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WHAT TO SEEK IN A COLLEGE EDUCATION

I THINK I should sum up my conception of the true objectives of a college education in very much the same words I used once before in an issue of the Blue Hen. No man is really educated who does not keep before his mind throughout his college course the values that are to be found in it apart from the mere mastery of technical subjects and the ultimate securing of a diploma. Preparation for making a living is important. Preparation for making a life is more important. And so I say to you again:

If you can gain enough of information, in the various fields of knowledge you touch, to form the basis of reasoned judgments;
If you can find, through the discipline of intense application, the power to set yourself to any problem and think it through;
If you can discover, in what you study, some of the standards by which to differentiate that which is true from that which is false;
If you can give yourself in generous friendships and learn the graciousness of courtesy in your contacts with those about you;
If you can discern beauty and truth alike in the cold facts of science and in the poet's line;
If you can learn, as another has said, to esteem wealth chiefly for the service it can render and power for the help it can give;
If you can mold your course in college to the attainment of objectives such as these—before you, when you leave these halls, will lie the Open Road that will lead you on to success and to the abundant life.

Faithfully yours,

WALTER HULLIHEN.
BEST WISHES FOR THE FUTURE

In extending my best wishes to the Class of 1933 for a successful future, I would like to pass on a word of encouragement. We have been passing through a time of depression and it has been a financial strain on most of you and your parents to make it possible to reach the goal of graduation. I feel, however, that conditions are improving and that there will be a place for every graduate. My advice would be to accept any position offered as it has been proven that a man who is already working has a better chance than the one who is waiting for his ideal to open up.

Prosperous time must come again for our country. It is, therefore, my hope that the graduates of 1933 will find themselves starting out on the new era of prosperity. It has been a real pleasure to know you all and I hope each member of the class will continue their deep interest in their Alma Mater, become identified with the Alumni Association and help build the institution with which they have been affiliated for the past four years, and of which they can become a vital part.

Sincerely yours,

ARTHUR G. WILKINSON.

Business Administrator
THE Arts and Science School recognizes as its specific aims the following: (1) to give instruction in those subjects which are fundamental in any liberal education; (2) to discover and stimulate the special aptitudes and interests of students; (3) to lay the foundation for later professional specialization; and (4) to give the technical instruction necessary in preparation for certain occupational careers. To this end, the School offers instruction, through suggested curricula, in the fields of (1) Literature, (2) History and Social Sciences, (3) Philosophy, Psychology, and Education, and (4) Mathematics and Science.

Other aims and purposes of the Arts and Science School are more general. This School is interested only in the serious student—the young man who has a serious purpose in coming to college and is willing to pay the price of an education in hard work and decent conduct. It endeavors to acquaint the student with the best that has been thought and said and done in the world, and thereby better equip him to take his place as a useful and happy member of society. Finally, by placing before the student problems that require for their solution the orderly exercise of his mental processes, it seeks to train him to think logically and independently and to act with intelligence and effectiveness.

To fit earnest students to earn a better living and to lead a better life, to give them a real sense of responsibility, to train them to think for themselves, to make of them more useful and happier citizens—these are the aims and purposes of the Arts and Science School of Delaware College of the University of Delaware.
The Department of English of the University of Delaware offers instruction in English to the students of the college for men and the college for women. The staff numbers nine—two professors, one associate professor, two assistant professors, three instructors, one assistant. Of these officers, two are part-time teachers. Instruction is being given in the first term of 1932-1933 to 651 students. Two courses are required of all students—Freshman Composition and Sophomore Literature. Most of the other courses offered by the Department are elective.

The aim of the Department is two-fold: (1) to help the students of the two colleges to write with greater accuracy, clearness, and ease; and (2) to extend the knowledge which the students already have of the great books, the main authors, and the significant movements in English literature. Through such a study of great books and through practice in the expression in words of ideas about books and worthy and more efficient citizens.

The staff of the Department of History and Political Science has been strengthened this year by the return of two men, who during the past two years have been doing graduate work for the Ph.D. degree, namely Francis H. Squire at Yale, and H. Clay Reed at Princeton. The former, promoted to the rank of Associate Professor of History, will offer next year a new elective course entitled "Tudor and Stuart England," and the latter, promoted to the rank of Assistant Professor of History, is offering this year a new elective course entitled "Economic History of Modern Europe."

