Part I  Course Overview

Course Title: Neuroscience

Course Code: BMS4303

Course Duration: One semester

Credit Units: 3

Level: B4

Proposed Area: (for GE courses only)
- Arts and Humanities
- Study of Societies, Social and Business Organisations
- Science and Technology

Medium of Instruction: English

Medium of Assessment: English

Prerequisites: (Course Code and Title)
- BMS3201 Frontier of Biological Sciences or equivalent

Precursors: (Course Code and Title)
- NIL

Equivalent Courses: (Course Code and Title)
- NIL

Exclusive Courses: (Course Code and Title)
- NIL
Part II Course Details

1. Abstract
   *(A 150-word description about the course)*

   This course will provide 4th-year students a series of recent research topics in neuroscience field, ranging from a single cell to the brain networking and from the fundamental to the advanced concepts such as the brain diseases. The mostly updated knowledge will be provided by a group of neuroscientists, and students will discuss about topics selected by teachers in the class. This course will help students to understand neuroscience field and have interest in research.

2. Course Intended Learning Outcomes (CILOs)
   *(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)*

<table>
<thead>
<tr>
<th>No.</th>
<th>CILOs*</th>
<th>Weighting* (if applicable)</th>
<th>Discovery-enriched curriculum related learning outcomes (please tick where appropriate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Understand fundamental concepts and achieve knowledge of neuroscience</td>
<td>50%</td>
<td>✓</td>
</tr>
<tr>
<td>2.</td>
<td>Analyse research data and present in scientific ways</td>
<td>25%</td>
<td>✓ ✓</td>
</tr>
<tr>
<td>3.</td>
<td>Develop the ability to raise scientific questions and discoveries</td>
<td>25%</td>
<td>✓ ✓ ✓</td>
</tr>
</tbody>
</table>

* If weighting is assigned to CILOs, they should add up to 100%.

Please specify the alignment of CILOs to the Gateway Education Programme Intended Learning outcomes (PILOs) in Section A of Annex.

   A1: Attitude
   Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

   A2: Ability
   Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to self-life problems.

   A3: Accomplishments
   Demonstrate accomplishment of discovery/innovation/creativity through producing/constructing creative works/new artefacts, effective solutions to real-life problems or new processes.
3. **Teaching and Learning Activities (TLAs)**  
*TLAs designed to facilitate students’ achievement of the CILOs.*

<table>
<thead>
<tr>
<th>TLA</th>
<th>Brief Description</th>
<th>CILO No.</th>
<th>Hours/week (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>Knowledge transfer will be based on lectures to make students understand various neuroscience topics and researches</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Tutorial</td>
<td>Student discussion and oral presentation will be held to improve students’ scientific conversation skills and presentation skills</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

4. **Assessment Tasks/Activities (ATs)**  
*ATs are designed to assess how well the students achieve the CILOs.*

<table>
<thead>
<tr>
<th>Assessment Tasks/Activities</th>
<th>CILO No.</th>
<th>Weighting*</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Assessment: 50%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quiz</td>
<td>✓</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Attendance</td>
<td>✓ ✓ ✓</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Oral presentation</td>
<td>✓ ✓</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Discussion</td>
<td>✓ ✓</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Examination: 50% (duration: 2 hours, if applicable)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The weightings should add up to 100%.  
100%  

"Minimum Passing Requirement" for BMS courses:  
A minimum of 30% in coursework as well as in examination, in addition to a minimum of 40% in coursework and examination taken together.
5. **Assessment Rubrics**
(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Criterion</th>
<th>Excellent (A+, A, A-)</th>
<th>Good (B+, B, B-)</th>
<th>Fair (C+, C, C-)</th>
<th>Marginal (D)</th>
<th>Failure (F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Final Exam</td>
<td>To test students’ application of materials taught in class and evaluate their performance based on their understanding on the exam</td>
<td>High</td>
<td>Significant</td>
<td>Moderate</td>
<td>Basic</td>
<td>Not even reaching marginal levels</td>
</tr>
<tr>
<td>2. Quiz</td>
<td>To test students’ understand in lectures/tutorials</td>
<td>High</td>
<td>Significant</td>
<td>Moderate</td>
<td>Basic</td>
<td>Not even reaching marginal levels</td>
</tr>
<tr>
<td>3. Oral presentation and Discussion</td>
<td>Demonstrate the ability to apply what has been taught in lectures/tutorials in their oral presentation</td>
<td>High</td>
<td>Significant</td>
<td>Moderate</td>
<td>Basic</td>
<td>Not even reaching marginal levels</td>
</tr>
<tr>
<td>4. Attendance</td>
<td>Students are required to attend each lecture and tutorial</td>
<td>Full attendance</td>
<td>Near full attendance</td>
<td>Adequate attendance</td>
<td>Lack of adequate attendance</td>
<td>No or nearly no attendance</td>
</tr>
</tbody>
</table>
Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus
   (An indication of the key topics of the course.)

   Brain
   Spinal cord
   Nervous system
   Neurons
   Glial cells
   Neurodegenerative diseases
   Neural networking

2. Reading List
2.1 Compulsory Readings
   (Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of
   e-books, e-journals available from the CityU Library.)

      by Mark F. Bear (Author), Barry W. Connors (Author), Michael A. Paradiso (Author)
      ISBN-10: 0781778174

2.2 Additional Readings
   (Additional references for students to learn to expand their knowledge about the subject.)

   1. The CityU library has a research guide arranged by subject department:
      http://libguides.library.cityu.edu.hk/
   2. Scopus
      http://www.scopus.com/home.url
   3. Google Scholar: