </li> </ul> </li> </ul>	<p>Assigned reading Discussion Problems in preparing profit and loss statements, balance sheets and budget given as out-of-class assignments</p>
<ul style="list-style-type: none"> <li>VIII. Trends in food service systems-- Use of computer as a management tool</li> </ul>	<p>Field trip to a computer center Discussion</p>

Special Problem: Each student will be required to present review of a book in any area of management and to carry out a special problem or term paper which will involve readings, conferences, laboratory and experimental work and a written report.

## Supervised Work Experience

### Unit I                                  Orientation                                  (3 days)

1. Orientation to college food service.
2. Observe production and service of food
3. Become familiar with the policies, procedures and menu pattern of the cafeteria.

### Unit II                                  Food Production and Service                                  (10 days)

1. Work with cooks and other workers to become familiar with their jobs and to learn how to use and clean equipment.
2. Introduce and standardize one new recipe and calculate cost.

### Unit III                                  Supervision                                  (10 days)

1. Become familiar with the opening and closing routines and employee schedules.
2. Check foods as they come in, check storage conditions.
3. Make food production sheets.
4. Supervise production and service of menus and evaluate.
5. Make food consumption sheet after a meal.
6. Make tabulation studies.
7. Make worksheets.
8. Make a sanitation inspection round and write a short report.
9. Conduct a work simplification project and evaluate results.
10. Plan and supervise one function such as tea, luncheon or dinner.
11. Make a safety inspection round.
12. Supervise kitchen in the last three days with emphasis on maintenance of high standards of preparation, sanitation and safety.

### Unit IV                                  Management                                  (7 days)

1. Make one week's menus and have them checked.
2. Plan use of left-overs.
3. Select recipes.
4. Make requisitions, purchase food.
5. Observe portion control, merchandising, clean-up and storage of left-overs. Make suggestions.
6. Write job descriptions for each employee in the cafeteria.
7. Assist with storeroom inventories and ordering of staples for one month.
8. Become familiar and assist with records, reports and financial management of the food service.

## ACKNOWLEDGMENTS

Sincere appreciation is expressed to Mrs. Grace Shugart, Head of the Department of Institutional Management for her inspiration and expert guidance as major advisor; to Dr. Lucille Wakefield, Head of the Department of Food and Nutrition, and to Dr. Doretta Hoffman, Dean of the College of Home Economics, for their interest and helpful suggestions; to Miss Arlene Wilson, Internship Director of Indiana University Medical Center for her assistance and enlightening teaching.

Grateful recognition goes to the Ford Foundation for providing the opportunity to pursue a curriculum of study for background to this report. Special thanks to Dr. Elizabeth Hillier and Dean Lela O'Toole, of the Oklahome State University, for their unfailing interest and assistance.

Special acknowledgment to Dr. Zahida Amjad Ali, Principal of the Karachi College of Home Economics, Pakistan, for her encouragement and cooperation throughout this time.

A special note of thanks to my family and friends for their help, prayers and encouragement.

## LITERATURE CITED

- ADA. 1925. Association News. Report of the business meeting of the eighth annual meeting of ADA. J. Amer. Dietet. Assoc. 1:24.
- ADA. 1927. Standardization of courses for student dietitians in hospitals. J. Amer. Dietet. Assoc. 2:171.
- ADA. 1936. Educational trends in the field of dietetics. J. Amer. Dietet. Assoc. 12:248.
- ADA. 1963. Standards for effective administration of a hospital department of dietetics. J. Amer. Dietet. Assoc. 43:357.
- ADA. 1964. Dietitians and nutritionists defined. From "The Dictionary of Occupational Titles," 1965. U. S. Govt. Printing Office, Washington, D. C.
- ADA. 1965. Duties and responsibilities in the department of dietetics. An ADA Report. J. Amer. Dietet. Assoc. 46:179.
- ADA. 1969. Goals of the lifetime education of the dietitian. J. Amer. Dietet. Assoc. 54:91.
- ADA. 1971. Position paper on education for the profession of dietetics. J. Amer. Dietet. Assoc. 59:372.
- Alexander, M. 1963. Remarks and conclusions. Proceedings of the Second Conference on Institution Management. Sponsored by American Home Economics Association and American Dietetic Association. p. 62. University of Illinois, Urbana.
- American Home Economics Association. 1949. Home economics for higher education. Criteria for evaluating undergraduate program. American Home Economics Association, Washington, D. C.
- Anon. 1961. ADA convention report. Dietitians study management, nutrition and emotional reactions to food. Hospitals 35 (24):82.
- Anon. 1961. Underlying issues. Home Economics Seminar. French Lick, Indiana.
- Anon. 1970. Newer methods but same old problems. Mod. Hosp. 114 (6):108.
- Bennel, M. 1963. Summary of the group discussion. Proceedings of the Second Conference on Institution Management. Sponsored by American Home Economics Association and American Dietetic Association. p. 16. University of Illinois, Urbana.

- Blaker, G. 1968. Implications of the trends in food service industry for teaching institution management. Proceedings of the Fifth Conference of College and University Faculties of Institution Management. p. 58-61. University of Nebraska, Lincoln.
- Bloetjes, M. K., Couch, M. A. and Gottlieb, R. 1962. A study of dietetic training. J. Amer. Dietet. Assoc. 41:550.
- Cabot, E. E. 1970. Attention dietitians: Those numbers you feed are people. Mod. Hosp. 115 (5): 120.
- Cederquist, D. C. and Shugart, G. M. 1962. Education of the dietitian--a dietetic conference. J. Home Ec. 54:721.
- Clark, H. 1934. "The Professional Training of Hospital Dietitian," p. 8. Bureau of Publications, Teachers College, Columbia University, New York.
- Corbett, F. R. 1910. Essentials in the training of the dietitian. J. Home Ec. 2:499.
- Daza, N. V. 1956. An analysis of required courses in institutional management at Cornell University and their relation to the duties of the hospital dietitians. M. S. Thesis, Cornell University, Ithaca.
- Donaldson, B. 1965. The future in food administration. J. Amer. Dietet. Assoc. 46:357.
- Eppright, E. E. 1960. Philosophy and objectives of home economics--A discussion. J. Amer. Dietet. Assoc. 37:19.
- Faridi, T. 1962. "The Changing Role of Women in Pakistan," p. 1-20. Ferozesons Ltd., Karachi, Pakistan.
- Galster, M. D. 1953. Criteria for certain aspects of the institution management curricula. M. S. Thesis, Iowa State College, Ames.
- Gleiser, F. W. 1960. The dietitian--An executive. J. Amer. Dietet. Assoc. 36:103.
- Godfrey, G. 1941. Problems in the college training of the dietitian. J. Amer. Dietet. Assoc. 17:639.
- Government of Pakistan. 1951. Population Census of Pakistan. Economic characteristics. Census Bulletin No. 5, Karachi, Pakistan.
- Government of Pakistan. 1959. Report of the Commission on National Education. p. 191. Ministry of Education, Karachi.

