



Committee for the Evaluation of Nutritional Sciences Programs

**Tel Hai Academic College
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
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- *Ms. Yael Franks* - Coordinator of the Committee on behalf of the CHE.

Within the framework of its activity, the Committee was requested to:¹

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).

¹ 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 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 Tel Hai Academic College, which took place on January 24, 2012.

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

The Committee thanks the management of Tel Hai Academic College 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 Tel Hai Academic College

** 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

The Department of Nutritional Sciences at Tel Hai Academic College began operating in 1999 with approval from the Council for Higher Education. The program received authorization to award a Bachelor of Science degree in 2001 and since 2005 has been under the Faculty of Sciences and Technology. Following the mission of the College, the program has a strong focus on community service and multiculturalism.

Comparatively, the Nutritional Sciences Program has the largest number of students (374) in the Faculty of Sciences and Technology, 55% more than the next largest program, 205 in Biotechnology, and comprises 8% of the overall student body in the college. The enrollment in the Nutritional Sciences Program appears to have doubled in the past five academic years from 190 to 374. According to the tables presented in the self-evaluation report (SER), graduation rates have not kept pace with enrollments in the program. The intensity of the program was cited as a reason for students to complete the program in four years or longer. Also and as noted in several places in the SER and confirmed by students and faculty during the evaluation committee's visit, the motivation for completion may be decreased because of the inability to find internships right after graduation, a serious issue that needs to be addressed by the CHE and the Ministry of Health (MOH).

Mission, Goals and Aims

The mission of the Nutritional Sciences Program at Tel Hai Academic College, as stated in their SER, is to serve as an academic center in the Upper Galilee for the training of leading professionals and researchers in the field of nutrition and for promoting a healthy lifestyle in the community. They further state that the "curriculum is designed to provide an academic infrastructure for the expansion of research activities in the field of nutrition, food, and promotion of health" and "impart information, knowledge, and skills needed to address multidisciplinary issues on the basis of existing and innovative approaches" (p.14). Training of clinical dietitians is not stated explicitly in the mission of the Nutritional Science Program. Of note, the diversity of the student body is considerable at Tel Hai Academic College, and this diversity is embraced at all levels of the institution.

The aims and goals of the Nutritional Sciences Program as presented in the SER are divided into three main areas: academic quality, professional quality, and involvement in the community. The focus is on academic research and research skills. The committee was concerned that with the primary focus on research, inadequate faculty time may be available for teaching. This concern was reinforced with the administration and faculty emphasis on developing a Master's program in Nutritional Sciences and the understanding that there is interest for developing a closer relationship between the Nutritional Sciences department and the departments of Medical Sciences and Biotechnology. The committee is concerned that the emphasis on expanding programs and research may come at the expense of conveying an in-depth learning environment that focuses on real world, clinical experiences.

Recommendation

The committee recommends:

Immediate (0-2 years):

- Focusing on developing systems that will support students completing their BSc degrees in 3 years, unless structural modifications are made to the BSc program of study, see to recommendations under the subheading of **The Study Program**;
- Forming a faculty committee to review and potentially modify faculty expectations in terms of teaching relative to research responsibilities with the intent of ensuring that adequate time is allocated to quality teaching and that the faculty is appropriately recognized for such efforts.

The Study Program

As stated in the SER, the department's main focus has been "to provide students with the necessary tools and skills to obtaining a nutritionist's diploma from the Ministry of Health" (p.13). The Nutritional Sciences curriculum is rigorous. The BSc degree is awarded after successful completion of 150 credits. The program of study is configured to provide professional knowledge emphasizing science and research combined with experiential learning in nutrition and practicum laboratory experiences.

The first year of study covers 47.5 credits as part of 27 courses that are predominately introductory courses in the Life Sciences: cell biology, chemistries, and mathematics shared with other departments. The average number of students in classes is close to 100 with only six courses specific for majors in nutritional sciences. Although there is a course on Introduction to a Dietitian's Work there is no basic nutrition course in the first year.

The second year of study for Nutritional Sciences students focuses on human nutrition - 3 courses and 6.5 credits, biochemistry, and other sciences including genetics and microbiology. Prerequisites for these courses are completed in the first year. The second year has 51.5 credits with an average class lecture of 125 students.

