



## **Committee for the Evaluation of Nutritional Sciences Programs**

**Ariel University Center of Samaria  
Department of Nutritional Sciences  
Evaluation Report**

**July 2012**

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## **Chapter 1: General Background**

At its meeting on July 25, 2010, the Council for Higher Education (CHE) decided to evaluate study programs in the field of Nutritional Sciences during the academic year 2011 – 2012.

Following the decision of the CHE, the Minister of Education, who serves ex officio as Chairperson of the CHE, appointed a Committee consisting of:

- Prof. Alice H. Lichtenstein, Friedman School of Nutrition Science and Policy, Tufts University, USA – Committee Chair
- Prof. Judith Gilbride, Department of Nutrition, Food Studies & Public Health, NYU, USA
- Prof. Shoshana Mokady, Department of Food Engineering & Biotechnology, Technion, Israel
- Prof. Maret G. Traber, School of Biological and Population Health Sciences, Oregon State University, USA
  
- Ms. Yael Franks - Coordinator of the Committee on behalf of the CHE.

Within the framework of its activity, the Committee was requested to:<sup>1</sup>

1. Examine the self-evaluation reports, submitted by the institutions that provide study programs in Nutritional Sciences, and to conduct on-site visits at those institutions.
2. Submit to the CHE an individual report on each of the evaluated academic units and study programs, including the Committee's findings and recommendations.
3. Submit to the CHE a general report regarding the examined field of study within the Israeli system of higher education including recommendations for standards in the evaluated field of study.

The entire process was conducted in accordance with the CHE's Guidelines for Self-Evaluation (of October 2010).

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<sup>1</sup> The Committee's letter of appointment is attached as **Appendix 1**.

## **Chapter 2-Committee Procedures**

The Committee held its first meetings on January 17, 2012, during which it discussed fundamental issues concerning higher education in Israel, the quality assessment activity, as well as Nutritional Sciences Study programs.

In January 2012, the Committee held its visits of evaluation, and visited the Ariel University Center of Samaria, The Hebrew University of Jerusalem and Tel Hai Academic College. During the visits, the Committee met with various stakeholders at the institutions, including management, faculty, staff, and students.

This report deals with the Department of Nutritional Sciences at Ariel University Center of Samaria, which took place on January 18, 2012.

The schedule of the visit is attached as **Appendix 2**.

The Committee thanks the management of Ariel University Center of Samaria and the Department of Nutritional Sciences for their self-evaluation report and for their hospitality towards the Committee during its visit at the institution.

## **Chapter 3: Evaluation of Nutritional Sciences Program at Ariel University Center of Samaria**

*\* This Report relates to the situation current at the time of the visit to the institution, and does not take account of any subsequent changes. The Report records the conclusions reached by the Evaluation Committee based on the documentation provided by the institution, information gained through interviews, discussion and observation as well as other information available to the Committee.*

### **Background**

In 2010-2011, Ariel University Center of Samaria (AUC) had a total of approximately 9,300 students. The administrative location of the program of Nutritional Sciences is in the School of Health Sciences. The Department was established in 2004 and received full accreditation from the Council for Higher Education in 2007 to award Bachelor of Science degrees. The nutrition program is the second smallest program of the four programs in Health Sciences at AUC.

The mission of AUC as stated in the self-evaluation report (SER) is to focus on applied disciplines that will contribute to the Israeli economy and to combine theory and practice. The Nutritional Sciences Program emphasizes a strong foundation in basic sciences and the teaching of clinical skills for both application in various clinical settings and involvement in advanced studies and research. The program is devised to require 146 credits over three years (six semesters) that include 19 laboratory hours and 12 units of Jewish Heritage studies. The rigor and comprehensiveness of the program have often required students to complete the program in four years or more. The committee understands that under consideration is a plan to offer a Nutritional Sciences MSc program to accommodate the lag-time between students completing their BSc degrees and entering their dietetic internship programs. It was not clear to the committee that such a solution is in the best interests of the students who may potentially enroll in this new MSc program for the stated reason or is the best use of scarce faculty resources. Those students choosing to enroll in an MSc program might benefit more from the additional study after they have worked in the field for a few years rather than immediately after completing their BSc degree.