- Government of Pakistan. 1961. Population Census of Pakistan. Economic characteristics. Census Bulletin No. 5, Karachi, Pakistan.
- Hannah, J. A. 1963. Education for the jet age. *J. Home Ec.* 55:745.
- Hornaday, J. A. 1963. Interest patterns of dietitians. *J. Amer. Dietet. Assoc.* 43:99.
- Huddleson, M. P. 1947. A new profession is born. *J. Amer. Dietet. Assoc.* 23:573.
- Hunscher, H. A. 1963. Continuing education: an antidote to obsolescence. *J. Amer. Dietet. Assoc.* 43:115.
- Huntzinger, H. 1963. A dietitian's approach to food service. *Inplant Food Management.* 10 (3):50.
- Isch, C. 1964. History of hospital fare. *J. Amer. Dietet. Assoc.* 45:441.
- Johnson, D. 1960. Changing role of the dietitian. *J. Amer. Dietet. Assoc.* 36:593.
- Johnson, V. K. 1960. Responsibilities of food production managers performing at middle management level. Ph. D. Thesis, University of Wisconsin, Madison.
- Koehne, M. 1930. The training of hospital dietitian and the college curriculum in home economics. *J. Home Ec.* 22:98.
- Laboskey, D. P. 1960. College students' attitudes toward the profession. *J. Amer. Dietet. Assoc.* 37:13.
- Lanctot, M. 1966. A study of the effectiveness of academic preparation of selected dietitians in the province of Quebec resulting in a proposed university curriculum for institution management. M. S. Thesis, Cornell University, Ithaca.
- LeTourneau, C. U. 1957. Management and the profession of dietetics. *J. Amer. Dietet. Assoc.* 33:691.
- Lewis, M. N. and Lachner, B. J. 1963. New medical dietetic program coordinates classroom and clinical experience. *Hospitals* 37:94.
- Lipscomb, M. and Donaldson, B. 1964. How well do directors of dietetics fulfill managerial responsibilities. *J. Amer. Dietet. Assoc.* 45:218.
- Lipscomb, M. 1966. Early days of hospital dietetics. *J. Amer. Dietet. Assoc.* 49:103.



- MacEachern, M. T. 1948. "Hospital Organization and Management," p. 2. Physicians Record Company, Chicago.
- Marlatt, A. L. 1926. Report on college courses for prospective dietitians. J. Amer. Dietet. Assoc. 1:179.
- McFadden, J. and Hart, K. 1962. Academic preparation for the first line supervision. J. Amer. Dietet. Assoc. 41:191.
- Miller, G. A. 1960 a. Academic preparation for food service management. I. Evaluation of curricula. J. Amer. Dietet. Assoc. 37:21.
- Miller, G. A. 1960 b. Academic preparation for food service management. II. Recent graduates evaluate their education. J. Amer. Dietet. Assoc. 37:27.
- Miller, G. A. 1960 c. Academic preparation for food service management. III. Employers assess collegiate programs. J. Amer. Dietet. Assoc. 37:121.
- Miller, G. A. 1960 d. Academic preparation for food service management. IV. Views of educators and conclusions. J. Amer. Dietet. Assoc. 37:124.
- Mongeon, M. A. 1964. Adequacy, degree and place of emphasis in attainment of management competencies by dietetic students. M. S. Thesis. Kansas State University, Manhattan.
- Moore, A. N. 1959. A study of the attitude of recent graduates toward their educational preparation for food service administration in home economics and hotel, restaurant and institution administration in selected universities. Ph.D. Thesis, Michigan State University, East Lansing.
- Moore, A. N. 1968. Undergraduate education of administrative dietitians. Proceedings of the Fifth Conference of College and University Faculties of Institution Management. p. 62-64. University of Nebraska, Lincoln.
- National Science Council. 1968. Report of the protein committee. Protein problem of Pakistan. National Science Council, Karachi.
- Newton, M. E. 1962. Are administrators and dietitians speaking? Mod. Hosp. 99 (2): 108.
- Northrop, M. W. 1960. Which road for dietitians? Hospitals 34 (9): 68.
- Ohlson, M. A. 1952. Education of dietitians in various countries. J. Amer. Dietet. Assoc. 28:943.

- Ostenso, G. and Hunzicker, B. 1967. Institution management curriculum-- structural framework. Proceedings of the Fourth Conference on Institution Management. Sponsored by American Home Economics Association and American Dietetic Association. p. 40-48. University of Chicago, Chicago.
- Patterson, I. 1964. Dietetic education--some current issues. J. Amer. Dietet. Assoc. 45:19.
- Proceedings of the Second Conference on Institution Management. 1963. University of Illinois, Urbana.
- Proceedings of the Third Conference--College and University Teachers of Institution Management. 1965. University of Chicago, Chicago.
- Proceedings--Fourth Conference--College and University Faculties of Institution Management. 1967. University of Chicago, Chicago.
- Proceedings of the Fifth Conference of College and University Faculties of Institution Management. 1969. University of Nebraska, Lincoln.
- Rahimtoola, R. J., Khetpal, N. R. and Majid, I. 1969. Mortality and morbidity in children. The Medicus. 38:51.
- Robinson, W. F. 1961. The dietetic internship. J. Amer. Dietet. Assoc. 39:18.
- Robinson, W. F. 1963. Dietetic education. The 1962 conference of faculties of college and university home economics departments and approved dietetic internships. J. Amer. Dietet. Assoc. 43:110.
- Robinson, W. F. 1965. Your role in the continuing development of dietetics. J. Amer. Dietet. Assoc. 47:89.
- Robinson, W. F. 1966. How will the hospital dietitian function in the future? J. Amer. Dietet. Assoc. 49:110.
- Ross, A. 1967. An administrator looks at the department of dietetics. J. Amer. Dietet. Assoc. 50:26.
- Ross, M. L. 1961. Continuing professional growth. J. Amer. Dietet. Assoc. 39:15.
- Sabine, G. 1963. The college student, 1963. J. Amer. Dietet. Assoc. 43:95.
- Scott, D. D. 1960. Education of the dietitian of tomorrow. J. Amer. Dietet. Assoc. 37:16.

- Selzer, H. M. and Selzer, K. 1948. "Diet in India and Pakistan in Health and Disease," p. 1. Ripon Publishers, Lahore.
- Todhunter, E. N. 1965. The evolution of nutrition concepts--perspectives and new horizons. J. Amer. Dietet. Assoc. 46:120.
- Tyler, R. W. 1950. "Basic Principles of Curriculum and Instruction," p. 28-40. University of Chicago, Chicago.
- Tyler, R. W. 1962. Education in a world of change. J. Home Ec. 54:527.
- Wenberg, B. G., Ingersoll, R. W. and Dohner, C. W. 1969. Evaluation of dietetic interns. J. Amer. Dietet. Assoc. 54:297.
- West, B. B., Wood, L. and Harger, V. F. 1966. "Food Service in Institutions," p. 336-337. John Wiley and Sons, New York.
- Wheeler, R. 1925. Presidential address. J. Amer. Dietet. Assoc. 1:97.
- Whitcomb, M. 1963. How food service has changed in 50 years. Mod. Hosp. 101 (3): 163.
- Wilson, M. 1970. The dietetic education: yesterday, today and tomorrow. Paper presented at Dietetics 1970-2001 A. D., ADA Learn-In, Cornell University, Ithaca.
- Young, C. M. 1965. The therapeutic dietitian--a challenge for cooperation. J. Amer. Dietet. Assoc. 47:96.

## APPENDIX

DUTIES AND RESPONSIBILITIES IN THE DEPARTMENT OF DIETETICS  
An A. D. A. Report<sup>1</sup>

In the July 1954 issue of this Journal, an editorial, "Duties and Responsibilities" (1), spelled out in broad terms what were then considered to be desirable "job descriptions" for: professionally qualified dietitians, the food service supervisor, and the dietary clerical worker. In the interim, employment of food service supervisors has increased rapidly as training programs have been developed to meet the need, and it has become possible for dietitians to delegate to them more and more of the non-professional duties and responsibilities within the department. Thus the dietitian's work over the last decade has evolved and developed into a more purely professional position with greater responsibility. Hospital administrators have been quick to realize the value of these twin developments and continue to encourage dietitians to delegate duties to trained food service supervisors wherever possible.

Recognizing the mutual interest of both positions, the Joint Committee of the American Hospital Association and A. D. A. has urged a revision of the lists of responsibilities and duties to bring them up to date. This revision appears below. Members are urged to use this information in self-evaluation of professional performance and to continue both their support of training opportunities for and employment of food service supervisors.

