

A programme of the courses of study in the departments of pure and applied mathematics and astronomy of University College, London, has just been issued. In it are to be found full particulars as to the courses in the departments for students preparing for honours in the subjects above referred to, also of the facilities for research in the college. The programme may be obtained on application to the secretary of the college.

OXFORD.—Owing to the great increase in the number of students at Ruskin College, the staff is being increased. Prof. J. S. Smith has retired from the position of vice-principal, and has been elected director of studies and chairman of the executive committee. He will for the present combine this with his duties in the newly created chair of economics and public administration at University College, Bristol, and with his work at the London School of Economics. Mr. Charles S. Buxton, of Balliol College, has been appointed vice-principal. Mr. H. S. Furniss, of Hertford College, has been appointed lecturer in economics. The plans for the new building are now under consideration. The building will be erected on the site of the temporary buildings adjoining Worcester College, and will accommodate 100 students. For this purpose the college will require about 20,000l.

A FURTHER 2000l. has been given by Sir Donald Currie towards the equipment fund of Queen's College, Belfast, bringing up his contributions to the sum of 22,000l.

THE calendar of the Merchant Venturers' Technical College, Bristol, has just been issued, and gives particulars of the courses of instruction at the institution and much other information. Although the main building of the college was partially destroyed by fire, the work of the institution has not been crippled, owing to the Bristol Education Committee having placed at the disposal of the governors large buildings planned to accommodate more than 1000 pupils. These buildings, temporarily known as the Castle Branch of the Merchant Venturers' Technical College, Castle Green, have been fitted with the necessary lecture theatres, laboratories, and workshops.

An amendment to the Education Administrative Provisions Bill, recommending that power should be given to local authorities to make periodic anthropometric records of children which would afford definite information as to the physical condition and development of the children, was moved last week in the House of Commons by Sir Philip Magnus, who referred to the resolution upon the subject adopted at the joint meeting of the Anthropological and Educational Sections of the British Association, and the report upon such measurements conducted by the Glasgow School Board, which has just been issued by the Scotch Education Department; but upon the President of the Board of Education saying that clause 13 of the Bill as it stands gives the necessary powers the amendment was not carried. It is well, perhaps, to emphasise the fact that local authorities possess under the new Act the necessary powers to institute a system of scientific measurements.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, August 12.—M. Bouquet de la Grye in the chair. Integral curves of differential equations: Georges Remondos.—The accidents arising during the manipulation of compressed oxygen, and on an arrangement permitting of their avoidance: Georges Claude.—The ordinary forms of regulator for reducing the pressure contain a piece of ebonite, and this is liable to catch fire and even to inflame the steel cylinder. The author describes a simple modification of the regulator by which any local elevation of temperature in the neighbourhood of the ebonite is avoided.—A dynamo designed for wireless telegraphy: P. Villard. This dynamo has been designed so that the voltage curve is analogous to that of a Ruhmkorff coil, and, in addition, allows the time interval between the successive sparks to be regulated mechanically. The nature of the voltage curve produced has been studied by means of the oscillograph, curves from which are reproduced in the paper. Experiments

have been made with this instrument both in the laboratory and in the field, and for equal motive power the results are much superior to those obtained with a coil. The dynamo is also useful for the production of X-rays.—The maximum of phosphorescence: J. de Kowalski and C. Garnier. A discussion of some recent results on the same subject by L. Bruninghaus.—The cause of the beating of the heart: H. Kronecker. Serum from the blood of a calf was subjected to diffusion in a current of flowing water so that the amount of sodium chloride was reduced to 0.6 per cent. This fluid was used to replace the blood in the cardiac cavities of the frog, toad, and tortoise, and it was found possible to suppress completely the beats of the heart for one hour. Any stimulus applied during this period of arrest caused either a strong pulsation or a group of pulsations. The effects of other solutions are also recorded. The conclusion is drawn from these experiments that the heart does not beat automatically, but requires stimulants of a chemical nature to act on the nervous plexus of the heart.—The reaction of tuberculin in leprosy (subcutaneous, dermic, and conjunctival inoculations): Charles Nicolle.—Observations on the Eocene and Oligocene in Hampshire: Jean Bousac.—The results of observations of the intensity of gravity at the island of Booth-Wandel, Grahamsland, by the Antarctic expedition of Dr. J. Charcot: M. Matha. An account is given of the experimental method used and the accuracy attained. The value of g found, 982.439, is higher than the value calculated from the formula of Defforges,  $g=978.106(1-0.005243\sin^2 A)$ , by 0.116 cm. This difference is in full accord with the results of Foster in the same regions.—The paroxysms of Stromboli: A. Riccò.

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