Sample Syllabi – Subject to Change

BIOS 10015- Introduction to Metabolism and Nutrition

The course will begin with a general review of the structure of the macro, nutrients, carbohydrates, fats, and proteins. This will be followed with a review of their metabolism. A consideration of micro nutrient, nutrients, including vitamins, will be added. The regulation of the metabolism of the macro nutrients by diet and hormones will be considered nutritional dysfunction. As in obesity, diabetes, starvation, and hypercholesterolemia will be treated. This context will be employed to evaluate dietary recommendations by a nutritionist.

The format of the course will involve a mix of presentations by the instructor, student group presentations, including homework, assignments, and discussions.

Reference information can be obtained on the Internet, including from appropriate mobile lectures.

**Week 1** will focus on the chemistry macronutrients: carbohydrates, proteins and amino acids and fats, and the micronutrients especially vitamins. Readings are from Google and selected Nobel lectures (available on line). Assignments will be homework on specific issues related to the macronutrients. Students will be organized in groups so that each group will deal with a specific issue. Time for discussion and questions will be available.

**Week 2** will focus on the metabolism of the macronutrients and the regulation thereof by genes, hormones and diet. Readings, assignments will follow the format employed in week 1.

**Week 3** will focus on nutritional and metabolic dysfunction as seen in obesity, diabetes, high blood cholesterol, starvation and vitamin deficiencies and iron metabolism. Again, the readings and format will follow that set out for week 1.