The responsibilities and activities of the dietitian, as listed below, are based on present-day concepts of the role in the hospital and reflect current practices. To review in more detail the standards for the professionally qualified hospital dietitian,

---

<sup>1</sup>From: Journal of The American Dietetic Association. 1965. 46:179.

members and readers are referred to the following articles, all of which have appeared in this Journal: "Policies for Effective Administration of the Department of Dietetics" by Zahasky and Brady (2); "Responsibilities of Dietitians to Administrators and Physicians" (3); and "Standards for Effective Administration of a Hospital Department of Dietetics" (4).

### The Professionally Qualified Dietitian

#### RESPONSIBILITIES OF THE DIRECTOR OF A DEPARTMENT OF DIETETICS

The role of the director of a department of dietetics, as distinct from that of dietitians in general, is set forth below in this first section of "responsibilities." Although "director" in this context implies a large department in which a staff of dietitians is employed, the activities listed are also applicable in situations in which there is an "only dietitian" who is designated as head of a department. However, whereas the duties and responsibilities of the director of a staff of dietitians are primarily administrative in nature, the single dietitian must also fulfill the obligations and responsibilities in all areas of specialization in hospital dietetics, namely administration, therapeutics, education, and research. These are outlined in succeeding sections of this report.

#### A. Planning, organizing, and directing activities of the department.

1. Establishing both long- and short-range objectives for the department which are consistent with the goals of the institution.
2. Recommending policies and standards for the department to administration.
3. Interpreting objectives, accomplishments, and needs of the department to administration.
4. Planning for effective budget management and personnel utilization.

5. Planning, organizing, evaluating, and directing the total food service, including: normal and therapeutic food service to patients and personnel, purchasing specifications for facilities and materials, food production, and sanitation and safety standards.
  6. Participating in conferences of department heads.
  7. Attending general medical staff meetings and clinical conferences in accordance with the hospital policy.
  8. Establishing and maintaining effective intra- and interdepartmental communications patterns.
  9. Coordinating and integrating departmental services with those of other departments.
  10. Developing and maintaining an organization chart of the department showing responsibilities and authority of all personnel.
  11. Delegating responsibilities to all professional staff members and supervising their work.
  12. Supervising maintenance of cost control and personnel records and reports, without duplicating information kept in other departments.
  13. Participating in professional and community activities.
- B. Planning, organizing, and directing educational programs of the department.
1. Developing and maintaining an active and effective staff development program.
  2. Planning, advising, and/or participating in the development and execution of educational programs for: nursing students; medical and dental students, interns, and residents; dietetic interns; and other groups in the institution.
  3. Participating in formulation and maintenance of an effective and continuous program for the orientation, training, and supervision of personnel.
- C. Planning, organizing, and directing research programs of the department.
1. Developing and implementing research programs in administration, food production, normal and therapeutic nutrition, and education.
  2. Cooperating and assisting with medical research related to nutrition.

## ADMINISTRATIVE RESPONSIBILITIES OF THE DIETITIAN

1. Planning, developing, implementing, and evaluating food service for patients and personnel within budgetary limitations and according to current nutritional principles, in order to maintain and improve the nutritional status of patients and personnel.
2. Maintaining high standards in quality of food procurement, production, and service; economical use of labor and food; and the training of efficient staff.
3. Planning regular and modified menus according to established patterns, in cooperation with dietitians concerned with patient food service.
4. Standardizing recipes and supervising their use.
5. Delegating duties and responsibilities to competent individuals.
6. Assisting with the maintenance of records for planning and control of the department.
7. Assisting with reports of financial management.
8. Maintaining safety and sanitary standards of the department.
9. Analyzing, developing, and keeping up-to-date job descriptions and specifications for all positions.
10. Contributing to over-all departmental planning and coordination of services with other departments.
11. Instructing, supervising, and evaluating dietetic interns, food service supervisors, and other food service personnel.

## THERAPEUTIC RESPONSIBILITIES OF THE DIETITIAN

1. Maintaining or improving the nutritional status of patients by adapting menus, evaluating foods consumed, and counseling in principles of nutrition.
2. Interviewing, teaching, and assisting patients to satisfactorily fulfill nutritional needs in following prescribed diets at home.
3. Cooperating in patients' care by acting as consultant to physicians, nurses, medical social workers, and other paramedical persons in all areas of normal and therapeutic nutrition.



4. Consulting with physicians concerning dietary prescriptions and implementing these through meals adapted to the needs of individual patients.
5. Consulting with community agencies responsible for home or institutional care of patients following discharge from the hospital.
6. Recording on patients' charts, when indicated, appropriate information, including patients' dietary histories, food consumed in the hospital, and progress notes on patients' education.
7. Participating and contributing to over-all departmental planning.
8. Delegating duties and responsibilities to competent individuals.
9. Instructing, supervising, and evaluating dietetic interns, food service supervisors, and other food service personnel.
10. Participating in nutrition education of dietetic interns, nursing and medical students, and others.
11. Preparing, reviewing, and revising materials on modified diets for the department diet manual and for use in educational programs for professional students and department personnel.

#### EDUCATIONAL RESPONSIBILITIES OF THE DIETITIAN

1. Developing, organizing, and teaching courses or units of instruction related to normal and therapeutic nutrition.
2. Coordinating and integrating current principles of normal and therapeutic nutrition into teaching programs for patients in the over-all educational curriculum, dietetic interns, and medical, nursing, and other professional students.
3. Formulating, directing, and participating in staff development and in-service education and training of dietary personnel.
4. Incorporating current trends into the educational program by maintaining liaison with colleges, universities, professional associations, and allied groups.
5. Using effective motivating and learning techniques in presenting current nutrition and/or management instruction to nursing and medical students, dietetic interns, graduate professional groups, and the public.

6. Preparing manuals, brochures, visual aids, and other materials used in teaching.

## INVESTIGATIVE RESPONSIBILITIES OF THE DIETITIAN

1. Originating and/or assisting in planning, organizing, and conducting research programs in nutrition, administration, and education.
2. Studying and analyzing recent scientific findings in these areas for application to present research and development of tools for planning the research.
3. Analyzing, evaluating, and interpreting this research.
4. Contributing personnel to a medical research team, wherever appropriate.

### The Food Service Supervisor

A survey made in 1962 (5) indicated that the position of food service supervisor in the department of dietetics has gained a firm foothold in hospitals. Almost 40 per cent of the hospitals under 100 beds and approximately 70 per cent of those with more than 100 beds reported employing one or more food service supervisors. Some 4700 vacancies were also reported for the institutions represented in this survey, and by extrapolation, it has been estimated that there might actually be opportunities for as many as 10,000 food service supervisors if they were available.

When the use of sub-professional supervisory personnel was first recommended by a committee of The American Dietetic Association, this type of work was considered appropriate in hospitals where at least one professionally qualified dietitian might serve as the supervisor's superior. As the role of the food service supervisor has grown, specializations have even appeared in larger hospitals. It has also come to encompass work in smaller institutions and nursing homes which are not large enough

to employ full-time dietitians. In such situations, while having day-to-day responsibility for operation of the food service and reporting to the administrator, the food service supervisor should be working under a part-time or shared dietitian or have the help and advice of a dietary consultant.

To clarify terminology, it has been recommended that in very small institutions--usually 25 beds or less--where the person in charge of food service is also responsible for actual food preparation, his title be that of "cook-manager" rather than "food service supervisor." Where a food service supervisor or a cook-manager is responsible for the daily operation of the food service department, additional duties are usually assumed by virtue of the responsibilities of the position.

The role of the food service supervisor today may, therefore, include many and varied duties and responsibilities. The listing below has been worked out to reflect the current practice. In any area of food service, the work of the food service supervisor may involve the following duties, depending on the size of the institution in which he is employed.

1. Consulting with the dietitian (full- or part-time or dietary consultant) regarding operating problems, patient food service, and therapeutic diets.
2. Orienting, training, supervising, and evaluating new personnel.
3. Training, supervising, and evaluating other personnel.
4. Instructing employees in use, care, and maintenance of equipment.
5. Preparing work and time schedules for food service employees.
6. Supervising sanitation and housekeeping procedures.
7. Maintaining safety standards.