### **Mission, Goals and Aims**

The Nutritional Science Department has a general mission statement. As stated in the SER, it is “to train graduates with a strong background in basic sciences, and particularly nutrition science (NS), and to teach them scientific and clinical skills at the high standard required to prepare them for work in different clinical settings, and to be involved in advanced studies and in research.” (p.20). The committee believes that the department's mission should also emphasize the successful completion of the dietetic internship that is a main feature of the BSc program in Nutritional Sciences.

### **Recommendation**

The committee recommends:

Immediate (0-2 years):

- Developing a 5-year strategic plan for the department to further define its mission and develop goals for achieving that mission, with particular emphasis on the preparation of clinical dietitians.

## **The Study Program**

### ***Program Sequence***

#### *The BSc Program*

The study program offers a BSc degree in Nutritional Sciences. The first year includes basic sciences and mathematics, physics, chemistry, immunology, genetics, anatomy and physiology. By the second year students are exposed to the food industry in courses: Functional Foods and Nutritional Aspects of the Food Industry, and to selected issues of Food Preparation in the course of Theory of Food Science, as well as Toxicology of Food, Microbiology of Food and Water. Third year clinical topics are courses in Pediatric, Geriatric and Sports Nutrition, Eating Disorders, Clinical Biochemistry, Dietetics, Physiologic Regulation of Energy Requirements in the Human Body, Nutrition in Human Health – Advanced Aspects. Important clinical issues of food-drug interactions are taught in courses such as Clinical Pharmacology and Medicinal Herbs. Other special courses are Water and Mineral Homeostasis, Hormones, and Pathophysiology of Diseases. Courses such as Public Health in Israel and Economics of Health expose students to the role of nutrition in the context of the total healthcare system.

Over the past five years (between the years 2007- 2011) total student enrollment in the department has been 107, 140, 128, 113 and 128, respectively. Current enrollments are 43(Yr. 1), 40(Yr. 2) and 43 (Yr. 3) for the program. The goal, according to the department head, is to have a maximum of 50 students enroll each year depending on the available resources.

The committee's impression is that the current BSc program is specifically designed to teach students the necessary skills for dietetic practice, including patient interviews, obtaining a complete diet history, and developing a nutrition care plan. Other basic skills are taught such as Theory of Interviewing, Introduction to Psychology, and the Dietitian and the Patient. Topic-focused courses with clinical application include Sports Nutrition, Pediatric Nutrition, Geriatric Nutrition, and Eating Disorders. Once students have taken Epidemiology and Survey and Research Methods in Nutrition and Statistics for Research Studies and Reading the Scientific Literature, the second year has a pro-seminar and the third year culminates in a seminar or research project.

It is the committee's opinion that the study program is very strong in the sciences and gives students a solid basis to support a career in health or medicine and provides the potential for new and innovative biotechnology and food industry jobs.

Common to all the institutions that offer BSc degrees in Nutritional Sciences is the institutions' and students' concern over the long wait and uncertain timing to complete an internship. The waiting period can be for individual students from several months up to two years. In some cases students enter MSc programs to fill the gap and in other cases, they take jobs outside the field and do not return, neither of which is the best option in terms of the demand on resources and producing dietitians to meet the country's future needs.

### ***Recommendations***

The committee recommends:

Immediate (0-2 years):

- Introducing a course focused on an overview of the field of nutrition during the first year;
- Assessing the faculty staffing plan to determine whether, within the context of current funding levels, a goal of having 50 BSc students per year enrolled in the program is feasible;
- Examining the curriculum to determine whether there is an appropriate balance between the basic sciences (e.g., computer science, two semesters of physics) and applied nutrition (e.g., advanced nutrition therapy across the life span);

- Examining the content of courses to ensure a balance of didactic material among the courses and a logical sequence in the curriculum, e.g., macronutrients, micronutrients, nutrition and chronic disease risk, nutrition and the lifecycle, ethical decision making and professionalism;
- Reviewing available electives and potentially adding new offerings that focus on nutritional needs of special populations e.g., pediatric, geriatric and athletes;
- The CHE and the Ministry of Health (MOH) should discuss together the possibility of formally incorporating the dietetic internship program into the B.Sc. program to ensure an efficient and seamless transition from didactic to practical experience and timely completion of the requirements to become a dietitian; please see the General Report for further details;

