



## **Proposal for a Master of Nutrition Science and Policy degree in cooperation with the Government of Ras Al Khaimah, United Arab Emirates**

### **I. Executive Summary**

- The Friedman School of Nutrition Science and Policy at Tufts University, in cooperation with the Government of Ras Al Khaimah (RAK), United Arab Emirates, is proposing a new graduate degree in nutrition. The proposed degree program will be a Master of Nutrition Science and Policy, consisting of eight courses delivered in a three-term format and completion of a Master's thesis, all within a 12 month period. This model builds on the successful experiences and lessons learned from the Fletcher School's Global Masters of Arts Program (GMAP), and the Friedman School's Master of Arts in Humanitarian Assistance (MAHA) programs.
- Instruction for the degree program will use a hybrid approach, including one, two-week period per term of intensive classroom sessions in dedicated educational facilities in Ras Al Khaimah. Each term will also include 11 weeks of instruction and activities using cutting-edge distance learning methodologies. The degree will be conferred by Tufts University on successful completion of the program.
- Similar to requirements for other Master's programs at the School, qualified applicants for this degree program will have successfully completed their bachelor's degree, with a minimum grade point average of 3.0 out of a 4.0 equivalent. They will also have prerequisites, including nutrition, biochemistry, biology or physiology, and statistics or calculus.
- Graduates of the program are expected to work in government, non-governmental organizations (NGOs), in the rapidly expanding corporate services sectors, and with international organizations, including the United Nations' agencies and regional development organizations.
- Creation of this new degree program is consistent with the goals of the School's ongoing 2005 strategic plan. The proposed program offers an exceptional opportunity for the School to reach a new pool of students, build its technological capacity to facilitate and manage learning using new communications technologies and to enhance the School's profile internationally among professionals and institutions.
- The financial resources necessary for development of the program, including staff time, equipment, materials, travel, and indirect cost recovery are provided through the agreement with Ras Al Khaimah, which has also donated three million dollars to the School dedicated to creating an endowed professorship. The program also includes the necessary monitoring and evaluation tools to allow for ongoing development and improvement over its first five years.

## II. Introduction: Overview of Program Purpose and Organization

- The **graduate degree** that is the subject of this memorandum, is one of three ‘projects’ under development by the Friedman School of Nutrition Science and Policy at Tufts University and the Government of Ras Al Khaimah (RAK), United Arab Emirates. These are i) a graduate degree in nutrition, ii) a series of professional development courses, and iii) support for an enhanced nutrition and wellness center (run by RAK). Only the degree program is discussed here.
- The proposal is for a new one-year Master’s program in nutrition science and policy aimed primarily at students with a basic science background. The framework of the new degree draws on seven years of rich experience of the Global Master of Arts Program (GMAP) at the Fletcher School of Law and Diplomacy (with which the Friedman program will share technology assets and some costs).
- Following the model of the School’s existing one year Master of Arts in Humanitarian Assistance degree, the new degree will be based on eight credits of coursework—in this case pursued across three terms over a one year period, and one credit of thesis preparation/practicum. The learning/teaching approach being developed is an up-to-date hybrid system incorporating an integrated admissions and ongoing student support system that is closely linked with existing systems at the Friedman School and the learning resources and services at the University.
- Most courses include an initial residence-based period with faculty-led classroom sessions. Classes continue during each term through a new learning management system that incorporates recently developed but proven e-learning techniques with rigorous but individually-paced materials, DVDs of lectures (sent to students) combined with web-mediated classes, activities, exercises, group discussions and student-faculty-student feedback, and evaluations. The first term will include three courses, the second term will include an additional three credits of coursework using a similar format, and the third term will include three courses (two credits) and a thesis.
- The residency period in RAK of two weeks during each term includes orientation and student services activities aimed at building Tufts/Friedman School spirit and community.
- Faculty-run classroom sessions during this period will provide an introduction to each course and advance the students into key substantive areas. This will promote student-faculty and student group interaction and allow faculty members to gain a solid sense of the students as a group and as individuals. These face-to-face sessions are a key element in successful transitions to the distance learning modality for the remainder of the term.
- Experienced Friedman School staff, with academic, research, and distance learning experience will support and assist the core teaching faculty in creating professional course materials based on leading, tested and proven technologies and theories and practice in effective learning.
- Preliminary assessments have found that most of the prospective students are well versed in use of computers and that adequate internet services are available in the region.
- Each student will receive a fully-configured laptop computer which will contain all necessary software and the first term’s learning materials needed to participate and communicate. Any books needed in print format will be delivered in advance or during the face-to-face classroom periods.

### **3. Rationale for the Degree Program**

#### **3.1 Review of Existing Nutrition Education Opportunities in the Region**

- The government of Ras Al Khaimah is committed to introducing high quality educational programs dealing with health, nutrition, and wellness in the Emirates and neighboring regions. Following an expression of interest directed to the School, from RAK, faculty members made two trips to the Emirates in 2006.
- A faculty team conducted an assessment of existing academic graduate programs in nutrition at universities in the Middle East as well as in South Asia in order to determine the academic and financial viability of hybrid education models in the region. The assessment also focused on a) the content and intent of existing curricula (focus and gaps) related to nutrition, and b) the availability of full or partial distance learning and “off-site” graduate programs relating with particular attention to content and intent of existing curricula
- Information sources included: a) contacts including school alumni from and/or working in the region, b) other professional colleagues working in academia, health service sectors or international organizations, c) discussions with academic colleagues working in US universities with a presence in the Emirates or elsewhere in the region (such as Lebanon, Egypt or Jordan), d) review of available materials on degree programs and professional needs in the region, e) discussion with non-academic colleagues from the region who have interests in national capacity-building initiatives (such as through the United Nations University, the World Bank, the Gates Foundation, and MENANA (the Middle East North Africa Nutrition Association). and f) the preliminary findings of a market research survey conducted by a regional marketing firm on the potential market for graduate education through US institutions working in the Emirates,
- It was determined that while there are several institutions in the Middle East offering undergraduate degrees in nutrition, medicine, or nursing, there are few programs offering a master’s degree (for example Tehran University in Iran, the American University of Beirut in Jordan, and institutions in Saudi Arabia, Egypt, India and Pakistan). In addition, there are no programs in the Emirates offering master’s degrees that touch either on nutrition science or policy or programs that respond to health concerns.
- Existing programs in the Emirates (including the Gulf Medical College in Ajman as well as the Faculty of Medicine and Health Sciences at United Arab Emirates University at Al Ain) do represent potential “feeder” programs that could promote post-graduate education in nutrition. Some institutions, such as Zayed University in Abu Dhabi and Dubai, are in the process of discussing the need for improved nutrition education and a health, wellbeing and nutrition program for the students attending local universities.
- However, the catchment area for the Friedman school initiative is much wider than the Emirates, potentially to include the Gulf states of Saudi Arabia Kuwait, Bahrain, Qatar and Oman, some areas of South and West Asia (India, Bangladesh, Afghanistan, and Iran), Eastern Mediterranean (Jordan, Lebanon, and Iraq), and North African (Egypt, Ethiopia and Sudan) countries. Demand for higher education/professional development has been growing rapidly in the Gulf region, but also more broadly across the Mediterranean basin and South-Central Asia. Current and future requirements are expanding for technical experts in food and nutrition policy from various sectors including agriculture, education, health, economic and natural resources.
- The conclusion of the assessment was that demand for a master’s degree in nutrition science and policy is strong and growing, and that there is also unmet demand for shorter

Professional Development Courses (along the lines of continuing medical education) for physicians, nurses, faculty in higher education, government officials in public health, clinical dietitians, occupational health specialists and others in private practice.