## RESPONSIBILITIES IN THE AREA OF ADMINISTRATION

1. Assisting in ordering food supplies.
2. Receiving deliveries and checking receipts against specifications and orders.
3. Maintaining or improving standards of food preparation and service.
4. Supervising activities of work areas, including cafeterias, dining rooms, and the dishwashing room.
5. Assisting in the standardization of recipes and supervising their use.

## RESPONSIBILITIES IN THE AREA OF PATIENT FOOD SERVICE

1. Writing modified menus according to patterns established by the dietitian or dietary consultant.
2. Supervising serving units or central tray service.
3. Contacting patients daily who are receiving routine diets and/or selective menus.

## THE COOK-MANAGER

The food service manager or cook-manager who is responsible for daily operation of the department may be involved with the following additional functions:

1. Planning menus consistent with current nutritional principles and within budgetary limitations.
2. Scheduling, training, and evaluating food service personnel.
3. Developing specifications for food supplies and purchasing them.

## The Dietary Clerical Worker

A clerk may be used throughout a department of dietetics or may work specifically in administration or in patient food service. In all areas, a clerk may be assigned any or all of the following duties:

1. Performing general office routines.
2. Receiving and transmitting telephone messages.
3. Writing requests for repairs of equipment.
4. Typing menus, schedules, requisitions, purchase orders, recipes, and so on.
5. Cutting stencils and duplicating menus and forms.
6. Posting bulletin board memoranda.
7. Keeping time cards and/or attendance records and personnel, purchase, and census records.
8. Preparing payroll and accident reports.
9. Checking invoices and preparing them for payment.
10. Maintaining records necessary for cost accounting.
11. Taking physical inventories and keeping inventory and storeroom records.
12. Requisitioning supplies.
13. Checking laundry in and out.
14. Checking supplies in storage and/or serving kitchens.

### ADDITIONAL RESPONSIBILITIES IN THE AREA OF ADMINISTRATION

1. Placing "routine" food purchase orders; for example, bread and milk.
2. Calculating recipe and portion costs.

3. Tallying food summaries for cooks' work sheets.
4. Checking cash receipts (if this is not done by business office).
5. Keeping cash records.
6. Relieving cashiers.

#### ADDITIONAL RESPONSIBILITIES IN THE AREA OF PATIENT FOOD SERVICE

1. Recording routine diet and menu changes.
2. Preparing menu slips and tray cards.
3. Maintaining nourishment records.

The practice of dietetics has changed in the last decade, as has almost every other facet of life and work in our country, and it will continue to change. The above "job descriptions" will enable members better to assess their present professional performance. The obligation of each member of a profession is to work toward the goal of upgrading and improving professional performance. Delegation of duties, improved supervision, and better use of the dietitian's education should be expected of and realized by the professionally qualified dietitian. In better using his ability and talents, improved care to patients and improved quality of food service can readily be expected.

#### References

- (1) Duties and responsibilities. J. Amer. Dietet. A. 30:692, 1954.
- (2) Zahasky, M. C., and Brady, N. A.: Policies for effective administration of the department of dietetics. J. Am. Dietet. A. 34:160, 1958.
- (3) Responsibilities of dietitians to administrators and physicians. J. Am. Dietet. A. 40:41, 1962.

- (4) Standards for effective administration of a hospital department of dietetics.  
J. Am. Dietet. A. 43: 357, 1963.
- (5) Food service in hospitals. An A. D. A. survey. J. Am. Dietet. A. 44:255, 1964.

THE AMERICAN DIETETIC ASSOCIATION  
620 North Michigan Avenue, Chicago, Illinois 60611

Academic Requirements for Active Membership in The American  
Dietetic Association and Entrance to Dietetic Internships  
Approved by the Executive Board  
Revised 1968

The academic plan for membership represents a broad basis of subject content. Membership may be obtained through three academic avenues: namely, science, business management, and the traditional pathway of general dietetics. In this way more individuals may be encouraged to pursue careers in dietetics and to meet the increasing demands for specialties in dietetics.

These requirements apply to:

- (1) Applicants for admission to dietetic internships approved by The American Dietetic Association.
- (2) Applicants for membership in The American Dietetic Association.
- (3) Former members desiring reinstatement of membership in The American Dietetic Association after a five-year period.

A bachelors' degree from an accredited college or university which has included or been followed by required courses and credit hours as adopted by the Executive Board of The American Dietetic Association is a basic requirement both for membership in the Association and entrance to approved dietetic internships.

Certain directors of dietetic internships request more than the required credit hours stated.

Five years is the limit of time which may elapse between completion of the academic requirements and admission to an approved dietetic internship. If five years have elapsed between the completion of academic requirements and application for an appointment to an internship, the applicant must present 2 courses for 4 semester hours credit in the areas of nutrition, food service management or related sciences earned within the five-year period prior to application.

Applicants who meet the academic requirements must present also: satisfactory completion of an approved dietetic internship and endorsement by the Director of the internship, OR the planned experience, endorsement, and supervision requirements approved by the Executive Board. Write to the Headquarters office for information.



## MINIMUM ACADEMIC REQUIREMENTS FOR ADA MEMBERSHIP

The Core plus ONE Emphasis, plus ONE Concentration constitute the requirements for membership or internship, as designated for the specialties. Credit for a course may be used only once.

CORE SUBJECTS 22 semester hours--basic minimum--all core subjects required

Natural Sciences -- 14 s. h.  
     human physiology and bacteriology -- 6 s. h.  
     chemistry -- 8 s. h.  
 Food -- 6 s. h.  
     selection, preparation, meal planning  
 Nutrition -- 2 s. h.

EMPHASES Choice of one Emphasis - 9 semester hours - basic minimum - underlined subject areas required

- I. FOOD SERVICE MANAGEMENT
  - organization and management
  - quantity food production and service
  - advanced food production management
  - equipment selection, maintenance, and layout
  - principles of accounting
  - purchasing

or
- II. EDUCATION (Business and Industry, Clinic, College, Extension, School, and Public Health)
  - educational principles and techniques
  - educational psychology
  - anthropology
  - child psychology
  - sociology

or
- III. FOODS--EXPERIMENTAL AND DEVELOPMENTAL
  - experimental foods
  - advanced bacteriology
  - consumer economics
  - cultural aspects of food
  - food styling
  - quantity food production and service
  - psychology of advertising
  - technology of food
  - theory and technique of communication

CONCENTRATIONS Choice of one concentration - 15 semester hours - basic minimum  
Underlined subject areas required.

A. THERAPEUTIC AND ADMINISTRATIVE DIETETICS

advanced nutrition 2 s. h.

biochemistry

personnel management or industrial psychology

principles of learning or educational psychology

diet therapy

advanced food production management

equipment selection, maintenance, and layout

foods: cultural, experimental or technological

principles of accounting

purchasing

or

B. BUSINESS ADMINISTRATION

advanced accounting

advanced food production management

equipment selection, maintenance, and layout

personnel management

purchasing

business law

communication

human relations

industrial psychology

labor economics

or

C. SCIENCE--FOODS AND NUTRITION

advanced nutrition 6 s. h.

biochemistry

foods: cultural, experimental or technological

child growth and nutrition

community nutrition

diet therapy

principles of learning or educational psychology

statistics

food processing and preservation

OBJECTIVES FOR COLLEGE PREPARATION FOR DIETETICS  
TO MEET ACADEMIC REQUIREMENTS

Objectives for the Core

Social and Behavioral Sciences (assumed to be included in college degree requirements)

1. To develop an understanding and appreciation of the basic needs, motivations, and goals of individuals and groups.
2. To foster respect for the dignity of man.