The essence of the applied dietetic practice and advanced nutrition are taught in the 51 credits in the third year. Ten credits of electives are selected by the students in the third year with at least 2 credits in humanities and 8 credits in life sciences, nutrition, food science and social sciences. The food preparation and microbiology and sanitation are taught in a modern, well-equipped and very impressive Food Preparation laboratory on par with science laboratories for teaching chemistry and physiology. Students have the opportunity to conduct scientific research at the nearby MIGAL Research Institute and have three nutrition professors with whom they can work. Nevertheless, it was the committee's opinion that the students might benefit from additional basic nutrition therapy content.

Although there was general agreement that the faculty is extremely committed and diligent, there were diverse opinions with regard to the strengths and weaknesses of the course offerings. Concern was raised about the generic nature of the course work and heavy emphasis on basic science during the first year. To the latter point, it was suggested that in some cases the first year coursework did not reinforce coursework in subsequent years and could be eliminated. Related to this, also noted was that in some cases there was a lack of coordination among faculty with regard to course material, resulting in overlap among courses, particularly basis science courses. The committee is of the opinion that this issue is worth additional review because it may be contributing to the limited opportunity of the students to take nutrition-related elective courses. For students, elective course offerings could help them customize their training to support their eventual career goals. It appears that many of the basic science courses are geared towards preparing students for research careers rather than dietetic careers. Suggested additional elective courses that would support students in their careers include nutrigenomics, nutrigenetics, diabetes, cardiovascular disease and hypertension. Other topics that

arose included chronic disease prevention and intervention, diet counseling and behavior change, sports nutrition and obesity management.

Common to all the institutions that offer BSc degrees in Nutritional Sciences is the concern over the long wait and uncertain timing to complete an internship required by the Health Profession Law in order to receive a practitioner's license. In some instances students enter MSc programs to fill the gap and in other cases take jobs outside the field of nutrition and do not return. Neither of these options is optimal in regard to the demands on resources and producing dietitians to fill the country's needs.

Recommendations

The committee recommends:

Immediate (0-2 years):

- Forming a faculty committee to review and revise the curriculum to reinforce the basic nutrition therapy content and build on this basic material with more complex concepts and case scenarios. Consider replacing some of the basic science course required during the first two years with additional nutrition related courses;
- Increasing Tel Hai's relationship with the local hospitals and clinics to support student exposure to the clinical aspects of health and disease as elective courses prior to entering their internship;
- Expanding the scope of elective courses in the area of public health policy or education/teaching, sports nutrition, nutrition through the life cycle;
- Increasing access and learning opportunities across the health disciplines within the institution;
- Developing a cross disciplinary course in ethics, professionalism and health systems for all the health sciences programs;
- The CHE and MOH should discuss together the possibility of formally incorporating the dietetic internship program into the BSc 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

The senior and junior faculty members of the Nutritional Sciences Department consists mainly of either high quality experienced scientists conducting research at the MIGAL Research Institute or faculty who have adjunct appointments and who do not conduct research. Almost all of the faculty members teach the introductory basic life science courses in the first 3 semesters. Only a few faculty members teach nutrition courses, sharing the heavy load of teaching among senior, junior and adjunct faculty and assistants. Nevertheless, the committee's impression is that the faculty members are able to provide strong support to the students in their classes. Nutrition-teaching staff members are also involved and very proud of a program entitled Nutrition in the Community, which is mandatory for third-year students and consistent with the mission of Tel Hai.

Recommendation

The committee recommends:

Intermediate (2-4 years):

- Adding a clinical nutritionist to the faculty to share teaching responsibilities and initiate clinical research projects that provide experiential opportunities for students;

Students

The students at Tel Hai come from diverse backgrounds (14.5% minority) with 50% from the area and 50% from other parts of Israel. They are very positive about their study program and the individualized attention that they receive from the faculty. Many students extend their academic program to four years instead of three and often are employed part-time and have family responsibilities.

Since 2005 the number of students who have graduated from the Nutritional Sciences program has ranged from a low of 49 in 2006-2007 to a high of 94 in 2008-2009. The distribution of final grades during the last 5 years has remained relative constant, in terms of average and range. However, the data presented in the SER suggests that since 2006 the proportion of admitted students with matriculation scores in the 100-110 and 110-120 ranges has declined. A similar trend is seen in the distribution of their composite scores.

