Quyen Hart fell in love with astronomy when she was young. On summer nights in Philadelphia, Pa., she would look out her window and observe one bright star. She would think about what it was, where it came from and why it was so bright. That observation was the budding of a passion that would lead her to a Ph.D. in astrophysical and planetary sciences, and eventually, to teach at Regis University, where she shares her passion with students.

“Astronomy is an important subject for students because it demonstrates how different areas of math, physics, chemistry, computational science and engineering can be applied in one scientific discipline,” says Hart. Inter-disciplinary learning is essential because it mimics the way scientists work in the field.

For students who decide that science is not for them, Hart believes that skills learned in her classes can be applied to almost any field. Being able to explain what they know, using reasoning to solve problems and researching primary sources are just a few of the skills students develop.

To accomplish this, Hart employs an innovative methodology in the classroom. Students use handheld devices, called clickers, to respond to questions, so that she can gauge their level of comprehension. This, plus observing team discussions, allows Hart to adjust her teaching strategy in real-time to facilitate effective learning.

When Hart isn’t observing students she is observing galaxies. She uses X-ray, radio and optical observations to study how galaxy clustering might impact the activity of black holes, and vice versa. She gives students a window into her research by sharing work in class, and invites select students to be partners in that research.

“It is daunting to teach ‘the universe’ in one semester,” concludes Hart. But there is nothing she would rather be doing. She gets to share her passion and life’s work, while preparing the next-generation of inquisitive star-gazers.