



**Instructor:** Dr. Brett Beston, [bestonbr@mcmaster.ca](mailto:bestonbr@mcmaster.ca)  
Department of Psychology, Neuroscience & Behaviour

**Teaching Assistants:** Stu Fillman, [fillmas@mcmaster.ca](mailto:fillmas@mcmaster.ca)  
Lia Tsotsos, [tsotsos@mcmaster.ca](mailto:tsotsos@mcmaster.ca)  
Ryan Kealey, [kealeym@mcmaster.ca](mailto:kealeym@mcmaster.ca)

**Lectures:** JHE 376, Mon / Wed 11:30 - 12:20  
Fri 1:30 - 2:20

**Text:** Custom Courseware will be available at your bookstore

### Distribution of Grades:

1. There will be 2 MID-TERM TEST (15% each). Tests will be based on multiple-choice and a short-essay questions.
  - **Mid-Term 1 - January 28th**
  - **Mid-Term 2 - March 12th**
2. WRITTEN ASSIGNMENTS (15%). Write critiques based on video lectures that we will watch in class. Each critique will be due one week after the presentation of the video. Assignments will be weighted 50-50% or 30-70% (which ever gives the better final grade).
  - **Critique 1 - Jan - Due February 25th**
  - **Critique 2 - Feb - Due March 28th**
3. IN-CLASS LABORATORIES (15%). Write up one of two in-class labs (approximately 5 pages double spaced).
  - **Contrast Sensitivity - Due: February 11th**
  - **Feature Analysis - Due: April 7th**
4. FINAL EXAMINATION (40%).

*Please Note*

*There will be no makeup tests given. However, if you have a note from the Dean's office for missing a test, the weight of that test will be added to your final examination.*

*Students will be penalized a full letter grade per day for late assignment submissions.*

### Scaling:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59	F = 0-49
A = 85-89	B = 73-76	C = 63-66	D = 53-56	
A- = 80-84	B- = 70-72	C- = 60-62	D- = 50-52	

\*Final marks may be adjusted up or down on an individual basis, in light of special circumstances and or the student's overall performance in the course

Topics	
1	<b>Introduction to vision</b>
2	<b>The Eye</b>
3	<b>Visual Transduction by Rod and Cone Photoreceptors</b>
4	<b>Visual Relays in the Thalamus and Blindsight</b> <ul style="list-style-type: none"> <li>• <i>Mid-Term 1 (topics 1-4, January 28th)</i></li> </ul>
5	<b>Anatomy, Physiology, and Perceptual Processing of Primary Visual Cortex</b> <ul style="list-style-type: none"> <li>• <i>In-Class Lab - "Contrast Sensitivity" (Due 1: February 11th)</i></li> </ul>
6	<b>Developmental Plasticity in Primary Visual Cortex</b> <ul style="list-style-type: none"> <li>• <i>Video Critique - Takao Hensch "Critical Period Mechanisms of Visual Cortical Plasticity" (Due: February 25th)</i></li> </ul>
7	<b>Depth Perception and the Underlying Physiological Mechanisms</b>
8	<b>Color Vision and the Role of Color Vision in Spatial Processing</b> <ul style="list-style-type: none"> <li>• <i>Mid-Term 2 (topics 5-8, March 12th)</i></li> </ul>
9	<b>Form Perception - Object and Face Recognition in the Visual System.</b> <ul style="list-style-type: none"> <li>• <i>Video Critique - Roger Tootell "fMRI Reveals Different Ventral Stream Processes in Awake and Behaving Macaques and Humans (Due: March 28th)</i></li> </ul>
10	<b>Motion Processing and the Link to Perception</b>
11	<b>Neural Basis for Human Visual Attention</b> <ul style="list-style-type: none"> <li>• <i>In Class Lab - Feature Analysis (Due: April 7th)</i></li> </ul>

**Course Policies:**

Details of the course requirements may change. If it becomes necessary to make changes to some part of the course during the term, reasonable notice and communication will be provided between the students and lecturer. Updates will be discussed in class and will be posted on the class web page.

**Academic Integrity:**

You are expected to exhibit honesty and use ethical behaviour in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at <http://www.mcmaster.ca/academicintegrity>