THE TECH, BOSTON, MASS., APRIL 10, 1911.

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18

ELECTRICAL ENGINEERING
By Prof. D. C. Jackson

The electrical engineering course is planned for the purpose of giving that professional training which is needed by men who have to do with the generation of electric power and its utilization for any of those purposes to which electric power is now put. The use of electric currents for providing motive power, for setting up electrochemical operations, for heating, and for other purposes has become so universal in the industries of this nation that electrical engineers must possess an unusually wide understanding of the industrial sciences, including those relating to transportation and inter-communication. A particularly wide understanding is required of those sciences affecting the generation and industrial use of power, and the industrial use of heat and chemical reaction. The subjects of chemistry, physics, mathematics and applied science which comprise the backbone of the electrical engineering curriculum. Articulated with these basic subjects are the more directly professional studies which relate to the generation of mechanical power and its transformation into electrical power, the transmission of power, and the utilization of electrical power for purposes of transportation and inter-communication and those numerous other purposes for which the modern industrial and social developments have made it almost a necessary agent. These more directly professional subjects which are articulated with the basic subjects of chemistry, physics, mathematics and applied mechanics consist of: the principles of electric and magnetic phenomena, and particularly of electric and magnetic circuits, alternating currents, electrical measurements, alternating current machinery, thermodynamics and steam engineering, hydraulics and water power, and associated subjects. Following these subjects in the curriculum of Course VI come a series of studies in which attention is more particularly directed to the professional engineering installations in which electrical power is generated and utilized, such as central electric power stations, (whether steam or water power drives the prime movers,) electric illumination, electric transmission of power, electric railroads and telephony. These subjects are also associated with a study of surveying, machinery and structures.

WILLIAM S. JOHNSON, '89
Sanitary and Hydraulic Engineer
101 Tremont Street
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PROF. DUGALD G. JACKSON

Sincere study of the foregoing subjects when associated in logical order as laid down in our curriculum gives that kind of training which is distinctly the scientific basis of electrical engineering practice; but a professional engineering course must comprise more than the scientific studies alone. Studies of the character of economics are a distinct part of the engineer's professional training, and our students are required to pursue a reasonable amount of economics and 3.0 of English, foreign languages and history. These studies are associated in the course so that they make a part of the work of each of the four years of the course. By this arrangement of the subjects the students are afforded a fortunate contrast of the reasoning processes pertaining to the exact logic of mathematics and those pertaining to the less definite but equally necessary methods obtained by following the balance or preponderance of evidence as used in economics and in historical studies. Both of these processes of reasoning are of constant value to any man who, like an engineer, applies the principles of physics and chemistry to human affairs, and so engineer can come to commanding influence unless he has facility in each of these processes.

Section VI does not end with four years of study following the preparatory school course, or two or three years following the Arts college course, but, after those who are able to spend additional time profitably, it extends into one or two additional years of advanced study and research leading to higher and better accomplishments for the students and preparing better preparation for an influential engineering career. Such advanced study successfully prosecuted by higher degree conferred by the Institute.

CONGRESS SPEAKERS

SECTION E
Continued from 17
11.45 The Pollution of Streams by Manufacturing Wastes.—William S. Johnson, SHattering and Hydraulic Engineer, Boston.
2.00 Sewage Disposal with Respect to Offensive Odors.—George W. Fuller, '93, Consulting Hydraulic Engineer and Sanitary Expert, New York City,
3.00 The Life Saving Corps of the Technical School.—Severance Burridge, '92, Prof. Sanitary Science, Purdue Univ., Lafayette, Ind.
4.15 Factory Sanitation and Efficiency.—C. E. A. Winslow, '99, Assoc. Prof. of Biology, College of City of New York, New York City.

Collegie News

Last Saturday morning access to the chapel at Tufts College was rendered dangerous by the hail of snowballs and lumps of snow that bombardied the door of chapel. Only about two thirds of the men braved the flying missiles and fought their way into the chapel where the organist was playing "Holy Night, Peaceful Night, etc.

THE...

THE ALUMNI

ARE CORDIALLY INVITED TO VISIT THE

Tech Union
Dining Room

AND SEE HOW THE PROBLEM OF...

Feeding the Students

IS BEING WORKED OUT AT TECHNOLOGY.......

Breakfast, 7.30 to 9.00
Combinations, 12c to 25c
Luncheon, 12.00 to 2.00
Table d'Hote, 20c and 25c
Dinner, 6.00 to 7.00
Table d'Hote, 25c

A la carte served at counter
7.30 a.m. to 7.00 p.m

CONGRESS SPEAKERS:

Chairman—Prof. F. W. Chandler.
11.00 A. M.—1.00 P. M.
The Engineer and Architect Unite.—Lawrence S. Crowell, '97, Assistant Designing Engineer, Boston Elevated Railway Co., Boston.

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From the POST

A la carte served at counter
7.30 a.m. to 7.00 p.m