

Math formula helps recre

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Special Projects Editors

Ever wondered what Elon's campus used to look like and how it's changed over the years? Alan Russell and senior Laura Snipes recreated photos to do just that.

Every year senior students majoring in math have to put together a senior capstone project that they present to faculty and students in mid-November. The goal of the project is to retell a story using a math article. Snipes chose the article "Where the Camera Was" and from there made the project her own with a little help from the buildings around Elon's campus.

Her research started about a year ago by looking through the picture archives in Belk Library for original shots of Elon buildings. Snipes and Russell picked Sloan, McEwen, West and Alamance. The reason they picked these buildings is because some of the new buildings that have been added over the years are blocking the angles. Also, the buildings must be pictured with two sides, so frontal pictures couldn't be used. A final requirement is that the picture must have been taken from ground level because anything elevated will cause problems in the formula.

In order to find the exact angle the previous photographer used, Russell and Snipes used a specific formula that calculates how far to the left and right and how far to the front the position is. They used a two-dimension picture to make it 3D. After they found the exact angles, they went out and used a tape measurer and a trundle wheel, which measures as you roll it, to find the exact spot to recreate the picture. This way, the new pictures can be compared with the old pictures because they are both taken in the same position and show how much has changed.

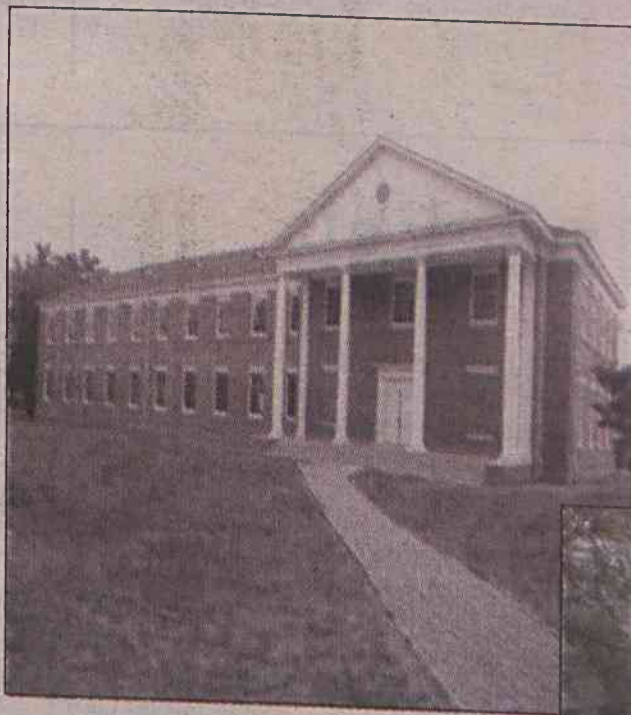
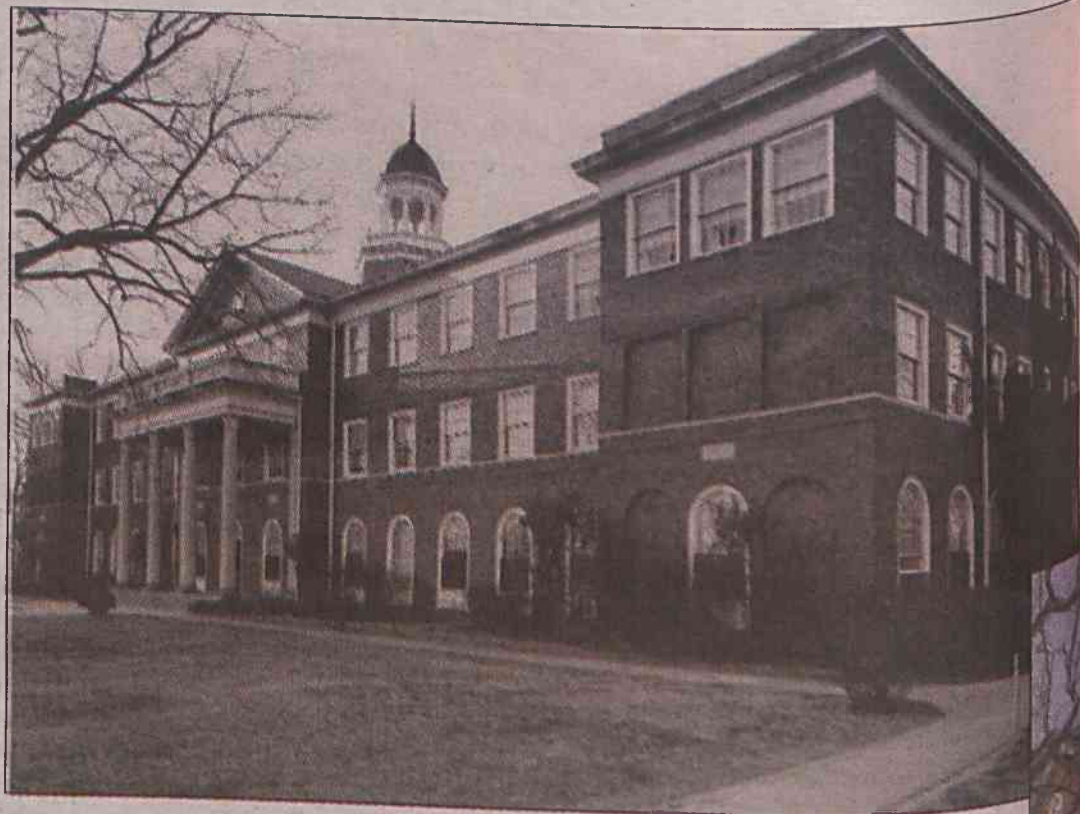
"With then and now pictures, if it's not the exact angle then it's not a good comparison because people will be drawn to the scenery and how it's changed, not the building," Snipes said. "It can be misleading. It's difficult and complex, but there's a practical application of how to do it."

After a year's worth of work, Snipes and Russell were glad to be able to see the success of their project and discover how accurate they were.

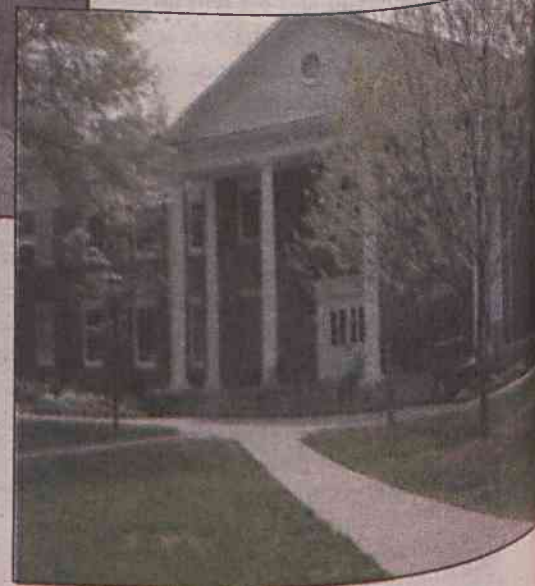
"The point of the project is that we are measuring a two dimensional representation of an object to determine a 3D position," Russell said. "This idea brings mathematics to life and finds a practical use for geometry."

"What I think is cool is that we're applying math and getting results," Snipes said. "People don't know how it relates to the real world so I'm excited to show everyone. It's useful and you see how math helps get us a result."

Recent photos taken by Alan Russell and Laura Snipes. All other photos came from Elon's archives.



McEwen is one of the most dramatic examples of landscape changes. The building hasn't changed much over the years, but the landscaping has made it much more attractive.



Alamance has been added in 1982. In 1982.