Systematic graduate work is being carried on this year by the head of the department for the first time. This work has been prompted by the need among students, who major in history in their undergraduate career, for more training in research than can be secured in undergraduate courses, and it is to be hoped that a modest beginning will justify a continuation of the policy.
Department of Philosophy, Psychology, and Sociology

As the name of this Department indicates it covers a very broad field indeed. Philosophy is the oldest of the teaching disciplines, and Psychology and Sociology are two of the youngest. Philosophy, the mother of sciences, still retains under her wing such broad fields as Ethics, Logic, Metaphysics, and Aesthetics. Psychology undertakes to reveal the nature of man, and Sociology discusses the social form which man has invented for the living of his life.

It is obvious that under the present organization of the Department, with two teachers, it is possible to offer only introductory courses in these great fields of human interest. One object of these courses is to give to the student, who is interested in acquiring a broadly cultured outlook on life, an acquaintance with the thought of the great minds of our race, past and present. This is Philosophy. And certainly readers of modern books will understand little without the aid of modern Psychology. That is a queer college graduate who is not deeply interested in the pressing social problems of his own day. Sociology undertakes to be of aid here.

Department of Economics

It is the aim of the Department of Economics to serve two types of students. For those whose major interest lies in other departments it provides a general course, the purpose of which is to prepare them to cope intelligently and constructively with the numerous complex problems of our economic life. However, for those students who definitely intend to enter some phase of business, or who plan to work for an advanced degree in economics, it offers a number of more specialized courses in addition to the above. During the past semester a new course, The Application of Statistics to Economics, has been added. It is designed as a general course in elementary principles of statistics as applied to the interpretation of economic problems.

It is the intent of this department to meet, as adequately as its limited facilities will permit, the needs of the students majoring in it.
Department of Modern Languages

The Modern Language Department attempts to serve not only the pre-professional student desiring a reading knowledge of a modern foreign language, but also the future teacher or scholar anticipating specialization in our field of instruction. In the interests of the latter type of student we are now able (thanks to the enlargement of our Staff by the appointment of Mr. Miller) to offer a third-year college course in both German and Spanish literature, and also a new French elective—Survey of French Literature.

Further opportunities for specialization in Modern Languages and Literatures are now possible. For those students financially unable to profit by the Junior Year in France and the Junior Year in Germany, as well as for Seniors returning from Europe, the Department is instituting "Reading Courses," which provide programs of independent readings, supervised and discussed in weekly conferences. It is hoped that this individualized instruction will largely compensate for the present inadequate curriculum and that in a few years a sufficient number of courses can be offered at Delaware College to permit majoring in the Department.

Department of Ancient Languages

The study of the ancient classics constitutes a very important element in the attainment of a liberal education. It develops the reasoning powers, quickens the habits of observation, and makes one exact in his thinking and expression of thought. It greatly enlarges one's English vocabulary and helps him to understand and appreciate countless things in everyday life, in literature, religion, art, science, law, and medicine, which would otherwise have little or no meaning for him. Latin is the key to the clean understanding of the Romance languages, French, Spanish, Italian, etc., all being a continuation of spoken Latin. A person with a good knowledge of Latin can learn any one of these eight languages in half the time that would otherwise be required.

A mastery of English is impossible without a thorough knowledge of Latin and Greek as 75% of our words are derived from those languages. The study of the classics aids us in pronunciation, especially of the mots savants, a steadily increasing class of derivatives. A person very readily shows his lack of culture by his carelessness in pronouncing these words.
The primary purpose of the Department of Education is to give students who wish it an opportunity to make the preliminary preparation needed to qualify them to teach in public secondary schools after graduation. Teaching as a profession is both a science and an art. By this is meant, first, that there is a body of technical knowledge which the candidate must acquire before he is qualified to engage in teaching, and, second, that the teacher should be an artist in his ability to apply this knowledge in actual teaching situations. The courses in Education are designed to contribute to both of these ends.

For those students who do not expect to engage in teaching, the study of the science or theory of education should serve to develop in them, as laymen, an understanding of and a sane attitude toward current educational practices.

William Albert Wilkinson, A.M.
Professor of Education

The University of Delaware offers a variety of courses in mathematics to students who by taste or aptitude may wish to continue the study beyond the College requirements for admission. Of course, students in any of the technical courses, by reason of the fact that mathematics is the foundation of their content and the language of their expression, are required to take a course in mathematics covering the ground of their requirements for successful work.

The freedom of election provided in the nontechnical courses permits students who may have the requisite preparation to select such work as they may be prepared for. Thus, they may be fitted to continue their studies in mathematics in higher fields or to engage in the practical business of Merchandising, Banking, Insurance, etc.

