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Dr. Rhett B. Herman, a physics professor at Radford University, went on an excursion to the arctic.

“There was a physics major that wanted to get RU involved in environmental studies. One thing led to another; I took him and another student to go on a trip that was sponsored in part by NASA. A ‘fact finding trip’ to the North Pole,” said Herman. “That sparked my Arctic research interest. I did this first arctic research class in the spring of 2006, but it was an independent study class. Then in 2008, 2010 and this coming spring it’s just a regular class that students can sign up for.”

“Regular class” might not be what most students would call the class that Dr. Herman has started. It isn’t what you would expect from a regular Physics class.

“I created a class called arctic geophysics, running this spring. I’ve got the applications from the people that want to be in the class. It’s a very restricted class in the sense that we go up there and we stay on the grounds of the old Naval Arctic Research Labs,” said Herman. “We have a hut that has limited space for eight people and that’s 300 miles from the Arctic circle.”

Environmentalists and scientists all have their eyes on the North Pole. The questions about global warming and the earth heating up, due to human activities and other factors, need to be answered.

“We know the thing is melting,” said Herman. “We are trying to see if there is a technique that we can contribute to measure the ice quickly.”

When discussing this issue of global warming with Dr. Herman, he used an example of black and white t-shirts. People should wear white in the heat, because it doesn’t absorb as much heat.

“Ice is white, so it reflects light. So when the ice is gone, the ocean absorbs more of the sunlight,” said Herman. “So what is left melts any faster.”

Up in the North Pole, Herman and his students are trekking in weather that is -40 degrees Fahrenheit, measuring the thickness of the ice out on the water.

“The polar cap is about the size of North America, and so if you drill a few holes around North America to get a sample of what’s under our feet, that’s not going to be any good,” said Herman. “So they need something where they can fly over in an airplane and go ‘how thick is it? BOOM! We know’ over a large area real quick.”

Herman explained about some of the tools that were used to measure the thickness of the ice, and what those tools do for Herman and his team.

“Several pieces of equipment; one that has been proven to be the most useful an electrical resistivity, a ray, the OhmMapper,” said Herman. “It is something that measures the electrical properties of the ice. What it does is, after some image processing, essentially takes a cat scan cross section of the ice.”

Work being done by Dr. Herman and others like him is important, since time is of the essence.

“Pretty much in 90 years, it will be gone. The whale population will decrease. We may have a few surviving polar bears near greenland,” said Herman.

Biodiversity, according to Herman, will be severely affected by the caps melting. It will not only affect those living in the North Pole, but the whole world. Some might wonder why we don’t just move what biodiversity we have up North to the South Pole.

“You have to be careful about transplanting things, you could create a whole world of problems,” said Herman.

With all these fascinating worldly issues to be studied, and the exciting journey that could be taken, the students in Herman’s class benefit greatly in experience.

“We always present our results at The American Geophysical Union meeting. It’s the world’s largest scientific meeting, and about a third of them are from NASA.” said Herman.

Though the future is looking grim from what scientists are finding about what global warming is doing to the earth as a whole, Dr. Herman insists there is hope.