### **3.2 Availability of Hybrid or Distance Learning Graduate Nutrition Education**

- No programs offering the flexibility of hybrid or distance learning options have been identified in the region. A survey of ten “distance learning” master’s degrees in nutrition from institutions of higher learning in the United States was carried out to determine the content and focus for these degrees. Each of these programs offers a one-year degree, usually with a master’s thesis. Their focus is mostly in food and nutrition science with very little concentration on nutrition policy. All programs require some degree of presence on the campus in the US. Perhaps, more importantly, none of these programs will be able to specifically address the food, nutrition, and policy challenges of interest to nutrition and public health professionals in the Gulf, Middle East and North Africa.

### **3.3 Demand for Higher Education in the Region**

- The demand for higher education has been growing rapidly across the UAE and the regions of the Gulf, North Africa, and South Asia. Current and future need for technical experts is expanding in food and nutrition policy from various sectors.
- It is now widely recognized that an enabling and supportive macro policy and political environment for nutrition is needed to achieve sustainable food and nutrition security, and that a more holistic approach to nutrition education (competency in science, but an ability to think far beyond that) are needed.
- The Friedman degree will go beyond a generic ‘basic sciences’ curriculum, to provide the highly-respected, sought-after and needed cutting-edge science and policy analysis.

## **4. Master’s Degree Program**

### **4.1 Overview**

#### **A New ‘Master in Nutrition Science and Policy’:**

- The Master in Nutrition Science and Policy degree will build on the Friedman’s School’s joint emphasis on both science and policy, and adds a new focus on nutrition issues and challenges in the Gulf, Middle East, North Africa, and South Asia.
- The degree will cover the essentials of nutrition science (nutritional biochemistry: macro and micronutrient metabolism) and nutrition research tools (epidemiology (both basic and nutritional) as well as applied statistics), plus set these concepts and skills into a broad context that extends from an understanding of microorganisms (cell and molecular functions in nutrition, genomics), through the total human organisms across the lifecycle and generations (nutrition as it affects individuals across through the lifecycle--pregnancy, infancy, childhood, adolescence, adulthood and the elderly).
- The degree program will extend into policy areas based on the closely held Friedman School tenet that nutrition affects whole populations and regions. Therefore, courses will cover national and international dimensions of vitamin and mineral deficiencies, the effects of changes in traditional diets and activity levels on the prevalence of overweight and obesity, and the chronic diseases of the middle-aged and elderly.

- The new degree will go beyond information and theory. Courses are being designed to include relevant regional examples and significant prescriptive and practical components. One signature element of this Master's program will be an emphasis on providing students both with knowledge and nutrition research tools as well as the ability to apply what is learned to solving the nutrition and lifestyle related problems and challenges in the region.
- The courses offered through this program enhance the study of nutrition to supplement medical models that have long dominated higher education in this field toward a 'public nutrition' model. Scientific knowledge and skills will be balanced with those needed to understand key areas such as food security and pricing policies, nutrition assessment, intervention development, and intervention monitoring and evaluation at the level of populations. Nutrition problem analysis will be expanded to include up-to-date techniques for assessing nutrition across a lifecycle and across generations, the implications of nutrition's linkage with wellness, and the importance of processes that influence an individual nutrition and healthy lifestyle behavior. Basic research tools will be complemented with learning about research management and communication including ethical issues.

### **New Degree Program Structure:**

- The program will consist of three academic terms over a 12 month period.<sup>1</sup>
- During the one year period, students will take a total of seven one-credit and four half-credit courses including a research or project based thesis. The overall learning format for the program will be a hybrid learning system combining periods of intensive, face-to-face classroom instruction with the use of cutting edge, multi-channel, distance learning and communication formats, procedures and activities. (See table that follows for detail.)

### **Three Term Schedule:**

- Based on analysis of periods of Tufts faculty and staff availability and work load, regional cultural/social traditions including periods of major religious observance (Ramadan, regional secular and religious holidays), and seasonal climate, it has been decided to have the starting and ending points of the three-term schedule early in the month of January. Thus, the first entering class will begin in December 2008.

### **Faculty and Staff in Ras Al Khaimah**

- An institutional presence of the Friedman School is planned and budgeted for in RAK, to include dedicated classrooms, an area for faculty and staff preparation and meetings, an

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<sup>1</sup> A pre-first term program of various preparatory courses and/or activities will be required for accepted students depending on the nature and extent of their exposure to science, math and nutrition at undergraduate level. This "pre-term qualifying period" is offered so that the new degree will be open to as many potential students as possible, while simultaneously assuring that all students have the knowledge background needed to participate fully and meet Tufts' standards. Pre-program activities are planned for the September to December period prior to the first residency. For those students who meet admission standards with the exception of missing a specific subject area, provisional admittance to the program may be considered that would require them to satisfactorily complete one or more courses in key domains prior to the first residency period. Fulfilling this requirement will be facilitated by the School's offering of an existing graduate level course in 'general nutrition' on-line. The School will also assist students by identifying acceptable alternatives courses in statistics, physiology and/or biochemistry, that if successfully completed will allow 'provisionally accepted' students to enter the program. Provisionally-admitted students who do not complete the prerequisites will not be admitted. It may also be possible to develop collaborative agreements with universities in the region that offer acceptable undergraduate courses in required areas such that 'local' preparation for the Friedman degree can be enhanced over time.

administrative area and living, dining and recreational facilities for students during their three residency periods. The investment and running costs of these facilities are being borne by RAK. Orientation of participating faculty will include a focus on building community, cultural social issues related to the students' regional backgrounds and handling issues documented within hybrid learning system programs.

- Those facilities will be staffed by local program support personnel, including a senior level administrator who will provide on-the-ground liaison with Emirates-wide and RAK municipal authorities, leaders of the George Mason University undergraduate degree program (located on the same campus), and the faculty and administrative team based in Boston. Other RAK-based staff will prepare for the residency periods, assist with regional student recruiting and overall program marketing and assist with other aspects of the overall program including the Continuing Professional Education courses. To assure that students are provided with as full a set of student services as possible, the program has planned and budgeted for a full time staff member (Academic Support Liaison) within the RAK team who will work closely with the School's Student Services section. This staff member will actively coordinate both the academic and non-academic activities of the residency periods in collaboration with faculty and locally based staff and lead in designing any necessary adaptation of the service package that will be provided to all students in the program.
- During residency periods, the relevant Boston-based staff and faculty will join the locally based staff and take active part in the students' orientation activities. Program staff based in RAK include: 1) Friedman Degree & Continuing Profession Education Courses Administrative/Marketing Manager; 2) Master's Program and Continuing Professional Education On-site Facilitator; 3) On-site Marketing and Recruitment Officer; 4) On-site Academic Administrative Assistant; and 5) Local Driver. Working as a team, with the added involvement of additional Boston-Tufts personnel ranging from Research Assistants to Library personnel, it is expected that the students will have a high quality learning experience during both the residency and distance learning portions of the program.

