The University of Georgia

University Council
Athens, Georgia 30602

March 12, 2014

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Dear Colleagues:

The attached proposal to offer the existing major in Food Technology (M.F.T.) as an online program will be an agenda item for the March 19, 2014, Full University Curriculum Committee meeting.

Sincerely,

David E. Shipley, Chair
University Curriculum Committee

cc: Provost Pamela S. Whitten
Dr. Laura D. Jolly

Proposal for an External Degree – Master of Food Technology
The University of Georgia

Institution: University of Georgia Date: February 7, 2014

College/School/Division: College of Agricultural and Environmental Sciences

Department: Food Science and Technology

Degree: Master of Food Technology

Major: Food Science

CIP Code: 19-4011

Proposed Start Date: Spring 2014

1. Assessment

The need for an online degree in food technology is demonstrated from several criteria. First, there is a projected need for more graduates in agricultural disciplines and, specifically, an even higher need for graduates in the food science and technology discipline. Also, the M.F.T. degree was first proposed in response to inquiry from industry and an initial survey of members of IFT (Institute of Food Technologists) in the southeast, which identified a part time graduate degree program as a viable response to meet workforce readiness needs. Further, based on the report, "Employment Opportunities for College Graduates in Food, Renewable Energy, and the Environment, United States, 2010-2015" found at: (http://www.ag.purdue.edu/usda/employment/pages/default.aspx), an estimated 5% more agricultural and life sciences graduates will be needed in 2010-15 compared to 2005-2010; specifically for food scientists and technologists, an estimated increase of 16.3% is projected. Finally, in cooperation with the Office of Online Learning, a market survey (2013 EduVentures, See Appendix A) was conducted, which also showed a need for entry level graduates in the food science/technology area. In the period of 2010-2020, food science related occupations were projected to grow at 8.0% and 10.3% nationally and in Georgia, respectively.

The typical M.F.T. student has a non-food science degree, such as biology, chemistry, computer science, culinary science, or nutrition, but is working in the food industry. Oftentimes, employees may not have a degree in a science-based discipline. Ensuring the safety, quality, security, convenience and diversity of food products, ingredients, and choices in a highly competitive economic environment, requires a highly skilled workforce. The dynamic nature of the food industry and the need for rapid responsiveness to consumer preferences requires an equally dynamic response and constant innovation. Ensuring safety to minimize foodborne pathogen outbreaks and/or trace the causative agent(s) in outbreaks are of increasing concern in a global marketplace and international sourcing of ingredients and food products. The industry response to consumer preferences for "clean label," use of natural ingredients and locally grown foods has placed additional pressure on the food industry for innovation without compromise of food safety and quality. In addition, the food industry is striving to increase the consumption of fruits and vegetables and formulation of foods that promote health as well as mitigate the obesity epidemic. For example, snacking accounts for over 20% of caloric intake; development of snack foods that are less energy dense, more nutrient rich, and palatable to consumers could result in significant weight loss and health benefits.

The M.F.T. degree offers the opportunity for instruction in core areas of food technology, such as

chemistry, microbiology, packaging, processing, ingredients and policy. In addition, the degree offers current and up-to-date information on emerging trends, new regulations, and potential innovations. The impact of the program includes training and increased workforce readiness in core areas, and also increased skills in the area of troubleshooting, identification and prevention of product failure, innovation in process optimization for consistent quality and safety and new product formulations to improve human health.

Many land grant institutions are offering online courses, online certificates in specialty areas, such as food safety, food policy and regulations; few offer comprehensive degrees. For those with online programs, the credit requirements are similar and range from 30-36 credits; UGA E tuition rates are similar or slightly lower. Time to completion ranges from 3-10 years; most current M.F.T. students complete the UGA goal of degree completion within 3-4 years. The University of Illinois has the most similar program to the proposed UGA online M.F.T. It offers a comprehensive food technology degree online, requires 32 credit hours, and typically requires 4 years to completion; UI does not require the GRE. For students who do not immediately enter a food science graduate program after the baccalaureate or who cannot afford to enter graduate study full time, the ability to obtain a graduate degree online, from one of the top food science graduate programs in the U.S. (http://www.nap.edu/rdp/), the UGA M.F.T. online degree program offers a concrete opportunity for career success and advancement. Enrollment in the M.F.T. has been consistent for several years, but low. Typical enrollments range from 6 to 12; we are projecting 15 new students per year for each new cohort. The total enrollment should remain between 30 and 45. It is likely that offering the degree online will facilitate enrollment numbers and completion of the degree. In the transition to fully online, faculty and the proposed graduate students will work closely with the Office of Online Learning.