## **Faculty**

There are seven senior faculty members who are involved in nutrition teaching in the Department. The faculty is highly motivated and extremely dedicated. However, the committee received the impression that the faculty feels overwhelmed at times, with only two of the positions being at the rank of full time professor, with the majority, most notably the department chair, not being full-time. The advantage of this arrangement is that the part-time faculty can make available training opportunities for the students outside the college; however, at times the arrangement may not be the most efficient use of time for the individuals involved. Notably, part-time faculty members or adjunct teachers (some of who teach similar courses at other institutions within Israel) teach the majority of the nutrition courses. If full time permanent positions were to be added to the faculty, it was not clear to the committee whether there would be an adequate number of PhD level nutrition science professionals to fully staff all the Israeli institutions offering BSc, MSc and PhD degrees in Nutritional Sciences.

## **Recommendation**

The committee recommends:

Immediate (0-2 years):

- Supporting an additional full-time senior faculty member to:
  - teach the higher level nutrition courses,
  - supervise the applied nutrition research,
  - focus on advising students in seminars,
  - take a lead role in the departmental curriculum committee to facilitate coordination among course offerings and avoid overlap or duplication of course content.

## **Students**

The students seemed to be extremely positive about their experience at AUC. Specific strengths noted included the dedication of the faculty, quality of teaching and personal attention afforded to each student. They also have appreciated the breadth of experience that the instructors bring to the classroom. A serious concern about the delay between being awarded the BSc degree and internship opportunity was voiced. The Health Professions Law in Israel requires post-baccalaureate students to complete internships in order to receive their practitioner's license. In addition, individuals need to pay for the internship experience during a period of time when they cannot generate income in their area of study. The committee's impression is that this leads to frustration among the graduates and attrition from the profession of dietetics.

### ***Recommendation***

The committee recommends:

Immediate (0-2 years):

- Reviewing the data on student attrition from the program to develop systems to better support students to remain in the field of Nutritional Science and provide enhanced instruction in career planning.

### **Alumni**

Nearly 45% of graduates were employed in clinical nutrition, 6.2% in the nutrition and food science industries and 37% were employed in other fields. Nine graduates are pursuing graduate degrees. Informal feedback from program graduates to the committee indicated they felt well prepared for their internships and subsequent clinical practice jobs, and that the graduates have been very successful at integrating theory and practice.

### ***Recommendations***

The committee recommends:

Immediate (0-2 years):

- Conducting an in-depth analysis of the alumni data to determine which courses were of most help for their jobs post-graduation and which areas they felt would have been helpful to have had additional training.
- Contacting graduates who did not remain in the field of Nutritional Science, ascertaining the reasons and assessing whether the majority of attrition was related or unrelated to their BSc training.

### **Research**

Research activities of AUC faculty members are not required or funded by the CHE. However, the committee was informed that the Department requires faculty members to conduct research, publish in scientific journals and present papers at national and international scientific meetings. These activities are major criteria for receiving tenure and promotion. The students benefit from the faculty's research activity because faculty research provides important student training opportunities. It is unclear how these additional job-related responsibilities impact on the quality of teaching.

The committee's impression is that faculty members with a nutrition background conduct basic research in a very broad variety of subjects, which may not be the most efficient approach in terms of securing funding and moving the disciplines forward. One alternate approach to facilitate future research efforts is to create internal research groups concentrated on the main strengths of the faculty members, enlarge collaboration with external research groups, and encourage and develop participation in clinical trials conducted in local hospitals.

### ***Recommendation***

The committee recommends:

Immediate (0-2 years):

- Concentrating on a narrower range of research projects to maximize the efforts and strengths of the faculty.

## **Organizational Structure**

Both the faculty and students indicated that a strength of the program is the supportive nature of the administration. The current chair is enthusiastic and has established a dynamic program. At this time it appears there are no plans in place to transition younger faculty members into administrative positions so that there is a seamless progression as the department matures and older faculty members and administrators retire.

## **Recommendation**

The committee recommends:

Immediate (0-2 years):

- Establishing a plan for transferring some of the responsibilities for directing the department to multiple faculty members to avoid excessive dependence on a single person, currently the department chair, particularly in the area of future directions.

