

# NEWS

The Evergreen State College  
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Combine the ancient theories of the Greeks with today's modern technology. Add large doses of pedagogical persistence and collegiate curiosity. What you may come up with is a most unusual evening of entertainment.

Called "The Creation of the Universe Symphony", a full-scale musical/film production is set for June 7, beginning at 8 p.m. in Lecture Hall One at The Evergreen State College. The title gives you some idea of what's in store for you, but you have to see it -- and hear it -- to believe it.

Last Fall two Evergreen professors, Dr. Jacob Romero, an engineer and applied scientist, and Dr. Robert Gottlieb, a musician and composer, began working with a group of students to "find a way to integrate science and music". To do this, they offered studies of the harmonic aspects of physics, astronomy, mathematics, acoustics and biology. To unify their academic program, called Harmony in the Universe, they required student creation of a symphony based on movements transcribed from natural phenomena.

It is that symphony which will be performed at Evergreen June 7. Its presentation will involve use of unusual 'instruments', including a lovely set of crystal glassware and a specially adapted guitar; performance of musical scales based on atomic and planetary vibrations; presentation of the evolution of music from primitive chants to modern, electronically synthesized works; and recordings of 'natural' music, including waterfalls, volcanoes, birds, the human heart, and even brain waves.

Arranged in four movements paralleling the evolution of the universe, the symphony will also offer performances by student dancers, slide/tape accompaniments, and both traditional and computer-generated films, as well as some conventional music performed on stand-

Dick Nichols, Director  
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ard instruments.

Of the four symphonic movements, the first, "Materia Prima" depicts the early formation of the universe, the "big bang" and events following formation of atoms. The second, "Corpi Celesti" represents condensation of matter into heavenly bodies; the third, "Vita Mundique" shows the evolution of life on earth; and the fourth, "Ad Infinitum" offers a look into the future of the universe.

"What the students have done," Dr. Romero says, "is synthesize sound from universal things -- things which make music all by themselves. They have, for instance, learned to represent the music of planetary orbes by using crystal glassware, tuned to notes that were assigned to each of the planets by the Greeks in the second century. The amount of water in the glass, as well as the size of its circumference, determines the sound of the notes."

One particularly unusual musical piece, Dr. Romero says, is an Indian Raga, performed by a student guitarist who will explore the notes first, as traditional Indian musicians do. But, instead of using the traditional note scale, he will explore scales based on planetary frequencies, and instead of having a tabla drum accompaniment, his performance will be complemented by the beat of radio signals representing oscillation of a pulsar (expanding and contracting) star, obtained from the University of Washington. "His music," Dr. Romero adds, "will be based on a variation of Kepler's Second Law of Planetary Motion, which shows how thoroughly he has been able to integrate the sciences and music."

While the symphony may sound a bit "heady", Dr. Romero assures potential listeners "it's really quite lovely". "There are some truly unusual sounds, ones which we aren't used to associating with the word 'music', but it really is enjoyable listening and viewing."

The evening performance is free and open to the public.