### **First Term: January – May (three one-credit courses)**

- The first term will begin at the new educational facility in the UAE with a 16-day residency in January. An initial three day program orientation will outline academic requirements and required levels of participation, provide technical instruction on incorporated learning technologies, distribution of equipment, laptop computers<sup>2</sup> and set up and trial of synchronous and asynchronous communication procedures.
- Over the remaining 13 days of the initial residency period, students will enter a period of intensive classroom sessions for the three, one-credit courses. Faculty for each of the courses will present 9 sessions up to 90 minutes each that outline their courses, introduce key topics and planned activities, work through the lesson formats, activities, and demonstrate the communication procedures to be used during the distance learning.<sup>3</sup>
- During the first residency period students, faculty and staff will participate in activities focused on sharing cultures and backgrounds, and on information about Tufts, the Friedman School and 'building community' as part of the dynamics of the program.

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<sup>2</sup> During this period, each student will be provided with a laptop computer that has been preconfigured with the software needed for participation in the distance learning systems of the program and with sets of preliminary learning materials supporting each of the first term's three one-credit courses.

<sup>3</sup> The Friedman School's director for Distance Learning and team will facilitate introduction of specific techniques such as within class group discussions, on-line mini-conferences, wikis, and Skype<sup>®</sup> Internet telephony.

- Following the first residency period, the term will continue for a period of 11 weeks using a distance learning format for all three courses.

**Second Term: May—August (two one-credit and two half-credit courses)**

- The second term will begin with a 14 day residency period at the educational facility in RAK. A Friedman School faculty/Office of Student Affairs team will combine to offer a second set of intensive classroom sessions, individual discussions with students on thesis areas, activities aimed at maintaining and building groups and Friedman School community spirit, and solving any administrative or distance learning issues.
- Four 90-minute classroom sessions will be included in the residency period for each of the two, half-credit required courses and nine, 90-minute sessions for each of the two, one-credit courses<sup>4</sup>. Students will also be provided with packets of supporting and required reading materials on DVDs to complement distance learning sessions during the remainder of the second term<sup>5</sup>.
- The remainder of the second term will be conducted using a distance learning approach consisting of 11 weeks of classes for the full course and 5 weeks for the half-credit courses that will be offered sequentially over the 11 week period.
- As an additional activity in the second term, students will continue to interact with the thesis advisory team on their thesis projects or research with an objective of assuring that related activities are well planned and approved prior to the beginning of the third term.

**Third Term: September –December (two one-credit courses and two half-credit courses)**

- The third term includes two single credit and two half-credit courses. One of the full credit courses will be a thesis consisting either of a research-based dissertation or a detailed report of an approved practicum. The dissertation will be an extended essay that involves work equivalent to a full credit, along the lines of the Fletcher school Master of Arts in Law and Diplomacy thesis. A thesis coordinator will match student interests with a faculty ‘adviser/overseer’ as necessary, as well as serving as a second reader for the purpose of overall comparability and quality control. When the student selects the practicum option, Friedman faculty will approve appropriate professional settings in which students can work for a minimum of 400 hours (conforming to existing Friedman internship policies), leading to a detailed report of activities and skills gained following a pre-determined template.
- The final term will vary from the previous two in that the initial period of course work and work on the thesis will be conducted primarily through distance learning channels. The format for thesis presentations and defenses are not yet finalized. Alternative possibilities utilizing teleconferencing and similar methods are being discussed in addition to the more traditional options of face-to-face settings.
- The 12-month program will culminate in a final residency period in January at the RAK campus that will include final discussion sessions and group work on the 3 concurrent courses, defense and presentations of theses, employment counseling, and graduation.
- After the first year of the program, graduating students will also be incorporated into the orientation for incoming students, which will overlap in the January residency periods.

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<sup>4</sup> Faculty responsible for each of the half-credit courses will conduct face to face sessions during the residency period. However, the remaining classes for each of these courses will be offered using distance learning channels during either the first or second half of the term to assure there is a balanced course load throughout.

<sup>5</sup> The third term period will include a lightened class schedule (distance learning activities) during Ramadan.

## 4.2 Admissions and Registration Procedures

- Admissions to the program will follow the same requirements as for those students applying to the Friedman School in the United States. For the past three years, the School has used the on-line admissions application, Embark, utilized by all schools at Tufts University. The student application, the essay, the references, and the GRE scores are all obtained electronically. The only materials that arrive in the Boston Admissions office via post are the academic transcripts provided directly from the universities or colleges. This application system works well for the diverse study body that currently comprises the school
- International students applying to the program are required to take the Test of English as a Foreign Language (TOEFL). This requirement is waived for students whose native language is English or for whom English was the primary language of instruction for a post-secondary school degree. Students with a score of 600 on the paper version of TOEFL or 250 on the computer-generated exam will be eligible for admission in terms of 'language proficiency'. As is the case in Boston/Medford, no provision will be made for remedial activities for students not achieving proficiency other than counseling to seek help to improve their English before reapplying.
- To be fully admitted, students will have had to successfully complete undergraduate level courses in statistics or calculus, biochemistry, biology or physiology, and a general course in basic nutrition science. Students may be admitted on a provisional basis, pending completion of prerequisites prior to actually starting the degree coursework.
- Consideration is being given to providing some measure of tuition scholarship. The scholarship would be assigned based on merit (the entire application including the references) and on an essay from the student describing how the tuition assistance will help accomplish his/her career goals.
- Registration procedures would be no different than for Boston and Medford-based students. Registration and course enrollment is already fully online. In addition, the Student Information System (SIS) that the Friedman School uses to keep track of all student registrations and enrollment is fully capable of having a variety of start and stop dates for learning periods, even within the same school. For example, students seeking a MALD from Fletcher register for terms called 'Fall Term' and 'Spring Term', whereas GMAP students register for 'Fall GMAP', 'Spring GMAP', and 'Summer GMAP'. The learning periods for the new Friedman degree will therefore be termed *Spring Term*, *Summer Term*, and *Fall Term*. Great care has been taken to determine dates that will work well for students in the hybrid learning approach but also for faculty and staff.

## 4.3 Content of the Curriculum

- **Pre-requisites for the Master's degree include:** Biology/physiology; biochemistry; introductory nutrition throughout the lifecycle; and statistics or calculus. Students who appear to be academically prepared for the program but who lack one or two pre-requisites can use the fall period (September to December) to make up pre-requisites at other universities before enrolling.

- **Required Master’s Skills Courses include:** Epidemiology for Nutrition Professionals; Biostatistics; Management, Planning, and Control of Nutrition and Health Programs and Organizations; Nutrition Research: Planning, Management and Communication.
- **Required Master’s Core Science and Policy Courses include:** Nutritional Biochemistry; Fundamentals of Food Science; Nutrition, Obesity, and Chronic Disease in the Middle East: Science and Program Applications; Micronutrients: Science and Public Health Interventions; Food and Nutrition Policy; Monitoring and Evaluation of Food Security and Nutrition Projects; Master’s Thesis. The courses are depicted below in **Table 1** and described in more detail in **Appendix A**.

