

# ASTRONOMY (ASTR)

This is a list of the Astronomy (ASTR) courses available at KPU.

For information about transfer of credit amongst institutions in B.C. and to see how individual courses transfer, go to the BC Transfer Guide [bctransferguide.ca](http://bctransferguide.ca)

## **ASTR 1100** **4 Credits** **Introduction to Astronomy**

Students will study a wide range of topics in astronomy from the point of view of a non-scientist. They will study topics including the earth, solar system, stars, the Milky Way, galaxies and cosmology and will discuss and study current events of astronomical interest. The laboratory component will include indoor experiments and outdoor observations. This is an introductory course in astronomy intended for students not specializing in science. No prior study of physics or astronomy is required.

**NOTE:** This course may not be used for credit towards a science degree or as a prerequisite for further science courses. This course may be used to partially fulfill quantitative requirements for a Bachelor of Arts degree, science requirements for an elementary teacher education program, lab science requirements for an Associate of arts degree, and liberal education/breadth credits for Kwantlen degrees.

*Attributes: QUAN*

## **ASTR 1105** **3 Credits** **Basic Astronomy**

Students will study a wide range of topics in astronomy from the point of view of a non-scientist. They will study topics including the Earth, the Solar System, stars, the Milky Way, galaxies and cosmology and will discuss and study current events of astronomical interest.

**NOTE:** No prior study of physics or astronomy is required. Only one of ASTR 1100 or ASTR 1105 can be taken for credit.

## **ASTR 1120** **4 Credits** **Introduction to Astrophysics**

Students will study topics including the solar system, stars, the Milky Way, galaxies and cosmology as well as observational and theoretical techniques used to study these systems. They will apply physical laws and principles in order to analyze and solve problems in astrophysics. Students will conduct indoor experiments and outdoor observations in the lab component.

**NOTE:** This is an introductory course in astronomy intended for students in science. ASTR 2101/2102 rather than ASTR 1120 are recommended for students who intend to pursue studies in Astronomy.

*Prerequisites: PHYS 1100 or Principles of Physics 12 (C)*

## **ASTR 2101** **3 Credits** **Astrophysics I: Stellar Astrophysics**

Students will study the observed characteristics of stars, radiation and stellar spectra, the interior structure of stars, nuclear reactions and stellar evolution, white dwarfs, neutron stars and black holes.

*Prerequisites: (PHYS 1120 or 1101) and (MATH 1120 or 1130 or 1140) (PHYS 1220 or 1102 is recommended)*

*Attributes: QUAN*

## **ASTR 2102** **3 Credits** **Astrophysics II: Galactic Astronomy**

Students will study the basic properties of the Milky Way Galaxy, kinematics of stars, star clusters and stellar evolution, stellar populations and chemical evolution, rotation and the mass of the Galaxy, the formation of the Galaxy.

*Prerequisites: (PHYS 1120 or 1101) and (MATH 1120 or 1130 or 1140) (ASTR 2101 and one of PHYS 1220 or 1102 is recommended)*

*Attributes: QUAN*

## **ASTR 3110** **3 Credits** **Exploring the Solar System**

Students will survey, without the use of advanced mathematics, recent discoveries about the planets and other objects in the solar systems. They will also study the sun, the existence of planetary systems around other stars, and the search for life.

**NOTE:** This is an introductory course in astronomy intended for students not specializing in science. No prior study of physics or astronomy is required.

**NOTE:** This course may not be used for credit towards a science degree or as a prerequisite for further science courses. This course may be used to partially fulfill quantitative requirements for a Bachelor of Arts degree, science requirements for an elementary teacher education program, lab science requirements for an Associate of arts degree, and liberal education/breadth credits for Kwantlen degrees.

*Prerequisites: 45 credits of 1100-level or higher courses, including ENGL 1100*

*Attributes: QUAN*

## **ASTR 3111** **3 Credits** **Exploring Stars & Galaxies**

Students will survey, without the use of advanced mathematics, recent discoveries in modern astronomy. They will study stars, pulsars, black holes, galaxies, quasars and the origin and evolution of the Universe.

**NOTE:** This is an introductory course in astronomy intended for students not specializing in science. No prior study of physics or astronomy is required.

*Prerequisites: 45 credits of 1100-level or higher courses, including ENGL 1100*

*Attributes: QUAN*