Physiology

To develop an understanding of the structure, processes, functioning, and interrelationship of the various systems of the human body.

Bacteriology

To develop an understanding of the factors which promote or inhibit the growth of the various microorganisms which are important in relation to food and health.

Chemistry

To learn the composition, physical properties, and interaction of inorganic and organic substances as a background for understanding man's physical and biological environment.

Foods and Nutrition

1. To develop an understanding of the basic principles of food preparation and of meal service in relation to acceptable quality, appetite appeal, and preservation of nutritive value, appropriate meal service; and the effective use of time, energy, money, and equipment.
2. To develop an understanding of the food needs of individuals in relation to the specific food nutrients and the functions of these nutrients in the body throughout life. This will also include evaluation of dietary patterns and ability to plan or select an adequate diet for various members of a family or institution group.
3. To develop an appreciation for food as it relates to the development (physically, socially, mentally, and politically) of individuals, communities, and countries.

Objectives for Emphases  
(Nine Semester Hours)

EMPHASIS I. FOOD SERVICE MANAGEMENT

1. To know quality food and to develop the ability to produce quality food for group service within a predetermined budget.
2. To develop the ability to recognize the principles of good organization and management and to apply these principles to the effective operation of the food service department.
3. To develop the sense of responsibility in the food service manager for leadership in the achievement of the goals of the institution.

EMPHASIS II. EDUCATION

1. To develop an understanding of the principles of education that are basic to effective learning of individuals and of groups.
2. To develop ability to clearly define objectives for an education program or project.
3. To develop ability to select and use most appropriate methods for specific groups in the attainment of defined objectives.
4. To acquire recognition of the numerous resources from which supplemental teaching aids are now available.
5. To develop ability to select and use evaluation techniques that measure student progress and serve as a means to improve teaching.

EMPHASIS III. FOODS--EXPERIMENTAL AND DEVELOPMENTAL

1. To develop a working knowledge of the behavior of the basic food constituents in food preparation.
2. To develop an understanding of the relation of bacteriology to the preparation, preservation, processing, and serving of food.
3. To develop an appreciation of both the cultural and technological aspects of food production and preparation.
4. To develop an understanding of consumer economics and the factors which affect it.

5. To acquire a working knowledge of effective communication processes (written, oral, audio, and visual).

Objectives for Concentrations A, B, and C  
(Fifteen Semester Hours)

CONCENTRATION A. THERAPEUTIC AND ADMINISTRATIVE DIETETICS

I. Objectives for Advanced Nutrition and Diet Therapy

1. To develop an understanding of the nourishment of the body, based on knowledge of the chemical and physiological processes and functions of specific nutrients in meeting the nutritional needs in health and disease.
2. To develop the ability to use nutritional knowledge to feed people of various ages and under various circumstances in the promotion of positive health.
3. To develop the ability to evaluate research studies and apply this knowledge to the feeding of people of all ages.
4. To develop an understanding of the intermediary metabolism of carbohydrates, lipids, amino acids, purines, and nucleic acids and of the experimental evidence for the biological pathways in the mammalian body.
5. To develop the ability to recognize the interrelationships of the inorganic and organic compounds (included vitamins, enzymes, and hormones) in structures and regulatory functions.
6. To develop the ability to evaluate nutrition information and separate facts from untruths, half truths, and misinformation.
7. To increase the ability of an individual to use the various techniques through which others will understand and want to put into practice this knowledge of nutrition.

II. Objectives for Biochemistry (In Concentration A and C)

1. To develop an understanding of the intermediary metabolism of carbohydrates, lipids, amino acids, purines, and nucleic acids and of the experimental evidence for the biological pathways in the mammalian body.
2. To understand the functions and metabolisms of the inorganic elements and their interrelationships with organic functional substances.

3. To develop the ability to recognize the interrelationships of the inorganic and organic compounds (including vitamins, enzymes, and hormones) in structures and regulatory functions.

### III. Personnel Management

1. To develop an understanding of the interaction between individuals as it affects the dietitian's role in: (a) personnel policy formation, (b) interviewing and hiring of employees, (c) orientation and training procedures, (d) work scheduling (e) supervision and (f) periodic job performance evaluation.
2. To appreciate the achievement of employee satisfaction as well as efficiency while meeting the goals of the institution.

### IV. Principles of Learning (In Concentration A and C as well as Emphasis II)

1. To develop understanding that learning takes place more readily (a) when emphasis is placed on the individual, (b) when emphasis is placed on the learner's perception of the task to be accomplished (c) when emphasis is placed on human relation factors such as feeling, anxieties, concerns, and questions and (d) when the learner feels that he belongs and is secure.
2. To develop the idea that learning is an active process in which leaders should help students to clarify their goals and to plan, experiment, explore, and perform tasks in achieving their goals.
3. To develop the ability of the individual to use appropriate teaching materials effectively and to call upon many resources to promote the learning process.

### CONCENTRATION B. BUSINESS ADMINISTRATION

1. To develop a high standard of ability to plan, organize, direct, coordinate, and control the activities of a food service institution.
2. To develop awareness of human factors in working with individuals and groups.
3. To develop an understanding and ability to control the business and economic activities which are within management's responsibility.
4. To develop an understanding of labor relations and personnel management.

### CONCENTRATION C. SCIENCE--FOODS AND NUTRITION

1. To develop the ability to apply knowledge of chemical and physical changes

occurring in the preparation of food to quality of product and the feeding of people for the promotion of adequate nutrition.

2. To promote an interest in and appreciation of the art, management, and science involved in serving quality food and in feeding people of varying cultural backgrounds. This involves an appreciation of the value of gracious meals enjoyed together in the home and elsewhere.
3. To develop the ability to evaluate research studies and to apply this knowledge to experimental cookery as well as to feeding people.
4. To develop the ability to evaluate food and nutrition literature and to separate facts from untruths, half truths, and misinformation.
5. To foster an understanding of growth and development from conception throughout the life cycle, as a basis for the promotion of an adequate food intake.
6. To increase the ability of an individual to use the various techniques through which other people and groups will understand and want to put into practice the knowledge of foods and nutrition . (See objectives for Principles of Learning in Concentration A.)
7. To develop an understanding of the chemical and physiological processes and the functions of specific nutrients in meeting the nutritional needs throughout the life cycle in health and disease. (See objectives for Biochemistry.)

## GOALS OF THE LIFETIME EDUCATION OF THE DIETITIAN

Committee on Goals of Education for Dietetics, Dietetic Internship Council,  
The American Dietetic Association<sup>1</sup>

These goals for Lifetime Education of the Dietitian define, unify, and give direction for basic professional and continuing education and personal development. These statements can be effective when used as a framework for the interpretation of the profession of dietetics. They serve as a basis for (a) recruitment of youth to the undergraduate education through understanding of the profession by counselors, parents, and youth, (b) college curriculum for understanding of objectives by students, faculty, and administrators, (c) internships for pointing the way in their programs, and (d) the on-going continuing education and development throughout the lifetime of each dietitian. They have been accepted as the current goals for all in the profession of dietetics.

Many professions are studying, reassessing, defining, redefining, and restating goals of education and function. With the new and the altered programs and legislation in health and medical care systems, as well as the explosion of knowledge in science, technology, management, and behavioral sciences, medical and allied health professions are at work singly and together on goals of education, both basic professional and continuing.

The charge to the Committee on Goals of Education for Dietetics was to identify those qualities which, to some degree, should be characteristic of every dietitian. If we are to designate dietetics as one profession, there must be a unifying core of characteristics for anyone or all in the profession. The task of the Committee was not to identify those special responsibilities needing specialized education or experience. Subsequent statements are necessary on the educational requirements and desirable achieve-

---

<sup>1</sup>Committee members are: Chairman, Helen A. Hunscher, Ph.D.; Geraldine Bosch, Eleanore M. Gillig, Martha N. Lewis, Gertrude E. Miller, Mary Murai, Dr. P.H., and M. Arlene Payne, Ph.D. Consultant.



ments in specialty responsibilities in dietetics.

