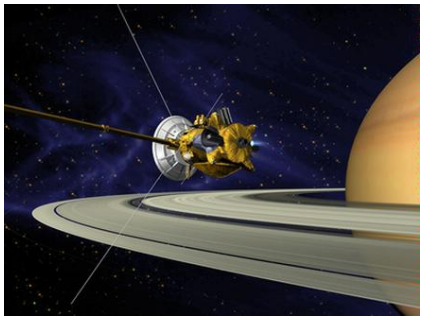
ASTRONOMY

This course is a survey of everything from the edge of the atmosphere to the end of the universe. Since we only have one school year to cover what is (almost) literally an infinity of information we will obviously be doing a lot of overviews and summaries. However, the basic purpose of this course is to introduce the students to the basic concepts of astronomy and to hopefully bring a whole new understanding to the night sky.

The night sky is where we will begin. What do we see at night from the New York City area. How does the sky change over the course of a year? Why does the sky change? We will look at the cycles of celestial objects as seen from Earth and then introduce the various systems for locating stars in the sky. Finally we will look at what information we can get from these stars and how we can begin to study the stars using this information.

Of course the planets we are most familiar with have been in the news lately. The furthest planet of our own solar system was just visited and news about Pluto will continue to come in over the next year. We will look at what we know about them, how we think they formed and what the chances might be for life on these other worlds. Finally we will return to the newly discovered planets around other stars to look at how they compare to the planets we know.

On the stars. We will start with the classic studies that led to our basic classification system for stars. Then we will study the life and death of stars and how this has affected the evolution of the stars in our galaxy. We will take a quick side trip into how the elements in the universe are created and why it is said "we are all star stuff". Finally we will look at groups of stars in galaxies and clusters and what appears to be the organization of the galaxies in the universe.



Which will bring us to the universe. How did it start, what is it doing now, and what is going to happen to it? Theories of the universe and space and time. These discussions will of course lead us to questions of life on other planets and we will take a quick look at planets around other stars.