#### 4.4 – Structure of the Program

**Table 1 - Three Term plan for MNSP – Nine Credits Including a Thesis**

First Term			Second Term			Third Term		
NUTR 315	Nutritional Biochemistry (Ausman and colleagues)	1.0	NUTR	Epidemiology for Nutrition Professionals (Harris)	1.0	NUTR	Nutrition, Obesity & Chronic Disease in the Middle East: Science & Program Applications (Saltzman and Lichtenstein)	1.0
NUTR	Biostatistics (Houser)	1.0	NUTR	Monitoring and Evaluation of Food Security and Nutrition Projects (Coates and colleagues)	1.0	NUTR	Nutrition Research: Planning, Management and Communication (Gleason)	0.5
NUTR	Micronutrients: Science and Public Health Intervention (Gleason)	1.0	NUTR	Food and Nutrition Policy (Rogers and Webb)	0.5	NUTR 219	Fundamentals of Food Science (Ausman)	0.5
			NUTR 216	Management, Planning, and Control of Nutrition and Health Programs and Organizations (Hastings and colleagues)	0.5	NUTR	Master’s Thesis (Webb)	1.0
	<b>Credits</b>	<b>3.0</b>		<b>Credits</b>	<b>3.0</b>		<b>Credits</b>	<b>3.0</b>

- The Master of Nutrition Science and Policy degree is designed to be undertaken as a three-term curriculum, consisting of 8 courses and a thesis. Table 1 shows the planned structure of the program and faculty members who will instruct each course.
- Eight of the ten courses included in this degree program are all already taught at the School. All of them will be presented to the School’s Curriculum & Degrees (C&D) Committee for individual approval or 're-approval' prior to teaching as part of this program, since existing courses must be converted to new formats with tight learning objectives,

slightly different readings, and other modifications appropriate. Since the first classes are not due to start until January 2009, there is ample time for C&D to fully vet the components of the program before faculty begin preparing their materials.

#### **4.5 - Advising Plan**

- All students will have an Academic Advisor drawn from the School's program faculty. In general, academic advising will be simplified by the fact that all students will be expected to take the same course sequence. Nevertheless, all faculty and advisers (who may not be teaching) will be given training on how to mentor and support students from a distance.

#### **4.6 Academic Support Issues**

##### **4.6.1 Access to Academic Resources**

- During the first residency period, all students will be provided with a laptop computer that is preloaded with all required software for communications to undertake course related activities for the program as well as course materials for the first term. Students will be oriented on use of the computer, introduced to required software, and have some guided practice to assure minimum competency in use. This orientation and practice will include use of the Learning Management System (Angel) that is used throughout the one year program. Appropriate staff such as the Distance Learning Director or the Biostatistics Instructor will carry out the instruction for these activities during the orientation.
- The Tufts library system will be an essential academic resource for the students. Discussions have been held with Eric Albright, Director of the Hirsh Health Science Library, to ensure that the library can adequately accommodate distance learning students who will need fully electronic services. The most important services will be: online searches for journal articles and books; access to materials such as scanned copies of materials not available online; access to materials on microfiche; and (potentially) interlibrary loans. Friedman School staff and faculty will provide tutorials and training sessions on library service usage during orientation. Mr. Albright has agreed that no additional compensation is needed for the use of library services if adequate tutorials on library resources are included in the orientation period (see **Appendix C** for signed form).

##### **4.6.2 Tutoring**

- Students in academic difficulty will receive help first from the Instructor and Teaching Assistant associated with the course. The Academic Advisor and the Master's Degree Academic Support Liaison for the program will be kept informed. For those students desiring additional one-on-one help with course material, appropriate tutoring services will be identified but at a cost to the student. Development of these services and close monitoring of student progress will be an important component of the initial years of the degree program implementation.

##### **4.6.3 Bursar**

- The funds charged for tuition will not be paid to the School. The financial agreement for this degree is that RAK will receive all payments for the first 5 years of the program. As a result, the Tufts University bursar will not be involved. A separate accounting system will be set up

by the Friedman School to service the students. Current plans are to have the newly devised financial accounting system connected with the Student Information System (SIS) only for program monitoring purposes and to keep track of term enrollments.

#### **4.6.4 Career Counseling**

- This is an area which will grow as experience and organizational linkages are developed within the region during the early years of the program. That said, many of the faculty and staff associated with this program are already familiar with appropriate career options in the region and have good contacts with School alumni and relevant local institutions that will be helpful in the process of professional networking.

#### **4.6.5 Physical and Mental Health**

- Given the nature of the program and its international clientele, all students must assume responsibility for their own health insurance. In addition, as Tufts University students, the Master's degree students in RAK will become members of International SOS. SOS is the medical and security assistance company for both emergency and non-emergency situations for students (and faculty/staff) away from home to speak with a physician or security specialist 24 hours a day, 7 days a week ([http://publicsafety.tufts.edu/risk\\_ins/sos/](http://publicsafety.tufts.edu/risk_ins/sos/))
- For ease of dealing with emergencies or urgent situations, physical and mental health care deemed to be adequate will also be made available to those needing it at their own cost. It is anticipated that some services could be negotiated with Emirates health care authorities in RAK. Staff in Boston and in RAK will build and maintain linkages with public health authorities in RAK and also with George Mason University in RAK. These linkages will supplement ongoing liaison with the international division of the US Centers for Disease Control and Prevention regarding any acute infectious threats, emerging diseases and appropriate measures to protect students, faculty, and staff. All faculty, staff, and students will need to meet local immunization requirements.

#### **4.6.6 Legal Affairs**

- Harassments, discrimination, and stalking can take place in an online educational milieu as it does in the more traditional classroom situation as during the residency period. Tufts University has a long-standing policy of dealing with these types of problems. All faculty and staff for this hybrid program will be given appropriate training in advance to enable them to recognize the problem and quickly request the appropriate assistance.

#### **4.6.7 Master's degree Academic Support Liaison**

- The Master's degree Academic Support Liaison serving the program will be recruited and based in Boston and will participate in all RAK events during the residency period of each term. This project staff member will facilitate the orientation to all student services and the interface between the students accepted to the program and the academic activities during the coming year. The Academic Support Liaison will also be the main link between the student and the team at the Friedman School devoted to the academics and students

services during the distance learning part of the program. This individual is the ideal triage person between the student asking the question and the individual who can answer the question (if not the liaison her/himself). The Liaison will serve as an ombudsman for the school and will be the staff member of first resort when questions arise about particular problems. It will be important for this individual to receive training on when it is appropriate to refer the student to a more senior member of the RAK team or to the School's Dean for Academic Affairs.

