**NON-CREDIT ELECTIVE TITLE**  
**Culinary Medicine**

**COURSE NUMBER**  
**BIOC 0905**

**LOCATION**  
Second Floor, Davison Hall, Douglas Campus  
26 Nichol Avenue  
New Brunswick, NJ 08901

**ELECTIVE DIRECTOR(S)**  
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**BLOCKS AVAILABLE**  
All

**DURATION/WEEKS**  
Year long

**HOURS PER WEEK**  
(5) three hour sessions plus 30 min to 1 hour pre-class requisites

**STUDENTS**  
16-28 students

**LECTURES/SEMINARS**  
Required online video and readings pre-class, cooking module with group case study questions

**OUTPATIENT**  
No

**INPATIENT**  
No

**HOUSESTAFF**  
No

**NIGHT CALL**  
No

**WEEEKENDS**  
No

**LAB**  
No

**EXAM REQUIRED**  
No

**OVERALL EDUCATIONAL GOAL**

Culinary Medicine molds culinary concepts and medical education in a hands-on interdisciplinary experience. The purpose is to increase medical student performance in core competencies, such as counseling patients with dietary concerns, including but not limited to: obesity, diabetes, hypertension, and autoimmune disorders. It is expected that the experience of working side by side with nutrition students will foster the team-oriented culture between the disciplines that is required for improving patient care and the health of the community as a whole.

**OBJECTIVES:**

I. **Patient care**

   Students must be prepared to provide patient care that is compassionate, appropriate, and effective.

   A. **Make informed decisions about diagnostic and therapeutic interventions based on patient information and preference, up-to-date scientific evidence, and clinical judgment.**

      Through researching, answering, and discussing clinically relevant questions, students have the opportunity to connect culinary concepts directly to the physiology, pathology and interventions used for a myriad of conditions. Pre-class reading includes current journal articles on the impact of diet and health.

   B. **Counsel and educate patients and their families**

      By being introduced to new foods, using different culinary techniques, and being shown ingredient substitutions, students will be better able to discuss specific components of a patient’s diet and how it ties into the bigger picture of the patient’s overall well-being (e.g. adding lentils to meat sauce to increase volume, decrease calories, and decrease cost). The discussion period affords students the opportunity to research and develop ideas on how to address common scenarios patients will present with. Each module will also emphasize food cost and shopping habits in order to inform students and patients how to eat on a budget.

   C. **Work with patients in maintaining health**

      Through the discussion of discussing clinically relevant questions during each module, students discuss dietary risk factors and how to explain beneficial alternatives.

   D. **Work as members of a multi-disciplinary health care team to provide patient-focused care.**

      Rutgers Nutritional Sciences graduate students will assist in each module. The relationship introduces participants to the interprofessional effort required to care for patients with dietary...
needs. The communication can help foster networking and the exchange of pertinent ideas in the medical and dietary communities. The program will also collaborate with the undergraduate nutrition, physician assistant and nursing programs in the following years so all healthcare students will be working as a team.

II. Medical knowledge
Students must demonstrate knowledge about established and evolving basic and clinical biomedical sciences, including epidemiology and social/behavioral sciences, & their application of this knowledge to patient care.

A. Demonstrate knowledge and application of the basic and clinical sciences relevant and appropriate to the clinical practice of medicine.
Students will review biochemical, immunologic, and cellular mechanisms from an entirely different point of view, to better integrate basic sciences into food preparation and choices. For example, the relationship between insulin and other hormones is introduced in a module based on preparing breakfast and reading a nutrition label.

B. Demonstrate an investigatory and analytic thinking approach to clinical situations.
Every discussing clinically relevant questions will have open-ended questions in order to provide a forum for students to research and find support for their ideas.

III. Practice-based learning and improvement
Students must be able to engage in self-evaluation regarding their academic & clinical performance, develop plans for personal improvement, and recognize how the application of new learning can be used to improve patient care.

A. Demonstrate strategies to analyze academic and clinical performance over the course of their professional careers, and develop improvement plans, in a methodical fashion.
This elective will hopefully shift the student’s perception to a competency-based approach as well as improving student health as well. Students should ask themselves, “how well can I counsel someone with diabetes?” instead of, “what do I know about diabetes?” Those taking the elective should feel more comfortable talking about diet and food shopping with patients, as well as making healthy lifestyles changes in their personal lives.

B. Locate, appraise, and assimilate evidence from scientific and clinical studies related to patients' health problems.
Students are given a list of 3 or 4 optional journal articles to go along with the 1 required pre-reading per session. Students are also required to watch an online video before each module that bridges the physiology, biochemistry, nutrition, and recent clinical research associated with the topics going to be discussed.

C. Obtain and use information about patients they care for and the larger population from which these patients are drawn.
Statistics about New Brunswick and New Jersey will be shared, including the most recent Rutgers childhood obesity study (2010). There will be a focus on food shopping and meal preparation for families on a budget as well as catering to different cultures and demographics in New Jersey.

D. Use information technology to manage information and access on-line medical information; and support their own education.
Students will be enrolled in an online course site where they will have access to pre-quizzes, videos, journal articles, and recipes. In the pre-quiz before each module, students will have the opportunity to ask questions anonymously and will be answered at the start of each module.

