

**DEREE COLLEGE SYLLABUS FOR:  
HSE 2215 LE Human Consciousness: From Brain to Subjectivity**

New Course  
(Fall 2016)

**US CREDITS: 3/0/3**

**PREREQUISITES:**

WP 1010 Introduction to Academic Writing  
WP 1111 Integrated Academic Writing and Ethics

**CATALOG  
DESCRIPTION:**

A lively, engaging introduction to a hot area of increasing popular interest which is currently a rapidly expanding domain of scientific inquiry and is ideal for students of biology, neuroscience, psychology, philosophy as well as literature and the arts. In this interdisciplinary course students are exposed to basic human brain anatomy, functions and neuroscience principles contributing to debates regarding the nature of perception and consciousness. An integration of biophysiological, neuroscientific, evolutionary, cognitive, and philosophical perspectives is explored in connection with the phenomenon of consciousness.

**RATIONALE:**

The course focuses on basic neuron and brain anatomy to equip students with a rudimentary understanding of neuroscience that is applicable to scientific and philosophical debates on consciousness. It helps students understand how theories on consciousness are informed by scientific evidence. The nature of mental content, and the neurobiological realization of consciousness is explored from multiple perspectives such as neurobiological, evolutionary, neuropsychological, and quantum mechanics. Students come to understand how our rich subjective experiences arise from objective neural activity and gain an insight into the biopsychological nature of the self, free will, artificial intelligence and the possibility of consciousness in animals.

**LEARNING OUTCOMES:**

As a result of taking this course, students should be able to:

1. Demonstrate an understanding of the neuron, basic brain anatomy and functions, and related methodology;
2. Evaluate a range of theories and perspectives on consciousness including neurobiological, evolutionary, neuropsychological, philosophical as well as socio-cultural standpoints;
3. Explore manifestations of consciousness as subjective experience, free will, and moral action through the lens of science, philosophy, and culture.

<p><b>METHOD OF TEACHING AND LEARNING:</b></p>	<p>In congruence with the teaching and learning strategy of the college, the following tools are used:</p> <ul style="list-style-type: none"> <li>• Active student-centered teaching approach in the presentation of course material to engage learners;</li> <li>• Student presentations of learning material to encourage involvement in the learning process;</li> <li>• Co-curricular activities both within and outside the campus to encourage students' creative engagement with the material;</li> <li>• Extensive instructor feedback on assignments and activities;</li> <li>• Individualized assistance during office hours for further discussion of lecture material, additional reading, and assignments;</li> <li>• Additional print and audiovisual educational material posted on the Blackboard course template;</li> <li>• Other relevant educational material placed on reserve in the library.</li> </ul>
<p><b>ASSESSMENT:</b></p>	<p><b>Critical Portfolio 40%</b> Two critical essays (1,000-word each) each dealing with a different aspect of the course subject. The essay needs to display a firm grasp of the topic at hand, of the issues discussed in the course as a whole, as well as of the relevant bibliography (<b>use of at least 3-5 scholarly sources</b>).</p> <p><b>Creative Project 40%</b> Students will deploy a creative medium of their choice to apply their insights on concepts and ideas explored in the course. The creative project includes <b>a 500-word self-reflective essay</b> (which articulates the concepts that inform the creative project and relates them clearly to the content of the course), as well as <b>an oral presentation</b> of the creative project.</p> <p><b>Participation 20%</b> Each student will be evaluated according to his/her contribution in the class, the preparation of the material and his/her critical ability. Furthermore, each student will be assessed in regards to his/her participation in group activities and discussions that will arise throughout the course.</p> <p><b>The Critical Essay</b> tests Learning Outcomes 1 and 2. <b>The Creative Project</b> tests Learning Outcome 3.</p>
<p><b>REQUIRED READING:</b></p>	<p>Selections from the following books:</p> <p>On line Textbook of Neuroscience <a href="http://neuroscience.uth.tmc.edu/toc.htm">http://neuroscience.uth.tmc.edu/toc.htm</a></p> <p><b>Quantum Approaches to Consciousness</b> <a href="http://plato.stanford.edu/entries/qt-consciousness/">http://plato.stanford.edu/entries/qt-consciousness/</a></p>