2. Admission Requirements

Admission to the M.F.T. degree program requires a baccalaureate degree in food science from an accredited institution or related discipline, and at least two years of work experience. The application should also include letters of recommendation and a statement of purpose/interest in a degree in food science. The M.F.T. is a professional degree, designed for working professionals. The work experience in the food industry requirement is essential to successfully complete the course assignments and to fully benefit from the information, interaction and lectures of the M.F.T. program. The statement of purpose and letters of recommendation are used to help identify those students who are likely to benefit from and succeed in the program.

3. Program Content

The curriculum for the M.F.T. program includes current and to-be-developed courses for the online program. The degree requires 30 hours of course work, plus an exit term project on a focused topic in food technology. The M.F.T. course work is unique from the M.S. or Ph.D. course work offered in the conventional degree programs. After the first year online, cohorts of new students will enter the program in summer and enroll in a trans-disciplinary class, team taught by three instructors. In fall and subsequent semesters, the new students will enter coursework with existing students. A model Program of Study is attached at the end of this document. To assist students in the transition to fully online or to accommodate students who cannot complete all classes with a cohort, students have the option to take coursework from other programs or to take an independent study with an individual faculty member, pending advisor approval.

4. Student Advising

Students will be advised online via ELCNew or equivalent, phone conversation, email, or Skype during pre-registration or pre-arranged online office hours. In addition, new students will be introduced to the program via an online PowerPoint presentation that lists resources, contact

information, deadlines, links to UGA web pages, etc. Current students will receive an email update with similar information. The Department of Food Science and Technology (FDST) is committed to excellence in education for the degrees offered through the department. The undergraduate and graduate degree programs are regularly reviewed at annual departmental retreats as part of the IFT accreditation process and as part of the PRAC (Program Review and Assessment Committee) review process. In addition, faculty are committed to regular review and updates to coursework due to the dynamic nature of upper division course work in food science and technology; faculty participate in CTL (Center for Teaching and Learning) activities, such as technology training and faculty learning communities.

The M.F.T. degree is tailored for the working professionals in the food industry, does not have laboratory-based courses and does not require laboratory research for completion. Students typically take two courses per term, complete course work in 2.5-3 years, and usually take an additional 1-2 semesters to complete the exit term project. Active advisement facilitates timely completion of the degree. Current plans include offering summer courses only for entering students, but future plans include summer offerings pending demand.

In coursework, timely feedback is essential so clear communication about expectations, deadlines and grades are communicated verbally and on syllabi. In an online program, early identification of students who are "at risk" is important so that intervention strategies can be implemented. Depending on the individual situation, these may include referral to UGA counseling resources, identification of extra work or reading, assistance with time management. In consultation with faculty, students will be identified who are consistently late or miss assignments, do not actively attend and participate during synchronous classes, who turn in incomplete assignments, etc. Regardless of the rationale, students will be asked to turn in a work plan that will enable them to complete the course(s) and weekly progress reports to implementing the plan.

The demands on time are high when working full time and attending school part time. In the event that a student needs to take a reduced load or sit out a semester (as long as in compliance with the continuous enrollment policy), alternative plans to "catch up" are available. While courses are interrelated, all but the FDST 7020 are independent, and the student can take classes at the next semester to remain in cohort. Alternative classes to take are also described under 3. Program Content.

After completion of about 24-27 hours of course work, the student and faculty coordinator will identify an advisor and potential topic for the exit term project. The student and advisor will meet at regular intervals to set goals, timelines and review progress with an anticipated graduation within 1-3 semesters of beginning the term project. The iterative process may be completed while still taking courses. More typically, an additional semester is required. If more than one semester after coursework has passed and the student is not ready to schedule a defense, then the M.F.T. coordinator will ask the student and advisor to turn in a revised work plan and weekly progress reports to complete the exit term project.

