



Course specification

Description: Astronomy 2

Subject	Cat-nbr	Class	Term	Mode	Units	Campus
PHY	1107	45233	2, 2005	EXT	1.00	Toowoomba

Academic group:	FOSCI
Academic org:	FOS002
Student contribution band:	2
ASCED code:	010303

STAFFING

Examiner: Brad Carter

Moderator: Alfio Parisi

RATIONALE

The course provides a general introduction to stars, black holes, galaxies, the universe, cosmology and the Big Bang for students with an interest in the science of astronomy. A range of topics is treated in a mostly qualitative manner, so that the diverse nature of the subject can be appreciated. The course also offers students an opportunity for astronomical observation. This course follows on from PHY1101 Astronomy 1 but can be taken independently.

SYNOPSIS

This course provides an introduction to such topics as stars, black holes, galaxies, the universe, cosmology and the Big Bang, with an opportunity for astronomical observation. The course content includes the following: Starlight and Atoms, The Sun-Our Star, The Family of Stars, The Formation and Structure of Stars, The Deaths of Stars, Neutron Stars and Black Holes, The Milky Way Galaxy, Galaxies, Galaxies with Active Nuclei, Cosmology in the 21st Century.

OBJECTIVES

On completion of this course students will be able to:

1. describe and apply basic physical laws;
2. summarise the basic properties of the Sun, the stars and black holes;
3. summarise the basic properties of our galaxy and other galaxies; and
4. describe basic concepts in cosmology.

TOPICS

	Description	Weighting (%)
1.	Atoms and Starlight	10.00
2.	The Sun	10.00

3.	The Properties of Stars	10.00
4.	The Formation and Structure of Stars	10.00
5.	The Deaths of Stars	10.00
6.	Neutron Stars and Black Holes	10.00
7.	The Milky Way Galaxy	10.00
8.	Galaxies	10.00
9.	Galaxies With Active Nuclei	10.00
10.	Cosmology	10.00

TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

Lattanzio, SP, Levine, JM and Lee, VL 2004, *Telecourse Student Guide for Universe: The Infinite Frontier*, 5th edn, Brooks/Cole, a Division of Thomson Learning, Pacific Grove, California.

Seeds, Michael A 2004, *Horizons: Exploring the Universe*, 8th edn, Brooks/Cole, a Division of Thomson Learning, Pacific Grove, California.

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Sky and Telescope (Periodical), Sky Publishing, Belmont, MA USA
<http://www.skyandtelescope.com>

Sky and Space (Periodical), Sky & Space Magazine, 80 Ebley Street, Bondi Junction, NSW 2022. (Available from Newsagents)

Ellyard, D & Tirion, W 2001, *The Southern Sky Guide*, 2nd edn, Cambridge University Press, New York.

Fraknoi, A, Morrison, D & Wolff, S 2004, *Voyages Through the Universe*, 3rd edn, Saunders College Publishing, Fort Worth.

((http://www.brookscole.com/astronomy_d/))

Hartmann, WK & Impey, C 2002, *Astronomy: The Cosmic Journey*, 6th edn, Thomson Learning, Brooks/Cole, USA ISBN 0 564 38249 5.

((http://www.brookscole.com/astronomy_d/))

Lang, KR 1995, *Sun, Earth and Sky (corrected printing) (softcover)*, Springer-Verlag, Berlin ISBN 3 540 62808 8.

Malin, D 1993, *A View of the Universe*, Cambridge University Press, Cambridge, Mass.

Ridpath, I 1998, *Stars and Planets: The visual guide the night sky viewed from around the world (Eyewitness handbooks) (First American Edition)*, Dorling Kindersley Limited, New York ISBN 0 7894 3560 8.

Ridpath, I 1989, *Norton's Star atlas and reference handbook (epoch 2000)*, 19th edn, Longman Scientific & Technical, Harlow.

((available from Sky Publishing, PO Box 9111, Belmont, MA 02178 USA.
<http://www.skyandtelescope.com>))

Sagan, C 1997, *Pale Blue Dot: A vision of the Human Future in Space*, Random House, New York.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Computer Managed Assessment	40.00
Examinations	3.00
Private Study	130.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
CMA 1	10.00	10.00	02 Sep 2005
CMA 2	10.00	10.00	14 Oct 2005
3HR RESTRICTED EXAM	80.00	80.00	END S2 (see note 1)

NOTES

1. Examination dates will be available during the Semester. Please refer to the examination timetable when published.

IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:
It is the students' responsibility to attend and participate in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:
To complete each of the CMAs satisfactorily, students must obtain at least 50% of the marks available for each CMA. To complete the examination satisfactorily, students must obtain at least 50% of the marks available for the examination.
- 3 Penalties for late submission of required work:
If students submit CMAs after the due date without prior approval then a penalty of 20% of the total marks available for the CMA will apply for each working day late.
- 4 Requirements for student to be awarded a passing grade in the course:
To be assured of a passing grade, a student must attempt all of the summative assessment items, achieve at least 50% in the examination, achieve an aggregated mark of at least

50% in the total marks allocated for the CMAs, and at least 50% of the available weighted marks for the summative assessment items.

- 5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the weighted aggregate of the marks obtained for each of the summative assessment items in the course.
- 6 Examination information:
In a Restricted Examination, candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the restricted examination for this course are: writing materials (non-electronic and free from material which could give the student an unfair advantage in the examination); calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during the examination. With the Examiner's approval, candidates may, take an appropriate non- electronic translation dictionary into the examination. This will be subject to perusal and, if it is found to contain annotations or markings that could give the candidate an unfair advantage, it may be removed from the candidate's possession until the appropriate disciplinary action is completed.
- 7 Examination period when Deferred/Supplementary examinations will be held:
Any Deferred or Supplementary examinations for this course will be held in the semester of the next offering of the course.
- 8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/corporateservices/calendar/part5.htm> or in the current USQ Handbook.

ASSESSMENT NOTES

- 9 Students who obtain an overall passing mark, but who do not perform satisfactorily in the examination, may, at the discretion of the examiner , be granted a supplementary examination. Students will be granted a supplementary examination only if they perform satisfactorily in all other assessment items.
- 10 The due date for assignments is the date by which a student must despatch an assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner. Students must retain a copy of any assignments submitted. This must be despatched to USQ with 24 hours of receipt of a request to do so from the Examiner.

OTHER REQUIREMENTS

- 1 An optional residential school at Mt Kent Observatory will be held as part of this course. Web and email access is a requirement of this course.
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