BIOL 4356 *MOLECULAR NEUROPATHOLOGY*

FALL 2016

Room – GR 4.208

Instructors: Dr.HENG DU and Dr. UMA SRIKANTH

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***Office hours**:* *Dr.Srikanth FN 3.108* *2:00 – 3:00 PM on Mondays*
Dr.Heng Du NSERL 1.718 *1:00-2:00 PM on Mondays*

Required Textbooks:
No required textbook for this course. All lecture power points will be posted on elearning.

Recommended book: Robin's Pathology

Course Description:

This course is designed to give the students a 360 view on pathology and the corresponding molecular basis of this pathology in different diseases linked to the brain and spinal cord.

Learning Outcomes:

1. *Students will be able to associate the pathology in these diseases with the anatomy of the brain*
2. *Students will be able to understand the role of genes and their expression in the different diseases addressed.*
3. *Students will be able to form strong connections between the pathology and the underlying molecules that may be the cause or the result of this*
4. *Students will be able to develop hypotheses to interpret experimental observations and devise experiments to test these hypotheses.*

Make-up Quizzes:

These quizzes will be scheduled on a need only basis. If you are unwell and unable to attend the exam, please email the instructor at the earliest available opportunity. Also, please remember to bring a copy of the doctor's note on the day your make-up exam is scheduled. These exams will be scheduled to the convenience of the teaching assistants (graduate) or the instructor.

Quiz viewing hours:

Quizzes are graded by the Instructors. Instructors will send announcements on elearning about office hours for viewing quizzes after they have been graded. Please be sure to come and visit the instructor during these hours. If the allotted time is in conflict with your classes, please email instructor in advance for an alternate time.

Tentative Syllabus

DATE	TOPICS	
8-26-16	*Neuroanatomy, Neurophysiology, and Neuropathology – an introduction*	*Heng Du*
9-2-16	*Molecular Biology - Introduction*	*Srikanth*
9-9-16	*Neurodegeneration in Brain – Pathology*	*Heng Du*
9-16-16	*Neurodegeneration in Brain – Molecular aspects*	*Srikanth*
9-23-16	*Neurodegeneration in spinal cord and peripheral nerves - Pathology*	*Heng Du*
9-30-16	*Neurodegeneration in spinal cord and peripheral nerves – Molecular aspects*	*Srikanth*
10-7-16	*QUIZ 1*	*Heng Du & Srikanth*
10-14-16	*Cerebral Vascular diseases - Pathology*	*Heng Du*
10-21-16	*Cerebral Vascular diseases – Molecular aspects*	*Srikanth*
10-28-16	*Demyelinating diseases - Pathology*	*Heng Du*
11-4-16	*Demyelinating diseases – Molecular aspects*	*Srikanth*
11-11-16	*LAB 1*	*Heng Du & Srikanth*
11-18-16	*LAB 2*	*Heng Du & Srikanth*
11-21-16 to 11-25-16	*Thanksgiving holiday*	
12-2-16	*QUIZ 2*	*Heng Du & Srikanth*

Assessment for the course is as follows:

Attendance/Class participation	*10%*
Lab Report	*20%*
2 Quizzes	*65% (32.5% from each quiz)*

Material covered on the quizzes will be taken from the class lectures prior to the quizzes as well as any additional material that is provided. Quizzes will consist of multiple choice questions and maybe a few short answers. The quizzes will each carry three bonus questions (one point each).