**William Holding Echols 3rd Director 1888-91**

Born Dec 2, 1859 in San Antonio, Texas

Died Sept 25, 1934 in Charlottesville, Virginia of a heart attack

Sent to boys school at University of the South in Sewanee, Tennessee and then to the Episcopal High School in Alexandria, Virginia. He entered the University of Virginia in1878 ad graduated in 1882 with 2 degrees- Bachelor of Science and Civil Engineer.

Worked as Railroad Engineer in the South, Mining in Colorado

1887 – Professor Echols took over the instructional work of Maj. Emerson in Graphics and Engineering. Served one year as Professor of Graphics and Engineering and then three years as Director of the School of Mines & Metallurgy beginning Sept 1, 1888, not formally appointed Director until June 1889 – Full Professor of Mathematics at University of Virginia at Charlottesville. His favorite remark at the end of the term or after a final examination was this: “The meaning of this credit is that you are now prepared in my opinion to pursue the study of this subject without the aid of a teacher” (from School of Mines Reminiscences by Prof George Dean ’90, ‘91

Married 1885 to Miss Mary Elizabeth Blakey of Virginia – had 5 children – she died in Virginia in 1894 - married a second time in 1897

Echols nicknamed “Reddy” because of his red hair

**Departmental Reorganization** – divided instruction into 2 divisions academic and technical

**Academic** – covered the work of the Academic Course of 1885 and of the 2 year Preparatory Course. – Language – Mathematics – Science

**Technical –** divided into departments – 5 schools (1) Engineering (civil, mining, mechanical) (2) Analytical Chemistry and Metallurgy (3) Pure Mathematics (4) Mineralogy and Geology (5) Physics – electricity

**Faculty –** 1888-89 chair of Civil and Mine Engineering then as Engineering 1889-91 1887-1891 Echols, Analytical Chemistry and Metallurgy: W.H. Seamon (chair), Chase Palmer, & Arthur J. Stewart. Mathematics: W. B. Richards, George Reinald Dean. Academic Depts: E. S. Drake- 1887-91 Secretary and librarian, English, Paul Julius Wilkins

Degrees given were changed to Bachelor of Science in Civil Engineering, Mining Engineering or Mechanical Engineering. After establishing himself with a profession and after a stated interval of time he may receive upon application to the Faculty the full degree in Civil, Mining or Mechanical Engineering.

Curricula evolution – policy of developing an institute of technology – Echols introduced the slogan “Work if Victory” All three curricula (Academic, Civil and Mining Engineer) were three-year courses. Six definite degree courses were set up by Director Echols I. Mining Engineering; II Civil Engineering; III Mechanical Engineering; IV Chemistry (equivalent of Chemical Engineering; V Mathematics and Physics (beginning of electrical engineering course); VI General Scientific Course VII Academic Course; VIII Preparatory Course (two year).

Certificate of Distinction – conferred on one who has attained ¾ of the value of the questions at an intermediate or a final examination; For the degrees of Proficient or Graduate an equal or higher standard is demanded.

1. Untitled Degrees – Certificate of Proficiency- Geology and Mineralogy; General Chemistry, Fire Assaying, Botany and Zoology, Elementary Physics, Geodesy, and the Preparatory Course. 2. A Diploma of graduation is conferred on one who has passed examination or any of the following general courses: Mathematics, Physics, Analytical Chemistry, Engineering, Assaying and the Academic Course.
2. The Degree of Bachelor of Science in Mathematics and Physics; of Bachelor of Science in Chemistry; and of Bachelor of Science in General Science is conferred on one who has passed examination on all of the prescribed subjects of the respective courses.
3. The Degree of Bachelor of Science in Civil Engineering; in Mining Engineering; or in Mechanical Engineering is conferred on one who has passed examination on all of the subjects of instruction in the respective course. The Degree of Civil Engineer, Mining Engineer, or Mechanical Engineer is conferred on one who, having graduated in and received the Bachelor’s Degree in the respective course, has identified himself with the profession during a period of not less than three years, and during that time demonstrated his fitness for his chosen profession.

**Miss Sallie Elizabeth Millard, (1891) was the first of all the School’s graduates to receive the degree of Bachelor of Science in General Science – and was, so far as we have yet discovered, the School’s first resident graduate student a year or so later.**

Director’s Residence now, then Student Club and Dormitory constructed in 1889, sidewalks and wooden picket fences put around campus, courses became more technical.

Executive Committee of the School of Mines– a subcommittee of the Board of Curators – had an unusual set up, two of its members were not officially appointed by the State as Curators of the University in any way. They were local citizens of Phelps County, to act with the third and only Curator member of the Committee, who was also the Chairman. This occurred during the Echols and Harris’ administrations. This local committee was abolished by 1893. The Board of Curators wanted total power back in their hands.

The Echols administration ended as it began, with a controversy within the General Assembly and the University over the management of the College of Agriculture and the School of Mines.