Alumni

The Tel Hai Academic College SER provided data compiled from 206 alumni. Of note, the vast majority (86%) were satisfied with their education, particularly in the areas of preparation for their current jobs and postgraduate studies. An impressive 95% indicated they would recommend Tel Hai Academic College because of its high academic quality. Somewhat disconcerting in the data was that only 55% would recommend studying Nutritional Sciences to others due to difficulty in finding work and low salaries. However, this is an issue independent of Tel Hai Academic College and indicative of the profession.

Recommendation

The committee recommends:

Immediate (0-2 years):

- Formally harnessing the student and alumni enthusiasm for the program to build a stronger alumni base that could provide additional training opportunities for Tel Hai graduates.
- Carefully track the quality of the admitted students and adjust admission rates on the basis of applicant qualifications rather than a targeted goal for number of students admitted per year.
- Retroactively assess student graduation rates, cumulative grade averages and similar outcome measures relative to student admission data and, if necessary, modify admission criteria.

Research

Although faculty members of Tel Hai Academic College are not formally required to do research, promotion and tenure are partly based on research activities. Research conducted by faculty members at the MIGAL Institute is of high quality, published in leading journals and presented at national and international conferences. The faculty appears to maximize the opportunity for student involvement in their research activities.

Recommendation

The committee recommends:

Immediate (0-2 years):

- Supporting research in the areas of clinical and applied nutrition research and providing opportunities for students to become involved in these types of research projects.

Organizational Structure

The organization and the delegation of responsibilities of the Nutritional Sciences Department are clear. The description provided to the committee is thorough and emphasizes the thoughtfulness that went into preparation of this report.

Teaching and Learning Outcomes

Teaching

Feedback provided to the committee stress the quality of teaching at Tel Hai Academic College and attention to individual student needs. Students consistently noted the responsiveness of the faculty, either in person or via e-mail, and the overall commitment of the faculty to the students. This feedback is reflected in the course evaluations.

However, many of the course syllabi provided in the SER were dated, particularly in terms of assigned reading material. In most cases course objectives were not provided in adequate detail to extract the learning outcomes. In a number of cases the entire course grade is determined by one final examination at the conclusion of the course. It is the committee's opinion that the students would benefit from a mid-term examination or other type of evaluation measure to help them gauge their grasp of the material prior to the end of the course. Concern also arose that too much weight was given to the final examination grade rather than course assignments throughout the semester that appear to represent a considerable amount of student effort.

Tel Hai Academic College has established a Center for Excellence in Teaching which offers a wide range of services, including assistance in preparing material and lectures for courses, curricula design, procedures for evaluating lecturers and other associated activities. It might be useful for the faculty to make use of these services when revising their course syllabi in the future.

The department should be commended for the extensive formal student feedback routinely collected on individual courses using questionnaires and informal meetings with the department head. As indicated in the SER, if a potential problem is identified, input is solicited from another faculty member, presumably the following year when the course is taught again.

Learning outcomes

As indicated in the SER "The intended learning objectives of the program have not been formally determined." However, the report then states that the learning objectives are based on the major courses in the degree program and lists 15 well-articulated and broad ranged objectives. For some learning objectives, for example, "To conscientiously apply the professional code of ethics in work" it is unclear whether this is taught proactively or by example. To the credit of the department, the current limitation in determining whether the learning objectives were achieved was noted in the report.

Recommendations

The committee recommends:

Immediate (0-2 years):

- Requiring all faculty to submit updated course syllabi and additional course material using a revised format developed in collaboration with the Center for Excellence in Teaching, to include learning objectives for each lecture and instituting a system so these syllabi are kept updated on an annual basis;
- Instituting a system whereby the vice-president/department and/or a head/faculty committee collaboratively review updated course syllabi and other available course related material, with

the intent of identifying potential areas of overlap and gaps, and providing additional opportunities for the students to take nutrition related elective courses and/or experiential learning;

Intermediate (2-4 years):

- Continuing to innovate and assess effective teaching methods
- Infusing the curriculum with up-to-date approaches for the application of nutrition principles, which has already begun with the addition of evidence based dietetics practice, oral health assessment, the nutrition care process and International Nutrition and Dietetics Terminology (INDT).

Long Term (4-6 years):

- Considering development of two alternate curricula for the 3rd year, with an emphasis on dietetics or training for advanced research degrees; please see the General Report for further details.