The Committee believes that this set of lifetime goals of the dietitian has some valuable contributions to the profession of dietetics:

(a) It has identified the unique role of the dietitian as being nutritional care.

Every profession must identify its own unique contribution. The goals perform this function for our profession.

(b) It denotes qualities that beginners in the profession should have attained to some degree and that should continue to grow with experience. It is recognized that some individuals may arrive at various degrees of progress to the goals at different times in life.

(c) It constitutes a pattern for progressive future efforts in educational programs, and it provides a guide for individual self-improvement.

(d) It stresses an attitude of progressive development of the profession and its members with the changing environment, knowledge, and health care programs.

The development of the statement of goals has also necessitated the writing of fundamental definitions to clarify and unify terminology which is currently and confusingly used regarding dietetics in dictionaries and other publications.

The assessment of the value and soundness of these general lifetime goals of the dietitian can be made solely through putting them into practice in professional life in all situations. Methods for achieving these or any such goals necessitate construction, review, and revision of programs, procedures, and ideas.

#### Fundamental Definitions

(a) "Health is a state of complete physical, mental, and social well-being and not

merely the absence of disease or infirmity."--World Health Organization.

- (b) Science and art includes science as systematized knowledge derived from exact observations or experimentation and evaluation carried on to identify facts, phenomena, laws, and proximate causes; and art as skill in performance acquired by study, observation, and experience.
- (c) "Nutrition is the science of food, the nutrients and other substances therein, their action, interaction, and balance in relation to health and disease and the processes by which the organism ingests, digests, absorbs, transports, utilizes, and excretes food substances. In addition, nutrition must be concerned with certain social, economic, cultural, and psychological implications of food and eating."--Council on Foods and Nutrition, American Medical Association, 1962.
- (d) Nutritional care is the application of the science and art of human nutrition in helping people select and obtain food for the primary purpose of nourishing their bodies in health or in disease throughout the life cycle. This participation may be in single or combined functions: in feeding groups involving food selection and management; in extending knowledge of food and nutrition principles; in teaching these principles for application according to particular situations; and in dietary counseling.
- (e) Profession is a calling requiring specialized knowledge and often long and intensive preparation, including instruction in skills and methods as well as in scientific, historical, or scholarly principles underlying such skills and methods, maintaining by force of organization or concerted opinion high standards of achievement and conduct, and committing its members to continued study and to a kind of work which has for its prime purposes the rendering of a public service.--Webster's Third International Dictionary.
- (f) Dietetics is a profession concerned with the science and art of human nutritional care, an essential component of the health sciences. It includes the extending and imparting of knowledge concerning foods which will provide nutrients sufficient for health and during disease throughout the life cycle and the management of group feeding for these purposes.
- (g) A dietitian is a specialist educated for a profession responsible for the nutritional care of individuals and groups.

### Goals of Lifetime Education--In Terms of Achievements

#### THE DIETITIAN:

##### I. IS COMMITTED TO EXCELLENCE IN THE NUTRITIONAL CARE OF INDIVIDUALS AND GROUPS.

All dietitians contribute to nutritional care. The dietitian is dedicated to excellence in professional service. In the achievement of excellence, he

is responsible for the establishment of goals for service and the assessment of progress towards these goals.

II. COMPREHENDS, INTERPRETS, AND APPLIES THE SCIENCE AND ART OF NUTRITION IN THE PROMOTION OF INDIVIDUAL, GROUP, AND COMMUNITY HEALTH.

Requisite for the dietitian is a thorough knowledge of the scientific bases of human nutritional needs, including biochemical, physiologic, and psychologic relationships throughout the life cycle in health and in disease. Interpretation and application of the science of nutrition involves creative dealing with people and situation, with knowledge of food in its many implications for health, and with communications directly to people or indirectly through the efforts of others for nutritional care.

III. UNDERSTANDS THE SIGNIFICANCE OF SCIENTIFIC INQUIRY AND INTERPRETATION IN ADVANCING PROFESSIONAL KNOWLEDGE AND IMPROVING STANDARDS OF PERFORMANCE.

Understanding and appreciation of research and the ability to evaluate and interpret findings are essential for effective professional practice. The scope of this research is broad. It includes such areas as nutritional, behavioral, and managerial sciences; technologic developments in food production, processing, and marketing; food service systems and equipment; automation and information processing. The dietitian evaluates new research findings and utilizes those that are valid and appropriate for the nutritional care of people.

IV. SHARES RESPONSIBILITY WITH ASSOCIATED PROFESSIONALS BY CONTRIBUTING HIS SPECIALIZED KNOWLEDGE OF NUTRITION.

The dietitian on the multidisciplinary team collaborates with others in planning, executing, and evaluating his contributions to comprehensive health care programs. These are components of nutritional care in the prevention, treatment, and control of health problems of individuals and families, groups, or communities. This care may be given in a variety of settings: hospitals, extended care facilities, government or voluntary health agencies, industries, business, or schools.

V. ADAPTS PLANNING AND PERFORMANCE TO ENVIRONMENTAL FACTORS AND CHANGES, RECOGNIZING PHYSIOLOGIC, PSYCHOLOGIC, SOCIAL, POLITICAL, CULTURAL, AND ECONOMIC INFLUENCES.

The dietitian is alert to the emerging concepts in science and technology and the environmental influences within society which will require alterations in the goals of health care and the methods of achieving them. At the same time, he is prepared to accept and work with individual differences in food practices and varying attitudes toward the role of nutrition in the promotion of health and the control of disease.

- VI. DEMONSTRATES RESPECT AND EMPATHY FOR PEOPLE AND APPRECIATION OF AN INDIVIDUAL'S CAPACITY TO CHANGE AND DEVELOP. Sensitivity to and acceptance of the attitudes and behavior of individuals is essential for teaching, guiding, and directing. The dietitian is responsible for providing an atmosphere in which an individual may be motivated to learn and profit from his learning. Such experiences, in which the teacher and the learner are mutually involved, increase reciprocal understanding and permit both to become better and more responsive individuals.
- VII. IS COMPETENT IN MANAGING AVAILABLE RESOURCES IN THE PROVISION OF NUTRITIONAL CARE. Management is the coordination of available resources for decision-making to achieve specified goals. Managerial competency is essential for all dietitians in their particular spheres of endeavor. The provision of nutritional care requires effective management of resources--physical facilities, finances, and people--to the end that people needing care receive it. The emergence of new management theories in personal-interactions and the dynamic evolution of health care emphasize a need for anticipatory management to meet the needs of a rapidly changing demand for professional services. The dietitian recognizes that one of his most important resources is himself. Competency in management includes ability to assess and use his own time and talents effectively.
- VIII. MANIFESTS PROFICIENCY IN COMMUNICATION. Skill in communicating with those whose work or well-being are the dietitian's responsibility necessitates effective listening, speaking, reading, and writing. The dietitian, with an awareness of modern communication theory and methods, selects the channels through which he can best communicate.
- IX. MAINTAINS THE DISCIPLINE AND SELF-AWARENESS OF THE PROFESSIONAL PERSON AND ACCEPTS RESPONSIBILITY FOR THE CONTINUING DEVELOPMENT OF HIS OWN COMPETENCE. Recognition of the meaning of being professional through self-appraisal, self-discipline, and continuing education is essential for the dietitian. Planning for excellence necessitates formulating short- and long-term goals for professional development. Personal motivation, initiative, resourcefulness, and judgment need to be exercised by the dietitian continuously to improve leadership and inspiration by demonstrating the value and commitment to lifetime learning and participation in professional advancement. The development of receptiveness to new experiences and the need to cultivate oneself as an instrument of inquiry are integral requisites for continuing development. With increasing breadth of experience comes enhancement of self-confidence and potential. Together with increasing flexibility, these attributes will contribute immeasurably to a lifetime of creative productivity.