## **Teaching and Learning Outcomes**

The seriousness with which the faculty takes their teaching responsibilities and availability of the faculty to the students was clearly evident to the committee. Nevertheless, it is the committee's impression that the program would benefit from a careful review of current learning objectives for the BSc program and assess how the curriculum fulfills them.

From the syllabi provided to the committee there appears to be greater reliance on textbooks than contemporary scientific literature for course material. In some cases long lists of books and scientific journals are listed for "main textbook and additional textbooks" and "reading list" with no further specificity. Some consideration should be giving to focusing on a single basic textbook and supplementary material taken from the recent literature.

The committee noted that in some courses 90% to 100% of the grade is determined by a single final examination. Consideration should be given to diversifying the methods used to evaluate student proficiency with the course material, particularly in regard to providing students with feedback throughout the semester. In some cases the course syllabi presented were incomplete and included dated reading material, raising some concern about the contemporary nature of the material presented.

Concerns were raised to the committee that some courses, e.g., computer applications, are unnecessary in today's society and that the students would benefit from increased class time devoted to basic nutrition, vitamins and minerals, with basic and advanced material spread over the three year program of study. Additionally, feedback also indicated that career preparation would be enhanced if additional elective courses addressing applied topics were available, e.g., sports nutrition, diabetes, behavior change, practical experience in community practice, clinical nutrition.

## **Recommendations**

The committee recommends:

Immediate (0-2 years):

- Introducing a mid-term examination and/or additional approaches to student evaluation in those courses for which the final exam represents 90% to 100% of the grade;
- Develop a system to ensure that all course syllabi include learning objectives and specific weekly readings/projects, and, once deemed complete by the department chair or faculty committee, are updated annually to reflect the changing science in the field of nutrition;

- Developing a formal process/timetable by which each faculty member submits their teaching materials to the Academic Development and Evaluation Department for input on potential approaches to improving and updating the material;

Intermediate (2-4 years):

- Conduct a comprehensive assessment of all courses, with specific emphases on evaluating potential overlaps and gaps.

### **Infrastructure**

Facilities for the Department of Nutritional Sciences are located in a number of closely situated buildings. It is projected that in one year the department will be relocated to new facilities on the lower campus. Currently laboratories and offices appear to be small and cramped. The committee was informed that the food science laboratory is inadequate and that construction plans are in place for a new facility. Most classrooms have adequate computer wireless access or will have when the department moves. The library facilities and information technology were judged to be good by the faculty and students. Most course material is available online. The library facilities will be expanded upon completion of the new campus.

### **Recommendations**

The committee recommends:

Long term (4-6 years):

- Infrastructure needs to be reassessed once the new facilities on the lower campus are completed.
- Enrich the teaching and learning environment by taking advantage of technological advances to share resources with other programs, e.g. “electronic” classrooms.

### **Quality assessment**

Prior to the 2010-2011 school year the department in conjunction with the Academic Development and Assessment Unit undertook an evaluation of quality assessment. The department head and dean developed a strategy to provide support services to the faculty to improve teaching skills as well as to recognize outstanding teachers. This was a two-stage plan, phase I was for the faculty members to update their CVs and syllabi. Phase II appears to be collecting the data that was used to complete the report to the CHE. Teams of faculty working groups accomplished this two-stage assessment plan. However, the committee noted that many course syllabi were not updated.

### **Recommendation**

The committee recommends:

Immediate (0-2 years):

- The department chair should determine whether the process of updating faculty CVs and syllabi has been completed and meets predefined criteria.

**Signed by:**

Alice H. Lichtenstein

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Prof. Alice H. Lichtenstein, Chair

Judith A. Gilbride

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Prof. Judith Gilbride

S. Mokady

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Prof. Shoshana Mokady

Maret G. Traber

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Prof. Maret G. Traber

## Appendix 1: Copy of Letter of Appointment



December, 2011

שר החינוך  
**Minister of Education**  
وزير التربية والتعليم

Prof. Alice H. Lichtenstein  
School of Nutrition Science and Policy  
Tufts University  
USA

Dear Professor Lichtenstein,

The State of Israel undertook an ambitious project when the Israeli Council for Higher Education (CHE) established a quality assessment and assurance system for Israeli higher education. Its stated goals are: to enhance and ensure the quality of academic studies; to provide the public with information regarding the quality of study programs in institutions of higher education throughout Israel; and to ensure the continued integration of the Israeli system of higher education in the international academic arena. Involvement of world-renowned academicians in this process is essential.