#### **4.7 Assumptions Governing the Business Model**

- The region is rich in universities providing mostly BS/BA degrees. One university in the Emirate at Al Ain provides an undergraduate nutrition degree. Several provide degrees in biology. None in the Emirates provide a graduate degree in nutrition. Most instruction is in the English language.
- The clientele will be diverse, coming from two primary sources:
  - mid-career individuals with a bachelor's degree seeking a next degree. The bachelor's degree could be either in nutrition (i.e. Al Ain) or in, for example, biology. This model would closely follow the incoming class into the MS program in Biochemical and Molecular Nutrition Program in Boston (some with nutrition background and all with a science background), or
  - persons coming directly from a BS/BA degree.
- Individuals will move as a cohort through a program of three terms. Students holding employment in their home location/country are able to manage – with planning – the six weeks of residency during the year and the course load. Thus, a uniform program may be offered to the diverse cohort. This will simplify the preparation and will keep the group cohesive throughout the year.
- Individuals without the appropriate background of undergraduate courses will be required to fulfill pre-requisites.
- The more broad and general the degree, the larger its base of potential students. However, the appeal of this degree will rest, in part, as it being perceived as “cutting edge” material.
- The degree should have a unique title to reflect the skills being acquired and to not compete with the face-to-face two-year MS degree in Boston/Medford. The Master of Arts in Humanitarian Assistance, joint with the Friedman and Fletcher Schools, and the GMAP, Fletcher School, are examples of unique degrees.
- The degree should capitalize, in so far as possible, on the skills of the faculty at Friedman, refocusing material to make it more applicable to examples in the Gulf and Middle East.

#### **4.8 Faculty Involvement in the Degree Program:**

- The instructors involved in teaching in this program will all hold faculty appointments at the Friedman School; in other words, teaching and mentoring will not be “farmed out” to instructors not associated with the school. The faculty's involvement and support is key, and every effort will be made to involve only those who are committed to the highest standards of pedagogy, who are excited to build such a challenging new program that offers so many

new opportunities, and who are willing to travel to RAK and/or other locations where student residency periods may be planned.

- The faculty identified for initiating this program all hold appointments in the Friedman School of Nutrition Science and Policy, Tufts University. Abbreviated curricula vitae are given in **Appendix B**. The faculty are:
  - Lynne M. Ausman, D.Sc., R.D., Professor
  - Jennifer Coates, Ph.D., Assistant Professor
  - Paul Giguere, Ed. D. Adjunct Assistant Professor
  - Gary Gleason, Ph.D., Associate Professor
  - Susan Harris, Ph.D., Adjunct Associate Professor
  - David Hastings, M.S., Adjunct Professor
  - Robert Houser, Ph.D., Assistant Professor
  - Alice H. Lichtenstein, D.Sc., Professor
  - Beatrice Rogers, Ph.D., Professor
  - Edward Saltzman, M.D., Associate Professor
  - Patrick Webb, Ph.D., Professor
- As the program develops and matures, additional/alternate faculty will become involved in the degree program, but they will always meet the highest standards set out above.

#### **4.9 Career Opportunities with a Master in Nutrition Science and Policy in the Region**

##### **Public Health Nutrition:**

- Government projects (health, nutrition, wellness)
  - Ministries of Education, Health, etc.
- Private companies
  - Health related private practice – Individual private practice
- Private companies that have located to Dubai and elsewhere in the region
- United Nations agencies
  - World Health Organization
  - Eastern Mediterranean Region for WHO (EMRO)
  - UNHCR (United Nations High Commission for Refugees)
  - UNICEF
- Consumer diet centers
- Hotel industry
  - Hotel industry
  - Chefs, dietitians – knowledgeable meal planners
  - Health and wellness component of the hotel/tourist industry
- Food industry:
  - Infant and complementary feeding industry
  - Drugs and nutritional supplements
  - Regulatory agencies
  - Food Processors

- Food Marketing

## 5. Administration and Governance

- The concept for the Master of Nutrition Science and Policy degree was approved by the Curriculum and Degrees Committee, Friedman School, at its meeting on August 23, 2007. The general faculty unanimously approved the development of this program, with residency based outside the United States, at a faculty meeting on October 3, 2007.
- The courses and course content are under the sole control of the Friedman School. The Director of the degree program, Dr. Lynne M. Ausman reports to the Dean for Academic Affairs, Dr. Patrick Webb, who is also a key faculty member for this program. The overall program in RAK is under the direction of Dean Eileen Kennedy.

## 6. Timetable for Program Development and Instruction

- The courses and faculty to teach them have been identified for this degree. The resources have been secured for adapting and developing the necessary courses into the hybrid format of intense classroom interaction and distance learning. To facilitate the process, the project has provided support for a new Distance Learning team led by Dr. Paul Giguere. The initial stages of helping the faculty adapt their courses to this hybrid model of learning have already begun. Each faculty member will be provided with instruction to learn the most effective way to communicate their course material. Instruction modes include face-to-face teaching, and various forms of synchronous and asynchronous distance learning. The first courses will be ready for a planned program start date of December 2008.
- Detailed discussions with the GMAP technical team at the Fletcher School, Tufts University, are well underway including an agreement for sharing the “learning management system” (LMS) software and technical support.
- The program will be announced and advertised using the web, visits to expected feeder schools, and attendance at appropriate conferences in the Middle East and Gulf areas. These activities will begin after approval by the University Trustees in November 2007.
- The Student Services team at the Friedman School is already at work adapting the on-line application process (Embark) for use in the program. An application deadline of August 31<sup>st</sup> 2008 would allow adequate review of applications so that those needing to fulfill prerequisites could do so in Fall 2008 and begin the regular program in December 2008.
- The projected enrollment for the first class is 30 students, gradually escalating to 100 students per year by 2014. The tentative timetable for the incoming December 2008 class is given in **Table 2** below.

**Table 2 – Tentative Schedule for Tufts University Degree Program in RAK in 2008-2010**

Year	Tufts/RAK	Month	Dates	Activity	Selected Important Dates	
					in Ras Al Khaimah, UAE	in Boston/Medford, MA
<b>2008</b>		August	Mon – Fri 25 – 29			FSNSP Orientation
		September	1 – 5		Ramadan: 9/2-9/29	FSNSP Instruction begins
	<b>Prep</b>	through		Satisfy		
		December		pre-requisites		
	<b>First</b>	December	15 – 19	Reading Period		
			22 - 26	Reading Period	Christmas: 12/25	Christmas: 12/25
		Dec/Jan	29 - 2	Break	New Year: 1/1	New Year: 1/1
<b>2009</b>		January	5 - 9	Classroom instruction		
			12 - 16	Classroom instruction		
			19 - 23	Distance Learning		Spring Semester, FSNSP
			26 - 30	Distance Learning		
		February	2 - 6	Distance Learning		
			9 - 13	Distance Learning		
			16 - 20	Distance Learning		Spring Vacation, FSNSP
			23 - 27	Distance Learning		
		March	2 - 6	Distance Learning		
			9 - 13	Distance Learning		
			16 - 20	Distance Learning		
			23 - 27	Distance Learning		
		Mar/April	30 - 3	Distance Learning		
		April	6 - 10	Distance Learning		
			13 - 17	Distance Learning		Passover: 4/8 - 4/16
			20 - 24	Distance Learning		
		Apr/May	27 - 1	Break		
		May	4 - 8	Break		
	<b>Second</b>		11 - 15	Reading Period		
			18 - 22	Reading Period		Tufts University Commencement
			25 - 29	Classroom instruction		
		June	1 - 5	Classroom instruction		
			8 - 12	Distance Learning		
			15 - 19	Distance Learning		
			22 - 26	Distance Learning		
		June/July	29 - 3	Distance Learning		
		July	6 - 10	Distance Learning		
			13 - 17	Distance Learning		
			20 - 24	Distance Learning		
			27 - 31	Distance Learning		
		August	3 - 7	Distance Learning		
			10 - 14	Distance Learning		
			17 - 21	Distance Learning	Ramadan: 8/22 - 9/16	
			24 - 28	Break	Ramadan:	Friedman School

