DEPARTMENT OF PHYSICS, ENGINEERING AND ASTRONOMY

COURSE OUTLINE

ASTR 311
EXPLORING THE UNIVERSE

INSTRUCTOR: Greg Arkos
OFFICE: Building 315, Room 209
OFFICE HOURS: TR 11:30 am - 1:00 pm *or by appointment*
PHONE: (250) 753-3245 Local 2207
EMAIL: gregory.arkos@viu.ca
COURSE WEBSITE: https://wordpress.viu.ca/arkosg/

OBJECTIVES: Astronomy 311 is a detailed examination of current thinking regarding the nature and evolution of our universe. Covered are cosmology, The Big Bang Theory, the exotic landscape of special and general relativity, quantum theory, and the search for extraterrestrial life. The course aims to provide students with an appreciation of our place within the universe, and stresses conceptual understanding and discussion. No formal background in astronomy is assumed or required.

PREREQUISITES: Third year standing or permission of the instructor.

LECTURE: TR 1:00 pm – 2:30 pm Bldg 315, Rm 216

OPTIONAL TEXT: Cosmic Perspective: Stars, Galaxies & Cosmology by J. Bennett et al. (7e).

STUDENT RESPONSIBILITIES: Read the course outline *carefully*; it is assumed that you are **fully aware** of its contents with regards to dates & deadlines, evaluation and policies. You are responsible for keeping up with material presented in lecture and monitoring your progress in the course. Please speak with me **immediately** if you are having difficulties which might impact your grade in the course.

ACADEMIC REGULATIONS: Academic dishonesty can have serious repercussions on your academic career and is taken very seriously at VIU. Read Policy 96.01 found on www2.viu.ca/policies/policies-index.asp under section "9600 Appeals and Withdrawals" which is under section "9000 Senate".

EVALUATION:
Final Exam (3 hrs)……..40%
Midterm Exam (in class)……25%
Quizzes (4)……...10%
Group Presentation (in class)……25%

** **Please read the important course polices at the bottom of the following page.** **

ASTRONOMY PRESENTATION: Students work in groups of three (3), with each member responsible for researching, creating and presenting a portion of the presentation. **A single grade** is assigned to each group and **applies to all members**. Presentations take place near the end of term during class; dates are TBD. Detailed instructions and the marking rubric are available on the course website.

GRADES: Final grades are assigned *approximately* as follows:

A+	(90 - 100)
A	(85 - 89)
A-	(80 - 84)
B+	(76 - 79)
B	(72 - 75)
B-	(68 - 71)
C+	(64 - 67)
C	(60 - 63)
C-	(55 - 59)
D	(50 - 54)
F	(0 - 49)

FAILING GRADES: Students worried about poor grades should see me as soon as possible. Do not drop out before speaking with me! **Grades on labs, quizzes and exams must be discussed within a week of their return and will not be reassessed after that time**. Please see the online Vancouver Island University Calendar regarding policies on registration. ** The last day for academic penalty-free withdrawal from courses is listed below. **

**** IMPORTANT course policies – READ CAREFULLY ****

1 Concerns regarding graded material MUST be raised within a week of its return.
2 Late submissions will NOT be accepted for grading WITHOUT prior approval.
3 Requests for exam deferments REQUIRE official supporting documentation.
4 There will be NO "extra" or "make-up" work for this course.
5 Students MUST be available for the entire term, eg. the entire final exam period.
6 There will be NO accommodation of non-university related travel, eg. vacations.

TENTATIVE QUIZ, EXAM & PRESENTATION DATES:

Quiz 1	**Jan 24**
Presentation Proposal	**Jan 31**
Quiz 2	**Feb 7**
Midterm Exam	**Feb 21**
Quiz 3	**Mar 14**
Quiz 4	**Mar 28**
Presentations	**Apr 2 – 11**

IMPORTANT DATES:

FIRST DAY OF CLASSES: January 7, 2019
WITHDRAWAL DEADLINE: March 1, 2019
LAST DAY OF CLASSES: April 12, 2019
FINAL EXAMINATIONS: April 17 – 30, 2019

HOLIDAYS: (No classes, labs or exams)

FAMILY DAY: February 18, 2019
STUDY DAYS: February 25 – March 1, 2019
GOOD FRIDAY: April 19, 2019
EASTER MONDAY: April 22, 2019

TOPICS: The following is a *tentative* list of topics that will be covered in this course.

Subject	**Chapter(s) in text**
Introduction	1
The Big Bang & modern Cosmology	20, 22, 23
Spacetime & Quantum Theory	S2, S3, S4
Black Holes	18, 21
Extraterrestrial Life	13, 24

**** NOTE: Circumstances may require modifications to the dates & topics in this outline. ****