'It's the *problem-solving* techniques and the *passion* everyone has for what they're learning and teaching that encourages me to *pursue my dreams.*'

'JMU is invested in my success'

BY RACHEL DAWSON ('13)

Devin Buennemeyer ('16)

physics major | Hamilton, Va.

To call freshman physics major Devin Buennemeyer ('16) self-motivated is an understatement. On a pre-med track, Buennemeyer's physics concentration is biophysics, and she is minoring in mathematics. Buennemeyer is one of five Class of 2016 full-ride Dingledine Scholars. "This scholarship has made my dreams become real," she says.

Dingledine Scholarships are awarded based on academic achievement and leadership, and recipients are required to complete extra hours of community service. The scholars meet regularly for peer support and networking and, according to Buennemeyer, strive to be involved and give back to the community. "We all want to change the world," she says.

Buennemeyer plans to attend medical school after graduation and work in rehabilitation or physical medicine. She dreams of establishing a hospital in a developing nation.

Even though JMU is helping her reach her dreams, ironically Buennemeyer wasn't sure that JMU was the right fit. After attending the admissions program CHOICES, Buennemeyer chose JMU she says, "because I thought the people here could become my friends and everyone here would be invested in my success."

The JMU physics department is small, and the one-on-one faculty time has given Buennemeyer the opportunity to work closely with professors and upperclassmen. And, she has formed a tight-knit community among fellow students. "Professors teach us to be problem-solvers," she says. "In physics, getting the right answer is one thing, but if you don't understand how you got that answer, you won't be able to duplicate it."

William Chris Hughes is one of Buennemeyer's physics professors and her adviser. "He's an amazing teacher," Buennemeyer says. "If I don't understand something, he'll explain it in 18 different ways until I get it. He seems really invested in each and every student's success."

Hughes appreciates the personal investment in Buennemeyer as well. "Devin is an impressive young woman who is very focused yet not overbearing," he says. "In some cases, a student with her drive and achievement can be high maintenance in that they expect to be treated differently than students for whom the material takes more effort. Devin seems to be very within herself and self-motivated."

During spring semester Buennemeyer completed research on protein aggregation with biochemistry professor Gina MacDonald Handal and eight students. Buennemeyer was one of two freshmen on the research team. "In my opinion the best way to learn science and develop critical thinking skills is to do science," Handal says. "Having students perform research is the ultimate method of teaching and learning science."

While Handal supervises and coaches her students, they are doing the hands-on research, documenting results, writing papers and getting their work published. "Devin is an absolutely outstanding student," Handal says. "She is careful, insightful, creative, enthusiastic and hard working."

Buennemeyer took one of her physics classes to the next level this semester — making it an honors course. She wrote a 10-page paper on battery storage and energy efficient alternatives to meet the honors requirements. "Honors courses take what you learn in class and your homework to a new level because you must apply your knowledge," Buennemeyer explains.

Physics professor Shanil Virani is pleased that JMU physics majors find success in the workplace and in graduate and medical schools. "Our students graduate with very good critical-thinking skills and problem-solving abilities. They collaborate with faculty in the lab helping us make advances in our understanding of the universe," Virani says. "That is physics. Not being afraid of problems, not being afraid of numbers, not being afraid of trying different ideas and seeing what works, and sometimes just as importantly, what does not."

Buennemeyer says physics is a challenging, but rewarding major. "It's the problem-solving techniques and the passion everyone has for what they're learning that encourages me to pursue my dreams." ME