The courses in Economics and Business provide instruction in the Mathematical Theory of Investment and of Statistical Methods.

The University possesses a splendid collection of mathematical models, and a fine and growing library of mathematical books and journals.

George A. Harter, Ph.D., LL.D.
Professor of Mathematics
Department of Chemistry

It should be remembered that the division of the field of exact science into the sub-divisions called chemistry, physics, biology, etc., is artificial, and is made for convenience only. The further separation of chemistry into the various courses offered in a modern University is even more artificial, but is made in order to promote efficiency and avoid confusion in the teaching. In organic chemistry, qualitative analysis, quantitative analysis and organic chemistry were taught separately by Liebig, and other courses have been added, as our understanding of the subject has grown. It was by Liebig that laboratory instruction in chemistry was first offered to the public.

The Department of Chemistry is responsible for giving the courses in chemistry which are needed in the various curricula. In some cases the object is cultural, for an educated man must have some understanding of the physical world in which he lives. In other curricula, such as medicine and engineering, there is the additional need, that the man must thoroughly master the fundamentals of chemistry, in order to apply these fundamental conceptions in his daily work.

Department of Physics

The Department of Physics has its quarters in the little building located just north of Recitation Hall and east of Old College. The first floor is taken up with offices and the Optical Laboratory. The Optical Laboratory is the real show of the Department. The equipment in the Optical Laboratory is much better than that found in Optical Laboratories in institutions the size of our institution. The entire second floor is used as laboratories for the General Physics course.

The subject of Physics deals directly with the Laws of Nature, in so far as these laws apply to the behavior of inanimate things. Physics attempts to explain these laws, and to tell why certain phenomena in Nature behave as observed, and also to predict what will happen when certain known conditions exist.

It is the aim of Physics to develop clear, straight thinking, by following a logical line of reasoning, and to develop a desire to know the truth, in so far as this may be investigated.
THE Purpose of the Student Health Service:
To promote the general health and physical welfare of the students by reducing to a minimum their illnesses and physical disabilities, by discovering physical defects and assisting in the correction of them, and by familiarizing students, through actual demonstration, with a practical program of health conservation and disease prevention.

A complete examination of every student at the time of matriculation in the university—a personal conference:
(1) This conference is for the purpose of individualizing the entrance examination and rechecking or following up abnormalities which were noted at the time.
(2) Assignment to physical activities and adjustment of scholastic programs in accordance with student's physical capacities.
(3) Consultations, in regard to personal and emotional problems, whims, etc.

Mental hygiene: Acute psychosis to minor problems of vocational adjustment, aptitude, fitness for one's choice of his life's work. Emotional problems, however, are often never enough to interfere seriously with the efficiency of school work and happiness in contact with other students.

Sex conflicts, etc.: The information obtained will be considered strictly confidential.
(4) Unhealthy family situations, poor social adjustment in college, scholastic problems, resulting from inadequate preparatory work and occasionally poor intellectual endowment.
THE Military Course given by the Military Department is designed to impart to the students of the University of Delaware knowledge which will prepare them to better serve the government in case of threatened or actual National disaster.
SCHOOL OF AGRICULTURE

The functions of the School of Agriculture may readily be divided into three activities. First, collegiate instruction of resident students; second, instruction of residents of the State off the campus; and third, the advancement of knowledge through experimentation and research.

The objectives of student instruction in Agriculture are to give the student in Agriculture a sound training in the fundamental sciences; the application of those sciences to the art and science of agricultural endeavor; a basic training in the art of human expression through the written and spoken word; and a training in the fundamentals of citizenship and the relation of the individual to society. Specific training is given in certain elected special branches, such as animal industry, agronomy, horticulture and training for the teaching of agriculture in the high schools.

The agricultural curriculum has been planned to give the student a broad foundation so that he, in after life, may have a sound point of departure for any profession or activity that he may choose to follow or that circumstances may dictate as wise.

Instruction off campus is commonly called Agricultural Extension Work. The object of such off-campus work is to present to men, women, and children the vast store of scientific knowledge and teach through demonstration and otherwise, how such knowledge may be applied to everyday affairs in order that a richer and happier rural life may be enjoyed.

The objectives of research are to extend the boundaries of human knowledge regarding nature's secrets, and search out the application of such discovered facts to the human affairs and occupations in the open country.
The Department of Agricultural Education offers courses designed particularly for those preparing themselves to become teachers. This department was established following the passage of the Smith Hughes Act of Congress in 1917, creating a demand for specially trained teachers of agriculture and related subjects in high schools and vocational schools.