This most important initiative reaches out to scientists in the international arena in a national effort to meet the critical challenges that confront the Israeli higher educational system today. The formulation of international evaluation committees represents an opportunity to express our common sense of concern and to assess the current and future status of education in the 21<sup>st</sup> century and beyond. It also establishes a structure for an ongoing consultative process among scientists around the globe on common academic dilemmas and prospects.

I therefore deeply appreciate your willingness to join us in this crucial endeavor.

It is with great pleasure that I hereby appoint you to serve as Chair of the Council for Higher Education's Committee for the Evaluation of Nutritional Sciences Studies.

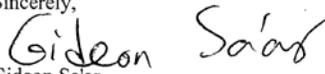
The composition of the Committee will be as follows: Prof. Alice H. Lichtenstein (Chair), Prof. Judith Gilbride, Prof. Shoshana Mokady and Prof. Maret G. Traber.

Ms. Yael Franks will coordinate the Committee's activities.

In your capacity as Chair of the Evaluation Committee, you will be requested to function in accordance with the enclosed appendix.

I wish you much success in your role as Chair of this most important committee.

Sincerely,

  
Gideon Sa'ar  
Minister of Education,  
Chairperson, The Council for Higher Education

*Enclosures:* Appendix to the Appointment Letter of Evaluation Committees

cc: Ms. Michal Neumann, The Quality Assessment Division  
Ms. Yael Franks, Committee Coordinator

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Appendix 2: Site Visit Schedule

**Nutrition Sciences - schedule of site visit**  
**Ariel University Center of Samaria**

**Wednesday, January 18, 2012**

<b>Time</b>	<b>Subject</b>	<b>Participants</b>
09:30-10:15	Opening session with the heads of the institution and the senior staff member appointed to deal with quality assessment	<b>President:</b> Prof. Dan Meyerstein <b>Rector:</b> Prof. Michael Zinigrad <b>Head, Quality Assessment System:</b> Dr. Nitza Davidovitch
10:15-10:45	Meeting with head School of Health Sciences	Prof. Yair Shapiro
10:45-11:30	Meeting with the academic and administrative heads of the Department of Nutritional Sciences	Dr. Olga Raz
11:30-12:15	Meeting with senior academic staff (representatives of relevant committees)*	Dr. Ruth Birk Dr. Mona Boaz Dr. Tovit Rosenzweig Dr. Gadi Turjeman Dr. Albert Pinhasov Sharon Gabriel, RD, MSc Esther Gonen, RD, MSc
12:15-13:00	Meeting with Junior academic faculty* and Adjunct teaching faculty	Dr. Dror Tobi Dr. Dan Gamliel Dr. kafe abramovich Tamar
13:00-13:45	Lunch (in the same room)	Closed-door meeting of the committee
13:45-14:30	Meeting with BSc students**	Up to 8 students
14:30-15:00	Meeting with Alumni**	Ms. Yael Sharon Ms. Lital Almadon Ms. Tara Weinstein Ms. Nitzan Gil Kahn Mr. Moshe Gross Ms. Moran Eitan Ms. Shalhevet Frank Ms. Gal Silver Ms. Sarit Gershon Ms. Jenny Schneider
15:00-15:45	Tour of facilities: classrooms, library, labs, offices	
15:45-16:30	Closed-door meeting of the committee	
16:30-17:00	Summation meeting with heads of department and institution	<b>President:</b> Prof. Dan Meyerstein <b>Rector:</b> Prof. Michael Zinigrad <b>Head of Department:</b> Dr. Olga Raz <b>Head, Quality Assessment System:</b> Dr. Nitza Davidovitch

\* The heads of the institution and academic unit or their representatives will not attend these meetings

\*\* The visit will be conducted in English with the exception of students who may speak in Hebrew and anyone else who feels unable to converse in English.