LAFAYETTE

CIVIL ENGINEERING (Cont'd)

1886-1887

Civil Engineering. This course, leading to the degree of Civil Engineering (CE), is comprehensive and thorough including not only studies in Civil Engineering, but in Topographical, Hydraulic, and Mechanical Engineering. Its object is to give its students such instruction in the theory and practice of engineering as to qualify them for immediate usefulness in the field and office, and, after a moderate amount of actual practice, to fill positions of trust and importance in their chosen profession.

The location of Easton is most favorable for an Engineering School.

The City is at the junction of the Delaware and Lehigh Rivers, and is a great center for railroads, canals, bridges, foundries, pipe works for water gas, etc., rolling mills repair drops and other industrial works.

Through the years there has been great changes in the required curriculum taken by Civil Engineering students attending Lafayette and would require a volume in itself to record.

It is not the purpose of this short review to list them all.

To give an idea of the changes in the engineering curriculum the following are listed. The curriculum for 1866 and 1870 and the curriculum as it stands in 1965.

1866 PARDEE SCIENTIFIC COURSE

FRESHMAN YEAR

FIRST TERM

Algebra
French
Anatomy and Physiology
Ancient Geography
English Composition
Elocution
Old Testament
Lectures on Health
Geographical Drawing

SECOND TERM

Geometry
German
Chemistry
Greek Antiquities
English Composition
Elocution
Old Testament
Biblical Geography
Geometrical Drawing

THIRD TERM

Algebra
Geometry
Modern Languages
Roman Antiquities
Botany
English Composition
Elocution
New Testament
Biblical Geometry
Geometrical Drawing

LAFAYETTE

SOPHOMORE YEAR

FIRST TERM

Plane Trigonometry
Zoology
Trench on the Study of Words
French
English, Bunyan

Rhetoric
Acts of the Apostles
Declamations and Themes
Drawing in Zoology
Taxidermy

SECOND TERM

Conic Sections
Mensuration
Chemistry
German

Acts of the Apostles
Geometrical and Topographical Drawing
Declamations and Themes
English, Spencer

THIRD TERM

Navigation
Surveying
Botany
Political Economy

English 1 Chaucer
Biblical Antiquities
Drawing of Plants
Declamations and Themes

JUNIOR YEAR

FIRST TERM

Analytical Geometry
Calculus
German
English, Daniel Webster
History

New Testament Epistles
Geometrical and Topographical Drawing
Declamations and Themes

SECOND TERM

Natural Philosophy
Anglo-Saxon
English, Milton
Constitution of U.S.
Political Philosophy

French
New Testament Epistles
Linear Perspective
Declamation and Themes

THIRD TERM

Natural Philosophy
Mineralogy
Anglo Saxon
Modern Languages

English, Shakespeare
New Testament Epistles
Machine Drafting
Declamation and Themes

LAFAYETTE

SENIOR YEAR

FIRST TERM

Mental Philosophy
Natural Philosophy
Spherical Trigonometry
Chemistry
Modern Languages and Literature
Confession of Faith
Themes and Extemporaneous Speaking

SECOND TERM

Moral Philosophy
Evidences of Christianity
Astronomy
Geology and Phys. Geog.
Anatomy and Physiology
History
English Literature
Confession of Faith
Rhetoric themes, etc.

THIRD TERM

Butler's Analogy
Astronomy
Geology and Physical Geology
Natural History
Archaeology of Literature
Architecture
Comparative Philology
Themes, etc.

PARDEE SCIENTIFIC DEPARTMENT
TECHNICAL COURSES 1870-1871

CIVIL ENGINEERING COURSES

FRESHMAN YEAR

FIRST TERM

Algebra (Loomis')
Trigonometry, Loomis'
Stereotomy, Elementary Drawing
Chemistry
French
Coleman's Biblical Geography
Lectures on Health

SECOND TERM

Mensuration, Loomis
Surveying, Loomis'
Problems in Divisions of Land
Drawing, Plane Problems
Chemistry
French
German (optional)
Coleman's Biblical Geography

LAFAYETTE

THIRD TERM

Algebra (completed)
Geometry (completed)
Surveying, field work
Geometrical Drawing
Throughout the year – Declamations and Themes

Mineralogy
French
German (optional)
Trench on Words
Acts of the Apostles

SOPHOMORE YEAR

FIRST TERM

Mesuration (completed)
Surveying, Field Work
Geometrical Drawing
Chemistry (optional)

French
German (optional)
Trench on Words
Acts of the Apostles

SECOND TERM

Conic Sections
Topographical Drawing
Botany, Zoology
Chemistry (optional)

French
German (optional)
English, Spenser (optional)
Acts of the Apostles

THIRD TERM

Analytical Geometry
Differential and Integral Calculus
Descriptive Geometry
Botany, Zoology
Throughout the year – Declamations and Themes

French
German (optional)
English Chaucer (optional)
Acts of the Apostles

JUNIOR YEAR

FIRST TERM

Natural Philosophy (commenced)
Descriptive Geometry (general)
Orthographic Projections
Geodesy
French

