**SUPERBUGS AND VIROLOGY**
Michael Blumenstock

**Session I**
Wednesday, 11 a.m. (begins March 6)
Fee: $65

Small but mighty, viruses and superbugs are making headlines. Each year the flu virus is a threat to the general population. Will the vaccine be effective? Why or why not? What other viruses are worth our attention? The increased use and abuse of antibiotics has made dealing with superbugs a serious business. In this course, gain an understanding of the history and origins of viruses and superbugs. We will investigate the main types of viruses and superbugs and preventative measures such as vaccines, antibiotics, personal hygiene practices, and other ways to protect against harmful viruses and superbugs. The amazing and autonomic immune responses against viruses and superbugs will be examined along with other intriguing aspects of these fascinating organisms that have dwelled on Earth for billions of years.

Michael Blumenstock has an M.S. in environmental sciences and policy from Johns Hopkins University and a B.F.A. in editorial design from Syracuse University. He teaches courses for lifelong learners in the areas of environmental science, astronomy, and virology/superbugs through the SAGE Program at the Prince Georges Community College.

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**DISCOVERING THE UNIVERSE**
Jim O’Leary

**Session I**
Monday, 9:30 a.m. (begins March 4)
Fee: $65

Today we know we live in a seemingly boundless cosmos, with billions of galaxies, each with billions of stars. But less than a century ago, we considered our Milky Way Galaxy to be the entire universe. Our understanding of our place in space has evolved over centuries, but fundamental questions remain about what makes up the universe, what its ultimate fate might be, and whether we are alone in this vast cosmos. We will trace discoveries from ancient philosophers to Copernicus, Galileo and Hubble, examine Stephen Hawking’s last thoughts on the structure of the universe, and explore today’s mysteries of dark matter and dark energy. Along the way, we will meet the quirky individuals through history who have changed our perception of being at the center of the universe to the modern view of inhabiting a small world, circling an average star, in an ordinary galaxy, among billions of others as far as we can perceive.

Jim O’Leary is senior scientist at the Maryland Science Center (MSC) and for 12 years co-hosted WYPR’s Skywatch program. He develops Earth and space science programs for MSC and conducts educator workshops both locally and nationally. He has produced several IMAX films and dozens of Planetarium programs. He lectures on astronomy and Earth science topics, appears on radio and television as an astronomy expert, and has undertaken programs with NASA and the National Science Foundation.

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**TUITION FEES**

$65 for one course;
$130 for two four-week courses or one eight-week course;
$150 for an unlimited number of courses.
To accommodate a change in our membership year timing, the Osher Lifelong Learning Institute at TU is waiving the membership fee for all of our current members for January-June 2019. You will receive a renewal notice in the spring for our new membership year cycle beginning July 1st and we hope you will renew at that time.