

Course Purpose / Objective

The objective of this one-semester course is that each high school student add to his/her scientific literacy, specifically in the area of astronomy. Scientific literacy can be defined as the quality of being able to understand scientific concepts, make moral and ethical judgments about scientific issues, and solve real-world problems that involve science. Further, students will learn to apply Christian principles to scientific study. Course material will presented using classroom instruction, textbook readings, homework, library & internet research, and hands-on laboratory experience.

Instructor

Eric Allen Brucker PhD
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Textbook

Modern Earth Science (Sager *et al.*, © 2002 Holt Rinehart & Winston)

Course Outline

Chapter 27	Stars and Galaxies	characteristics of stars, stellar evolution, star groups
Chapter 28	The Sun	structure of sun, solar activity, formation of solar system
Chapter 29	The Solar System	models of solar system, planets, asteroids, comets
Chapter 30	Moons and Rings	earth's moon, lunar cycles, satellites of other planets
Chapter X	To Infinity...	research project (<i>e.g. telescope design, Hubble images, Saturn fly-bys, extrasolar planets, civilian astronauts</i>)

Workload and Grading

homework	daily readings & section worksheets, transparency worksheets (10 points each)
labs	completed with each laboratory exercise (20 points each)
exams	one per chapter (50 points each)
project	literature research with class presentation (100 points)
final	one per semester, cumulative (50 points)

Laboratory Exercises

Labs occur as needed to complement the material presented during the course (usually one per chapter). Laboratory tools are provided. Students will document each experiment.

Required Materials

½" three-ring binder (or share binder with another class)
three-hole punched lined paper
black or blue pen

Rules

Respect & Safety (see also Student Handbook)

Procedures

seating	assigned (at lab tables) bring everything needed for class including planner may bring a drink but not food (except during laboratory exercises)
behavior	in class: mature adolescent Christian, "eyes here" in lab: extremely careful, no horseplay
homework	handed in on due date, always individual work (no groups), "over and up, yours on top"
cabinets	closed cabinets off-limits (except under microwaves) open bookshelf for reference materials (all which stay in room)
dismissal	bell for instructor, then instructor dismisses class
tardy	stand at door and ask permission to enter during natural break
absent	receive assignments from classmate