THE AMERICAN DIETETIC ASSOCIATION POSITION PAPER  
ON EDUCATION FOR THE PROFESSION OF DIETETICS

Mushrooming knowledge banks, unbelievable technologic advances, enlightening research results, and endless resources confront practitioners in the field of dietetics. The evolution of technologic, ecologic and social factors herald exciting futures in dietetics.

Those responsible for providing excellence of education for dietitians must cope with the need to adapt educational processes to coincide with the altered role of the dietitian. The American Dietetic Association has addressed itself to the task of anticipating the changed role of the dietitian and postulating the educational course that will prepare the person to fulfill that role.

Historically, dietetics has dealt more or less successfully with an intrinsic dichotomy of two major areas--administration and therapeutics. Both areas are undergoing a burgeoning of knowledge. For instance, giant steps have been taken to vastly improve equipment, to provide revolutionary food service systems, to make exotic foods readily available, to produce standard food items that are more and more "convenient." Awesome advances in health treatment are evidenced by increased use of artificial organs and organ transplants; accessibility of elite techniques, such as hemodialysis; concern about delivery of health care; and the resultant emphasis on longevity and efforts to alleviate chronic disease.

In addition to the growth of knowledge in these two traditional areas, the mode of application of knowledge is changing. Again, historically, dietetics has usually been

practiced in an institutional setting, the dietitian giving direct services to the recipient. The recipient was often "horizontal," as typified by the hospital patient or was regimented in routine as exemplified by a school child.

Current trends require dietitians to enlarge their sphere of practice and to make a major contribution in the delivery of health care to the "vertical" or community population. This places emphasis on the practice of preventive nutrition. One way of meeting the many-faceted demands of the enlarged field of dietetics is for the dietitian to extend individual efforts through allied professionals and supporting personnel. Inevitably, the roles of dietitians will become increasingly varied and complex.

What, then, will the practitioners of dietetics share in common?

The American Dietetic Association believes that the dietitian will assume directly, or through others, responsibility for the nutritional care of individuals and groups. This will require a person who is:

- (a) Knowledgeable about the principles of nutrition.
- (b) Highly skilled in communications.
- (c) Devoted to conceptual thinking and adept in the application of its products.
- (d) Oriented to research; participating in research and applying the results of research to the clinical delivery of nutritional care.

Extensive advances in knowledge and technology have already negated the feasibility of the dietitian being "all things to all people." Proficiency in dietetics requires in-depth knowledge of the subject matter. Such proficiency can be achieved only by limiting the scope of individual pursuit. This implies the necessity of delineating limited areas of study and practice—areas of specialization.

At the risk of oversimplification, four specialty areas can be defined:

(a) A general practitioner of dietetics: a person who is a specialist in the general application of dietetics. This is a person qualified to assist the extended-care facility or the small hospital, probably either as a parttime dietitian or as a dietetic consultant.

(b) An administrator of dietetic services: a person competent in the management of complex food service operations using a systems approach and integrating nutrition principles; an executive who participates in defining objectives, formulating policies, and who employs all the tools of business management, automation, creative planning, and delegation.

(c) A clinical nutrition specialist: a person with expertise in nutritional treatment. One who can evaluate the nutritional status of a person, plan his nutritional care, and direct implementation of the plan. Such a specialist would work with other members of the health care team but would accept responsibility for the diet prescription and the patient's nutritional care.

(d) A nutrition educator: a person proficient in education, motivation, and counseling techniques whose primary role is the improvement of nutrition care to the "vertical" population in the community.

Within each of these specialty areas, there would undoubtedly be refinement of expertise. For example, the clinical nutrition specialist may wish to direct total energy toward the nutrition treatment of small children; the administrator of dietetic services might further specialize in hospital food service administration; the general practitioner of dietetics in nursing home consultation.

What implication does this anticipated mode of practice portend for educational preparation for dietitians?

Basic to all practitioners is a need for knowledge of principles of nutrition, communication skill, conceptual thinking, and research orientation. If these are common needs for all dietitians, they must be included in the basic education for the profession. If the dietitian is to work through other people, an understanding of the psychologic and sociologic sciences is essential. A sound foundation for specialization must also include the physical sciences. The undergraduate program that integrates clinical experience with didactic training may prove to be the ideal way of providing the student with the basic education for the profession, including an appreciation for the relevance between academia and application.

This implies that the baccalaureate degree would provide the student with the foundation for a beginning position in dietetics or for study in a specialty area. The beginning position would enable the dietitian to assume a vital role in providing nutritional care in a variety of settings. At this level of career development, the dietitian would optimally work under the guidance of a dietitian who has in-depth education and experience in a specialty area. Career advancement to the specialty area would be through academic programs generally leading to advanced degrees.

In summary, The American Dietetic Association believes that the dietitian will assume greater responsibility for nutritional care of individuals and groups. This care will be provided by direct service and through allied professionals and supporting personnel. Career advancement for the dietitian will be through in-depth study in a given subject area. At least four areas of expertise can be defined: the general



practitioner of dietetics, the administrator of dietetic services, the clinical nutrition specialist, and the nutrition educator.

It is expected that sub-specialty areas will be refined. The educational framework for preparation for the field will consist of an undergraduate program that integrates clinical experience with didactic training to provide knowledge of principles of nutrition, communication skill, conceptual thinking, research orientation, and the sciences. The practitioner at this level will preferably work under the guidance of a specialist. Career advancement will be to the level of the specialist through in-depth study leading to an advanced degree in a defined specialty area.

The American Dietetic Association believes that such an educational plan would accommodate the profession of dietetics to the extensive advances in knowledge and technology; improve nutritional care; raise the performance standards of the profession; and make allowance for the needs of women who are beset with the limitation imposed by mobility of family units and the needs of employers who struggle with the rigors of supply and demand.

BOOKS AND PERIODICALS RECOMMENDED FOR THE  
INSTITUTIONAL MANAGEMENT COURSES

Books

- B. B. West, L. Wood and V. F. Harger      Food service in institutions. 1968. John Wiley & Sons, New York.
- L. S. Kotschevar and M. E. Terrell      Food service layout and equipment planning. 1961. John Wiley & Sons, New York.
- American Hospital Association      Food service manual for health care institutions. 1966. American Hospital Association, Chicago.
- K. Longree      Quantity food sanitation. 1967. John Wiley & Sons, New York.
- John W. Stokes      How to manage a restaurant or institutional food service. 1967. Wm. C. Brown Co. Publishers, Iowa.
- E. E. Smith and V. C. Crusius      A handbook on quantity food management. 1970. Burgess Publishing Co., Minneapolis.
- S. F. Fowler, B. B. West and G. S. Shugart      Food for fifty. 1970. John Wiley & Sons, New York.
- Edmund Miller      Profitable cafeteria operation. 1966. Ahrens Book Co., New York.
- D. E. Lundberg and J. P. Aematas      The management of people in hotels, restaurants and clubs. 1964. Wm. C. Brown Co., Iowa.
- E. A. Kazarian      Work analysis and design for hotels, restaurants and institutions. 1969. The AVI Publishing Co., Connecticut.
- G. C. Close      Work improvement. 1960. John Wiley & Sons, New York.

- R. M. Barnes  
Motion and time study. Design and measurement of work. 1968. John Wiley & Sons, New York.
- J. H. Donnelly, J. L. Gibson, and J. M. Ivancevich  
Fundamentals of management. 1971. Business Publications Inc., Austin.
- George R. Terry  
Principles of management. 1968. Richard D. Irwin Inc., Homewood.
- W. G. Scott  
Organization theory. A behavioral analysis for management. 1967. Richard D. Irwin Inc., Homewood.
- R. F. Moore  
AMA management handbook. 1970. American Management Association, New York.
- H. J. Leavitt  
Managerial psychology. 1964. Univ- of Chicago Press, Chicago.
- L. R. Bittel  
What every supervisor should know. 1968. McGraw Hill Book Co., New York.
- H. J. Chruden and A. W. Sherman  
Personnel management. 1968. Western Publishing Co., New York.
- G. Strauss and L. R. Sayles  
Personnel. The human problems of management. 1967. Prentice Hall, Inc., New Jersey.
- T. Haimann and W. G. Scott  
Management in the modern organiza- tion. 1970. Houghton Mifflin Co., Boston.

