

MARLBORO CENTRAL SCHOOL DISTRICT

HS SCIENCE: COLLEGE ASTRONOMY 102 / 101

ASTRONOMY 102, FALL SEMESTER

Title or Topics	Concepts / Skills	Major Assessments (Tests, projects, etc.)	Time Frame (Number of weeks)
Introduction to Facilities	Use, operation, function of the planetarium and observatory at Marlboro High School	Explaining major concepts explored, specifically operation and purpose of equipment and technology in the room	1
UNIT #1	<ul style="list-style-type: none"> • Charting the Heavens • Copernican Revolution • Radiation • Spectroscopy • Telescopes 	<ul style="list-style-type: none"> • <u>Examination #1:</u> Near the end of the first week in October, prior to progress reports 	5
UNIT #2	<ul style="list-style-type: none"> • Solar System • Earth • Moon & Mercury • Venus • Mars 	<ul style="list-style-type: none"> • <u>Examination #2:</u> Near the second week in November, prior to the end of 1st marking period 	5
UNIT #3	<ul style="list-style-type: none"> • Jupiter • Saturn • Uranus, Neptune, & Pluto • Solar System Debris • Formation of Planetary Systems 	<ul style="list-style-type: none"> • <u>Examination #3:</u> Near the third week in December, prior to progress reports and holiday break 	5
Review for Final Exam and “Using the Planetarium” Project	Students review all 15 topics for the cumulative final exam while creating planetarium shows from scratch in the planetarium.	Cumulative Final Examination Administered prior to end of second marking period.	Time remaining in second marking period.

ASTRONOMY 101, SPRING SEMESTER

UNIT #1	<ul style="list-style-type: none"> • Introduction to 101 • The Sun • Red Giants, White Dwarfs • The Interstellar Medium • Star Formation 	<u>Examination #1:</u> Near the end of the first week in March, prior to progress reports	5
UNIT #2	<ul style="list-style-type: none"> • Stellar Evolution • Stellar Explosions • Neutron Stars and Black Holes • The Milky Way Galaxy • Normal and Active Galaxies 	<u>Examination #2:</u> Near the second week in April, prior to the end of 2nd marking period	5
UNIT #3	<ul style="list-style-type: none"> • Galaxies and Dark Matter • Cosmology • The Early Universe • Life in the Universe • Constellations and Observational Astronomy 	<u>Examination #3:</u> Near the third week in May, leaving time for cumulative final exam review and the project.	5
Review for Final Exam and “Using Planetarium” Project	Students review all 15 topics for the cumulative final exam while creating planetarium shows from scratch in the planetarium.	Cumulative Final Examination Administered during scheduled local final exam time.	Time remaining in fourth marking period.