The curriculum is broad in scope, requiring students to elect fundamental courses in the various departments. In addition to training in technical agriculture, they take general courses in education and special courses in methods of teaching vocational agriculture. Seniors in Agricultural Education spend considerable time during their last semester teaching in the Newark high school, where vocational agriculture is offered. Here they receive valuable practice before taking up work in school positions of their own.

Approximately eighty-five per cent of the agricultural students elect work in this department not only in anticipation of service in the vocational teaching field, but also in preparation for educational, administrative, and supervisory positions. Throughout the course emphasis is placed on preparation for rural leadership.

The Department of Biology

The aim of biological instruction is to give the student some knowledge of the various living things by which he is surrounded, to show their relations to each other, and to stress their economic and biologic importance to the human race.

The field of biology is a large and varied one and studies therein should prove of interest and value to all who pursue them.

At the present time our department is well equipped for certain lines of work but is handicapped to a certain extent by lack of room and equipment which is needed in some of our largest classes. Eventually, however, we hope to have these needs supplied and to have a building devoted entirely to the work in biology, or possibly to share one with some other department such as that of physics or bacteriology—a building where we will be provided with plenty of light and room.
Department of Agronomy

THE Department of Agronomy offers courses of instruction in Farm Crop Production, Soil Management and Improvement, Plant Breeding and Farm Management. There has been a steady growth of the Department since it was organized in 1907 with one Professor. At the present time the Departmental Staff consists of one Professor, Assistant Professor and Assistant Research Agronomist. The Department of Agronomy is also a part of the Agricultural Experiment Station and conducts investigations in farm crop varieties, selection and improvement of crops, and the fertilizers and lime requirements of crops. Investigations at the present time pertain to alfalfa seed sources and fertilizer requirements, sweet potato fertilizers for yield and keeping qualities, fertilizers for wheat and time of application, improvement of wheat varieties for Delaware, and pasture improvement.

Department of Plant Pathology

THE Department of Plant Pathology and Soil Bacteriology as a department of the College and University was organized in 1912 with Dr. T. F. Manns as chief. The department owes its existence to the urgent demands of fruit growers and others for more intimate knowledge pertaining to the nature and control of plant diseases; the dual feature of soil bacteriology was added to cover needed research on the part played by microorganisms in maintaining soil fertility. The department offers to graduate students many pressing problems in research for thesis work.

The work of the department at present, aside from offering courses in plant pathology and soil bacteriology (undergraduate and graduate), is concerned chiefly with research and extension projects in plant diseases and soil biology. During the past twenty-five years, these projects involved work on the diseases and their control of sweet potato, apple, peach, grape, cantaloupe, watermelon, tomato, wheat, and many minor crops. The work also involved investigations on various spray and dusting materials and many disinfectants.

GEORGE LEE SCHUSTER, S.M.
Professor of Agronomy

THOMAS FRANKLIN MANNS, Ph.D.
Professor of Plant Pathology and Soil Bacteriology
The work of the Department of Animal Industry is diversified and includes teaching, research or experimental, and extension. These activities are carried out by a group of five specialists. Some members of the Department do no teaching. They devote their entire time to research or experimental work for the Delaware Agricultural Experiment Station, a division of the University. In addition to the teaching and investigational work in the specific fields of Animal Industry, courses of instruction are offered by members of the Department in certain of the basic biological sciences; namely, Bacteriology and Physiology.

The personnel of the department includes: Prof. C. C. Palmer, Head of the Department; Prof. T. A. Baker, specialist in the field of dairy and animal husbandry; Mr. C. W. Mumford, poultry specialist; Mr. A. E. Tomhave research worker in animal husbandry; Mr. H. J. White, instructor in bacteriology and physiology.
HOUSED in a modern building, of modern arrangement and with modern equipment, the School of Engineering is training young men to practice the profession of Engineering in the fundamental branches, Chemical, Civil, Electrical, and Mechanical Engineering.

Throughout his undergraduate career the student is continually reminded that Engineering is a profession of service. The young man is reminded of his obligation to use his knowledge of the forces and materials of nature in creating machines, methods and organizations which will assist in the progress of his fellow men. Distinction is carefully pointed out between the scientific acquisition of knowledge and the artistic use of acquired knowledge.