						Orientation
		Aug/Sept	31 - 4	Break	Ramadan:	FSNSP Instruction begins
	<b>Third</b>	September	7 - 11	Reading Period	Ramadan:	
			14 - 18	Reading Period	Ramadan:	
			21 - 25	Break	Eid-Al-Fitr: 9/21	Rosh Hashana: 9/18 - 9/20
		Sept/Oct	28 - 2	Distance Learning		Yom Kippur: 9/27 - 9/28
		Oct	5 - 9	Distance Learning		
			12 - 16	Distance Learning		
			19 - 23	Distance Learning		
			26 - 30	Distance Learning		
		November	2 - 6	Distance Learning		
			9 - 13	Distance Learning		
			16 - 20	Distance Learning		
			23 - 27	Distance Learning		
		Nov/Dec	30 - 4	Break	Eid-Al-Adha: 11/28	
		December	7 - 11	Distance Learning		
			14 - 18	Distance Learning		Chanukah: 12/11 - 12/19
			21 - 25	Break	Christmas break	Christmas 12/25
<b>2010</b>		Dec/Jan	28 - 1	Break	New Year's break	New Year's
		January	4 - 8	Classroom instruction		
			11 - 15	Classroom instruction		

\* Assumes that Tufts faculty will be monitoring class assignments Monday through Friday

## 7. Marketing and Recruitment Planning

- Marketing for the new degree program is planned to reach two distinct groups of potential students. The potential demand from each group is significant.
- The first group is comprised of individuals with undergraduate degrees who have been working in nutrition related fields with organizations such as United Nations agencies, international NGOs and/or national institutions in developing countries.
- The second group is comprised of those who have recently been awarded undergraduate degrees in food, nutrition and other science degrees.
- **Group One:** Individuals in this category have 5 to 15 years work or professional experience and would benefit from a graduate degree in nutrition. These individuals have been working in fields as diverse as emergency assistance, nutrition and health project officers, national nutrition policy development, food security specialists, evaluation staff, maternal and child health programs, HIV/AIDS specialists, community health workers, dieticians, and as program administrators in a variety of health/nutrition related organizations. The degree via distance learning is attractive since students can pursue the degree without significant interruption to their careers. For group one, a variety of marketing strategies will be employed, including:
  - An aggressive campaign will be mounted to advertise the degree to national institutions – ministries of health, and agriculture and extension services. In June, 2006 faculty from the School collaborated on a nutrition capacity building short course in India. Among the participants were physicians, university faculty and UN

organizational staff from 11 countries including India, Morocco, Iran, Sudan and Bangladesh, South Africa, Ghana, Mexico, China, Thailand, Malaysia, and Indonesia. This existing network is one example of how the Master's degree in RAK will be advertised to individuals in Asia.

- Targeted contact and mailings with United Nations agencies. For example, The Friedman School is an 'Associated Institution' of the United Nations University (UNU) - a virtual university – which has a primary goal of building capacity in developing countries. In this capacity, Friedman staff are exploring ways to increase educational capacity in the areas of food and nutrition. Furthermore, the School houses an academic, peer-reviewed journal called the *Food and Nutrition Bulletin* (FNB), which is formally a publication of UNU. The FNB has the largest circulation of any periodical in developing countries. Ads will be placed in the FNB and other selected publications to advertise the Master's program. Thus, the UNU link is one example of how the degree will be advertised throughout the UN system.
- The Friedman School has active programs of research and technical assistance with a range of UN institutions, including, the World Food Programme, Food and Agriculture Organization, UNICEF and the World Health Organization, to name a few. Each of these UN agencies will be contacted directly, and agreements will be negotiated for a guaranteed number of individuals to be enrolled in the Master's program. Ideally, UN agencies will sponsor their staff for the Master's degree.
- School faculty co-chair a working group in the UN Standing Committee on Nutrition (SCN). The SCN is the coordinating group for all nutrition related UN institutions. The SCN network will be a resource for marketing the Master's degree.
- International NGO's are a key target for marketing efforts. Several senior faculty have worked with CARE International and the Red Crescent. A specific campaign will be mounted to advertise the Master's program to NGO's.
- **Group Two:** The second category of potential students is those who have recently been awarded undergraduate degrees in food, nutrition and other science degrees. The marketing strategies for this group will be somewhat different. Again, it is expected that RAK will collaborate in these endeavors.
  - Mailings about the Master's program will be targeted to each college and university with undergraduate programs in food, nutrition and related areas in the Gulf States, Middle East and parts of Asia.
  - Contacts have already been made with Universities in Europe who draw a large part of their undergraduates from the Middle East. These universities will be feeder schools for the Master's program.
  - Key faculty at the Friedman School will visit universities in the region that have significant undergraduate degree programs in food, nutrition and health.

## 8. Five Year Business Plan

- A five-year budget covering the expenses and revenues associated with the Master's degree project was prepared as part of the overall business plan of the overall program with RAK that also includes two additional projects (Nutrition and Wellness Center, Continuing Professional Education courses). All expenses related to development, implementation and support of the Master's degree, including indirect costs at a rate of 40%, are borne by RAK.

- The Vice President for Finance/Treasurer at Tufts University has reviewed and given his approval of the full business plan for the degree program during a meeting with the school's Deans on September 26, 2007.
- A Summary Budget specifically covering the development and operation of the Master's Degree project is included below as **Table 3** below. A more detailed budget is provided in Appendix **D**.
- Tuition and fee revenues from participating students (regardless of their home country) will be paid to RAK, and constitute the revenue of this project.
- In addition to the development, operating costs and the indirect expense costs that RAK will provide to the Friedman School, the Government of RAK has already provided the full funds for one endowed chair and made a commitment to fund a second chair.
- Based on demonstration of the excellence of the hybrid learning model being developed and its value, especially for individuals already in the workforce, it will be reasonable to expand this model to other programs that can be offered and based in Boston/Medford.
- There is no anticipated need for faculty replacements. As planned, the current faculty/course ratio is sufficient to allow full time faculty who are available to also teach in the new Master's degree program in RAK.

## 9. Monitoring and Evaluation

### 9.1 Monitoring

- The Friedman School has several methods by which the quality of a course and/or of a program is measured. The primary purpose of these monitoring activities will be to allow adjustment and improvement of classes, the instruction and learning systems that are under development, as well as in student services, program administration and cost controls.
- At the course level, these include, but are not limited to: a) formal student course evaluation using an anonymous web-based questionnaire, b) use of results obtained from a formal review committee involving review of course materials (books, notes, exams, presentations) and c) discussions with instructors.
- At the level of a degree program these include a) evaluation of career opportunities for those receiving the degree, and b) exit review consultations. The Director of Distance Learning will also be developing additional measures that pertain specifically to distance learning.
- Monitoring of this program will include a system of ongoing course evaluations, monitoring of student recruitment and student services for enrolled students, and monitoring through interviews, questionnaires and group discussions with faculty and support staff. This system, which is currently in the stage of early development, will be active on a term by term basis and is viewed as one of the more critical activities during early years of the new degree program.
- Summaries of these monitoring and evaluation reports as well as the recommendations that they generate and the subsequent adjustments as the program fully develops will be shared with the appropriate officials at Tufts.

