



# SABA UNIVERSITY SCHOOL OF MEDICINE

## MEDICAL BIOCHEMISTRY Syllabus and Course Outline Fall 2008

### Faculty:

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### The objectives are

1. To appreciate that normal physiology, disease processes, and pharmacological interventions are based on molecular interactions and reactions between proteins, nucleic acids and metabolites.
2. To learn the basic concepts governing protein structure, reactivity and regulation.
3. To understand how energy and essential nutrients are derived from foods, how these are stored and how these processes are regulated.
4. To have a general understanding of how and where essential polymers (e.g. DNA, RNA, proteins, and glycogen) and metabolites are synthesized.
5. To describe the molecular events which govern the growth of cells and the communication between them.
6. To explain the pathophysiology that results from the abnormal functioning of processes described in 2-5 above.
7. To understand how several clinically relevant techniques of molecular biology work.
8. To be able to apply biochemical principles to understanding new clinical scenarios.

### Required texts

1. **Lippincott's Illustrated Review: Biochemistry, by P.C. Champe and R.A. Harvey, 4<sup>th</sup> Edition,** Lippincott, Williams & Wilkins, 2007
2. **Baynes, J. and Dominiczak, M.H. Medical Biochemistry,** 2nd Edition, Mosby, 2007

### References

- Devlin, T.M., Textbook of Biochemistry: with Clinical Correlations, Fifth Edition, 2002, Wiley-Liss, John Wiley and Sons, New York.
- Stryer, L. Biochemistry, Fourth Edition, 1995, W.H. Freeman and Co., New York.
- Voet, D. and Voet. J. Biochemistry, Second Edition, 1995, Wiley-Liss, John Wiley and Sons, New York
- Lehninger, A.I., Biochemistry, Second Edition, 1981 Worth Publishers, Inc., New York
- Murray, RK et al Harper's Biochemistry 25th Edition, Appleton & Lange, 2000

## **Attendance**

Students must attend lectures on a regular basis. Any student absent during roll or asked to leave during class may be marked absent for the day. The university policy of 90% or more attendance will be strictly enforced and students with inadequate attendance will not be promoted.

## **Conduct:**

Professional conduct is expected at all times at Saba University. Please familiarize yourself with the University policy as detailed in the student handbook.

## **Examinations and grading:**

The examinations will consist of multiple-choice questions similar to USMLE format. In taking this type of examination, concentrate on the stem (the question itself), not the responses. Read the stem carefully, then read each response making mental note of responses that might be correct and those that are clearly incorrect. Then, re-read the stem to make sure that you understand all parts of the question. Finally, select the response that BEST answers the question.

- **The 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> block exams will each contribute 18% to the final grade.**
- **The 5<sup>th</sup> block exam will contribute 10% of the final grade.**
- **The NBME biochemistry shelf examination will contribute 18% of the final grade.**

The University grading scale is as follows: 90-100 % = A, 80-89 % =B, 75-79 % = C, < 75 % = F.

## **The Biochemistry Subject Examination:**

The Biochemistry course uses the NBME Subject Examination as the Final Examination. How do we know what will be covered on the Final? We don't, but we have designed this course specifically to include all the content that the NBME says is on these examinations. Therefore you should prepare for the NBME Subject Examination by studying Saba University Biochemistry course materials. Prepare for the Final as though it were written by Saba Faculty.

## **Laboratory:**

Laboratory exercises would be combined with Physiology and will be a part of 4<sup>th</sup> and 5<sup>th</sup> blocks. Details will be announced later during the semester.

## **Faculty Office hours:**

Appointments are encouraged to ensure faculty availability.