So far, our knowledge has been based on the discoveries and developments of others. We are impatiently looking forward to the establishment of an organization, with adequately trained personnel, to carry on research leading to the discovery and development of scientific facts of direct use to the people and industries of the State of Delaware. The results of research by an Engineering Experiment Station will not only be of direct use but will also be of indirect benefit in furnishing further inspiration to our teachers and students and a closer co-operation between the Engineering School and the Industry of the State.
Division of Chemical Engineering

The students in Chemical Engineering are offered an opportunity to acquire a four-year training which will enable them to make a start in the chemical industry; or to begin graduate work in one of the larger universities in preparation for a teaching or research career.

Our location between New York and Baltimore has decided advantages for the student Chemical Engineer; for this region is probably the most important chemical manufacturing center in the world. By inspection trips, the students are enabled to study at first hand chemical processes conducted on industrial scale.

Those men who are qualified to take graduate work after completing the four-year curriculum, are urged to do so. The more important positions in industry, as well as in research, go to the well trained men. No student should neglect any tool within his reach which will contribute to his success.

Albert Sherman Eastman, Ph.D.
Professor of Chemistry

Division of Civil Engineering

The profession of civil engineering calls for thorough training in several scientific and technical subjects. Nothing can be considered of more importance in the preparation of an engineer than a good command of English and a knowledge of English literature. No matter what vocation one decides to follow, ability to speak and write correctly is essential if one is to understand and be understood.

Second to English preparation for the engineer comes a good working knowledge of mathematics as a framework for the applied subjects of mechanics, materials, structures, hydraulics, railroads, concrete, and the problems of sanitation met with in city and rural communities.

The monetary rewards often obtained by those engaged in business or commercial pursuits rarely become the lot of the engineer. But incomes from the practice of the profession of engineering are in keeping with those from other professions. The engineer is in most cases assured of a satisfactory income and in addition a life work holding endless possibilities for improvement, expansion, and discoveries in the uses of the forces of nature for the benefit of mankind.

Robert W. Thoroughgood, C.E.
Professor of Civil Engineering

In most cases assured of a satisfactory income and in addition a life work holding endless possibilities for improvement, expansion, and discoveries in the uses of the forces of nature for the benefit of mankind.
Division of Electrical Engineering

THE Division of Electrical Engineering attempts to send out graduates who are well grounded in the fundamental theory of electricity and who are familiar with modern electrical technique. The students in this division are also encouraged to take an interest in studies which are generally admitted to lead toward a liberal education.

During the first two years of their course, Electrical Engineering students study such general subjects as Mathematics, Physics, and English. Junior and Senior students, however, are specialists. They work in steam, hydraulic, and electrical laboratories; they study direct- and alternating-current theory, radio theory, and practical design and applications of electrical machinery.

Good Senior students are encouraged to attempt the solution of problems of minor research. They consider television, photoelectric-cell applications, short-wave radio transmitters, and many other interesting subjects.

GEORGE ALBERT KOERBER, E.E.
Professor of Electrical Engineering

Division of Mechanical Engineering

THE Mechanical Engineer deals primarily with the generation and transmission of power; the construction and maintenance of power utilizing machinery; refrigeration; heating and ventilating; and the organization of men and machines into an industrial organization. It is the purpose of the Division of Mechanical Engineering to instruct its students in the fundamental subjects, the knowledge of which, will enable them upon being graduated to capably enter the field of the Mechanical Engineer.

It is not the purpose of the department, however, to make the student solely a "technician." He is strongly encouraged, particularly in his Junior and Senior years, to participate in those studies and outside activities which are of a broad and cultural nature. In Senior Seminar this year, particular emphasis has been placed on the social and economic duties and obligations of the Engineer.

ROBERT LYLE SPENCER, S.B.
Professor of Mechanical Engineering
The function of this department is to act as a service organization to the various divisions of the Engineering School. The theoretical courses offered serve as a foundation for the practical applications to design of machines and structures which come later in the students' studies. The laboratory courses are designed to give a student an insight into the action of various engineering materials under stress and to acquaint him with the methods of performing tests which are required in specifications for those materials. In addition to the college work, the department co-operates with industries and municipal organizations in studying problems which concern the qualities and characteristics of the materials they use.

The Materials Testing Laboratory is moderately well equipped to meet the needs of the Engineering School and plans for the future provide for additional equipment to adequately care for its growing requirements.

HOWARD KENT PRESTON, C.E.
Professor of Theoretical and Applied Mechanics

Mechanical Laboratory, Evans Hall