## 9.2 Evaluation

- An evaluation of the overall program will be undertaken after the third year of operation. Details currently under consideration for the scope, design and modalities of that evaluation are included as **Appendix E**.

## Appendix A: Course descriptions for the Master of Nutrition Science and Policy Degree

Course Number	Title	Course Description
<b>First Term</b>		
NUTR 315 (1 cr)	Nutritional Biochemistry (Ausman and colleagues)	Students will explore the fundamental roles of nutrients in biological systems. Particular emphasis will be placed on the function of nutrients as defined by their chemistry, interrelationships between nutrient function, mechanistic approaches in the analysis of nutrient-disease relationships, and recent advances in the basic sciences related to nutrition and nutrient function.
NUTR (1 cr)	Biostatistics (Houser)	This one-term course will provide students with an intermediate level understanding of biostatistics concepts and methodologies, how they are applied, interpreted and presented in published research articles. Topics will include experimental design, descriptive statistics, graphical displays, probability distributions, confidence intervals, hypothesis testing, t test and analysis of variance, nonparametric tests, multiple linear regression, multiple logistic regression, survival analysis, and how to assess interactions and multiple comparisons. Students will regularly perform statistical analyses using a computer based statistics program.
NUTR (1 cr)	Micronutrients: Science and Public Health Interventions (Gleason)	Orientation on calcium, iron, zinc and iodine and Vitamin A, the B vitamins, Vitamin D, folic acid and calcium stressing in terms of functional consequences of deficiencies, and critical overview past and current issues and public health interventions related to addressing deficiencies in developing countries. The course will be organized around the lifecycle in terms of both science and public health level policies. The major technical and funding stakeholders working in the area of micronutrient interventions, ranging from pharmaceutical industry (vitamin and mineral supplements) and the staple food processing industry (flour fortification), to the work of UN agencies (UNSCN, UNICEF, FAO, WHO, WFP) and INGOs (Micronutrient Initiative, GAIN, Post Harvest Plus, IDPAS). Past achievements, challenges and future directions for research and interventions will be covered with a focus on micronutrient deficiencies in the Middle East, Gulf, South Asia and North African regions.
<b>Second Term</b>		
NUTR (0.5 cr)	Food and Nutrition Policy (Rogers and Webb)	The course will offer provide the tools and concepts needed for analyzing, critiquing and designing a variety of policies and programs aimed at tackling food supply, nutrition and hunger problems. The course will compare and contrast public institutions and interventions in the North Africa/South Asia region, the United States, other industrialized countries, and in multiple developing countries around the world. Students will examine what such interventions are designed to do, how they work (or don't work), and the socio-political and economic forces involved in design and management. The student will be expected to debate options for foreign and domestic assistance programs, engage in exercises based on real-life problems, and distinguish between the roles, rights and responsibilities of governments, grass-roots (non-institutionalized) organizations, non-governmental agencies, and civil society. Major areas of legislation, funding arrangements, policy debates and food security strategies will be explored under different socio-economic conditions.
NUTR (1 cr)	Epidemiology for Nutrition Professionals (Harris)	Course examines methods used to describe patterns of health and disease in human populations. Topics include study design and implementation, sources of inaccuracy in experimental and observational studies, and methods for interpreting and reporting study findings. Students will learn strategies for assessing dietary intakes and nutritional status that are appropriate to specific populations and study conditions. The course will also review the current state of knowledge relating diet and other nutritional indicators to selected health outcomes.
NUTR (1 cr)	Monitoring and Evaluation of Food	This seminar will provide an introduction to the principles and practice of program monitoring and evaluation (M&E), with case examples focusing on food security and nutrition programs in the Middle East and in geographically

Course Number	Title	Course Description
	Security and Nutrition Projects (Coates and colleagues)	proximate developing countries. The course builds on a participatory curriculum originally designed by Tufts and the World Bank to train professional nutrition program managers, teaching students such fundamentals as indicator construction and use, sampling, and survey instrument design. These topics will be supplemented by applied exercises of critiquing, planning, and writing monitoring and evaluation plans and reports. Students will engage with the practical challenges of M&E as they work in groups throughout the term to design a comprehensive monitoring and evaluation plan for an actual development program. The seminar is very participatory, with students expected to shape the discussion by contributing their personal experiences, opinions, and questions to the subject matter at hand.
NUTR 216 (0.5 cr)	Management, Planning, and Control of Nutrition and Health Programs and Organizations (Hastings and colleagues)	Key management concepts and principles for managing nutrition and health programs and organizations will be addressed to equip students to function as program directors and project managers. Case studies and readings will be used to convey a practical understanding of how to manage and coordinate business functions to achieve the goals and objectives of the organization. This course will deal with for-profit and nonprofit organizations. Topics will include business and project planning, management control systems, financial management, budgeting, performance measurement, pricing and marketing of services, operations, management, cost analysis, human resource management, and the development of management information systems. The course is designed to provide practical tools in areas that students need to acquire skills.
<b>Third Term</b>		
NUTR (1 cr)	Nutrition, Obesity, & Chronic Disease in the Middle East: Science & Program Applications (Saltzman and Lichtenstein)	This course will review the major chronic diseases of the 21 <sup>st</sup> century (obesity, diabetes, coronary artery disease, hypertension, cancer) in terms of the etiology of each disease, the nutrition components influencing the disease, and the major program approaches of interventions aimed at ameliorating each disease.
NUTR (0.5 cr)	Nutrition Research: Planning, Management and Communication (Gleason)	This course is aimed at helping non-scientists develop a critical view and appreciation for scientific research. The course provides and orientation to and rational for the need to develop problem based research agendas, research proposal development, funding sources and resource negotiations, study management, internal and external IRBs and approvals, and planning for effective research communication. Within these framework areas such as causation complexity, appropriate inquiry methods selection, the roles of various qualitative and quantitative approaches, the importance of pilot and preparatory work, and the common pitfalls that limit the impact of many studies will be discussed.
NUTR 219 (0.5 cr)	Fundamentals of Food Science (Ausman)	This course will provide students a broad overview of certain aspects of both the U.S. and worldwide food supply. This course is intended to provide students with an understanding of: 1) the basic groups of foods in the food supply and their nutrient profiles; 2) the effects of harvesting, processing and storage; and 3) the important issues affecting food safety.
NUTR (1 cr)	Master's Thesis cum Practicum (Webb and colleagues)	Faculty will oversee the selection and scope of an applied thesis project. This can take the form of a research-based dissertation overseen and read by appropriate Friedman faculty members (identified by the Thesis coordinator), or a guided practicum (a hand's on experience in a professional setting approved by the school), working under a mentor for a minimum of 400 hours—equivalent to the schools' internship program. This experience would be written up following a formal content template defined by the school.