5. Resident Requirements

There are no residency requirements for the M.F.T. degree. If the M.F.T. student is within proximity of the Athens campus, we encourage face-to-face presentation of the exit term project and defense. One course has a requirement of 2.5 day attendance on-campus and supervised testing, but the course is not required and the degree can be completed without the course. Students are advised of the residency requirements before enrollment.

6. Program Management

The Department of Food Science and Technology (FDST) is committed to excellence in education for the degrees offered through the department. The undergraduate and graduate degree programs are regularly reviewed at annual departmental retreats as part of the IFT accreditation process and as part of the PRAC (Program Review and Assessment Committee) review process. In addition, faculty are committed to regular review and updates to coursework due to the dynamic nature of upper division course work in food science and technology; faculty participate in CTL (Center for Teaching and Learning) activities, such as technology training and faculty learning communities.

The online M.F.T. degree will be the only online food technology degree on the east coast. The M.F.T. degree is tailored for the working professional in the food industry, does not have laboratory based courses and does not require laboratory research for completion. Students typically take two courses per term, complete course work in 2.5-3 years, and usually take an additional 1-2 semesters to complete the exit term project. Active advisement is used to facilitate timely completion of the degree. Current plans include offering summer courses only for entering students, but future plans include summer offerings pending demand. A timetable of proposed course offerings and potential course development is presented in Appendix B.

While the M.F.T. began as a face-to-face, part-time graduate degree program, faculty have used blended courses and incorporated synchronous and asynchronous online instruction for several years. Courses are offered in alternate years and are updated for technical content at each offering. In the transition to fully online, faculty and the proposed graduate students will work closely with the Office of Online Learning. They will receive training in online teaching technology to develop and modify courses that enhance student learning and retention, in development of online testing and assessment of learning, in tools to encourage active learning and experiential learning, and become fully informed on fair use of copyrighted material for instructional purposes. The faculty will work with the Office of Online Learning to incorporate technology to allow online proctored tests as part of this program.

Students enrolled in the M.F.T. must maintain continuous enrollment from matriculation until completion of degree (http://www.grad.uga.edu/academics/registration.html). This includes a minimum of 3 credit hours for any semester that UGA resources are used.

7. Library and Laboratory Resources

The University of Georgia has an excellent library facility and support resources (www.libs.uga.edu). We will make use of the reference librarian and reference resources available through the library and Office of Online Learning. For those students who can travel to campus, the Department of Food Science and Technology hosts a reference librarian in the department, in addition to instruction for classes and individual support at the science library. For the M.F.T., it is essential that students have access to library resources. We will highlight the library and access to resources in the introduction to the M.F.T. program lecture, and provide resources as needed in individual classes for the coursework. We have an existing lecture which includes practical exercises on using library tools for one of the first year classes. We will work with the dedicated librarian for Online Learning and information on resources (http://www.libs.uga.edu/ref/dl/) to identify and implement other changes to ensure access by online students.

8. Budget

The M.F.T. degree has been offered through the Gwinnett campus to attract students in the Atlanta area. Current tuition includes a differential that is lesser or greater than the E rate for in-state or out-

of-state students, respectively. Teaching in the current program has been handled out-of-load and courses are taught by part-time or full-time faculty for extra compensation, but faculty members are compensated at a lower rate than they should be due to low tuition return. The $14,400 included in the 2014-15 budget reflects an estimated return from tuition of students in 2013-14. The 2015-16 budget for instructor support reflects full costs associated with instructor support at $10,000 per course for the program. Details of the budget proposal are presented in Appendix B.

In the transition to online, there is a need to quickly adapt existing coursework to formats more compatible with online learning and larger enrollments, e.g., more asynchronous activities, such as short lecture components on essential topics, optimized synchronous activities to enhance learning and reinforce out of class activities, self-assessment tools, and online testing. Operating expenses include computer support for the faculty to maintain pace with technology. Support for 3 graduate students at $15,000 per year, either M.S. or Ph.D., is requested to work with faculty in 2014-15 and 4 graduate students at $16,000 per year in 2015-16. This model is proposed in lieu of faculty release time or staff support for the first three years. The FDST has commitment from the CAES for 3 assistantships in the event that enrollment does not meet expectations. If enrollment estimates are met and if there is a surplus, the surplus will be rolled back into the M.F.T. program for personnel support. Enrollment needs to increase to 15 or more M.F.T. students per year to sustain the program. By the end of the second year, the program should be self-sustaining. Marketing will be conducted in collaboration with the Office of Online Learning.