#### Periodicals

- Pakistan Management Review  
Journal of W. P. I. M., W. P. I. D. C. Karachi.
- Journal of American Dietetic Association  
The American Dietetic Association, Chicago.

Journal of Home Economics

American Home Economics Association, Washington, D. C.

Food Technology

Institute of Food Technologists, Chicago.

Journal of Food Science

Institute of Food Technologists, Chicago.

The Cornell Hotel and Restaurant Quarterly

Cornell University, Ithaca.

Hospitals

American Hospital Association, Chicago.

Management Review

American Management Association, New York.

S. A. M. Advanced Management Journal

Society for Advancement of Management, New York.

Harvard Business Review

Graduate School of Business Administration, Harvard University, Boston.

Personnel Journal

Personnel Journal Inc., Swarthmore, Pennsylvania.

Management of Personnel Quarterly

University of Michigan, Ann Arbor.

Institutions/Volume Feeding Magazine

Medalist Publications Inc., Chicago.

Modern Hospitals

McGraw Hill Inc., New York.

## Suggested Job Description of a Hospital Dietitian in Pakistan

### I. Job Summary:

Planning, organizing, directing activities of the food service including normal and therapeutic food service to patients and personnel; purchasing materials; food production; sanitation; safety; and evaluation of staff and the department.

### II. Performance requirements:

1. Is loyal to the administrator and physicians of the hospital.
2. Directs effective management of the department of dietetics through planning, organizing, coordinating, budgeting, controlling and evaluating.
3. Reports routinely, both in writing and in conference, to the administrator concerning present situation in the department and future plans.
4. Plans menus, orders food and supplies and checks inventories. Serves nutritionally adequate and palatable food under strict standards of sanitation within a prescribed budget.
5. Schedules employee hours and assigns them to proper work units.
6. Promotes harmonious relationships.
7. Establishes and uses effective means of communication.
8. Plans for record keeping to meet essential needs for efficient management.
9. Evaluates periodically the departmental functions in relation to present and future goals.
10. Serves as a consultant to physicians in all areas of diet therapy and nutrition.
11. Implements dietary prescription with meals adapted to needs of the patient.
12. Uses scientific knowledge in cooperating with the physician and allied professional personnel in the treatment of patients.
13. Teaches nutrition and diet therapy to patients including discharge diets for those being sent home on modified diets; for patients coming to the Out-Patient Clinics and student nurses.

14. Informs the physician, both verbally and in writing, concerning patient's food intake and progress in the patient's dietary instruction.

### III. Supervision:

Supervises production and service of food as well as housekeeping, sanitation and care of equipment and work areas. Supervises kitchen employees and trains them in better methods of production.

### IV. Relation to other jobs:

Promotion from: Student Dietitian  
Promotion to: Senior Dietitian

### V. Minimum personal requirements:

- A. Education and training data
  - M. Sc. (Home Economics) with major in Foods, Nutrition and Institution Management
  - Practical experience in a food service
- B. Personal qualification:
  - Good health and average weight
  - Enthusiasm
  - Initiative
  - Leadership
  - Good judgment
  - Sense of humor
  - Versatility and flexibility

Adapted from: ADA. 1965. Duties and Responsibilities in the Department of Dietetics. J. Amer. Dietet. Assoc. 46:179-182.

2000  
R4  
1972  
U77

Chapter	Page
I INTRODUCTION . . . . .	1
II THEORY OF MICROSTRIP TRANSMISSION LINE . . . . .	7
2.1 General Theory . . . . .	7
2.2 Losses in Microstrip . . . . .	14
2.3 Radiation from Microstrip . . . . .	25
2.4 Dispersion in Microstrip . . . . .	28
III CHARACTERISTICS OF MICROSTRIP . . . . .	30
3.1 Characteristic Impedance . . . . .	30
3.2 Propagation Wavelength and Velocity . . . . .	39
IV DISCONTINUITIES IN MICROSTRIP . . . . .	48
4.1 Bends . . . . .	48
4.2 Step Discontinuity . . . . .	49
4.3 Gaps or Slots in Microstrip . . . . .	50
V MICROSTRIP COMPONENTS . . . . .	56
5.1 Coupling of Microstrip Lines . . . . .	56
5.2 Directional Couplers . . . . .	62
5.3 Resonant Sections . . . . .	66
VI SUMMARY AND CONCLUSION . . . . .	70
REFERENCES . . . . .	72
ACKNOWLEDGMENT . . . . .	74

A PROPOSED PLAN FOR THE ACADEMIC PREPARATION OF  
THE DIETITIAN IN THE COLLEGE OF HOME ECONOMICS,  
KARACHI, PAKISTAN

By

SHAHIDA WASIM

M. Sc., College of Home Economics, Karachi, Pakistan, 1966

---

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Institutional Management

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1971



The profession of dietetics is concerned with the science of nutrition. It includes extending and imparting knowledge about foods to provide nutrients adequate for health and disease throughout the life cycle and management of group feedings for these purposes. A member of such a profession is called a dietitian. Her responsibilities in a hospital may be divided into four areas: therapeutic, administrative, education and research. Over the years emphasis on administrative responsibilities has increased as the complexities of management have continued to mount for the dietitian.

Dietetic education in the United States consists of three related phases-- undergraduate preparation, internship and/or graduate study. Currently, emphasis is being placed on dietetic internships coordinated with the undergraduate curriculum. The educational requirements for dietitians have been influenced by membership standards of ADA that are continually updated. At the present time an academic plan III that provides opportunities for greater emphasis in management, therapeutic and education is being used. The education of a dietitian includes a broad basic background in home economics with emphasis on nutrition and management.

In Pakistan the field of dietetics has not grown to its full potential. There are four colleges of home economics in the country that offer courses leading to Bachelor and Master of Science degrees. As yet there is no program directed toward the preparation of hospital dietitians. Hospital food service still is in the hands of unqualified personnel. However, there now seems to be a growing concern for the need of a professional person trained in dietetics. The purpose of this report was to develop and integrate the existing courses at Karachi College of Home Economics

into an academic plan for dietetic students with major concentration on institution management courses.

Materials used in planning the program were: academic plan III of ADA, course outlines of various subjects for dietetic students utilized by different universities in the United States, and the post high school curriculum guide for institutional food service developed by ADA. Adjustments were made to suit the needs of students and current socio-economic conditions of Pakistan.

The proposed program was based primarily on the existing curricula at Karachi College of Home Economics. The plan includes four years of undergraduate and two years of graduate study. The first three years of study will be the same as for any student of home economics including the home economics core and general education courses. The professional phase will start in the fourth year and will consist of a home economics core and some professional courses. The two years of master's study will comprise the professional courses. Courses start from fundamental and broad matters to form a background for advanced courses.

Detailed topical outlines were formulated only for institution management courses in accordance with the current management needs of the dietitian. Objectives were developed taking into consideration the attitudes that need to be created within the students and the subject areas in which these might be developed. The content included in these courses was intended to supply a wide background in diverse areas of food service administration. Units were organized to provide smooth progression from one unit to another. A variety of time tested teaching methods were selected to achieve the set objectives and to make teaching effective. Supervised laboratory

experiences in the college food service were included to provide opportunities for practical application of skills and knowledge. Field trips to several food service institutions were provided to give students an insight into the operation of dietary departments of different institutions.