**Appendix B: Curriculae Vitae for Faculty Instructors in the Master's Degree Program in RAK**  
**Appendix C. Library Resources Evaluation Form**

**University Library Council**  
**Library Resources Evaluation Form**

The evaluation of resources available in the Tufts libraries to support a proposed degree or certificate program is an essential component of the review process. Once the scope of the proposed program has been defined, the faculty member making the proposal should provide a written program description to the campus library Director or appropriate Bibliographer and schedule a meeting to discuss the program's library-based needs. The library will then prepare a written assessment of its ability to meet those needs. In the event that the library's holdings are insufficient to support the proposed program, the evaluation will include a budget for additional support.

**Please allow 3 weeks for this evaluation to occur.** For this reason, it is required that the library evaluation be taken into account when developing the departmental review process timeline. If the evaluation shows the need for additional expenditures, further discussion by the library with the appropriate administrators will be necessary before the proposal is submitted for final review.

**This form must be included with the proposal that is submitted to the Provost's Office.**

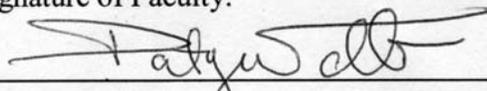
New Program Title: **Master of Nutrition Science and Policy degree in collaboration with the Government of Ras Al Khaimah, United Arab Emirates**

Department Submitting Proposal: Friedman School of Nutrition Science and Policy

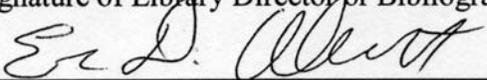
Contact Person/Phone: Dean for Academic Affairs, Patrick Webb, Ph.D., Office Phone 617-636-3779

Date of meeting with Bibliographer: Sept. 5, 2007

Signature of Faculty:

 Date: October 5, 2007

Signature of Library Director or Bibliographer:

 Date: 9-5-07

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**This section to be filled out by the Bibliographer.**

Existing library resources are sufficient to meet program needs as outlined in the proposal. ✓

Existing library resources are not sufficient to meet program needs as outlined in the proposal.

Library evaluation form is attached.

**Appendix D. Degree Program Budget**

## Appendix E. Comprehensive Evaluation Plan

A comprehensive evaluation is anticipated for the program after the third year of operation. The design of this evaluation will be adjusted based on the monitoring and evaluation activities undertaken during the first two years. However, the core elements of the overall evaluation are currently planned as follows: evaluation will be based on a review of extant data, interviews with faculty, administrators and relevant officials both in Boston and in the Emirates, a survey of the cohorts of the current first and second year of students, and summative review of the finished evaluation. Input will be required of students enrolled in the program. This also makes it possible to conduct focus groups in order to delve more deeply into themes found in the interviews. For the same reasons, interviews were also the chosen methodology for the administrators. The final part of the evaluation will look at what aspects of the program can and should be replicated and what aspects should be modified or discontinued. Below is a breakdown of each component that will be a part of the evaluation plan (Chapman, 2006):

- Review of existing program documentation for information on problems, needs, and assets
- Input from program administrators and faculty and input from program students
- Review of existing program end-of-course evaluations where applicable
- Input from program staff and administration to gather information on program activities and processes
- Input from current students to assess perceptions of program impact
- Interview with faculty to assess perceptions of program impact
- Review of student GPAs
- Review of retention figures and progress toward degree completion
- Input from current students as to program satisfaction and effectiveness
- Input from program faculty and administration about program aspects that should be maintained, changed or removed
- Input from current students about program aspects that should be maintained, changed, or removed
- Review of the evaluation to determine what aspects of the program can be used in establishing and/or improving other hybrid degree programs

### Sample Student Survey Items (Chapman, 2006)

Q1 – My interaction with my instructors is facilitated through a variety of ways.

Q2 - My interaction with other students is facilitated through a variety of ways.

Q3 - Feedback about my assignments and questions is provided in a timely manner.

Q4 - Feedback is provided to me in a manner that is constructive and non-threatening.

Q5 - I am provided with supplemental course information that outlines course objectives, concepts, and ideas.

Q6 - Specific expectations are set for me with respect to the amount of time per week I should spend for study and homework assignments.

Q7 – The instructors grade and return assignments within a reasonable time period.

Q8 – Learning outcomes for each course are summarized in a clearly written, straightforward statement.

Q9 - I have been instructed in the proper methods of effective research.

Q10 – My courses are separated into self-contained modules or units that can be used to assess my mastery before moving forward in the course.

Q11 - Each module, unit, or lesson requires me to engage in analysis, synthesis, and evaluation as part of the course assignments.

Q12 – Contact information and tools are provided to encourage students to work with each other and the instructor.

Q13 - The courses are designed to require students to work in groups using problem-solving activities in order to develop topic understanding.

Q14 - Course materials promote collaboration among students.

Q15 - Sufficient library resources are available to me.

Q16 - Before starting the program, I was advised about the program to determine if I have the self-motivation and commitment to learn at a distance.

Q17 - I am able to obtain assistance to help me use electronically accessed data successfully.

Q18 - I have been provided with adequate training and information to aid me in securing material through online databases.

Q19 - Written information is supplied to me about the program.

Q20 - Easily accessible technical assistance is available to me throughout the duration of the program.

Q21 – An effective system is in place to address my questions about the program.

Q22 - How many courses have you taken in the program? (include current courses)

Q23 - How many courses do you take in an average semester?

Q24 - Are you a member of a cohort?

Q25 - If on-campus, face-to-face meetings were offered 2 to 3 times during the semester, how likely would you be to attend them?

Q26 - Have you taken an online course prior to enrolling in the program?

Q27 - Would you recommend the program to others seeking a similar degree? Why or Why not?

Q28 - What is your level of agreement with the following statement? "The program has provided me with a rewarding and challenging educational experience."

Q29 - What items, if any, would you suggest be changed in the program?

Q30 - What items, if any, should the program keep the same?

Q31 – In your opinion, how can the program be improved?

### Sample Faculty Interview Questions

(Chapman, 2006)

1. What are the strengths and weaknesses with the variety and quality of the technologies and tools available for your use in teaching the online aspects of your course?
2. Describe the types and levels of technical and pedagogical assistance that is required when teaching in this program?
3. What processes should be used to support instructors who transition from teaching face-to-face to teaching a hybrid course?
4. How should student and instructor expectations be managed in our hybrid program?
5. How should instructors in our courses manage faculty-student interaction? What advice would you give other instructors in managing student feedback and communication in our courses?
6. How would you describe the reliability and security of the technology used in administering your hybrid course?
7. What course development standards are in place or should be in place for maintaining quality in the hybrid program?
8. What types of technical and pedagogical assistance are needed to maintain quality in your online program?
9. How adequate are the resources available to the program?
10. What processes should be standardized in order to maintain quality in your hybrid program?

### Evaluation Report

The final part of the evaluation plan will include a report of the results and the translation of those results into action items. The report will reflect viability for existing stakeholders and also will take into context the possibility of transportability for other hybrid learning contexts. For this evaluation, the report was directed at program faculty and administrators and included detailed analyses and results of all data collection.

Chapman, D. (2006). Building an evaluation plan for a fully online program. *Online Journal of Distance Learning Administration*, Volume IX, Number I, Spring 2006