Physiology of plant responses to environmental stresses, with emphasis on current research in selected physiological, molecular, and biochemical mechanisms for tolerance to environmental stresses such as temperature extremes, drought, salt, pathogens and other plants. provides a brief introduction to the various physiological mechanisms plants use to respond to environmental stresses. Environmental Stress Physiology will provide the student a brief overview of our current understanding of the physiological, molecular, and biochemical mechanisms of plant tolerance to environmental stresses such as temperature extremes, drought, salt, pathogens, and other plants. This course is designed to impart a general understanding of how a plant interacts with the environment.  We’ll start with a brief introduction and review, and then cover the following topics. and Modules will be posted beginning the indicated date and will remain online for the remainder of the term.

**Photosynthesis**: Primary Productivity, limitations and mechanisms of stress response

* C3 photosynthesis
* Light Reactions
* Dark Reactions, and Photorespiration
* C4 photosynthesis and CAM

**Photostress** and **Improving Photosynthesis**

**Activated** **Oxygen**: Its role in plant stress, signaling and disease resistance

**Mannitol and Plant Stress:**

**Drought:** Phytohormones, sugars and water stress responses