Infrastructure

The faculty administration office is located in the Sciences Building on the West Campus. Long-term plans indicate that the Nutritional Sciences faculty will be moved to new buildings on the East Campus. On the West Campus, the library is spacious, has adequate computer terminals and provides access to all major scientific search engines and journals. A system is in place in the event that requested information is unavailable. No concerns about limitations with regard to library resources were expressed.

The teaching laboratories classrooms were modern and well equipped. Adequate staffing and preparation space appears to be available to support student laboratory sessions. Of note was the outstanding food science laboratory. The faculty research activities provide opportunities for students to become involved in ongoing projects. There was no indication from administrators, faculty or students that the college's infrastructure is lacking with the exception of classroom size in some instances and that wireless access is not available in some laboratories. Stressed by the administration was the special attention given to students with special needs (e.g., when necessary certain seats are reserved in classrooms, all rooms are accessible without the need for stairs).

Note: There was no mechanism for assessing the impact of shifting the Nutritional Sciences Department from the West to the East Campus on the infrastructure. In addition, time limitations did not allow for the committee to visit the research laboratories located at the MIGAL Research Institute.

Quality assessment

As indicated in the SER, there is no official index for determining the quality of the program or achievement of its goals, however, the department has developed a monitoring system that they use to define the different indicators of the program's success. These include (1) twice a semester meetings of the department head with student representatives to receive feedback and comments regarding the program, (2) end of the semester college-wide teaching feedback survey, and (3) informal feedback from students provided to the department administration with regard to teaching standards and course material.

Recommendation

The committee recommends:

Immediate (0-2 years):

- Developing a formal system to provide regular feedback to the faculty with regard to their teaching responsibilities and if areas of improvement are identified, providing resources to remedy the situation and enhance student learning.

Signed by:

Alice H. Lichtenstein

Prof. Alice H. Lichtenstein, Chair

Judith A. Gilbride

Prof. Judith Gilbride

S. Mokady

Prof. Shoshana Mokady

Maret G. Traber

Prof. Maret G. Traber

Appendix 1: Copy of Letter of Appointment



December, 2011

שר החינוך
Minister of Education
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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 21st 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

Nutritional Sciences - schedule of site visit
Tel Hai Academic College

Tuesday, January 24, 2012

Time	Subject	Participants
10:00-10:45	Opening session with the heads of the institution and the senior staff member appointed to deal with quality assessment	The President: Professor Yona Chen, The Vice-President for Academic Affairs: Professor Haim Goren, Dean of the Faculty of Sciences and Technology Professor Gidi Gross Director General: Mr. Yossi Malka The Student Registrar: Ms. Raaya Gal Dr. Gonen Sharon, a member of the quality assessment's team Mr. Ofer Baharal, the academic secretary
10:45-11:15	Meeting with head of Faculty of Sciences & Technology	Dean of the Faculty of Sciences and Technology Professor Gidi Gross
11:15-12:00	Meeting with the academic and administrative heads of the Department of Nutritional Sciences	Dr. Jamal Mahajna, the head of the department of Nutritional Sciences Dr. Karen Jackson, the previous head of the department of Nutritional Sciences
12:00-12:45	Meeting with senior academic staff (representatives of relevant committees)*	Prof. Moria Golan, Prof Eran Dolev, Dr. Paula Belinki, Prof. Moshe Trop, Prof. Snait Tamir, Dr. Roe Gutman
12:45-13:30	Meeting with Junior academic staff *	Ms. Galia Shefer-Hillel, Ms/ Ester Gonen, Mr. Oren Pearlson, Ms. Ayelet Brener-Mann
13:30-14:15	Lunch (in the same room)	Closed-door meeting of the committee
14:15-15:00	Meeting with Adjunct academic staff (clinical supervisors)*	Dr. Gila Rozen, Ms. Dana Vainer, Ms. Yosepha Kahal, Ms. Hava Altman, Ms. Osnat Bobarov
15:00 -15:45	Meeting with BSc students**	
15:45-16:30	Meeting with Alumni**	Ms. Suzy Ariani, Ms. Perry-lu Gershoni, Mr. Baruch Nerotzky, Mr. Ori Alex, Ms. Shiri Paz, Mr. Asher Iberman
16:30-17:15	Tour of facilities: classrooms, library, labs, offices	
17:15-17:45	Closed-door meeting of the committee	
17:45-18:15	Summation meeting with heads of department and institution	

* 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.