The enrollment of nearly 80 graduate students in FDST is the largest in the CAES, with an application rate far greater than the acceptance rate. The admissions process is highly competitive and enrollment by the top students hinges on financial support. Most FDST faculty members have nearly evenly split appointments between teaching and research, and there is a strong culture of support for both missions within the department. We anticipate strong synergies that will benefit the on-campus M.S. or Ph.D. degree students and online M.F.T. degree students, who also work in the food industry.

In fall 2014, the three M.S. or Ph.D. students will work with faculty to prepare for courses taught in fall and to be taught online in spring and summer 2015. Students, like faculty, will participate in training with the Office of Online Learning, work with faculty input on course content and pedagogy to develop PowerPoint slides, to develop or identify electronic media related to core food science topics, to assist in development of assessment tools, to handle some of the routine tasks such as keying in assessment and self-study tools, and other tasks as assigned to ensure smooth, rapid transition to online learning. In subsequent semesters, graduate assistants will assist with the transition of courses scheduled to be taught. They will also assist with recruitment of new potential students, such as maintaining information on M.F.T. student inquiries, forwarding information about the program, developing a virtual tour of the department or other tools that can inform a potential online student about the department, M.F.T., and opportunities afforded by the degree. The FDST has a dedicated computer lab and computers in the laboratories of faculty that can be used by student assistants in support of the M.F.T. The M.S. and Ph.D. students will benefit from participation as TAs in the M.F.T. program because they will be engaged in “real-world” applications of food science, will be engaged with people working in the food industry and learning about the complexity of food and food systems. The M.F.T. students will benefit from more access to students who are more immersed in coursework and access to resources at UGA.

Course development and the transition to online should be complete, including any needed revisions to approach. Assistance with student records for effective advisement, which cannot be handled by graduate students, is a critical need. In subsequent years of the transition, a program coordinator may be needed and there should be clearer indication if enrollment will sustain a staff position. The FDST

has one program coordinator for the undergraduate and graduate programs. If enrollment in the M.F.T. grows as projected, a staff position will be needed who will assist with student records, advisement, implementation of recruitment and retention plans, course/instructor/program assessment and administrative tasks.

9. Program Costs Assessed to Students

Tuition costs associated with the delivery of the online program are derived from the eRate above. Additional costs include access to a computer with internet access, microphone and headset and webcam. Some courses may have proctored exams, which may carry additional fees.

10. Accreditation

The Department of Food Science and Technology (FDST) is closely aligned with the Office of Online Learning and committed to programs that meet or exceed expectations of the Southern Association of Colleges and Schools Commission on Colleges (SACS/SOC). The department will work closely with the Office of Online Learning and use the available guidelines, training and support services. There are no additional, professional accreditation requirements for the M.F.T.

11. State Authorizations for Distance Education

There are no required internships, practicums or teaching requirements for the M.F.T., so supervision in other states is not applicable. Currently, we offer a course that is team taught by a faculty member who resides in North Carolina. Marketing is not targeted to any specific state. Advertising occurs via group contacts, such as email distribution lists, availability of brochures at CAES (College of Agricultural and Environmental Sciences) extension workshops and the UGA Gwinnett facility, individual contacts within the food industry and word-of-mouth communication.

12. Program Marketing

In addition to the marketing support offered by the Office of Online Learning, the FDST has a marketing plan for the M.F.T. that includes email distribution lists of individuals in the regional food industry, alumni, and past inquiries from potential students.

Please indicate a point of contact for this program to assist in the formulation of information specific to this program for entry into the two sites listed above.

