

THE calendar for the present session of the University of Sheffield provides an excellent example of the numerous directions in which a modern university succeeds in meeting the needs of the area in which it is situated. The industries of the Sheffield district are reflected in the degrees in applied science which the University is prepared to confer. Students may take courses in preparation for the degrees of bachelor, master, or doctor in engineering science, or in metallurgy. In both these subjects, too, considerable specialisation is encouraged. The examinations of the University admit to associate membership of various professional institutions, and are also recognised by certain Departments of State. The University grants a diploma in domestic science. A two years' course of work in the University and the Sheffield Training College of Domestic Science has been arranged. The scientific portion of the course will be taken at the University, and the technical work in cookery, laundry, and housewifery at the training college. The calendar also provides full information of a well-planned University extension scheme which has been developed, and of numerous flourishing university societies. At the same time the more usual University work is carried on in the faculties of arts, pure science, medicine, and law, concerning which detailed particulars are given.

THE abridged calendar for the current session of University College, University of London, has been received. Detailed guidance is given as to the courses which should be taken by students proposing to graduate in one of the faculties of the University. The calendar points out that facilities for post-graduate work and research are provided in all departments of the college. There is a large science library in which the books concerned with the various scientific departments are grouped. The library contains all the most important scientific periodicals (British and foreign). The particulars of the studentships, scholarships, fellowships, and prizes for research awarded by the college run to forty-eight pages. The list of original papers and other publications from the various departments of the college since the provost's report in last year's calendar fills fourteen pages, and is good evidence that the reputation of the college as a centre for research is being worthily maintained. In his report, printed in the calendar, on the work of the last session at the college, the provost said the benefactions of the year had inevitably been fewer than usual, but he was able to announce that upwards of 1100*l.* had been added to the fund for the new chemical laboratories. He said a further sum of between 800*l.* and 900*l.* was needed for the partial minimum equipment for this session. The equipment necessary for the new physico-chemical laboratory is of a special and expensive character, and will cost about 10,000*l.*

THE calendar for the present session of the University College of North Wales has been received. Students of the college prepare for degrees of the University of Wales, which have been so framed as to allow great freedom in the choice of subjects of study. Each degree in arts or science may be regarded as a certificate of the preliminary knowledge required at matriculation, and of subsequent study pursued at one of the constituent university colleges for a period of three years, and tested at each stage by university examinations. Advanced study is encouraged not only by the existence of advanced and honours courses, but also by the regulations for the higher degrees, and by the award of university fellowships and studentships for research. As an instance of the encouragement given to research we notice the calendar states the professor of mathematics is glad

to furnish subjects for research in applied mathematics to candidates who have acquired a substantial knowledge of the subject-matter of the honours course and to direct their work. A number of aeroplane problems are generally available. In the agricultural department of the college, students may prepare for degrees in agriculture and rural economy or for the college diploma in agriculture, and their practical work is assisted by the facilities provided at the college farm of 675 acres. With the aid of a grant from the Development Fund, well-equipped laboratories have been provided, and full facilities are now available for the investigation of problems submitted to the department.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, October 26.—M. Ed. Perrier in the chair.—G. **Bigourdan**: Astronomical observations made in France before the foundation of the Academy of Sciences. An outline of the life of Fabri de Peiresc (1580–1637).—H. Le **Chatelier** and B. **Bogitch**: The preparation of alkaline nitrates starting with calcium nitrate. The preparation of ammonium nitrate by the interaction of calcium nitrate and ammonium sulphate presents difficulties on the large scale owing to the pasty mass being nearly impossible to filter. After heating under pressure in a closed vessel to 150° C., the calcium sulphate forms larger crystals, and the ammonium nitrate can be readily removed by washing.—Fréd. **Wallerant**: Some crystallographic peculiarities of aniline nitrate. This salt is dimorphous, with a well-marked transition point at 97.6° C.—Henryk **Arctowski**: Variations in the ratios between faculæ and sun-spots.—Luc **Picart**: A criterion for the identification of the minor planets.—Ernest **Esclangon**: The quasi-periodic integrals of a linear differential equation.—A. **Angelesco**: Associated polynomials with several variables.—St. **Procopiu**: Electromotive force due to motion. A study of the electromotive forces set up in a symmetrical cell (metal-electrolyte-metal) by motion of one electrode or of the electrolyte.—A. **Guilliermond**: Some cytological observations on the mode of formation of anthocyanic pigments in flowers.—G. **Riviere** and G. **Bailhache**: *Amygdalopersica formonti*. An account of some peculiarities in the growth of an almond grafted on to a peach tree.—Th. **Guilloz** and E. **Stock**: A compass for the location of metallic fragments in the body.—E. **Vasticar**: The structure of the auditory cell.—F. **d'Hérelle**: The biological method for the destruction of locusts. Details of an improved method for utilising the *Coccobacillus acridiorum* for the destruction of locusts.—E. **Aubel** and H. **Colin**: The reaction of the medium and filtration of toxins.

BOOKS RECEIVED.

- The R.P.A. Annual for 1916. Pp. 80. (London: Watts and Co.) 6*d.* net.
 Illustrations of Positivism. By Dr. J. H. Bridges. New edition, enlarged and classified by H. G. Jones. Pp. xiii+480. (London: Watts and Co.) 3*s.* 6*d.* net.
 The Dramas and Dramatic Dances of Non-European Races in special reference to the Origin of Greek Tragedy. By Prof. W. Ridgeway. Pp. xv+448. (Cambridge: At the University Press.) 1*s.* net.
 Field Analysis of Minerals. By G. D. McGrigor. Pp. 86. (London: *The Mining Magazine*.) 3*s.* 6*d.* net.