Why study art as a part of psychology?
The goal of psychology is to understand how psychological experiences and behaviour derive from underlying mental representations and processes, and how these, in turn, derive from biological substrates. The creation and viewing of artistic objects is a human activity that has existed since prehistoric times, pointing to the fundamental importance of aesthetic experience in human psychology. A scientific understanding of aesthetics and artistic behaviour is therefore a key component of the complete science of the human mind. While aesthetics is an aspect that we need to understand in its own right, the processes and products of art and design can additionally help provide windows to more basic aspects of perceptual and cognitive processes underlying the human mind. Art, or more generally, the creation and appreciation of aesthetic artefacts, engages many important components of psychology including visual perception, memory, motor control, decision making, emotion and social/cultural development. In this module we will examine progress in this relatively recent scientific field.

Topical focus of the module
One important observation is the presence of large individual differences in the capacity to create and appreciate aesthetic objects. These differences can be heightened in association with mental disorders (e.g., frontotemporal dementia, autism) and atypical cognitive development (e.g., synaesthesia, dyslexia). Another important observation is the intrinsically ill-defined nature of the differences in aesthetic quality among artefacts. These observations provide both a challenge and an opportunity for a scientific understanding of the reciprocal linkage of perceptual-cognitive function and aesthetics. In this module we will examine this linkage from several different viewpoints. A significant emphasis will be on the relationship between art and dyslexia, reflecting the abnormally high incidence of dyslexia in those talented in visual art.

Format of the module
Each week, we will discuss a selection of 2-4 papers related to a particular topic or question in the psychology of art and aesthetics. The first two weeks will begin with presentations by me, the instructor, followed by a general discussion session. For the following weeks, each week will start with a presentation by you, the students. Each student will present a summary of one of the papers, and we will then discuss the papers. For the last half hour of the lecture, I will do an overview of technical or conceptual material required to understand the readings for the following week.

Weekly Readings
It is imperative that you read all the papers that are assigned for the week (even if you are also scheduled to do a presentation that week), and note down questions and observations
for discussion in class. Please hand in a typed list of questions/observations for each of the papers (minimum of 2 questions per paper) at the start of class.

**Student Presentations**
Each week, starting in the third week, a summary of each of the assigned reading will be presented by you, the students. You will each do multiple such presentations, but each of you will also have a couple of ‘rest’ weeks. We will schedule the presentations in the first introductory class (this schedule will then be posted on Moodle). The student presentations are to be done on PowerPoint following the guidelines to be given in class.

**Assessment and course requirements**
The module is assessed 100% on a continuous assessment which will involve two separate assignments

**List of topics and readings**

**Week 1- Introduction: Modern art and the mind**
The history of modern western art and its links to issues in perception and cognition

**Week 2 – Review of behavioural and neurophysiological aspects of visual perception, visual cognition and linguistic/conceptual capacities**
In this lecture we will do an overview of basic mechanisms in visual perception, language processing and concepts in order to provide a foundation of the material in the rest of the module

**Week 3 - Psychology of art: Theoretical considerations**
The psychology and neuroscience of art and aesthetics is still in its infancy. It has emerged as a recognised scientific endeavour only in the last 2 decades. During this time, a few researchers have attempted to provide broad overviews and theoretical programs for the scientific study of aesthetics. The aim of this work has been to develop testable scientific hypothesis regarding the link between aesthetics and psychology/neuroscience. We review 3 prominent theoretical treatments that have been very highly cited in the literature.


Additional:

**Week 4 – internal representation in aesthetic understanding and visual preference**

An enduring belief is that aesthetics in art, design and architecture arise from certain fundamental constrains in the way the brain internally represents visual forms. We examine scientific work that seeks to understand aesthetics and visual preference from the standpoint of internal representations, and how these internal representations may be linked to external visual ecology.

- C. Firestone and B. J. Scholl (2014) “Please Tap the Shape, Anywhere You Like”: Shape Skeletons in Human Vision Revealed by an Exceedingly Simple Measure. Psychological Science

**Week 5 - Behavioural and psychophysical approaches to studying aesthetics and beauty.**

The creation and appreciation of art is a highly complex phenomenon that is subject to huge individual and cultural variation. The key characteristics of what constitutes good or bad art, high or low aesthetic experience, beauty or ugliness, are also difficult to define. How can we go about conducting meaningful empirical studies given this huge ambiguity? We will review a few studies that have attempted to use behavioural measures to get an understanding of underlying psychological processes of aesthetic appreciation and human facial beauty.

- Rosielle LJ & Hite L (2009) The caricature effect in drawing: evidence for the use of categorical relations when drawing abstract pictures, Perception, 38, 229-246

**Week 6 - Neuroscientific approaches to studying art, aesthetics and beauty**
Like all other areas of psychology, an important component of the science of aesthetics is to gain an understanding of the neural substrates that underlie the phenomenon. While the idea that there is an aesthetic ‘center’ in the brain seems far-fetched, neuroimaging could potentially help us understand which neural circuits are involved in the creation and appreciation of art. Furthermore, neuroimaging in the aesthetic domain may provide a way to gain a greater understanding of general aspects of psychology such as emotion and reward.


**Week 7 – 10 Neurological disorders and developmental differences linked to artistic capacity:** There is a longstanding belief that those who show great proficiency in the creation of art have important neurophysiological distinctions from the general population. What are these distinctions, and how do they help us understand the nature of aesthetics from a psychological and neuroscientific viewpoint? The ability to create art entails the capacity for great perceptual visualization and cognitive introspection. The effect of the differences in perceptual or cognitive function on artistic production and the artist’s introspections provide a rich source of material to probe the underlying principles and substrates of the psychology of aesthetics.

**Week 7 - Autistic Savant Syndrome**

- Snyder A (2009) Explaining and inducing savant skills: privileged access to lower level, less processed information, Philosophical Transaction of the Royal Society of London B, 364, 1399-1405

**Week 8 – Frontotemporal dementia and other neurological disorders**


Week 9 – Dyslexia


Week 10- Synaesthesia


Week 11 – Epileptic seizures, visual discomfort and art

Certain types of images can induce visual discomfort—particularly in individuals prone to seizures, migraine headaches etc. How is such discomfort related to art and aesthetics? We examine scientific work that seeks to understand the underlying visual properties of artistic and natural scenes that evokes a positive or negative visual/aesthetic experience.