



Lakehead
UNIVERSITY

GSCI-2330 General Science Astronomy II – Stars and Stellar Systems
Winter 2023 January 9 - April 11

Instructor: TBD

Email: TBA

Classes Hours: TBD

Office Hours: TBA

Course Description:

A continuation of the study begun in Astronomy I. The aim of the course is a broadly based understanding of the behaviour of the physical universe and an insight into the challenging questions to which modern astronomy is finding answers.

Assessment:

Eleven on-line weekly quizzes (30%) Two on-line midterm tests (30%)

Final Exam (40%)

The exam is in person and invigilated

To earn credit, students must achieve at least 40% on the exam.

Topics:

Physics primer – General Relativity, Thermodynamics, Light, Atoms, subatomic particles

Stellar Properties – Apparent and Absolute Magnitude, Surface Temperature, Mass, Radius, Distance from Earth, H-R Diagrams

The Sun as a Star – Nuclear Fusion, Hydrostatic Equilibrium, Layers, Sunspots.

Stellar Evolution – Protostars, Main Sequence, Evolutionary Tracks beyond the Main Sequence

Stellar Remnants – White Dwarfs, Neutron Stars, Black Holes

Galaxies – Spiral, Elliptical, and Irregular Galaxies

Cosmology – Cosmic Distance Ladder, Open and Closed Universes, The Big Bang

Required Text:

None – all content material is provided online.

Prerequisites:

General Science 2310