E. Facilitate the learning of other students and health care professionals.
Presentation and discussion will strengthen student communication skills and will be focused on communicating information in an educational manner.
Working side by side with other healthcare professionals provides plenty of time, both structured and informally for a free exchange of ideas between disciplines. The following years of the elective will include physician assistant and nursing students, which will allow for more interdisciplinary learning.

F. Facilitate the learning of other students and health care professionals.
Students will be broken up into small groups during each module and will have the opportunity
to interact and work with nutrition students. In the following years, nursing and physician assistant students will be part of these small groups.

IV. **Interpersonal and communication skills**
Students must be able to demonstrate interpersonal & communication skills, both verbal and written, that results in effective information exchange with patients, patients’ families, peers, and other health professions colleagues.

A. **Work effectively with others as members of a health care team, including peers, residents, faculty and other health care professionals.**
Students will be broken up into small groups and will have the opportunity to interact and work with nutrition students. In the following years, nursing and physician assistant students will be part of these small groups.

V. **Professionalism**
Students must demonstrate a commitment to carrying out professional responsibilities, adherence to ethical principals & sensitivity to a diverse patient population.

A. **Demonstrate respect, compassion, and integrity in interactions with peers, patients, and other health professionals.**
Students will demonstrate standards of professionalism, including respect, honesty, reliability and responsibility, in interactions with faculty, staff, peers, and patients.

B. **Demonstrate accountability to patients, society and the profession, and a commitment to excellence and on-going professional development.**
Following current research will show commitment to self-development in the profession and to excellence through self-guided learning. By including different healthcare professional roles into the small groups, students will gain exposure to team-based learning and the roles of individuals.

C. **Demonstrate sensitivity and responsiveness to patient individuality including the role of culture, ethnicity, gender, age, disabilities, and other aspects of health practices and decisions.**
Demonstrate accountability to patients, society and the profession, and a commitment to excellence
Through discussions, students will investigate an aspect of patient decision-making that is a personal choice, the choice of what to eat. It will require understanding of how culture, preference, environment, and availability come together.

VI. **Systems-based Practice**
Students will be able to function effectively in teams and within a larger organizational structure. They must demonstrate an awareness of the larger context & system of health care and of the resources available within the system to provide optimal care to individual patients and groups. Finally, students must demonstrate awareness of current barriers to health care and of the various strategies designed to assist patients in gaining access to care.

A. **Demonstrate effective involvement in a health care team and be able to recognize how their involvement in patient care may affect other members of the health care profession.**
The scope of almost all medical professions overlaps on the subject of nutrition. Working with students from different disciplines will help solidify each discipline’s niche and how everyone can interact as a team.

**BRIEF DESCRIPTION OF ACTIVITIES**
The Culinary Medicine Elective is based on the curriculum created and implemented by Tulane University Goldring Center for Culinary Medicine. This program at Rutgers will be joining Tulane and eight other medical schools in educating healthcare professionals and the community in cooking and nutrition. Culinary Medicine modules will be scheduled roughly once per month starting in October, they will be 3-hour long sessions held in the teaching kitchen located in the Davison building on Rutgers Douglas Campus. During these modules, students will be shared insights into the medical impact of food on diet-related illnesses. Current research on the benefits of the Mediterranean diet will the emphasis of the course, as well as discussion of other common diets prescribed to patients. Culinary skills and approaches to food preparation will be shared in a multidisciplinary format, as medical students will be working alongside Rutgers nutritional science graduate students and eventually the physician assistant and nursing students.
Format:
The modules are copyrighted by Tulane University Goldring Center for Culinary Medicine and the structure of the elective follows the culinary medicine curriculum set forth by Tulane University. Prior to the beginning of each module, students will be expected to watch a 15-20 minute online video overview of the topics to be discussed. They will also be expected to read a journal article and complete a short quiz, which is used to identify any areas of weakness that will be addressed during the first part of the module.

Each module begins with clinical vignette-style board questions. Students are given approximately 10 minutes to answer the questions. Students will then be divided into small groups and will be given one of four sets of recipes to prepare during each module. Recipes are distributed and approximately an hour is dedicated to food preparation. Culinary skills, such as flavor balance, knife skills, and portion-size are emphasized during this time. Afterwards, students are responsible to plate and portion their assigned meals. After plating, each pair gives a short summary of what they cooked and how the components are beneficial. Students and faculty will then have a family-style meal, trying everyone’s dish. During this time, nutritional science graduate students, invited-content experts, and students discuss how the recipes tie in with the over-arching medical theme for the day as well as going over their board-style questions and topics of discussions from the beginning of class. Once the questions have been reviewed the groups return to their workstations for cleanup.

The modules are: Introduction to the Mediterranean diet, Weight and Portion, Sodium Renal, Fats, and Food Sensitivity. The sessions will be timed to best correspond to the M1 curriculum, for example, Sodium Renal during Renal Block and Food Sensitivity during Immunology. There will be up to three more modules added in the following years when this program becomes more successful.

**Method of Evaluation:**
Before each module, students will take an online quiz, which evaluates their comprehension of the elective material for each class. Each question answered incorrectly by more than 50% of the students will be integrated into the following class discussion. Students attending all sessions will satisfactorily complete this elective. Each student will also be required to lead a community classes with similar content during the following year. Students will receive a letter they are competent in advising patients on dietary and lifestyle changes. A similar letter will also be submitted to be part of Medical School Dean’s Letter.