Name: Louise Wicker
Title: Professor
E-mail: lwicker@uga.edu

Model Program of Study – M.F.T. Online

Coursework	Sum 2014	Fall 2014	Spr 2015	Sum 2015	Fall 2015	Spr 2016	Sum 2016	Fall 2016	Spr 2017
FDST 7020E		Essentials							
FDST 7090E						Adv proc			
FDST 7180E									
FDST 7010E			Form Pres						
FDST 7130E			Shelf life						
FDST 7060E					Micro hazards				
FDST 7080E					Adv pkg				
FDST 7150E (in process)		Laws							
FDST 7030E						Bch rxn			
FDST 7140E (in process)								Ingred	
FDST 7007E							Directed proj		Directed proj
FDST 7100E								Culinary Ess	

MFT UGA Online Program Proposal Budget Sheet - FDST

Use the spreadsheet provided to identify anticipated revenues and expenses for the program. If in the first year, there are no courses offered, and therefore no tuition revenue accrued, identify any departmental resources that will be allocated in support of the program as well as any additional resources that will be needed. Note that the University will provide services in the form of course design/development, faculty training, marketing, and student support. Once courses are offered, project the revenue associated with tuition and fees using the information provided on the form. The E-Rate Differential Tuition should be entered in the Program Revenue section along with any other funds that are redirected in support of the program. Be sure to utilize the Guidelines that have been designed to help in completing this form. Additionally, you may wish to review the sample completed Budget form.

Line #				2014-15	2015-16
1	**Program Name:** Master of Food Technology				
	Projected Enrollments				
2	New Students			15	15
3	Existing Students			3	17
4	**Total Enrollments**			18	32
	Projected Student Credit Hours				
5	New Student Credit Hours			180	225
6	Existing Student Credit Hours			36	204
7	**Total Student Credit Hours**			216	429
	E-Rate Tuition* (no entry required unless differing from UGA standard rates)				
8	Base tuition per credit hour			$321	$321
9	Differential Tuition per credit hour *(UGA standard rate is entered. If program is requesting a different rate, change the figure entered for each year -- assume a $25 increase every other year)*			$275	$275
10	Total E-Rate Tuition Per Credit Hour			$596	$596
	**Tuition Revenue ** **				
11	Total Base Tuition			$69,336	$137,709
12	Total Differential Tuition Revenue			$59,400	$117,975
13	**Total Tuition Revenue**			$128,736	$255,684

Note: 2crs fall; 2crs sprg; 1 crs sum for new students

MFT UGA Online Program Proposal Budget Sheet - FDST

	Degree/Certificate Program Departmental Budget				
	Program Expenses ***			2014-15	2015-16
14	Direct Instructor Support Costs (2@ 4950 in 2013-14; $10000/crs thereafter)			$10,000.00	$50,000.00
15	Graduate Assistants (3 MS or PhD for y 1 @ $ 15,000; 4 for y2 @ $16,000			$45,000	$64,000
16	Faculty Resease Time (6+4 @ $8500 for course development)				
17	Program Coordinator (100% time of $40,000)				
18	Advising Support				
19	Clerical Support (10% of 30,000)				
20	Professional Development (4 conferences/training @ 1000)				
21	Supplies/Operating			$4,400	$3,975
22	Additional Marketing				
23	Course Development/Enhancement ***				
24	Faculty Training ***				
25	Marketing ***		**PROVIDED BY THE UNIVERSITY**		
26	Student Support ***				
27	Other Expenses (please be specific)				
28	**Total Program Expenses**			$59,400	$117,975
	Program Revenue				
29	E-Rate Differential Tuition Revenue			$59,400	$117,975
30	Grant Funds				
31	Other: (Name source)				
32	College/Department Redirection			$45,000	$45,000
33	**Total Revenue Allocated for Program**			$104,400	$117,975
34	**Annual Program Balance** (Total Program Revenue less Total Program Expenses)****			$45,000	$0

Notes:

*An E-Rate Tuition is charged for fully online programs. The e-Rate Tuition is the sum of the Base Tuition and the E-Rate Differential Tuition. Each year UGA sets a

** The e-Rate Differential Tuition Revenue is derived by multiplying the E-Rate Differential Tuition rate by the number of credit hours to be generated per year. This

*** Program expenses are costs that will be incurred by the college/department with the development and offering of the new program. The University will provide

**** Enrollment needs to increase to 15 or more students per year to sustain the program. In the interim, the Office of Or 1/30/2012