

77. COMPOSITION AND CLASSIFICATION OF COAL.—Classification, changes in composition, weathering, spontaneous combustion, formation of mine gases. Lectures; assigned reading. II; (1).

Professor PARR

78. METALLOGRAPHY.—Constitution and microstructure of metals and alloys and the relations between their properties chemical and mechanical treatment, and structure. Lectures; reading and laboratory. II; (2).

Assistant Professor MCFARLAND

92 and 93. JOURNAL MEETING.—(For juniors, seniors, and graduates.) I, II; (1). All members of the teaching staff in the chemical department.

For Juniors, Assistant Professor DERICK

For Seniors, Assistant Professor MCFARLAND

COURSES FOR GRADUATES

Graduate students whose major subject is in some department other than chemistry, before taking graduate work for credit in this department, must have had the equivalent of 15 university credits in chemistry, and the work covered must have included satisfactory work in general chemistry and in qualitative and quantitative analysis. Such students are advised to take Chemistry 31, 33, (or 102, 102a), 5b, 5c, 14, 9a and 9b. Courses of a more special nature will not, as a rule, be accepted for graduate work unless preceded by one of the above courses.

For students in agriculture, Chemistry 5a and 13a will not be accepted for graduate credit.

Graduate students who are candidates for an advanced degree in chemistry must have had the equivalent of 30 university credits in chemistry, and this must include satisfactory courses in general chemistry, qualitative and quantitative analysis, physical chemistry, and organic chemistry. They should have had courses in mathematics, including analytical geometry, and, if possible, the calculus. Before receiving the degree of Doctor of Philosophy such students are expected to complete work equivalent to courses 31, 33 (or 102 and 102a), 14, 9a, 9b, 101, and III. They are advised to take at least brief courses in gas analysis, iron and steel analysis, water analysis, assaying, and chemical technology.

For students in chemistry, 5a, 13a, 9, and 9c will not be accepted for graduate credit and 9a, 9b, 14, 31 and 33 will be accepted only from students entering the Graduate School with the equivalent of 30 university credits in chemistry.