Zoology
Botany
Mineralogy (optional)
New Testament Epistles
Declamations and Themes

SECOND TERM

Natural Philosophy (cont'd)
Calculus (cont'd)
Shades and Shadows
Map of Survey
Theory and Adjustment of Instruments

Calculation of Areas
Zoology. Botany
English, Anglo Saxon (optional)
New Testament – Epistles
Declamations and Themes

LAFAYETTE

THIRD TERM

Natural Philosophy (completed)
Anal. Applied Mechanics
Linear Perspective
Topographical Surveying
Hydrographic Surveying
Map of Topographical Survey

English; Shakespeare
Anglo Saxon
New Testament – Epistles
Declamations, Themes and
Extemporaneous Speaking

SENIOR YEAR

FIRST TERM

Higher Geodesy
Road Engineering Surveys and Estimates
Plan, Profiles, and Sections of Road Surveys
General Theory of Machines

Astronomy (optional)
Mental Philosophy (optional0
Modern Languages
Anatomy and Physiology
Confession of Faith
Themes and Speaking

SECOND TERM

Machinery and Motors
Machine Drawing
Stability of Structures
Supply and Distribution of Water
Modern Languages
Mental Philosophy (optional)

Political Economy
Astronomy (optional)
Geology
Physical Geography
Evidences of Christianity
Themes, Speaking

THIRD TERM

Designs for and Review of Engineering Works
The Steam Engine
Stone Cutting
Stability of Structures
Philosophy of Mathematics
Geology

Butler's Analogy (optional)
Natural History (optional)
English Literature (optional)
Modern Languages
History (optional)
Themes, Speaking
Graduation Theses

LAFAYETTE

CIVIL ENGINEERING CURRICULUM 1965

FRESHMAN YEAR

Fundamentals of Engineering
Chemistry
English
Mathematics
Military Science
Total Credits – 32

SOPHOMORE YEAR

Fundamentals of Engineering
Fundamentals of Engineering
Physics
Mathematics
Two humanistic electives
Military Science of Physical Education
Surveying I – Sophomore Summer

JUNIOR YEAR

Surveying II
Fluid Mechanics
Theory of Structures
Physical Geology
Humanistic Elective

Hydrology
Materials of Construction
Elements of Structures
Advanced Mechanism of Materials
Thermodynamics
Humanistic Elective

SENIOR YEAR

Indeterminate Structures
Sanitary Engineering
Reinforced Concrete
Soil Mechanics
Humanistic Elective

Seminar
CE Analysis
Transportation
Management Science
Humanistic Elective

LAFAYETTE

Through the years, members of the Civil Engineering faculty have been active in professional engineering societies and research and technical writing.

Professor Porter – He was active in the American Society for Testing Materials and did research on cement.

Professor F. O. Dufour – He was on the Board of Direction for the American Society of Civil Engineers. Book on Structural Design

Professor E. H. Rockwell – He was on the Board of Direction for the American Society of Civil Engineers.

Professor W.S. Lohr – He served as President of the State Society – a branch of the National Society of Professional Engineers and did research on bridge flooring and enclosed columns. "Concrete Columns Encased in Steel Shells Proposed" Engineering News – Record, 1934

Professor Robert DeMoyer – He served as President of Lehigh Valley Section of the American Society of Civil Engineers.

Professor Lynn Perry – "The Maryland-West Virginia Boundary" in Civil Engineering, June 1934
"The Circular Boundary of Delaware" in Civil Engineering, November 1934

Participation in Educational Programs aside from regular college work were performed by numerous faculty, below are listed some of their activities.

During the Second World War, Professor Lohr was the Director of the following programs:

E.D.T. – Engineering Defense Training 40-41

E.S.M.D.T. – Engineering Science and Management Defense Training 41-42

E.S.M.W.T. – Engineering Science and Management War Training 41-42

Research and development under the Army Ordinance Department was carried out by Professor W.S. Lohr, Professor Robert DeMoyer and others.

Commercial testing has been done for local Easton and Phillipsburg firms by a large number of faculties over the years.

Numerous structures have been designed by Lafayette faculty, probably the most known being the Northampton Street Bridge between Easton and Phillipsburg designed by Professor Porter who served without salary in the early ears and presented to the college numerous pieces of equipment and a steel

bridge that stood for many years between the west entrance of Pardee Hall and the observatory. The students dismantled and re-erected it yearly.

Following is a list of Department Heads and Civil Engineering Faculty.

James Madison Porter
Almon H. Fuller
Frank O. Dufour
Edward H. Rockwell
William S. Lohr
Robert DeMoyer

Many graduates in Civil Engineering, too numerous to mentions, have achieved distinction. Their endeavors embrace many fields, a partial list includes: Consulting Engineering, Railroads, Highways, Civil Engineers Corps of the U.S. Navy, Construction, Education, Private Industry and Governmental Agencies.