Introduction to Team-Based Learning (TBL)

What is TBL?
TBL is an instructional strategy in which students work in small teams to enhance the quality of their learning. Traditional lectures are replaced with in-class activities that promote group discussion and active learning. Students are expected to master the basic facts and concepts of the subject matter prior to coming to class; in-class time is devoted to applying this knowledge to solve difficult problems with their teams.

When and where will the TBL sessions occur?
There will be 10 TBL sessions, each lasting 2 hours. All sessions will be in Room 317 of the IB Building (medical library). The dates and topics for these sessions are as follows:

- September 1—Cell Biology
- September 13—Epithelia and Connective Tissue
- September 20—Muscle and Nerve
- September 27—Blood and Lymphoid Tissue
- October 4—Cartilage and Bone/Cardiovascular System
- October 25—Digestive System
- November 1—Respiratory and Urinary Systems
- November 15—Integument and Endocrine Systems
- November 22—Male and Female Reproductive Systems
- December 1—Eye and Ear

How will the TBL teams be formed?
Before the first TBL session, you will be randomly assigned to one of five teams. Each team will have 6 members. These teams will remain intact for all TBL sessions and you will not be allowed to switch teams.

How do I prepare for the TBL sessions?
The success of TBL, for both you individually and your team, is critically dependent on adequate pre-class preparation. Each TBL module has a set of “Learning Objectives” and an “Advance Assignment”. These are posted on the course website along with the corresponding class notes. You must complete the “Advance Assignment” prior to the TBL session. Read the assigned textbook chapters to gain a general understanding of the material, and then study the class notes with the intent of committing them to memory. Consider the class notes to be your authoritative source for learning the material. Defer to the class notes in those few instances where the class notes and textbook differ. Be prepared to take a 10-question, multiple-choice Readiness Assurance Test (RAT) based on the material in the class notes. The purpose of the RAT is to insure that everybody on the team is fully prepared to contribute to the group activities. If you do not come to class prepared, not only will your score suffer, but you will bring down your team’s score as well.

How will the TBL sessions be conducted?
- At the beginning of the session, everyone will take a 10-question RAT (10 min). This is called the individual RAT (iRAT). The answer sheets will be collected, scored, and recorded.
- Each team will then answer the same 10 questions again, but this time working as a group (10 min). This is called the group RAT (gRAT). The team will discuss the questions until a consensus is reached about the correct answers. The team’s answers will be marked on special Immediate Feedback Assessment Technique (IF-AT) forms, which provide feedback as to the “correct” answer. The IF-AT forms will be collected, scored, and recorded.
- The iRAT and gRAT will be taken CLOSED BOOK and CLOSED NOTES.
- After completing the RATs, each team will work through an Application Exercise consisting of about 8 challenging questions that require synthesis of information and higher-order reasoning (60 min). Many of
the questions are clinically-oriented and will not be answerable unless the team accesses external sources of information. For this reason, the Application Exercise will be taken OPEN BOOK and OPEN NOTES. In addition to the textbook and class notes, each team should have an unabridged medical dictionary and a copy of The Merck Manual (provided). Team members can bring to the session whatever written materials he or she thinks might be useful. However, access to the Internet will not be allowed. Each team will mark its consensus answers on a worksheet that will be collected, scored, and recorded.

- After the worksheets have been collected, the instructor will sequentially review each of the questions on the Application Exercise and ask the teams to “simultaneously report” their answers (30 min). This will be done by selecting and displaying a colored slide on a wall-mounted video monitor that denotes the team’s answer to a given question. In this way, all of the teams can see each other’s answer at the same time. Teams with different “correct” answers will be asked to explain/defend their choices. In the ensuing discussion, the instructor will reveal the correct answer and clarify misunderstandings.

What if my team disagrees with the instructor’s choice of correct answer?
Appeals will be considered only from teams, not individuals. If a team misses a question on an Application Exercise, and believes that credit should be given, the team has 48 hours to submit its appeal in writing to the instructor. The reasons for the appeal should be documented. If the appeal is granted, the team score will be changed, as well as the score of each member. However, the scores of the other teams will not be changed. Each team must be responsible for its own choices and not expect to benefit from the successful appeal of another team.

What if I miss a TBL session?
Every effort should be made to attend all TBL sessions because your team is counting on you. However, if missing a TBL session is unavoidable, you can make-up the iRAT at another time. Contact the instructor to make suitable arrangements. You will receive the team score for the gRAT and Application Exercise that you missed.

How will the TBL sessions be graded?
Each TBL session is worth 30 points and the 10 TBL sessions together are worth 300 points of the course grade (based on 1,000 total points). The point values of the TBL components are shown in the table below. Note that the team scores (gRAT plus Application Exercise) are weighted 2/3 of the total TBL points (200 points out of 300 points). The individual scores (iRAT) are only 1/3 of the total points (100 points out of 300 points). This illustrates the relative importance of the group work in the process.

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<tr>
<th>TBL Session</th>
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<th>gRAT</th>
<th>Application Exercise</th>
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Total Points: 100 50 150 300