<p><b>RECOMMENDED READING:</b></p>	<p><b>Textbooks:</b>  Alter T. and Howell, R. (2009). <i>A Dialogue on Consciousness</i>. Oxford University Press</p> <p>Baars, J. B. (1997). <i>In the Theater of Consciousness: The Workspace of the Mind</i>. Oxford University Press</p> <p>Blackmore, S. (2004). <i>Consciousness: An Introduction</i>. Oxford University Press</p> <p><b>Articles/Web Sites:</b></p> <p><b>A good number of articles and web sites will be selected for the following areas:</b></p> <p>The Language of Thought Hypothesis</p> <p>Connectionist Models of Cognition</p> <p>Philosophical Theories of Conscious Awareness</p> <p>Qualia and Consciousness</p> <p>Neurobiological Theories</p> <p>Global Works Space Theories</p> <p>Exploring Quantum Theories of Consciousness</p> <p>Information Integration Theories</p> <p>Artificial Intelligence and Consciousness</p> <p>Research Centers for Consciousness Studies</p>
<p><b>COMMUNICATION REQUIREMENTS:</b></p>	<p>Written reports in Word, using proper English. Knowledge of Excel and PowerPoint an advantage, as they may be required in either the report-writing or oral presentation phase. Oral presentation using proper English.</p>
<p><b>SOFTWARE REQUIREMENTS:</b></p>	<p>Word; Excel &amp; PowerPoint recommended.</p>
<p><b>WWW RESOURCES:</b></p>	<p>On line Textbook of Neuroscience</p>

	<p><a href="http://neuroscience.uth.tmc.edu/toc.htm">http://neuroscience.uth.tmc.edu/toc.htm</a></p> <p><a href="https://itunes.apple.com/us/itunes-u/brain-facts-2012-version/id684803111">https://itunes.apple.com/us/itunes-u/brain-facts-2012-version/id684803111</a></p> <p><a href="http://books.google.co.in/books?id=yTXS_OAkUmcC&amp;printsec=frontcover&amp;source=gbs_ge_summary_r&amp;cad=0#v=onepage&amp;q&amp;f=false">http://books.google.co.in/books?id=yTXS_OAkUmcC&amp;printsec=frontcover&amp;source=gbs_ge_summary_r&amp;cad=0#v=onepage&amp;q&amp;f=false</a></p> <p><a href="https://sites.google.com/site/schoolnewsite/molecular-neuroscience">https://sites.google.com/site/schoolnewsite/molecular-neuroscience</a></p>
<p><b>INDICATIVE CONTENT:</b></p>	<ol style="list-style-type: none"> <li>1. An Introduction to the Puzzle of Consciousness</li> <li>2. The Neurobiological Underpinning of Consciousness       <ul style="list-style-type: none"> <li>• The Neuron</li> <li>• Anatomical Structures of the Brain</li> <li>• Functional Pathways</li> <li>• Perceptual Systems</li> <li>• Neuroscientific Techniques and Methods</li> <li>• Brain Visualization and Imaging Techniques</li> </ul> </li> <li>3. The Neuropsychology of Consciousness (Attention, Memory, the Split Brain)</li> <li>4. Theories and Perspectives on Consciousness       <ul style="list-style-type: none"> <li>• Philosophical</li> <li>• Neurobiological</li> <li>• Cognitive/neuropsychological</li> <li>• Quantum and Information Integration Theories of Consciousness</li> <li>• Converging Ideas about Conscious Experience.</li> <li>• Artificial Intelligence and Consciousness</li> <li>• Future Directions</li> </ul> </li> </ol>