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BULLETIN OF THE UNIVERSITY OF WISCONSIN
UNIVERSITY TRAINING AND WARTIME NEEDS

May, 1943

FOREWORD

High school students are disturbed as they assess their responsibilities to the nation in this period of crisis. They are ready to accept any assignment which will help to win the war. They want to know what their duty is at this moment.

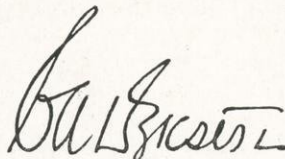
Fortunately, we have clear statements of national policy laid down by the Congress of the United States and further statements of national need by the Armed Forces and the War Manpower Commission. We know that all able-bodied men of 18 or over will be drawn into the armed services unless they are deferred to serve other national needs. We know too that the armed services will send to the colleges for further training many who enter the services by way of the local induction boards.

We face a long war and our country will need men trained in many different fields. We also need more and more trained women. And we will need both when this war is over.

This bulletin tells of these needs and gives information which will help our young Wisconsin men and women to make their plans for the immediate future.

It is clear that if we are going to meet our national needs we must continue to enroll in our colleges large entering classes of freshmen at the earliest possible moment. High school graduates are urged therefore to get all of the education and training they can before the time for their induction comes. Only by such a continuous educational program will our nation have a constant stream of young people in training for the national service.

I urge, therefore, a careful reading of this bulletin and a counselling with the high school staff and the informational offices which have been set up on college campuses.

A handwritten signature in dark ink, appearing to read "O. L. Bruns". The signature is fluid and cursive, with a large initial "O" and a long, sweeping underline.

President of the University

I. EDUCATIONAL PLANS AND COUNSELING AT THE UNIVERSITY OF WISCONSIN

GOING TO COLLEGE IN WARTIME.

"Should one go to college in times like these?" Many young men and women have asked this perplexing question in the last two years, each sincerely wanting to use his individual abilities where they would count most in the war effort. And parents have been as concerned as their sons and daughters. This bulletin has been prepared to help parents, high school counselors, and students as they work out answers to their individual problems. Information regarding the needs (both military and civilian), probable future shortages in the different fields of work, the training required for them—all of this should be of help in making the right decision.

The succeeding section will describe the opportunities available to men students, with special reference to the college programs of the various branches of the armed forces. Opportunities for women students are emphasized also since it is recognized that they, more and more, will have to provide essential workers and leadership on the higher educational levels to meet technical and professional needs. A serious shortage exists which can be met only by trained women; Section III will outline the shortage fields and the training required.

The Army and Navy College Training Programs are utilizing over 500 colleges and universities in their total war program for the training of general duty officers and specialists in various technical and combat areas. It has been estimated that these programs may soon involve between 150,000 to 250,000 men in uniform who are returning to the colleges for special training.

It is evident however that, in order to meet the need for trained and educated leadership both in civilian and military fields, there must continue to be a large entering class of freshman men below selective service age and of men in deferred categories. Careful planning of an accelerated course of study for seventeen-year-olds who will not complete more than their sophomore year, and in many instances only the freshman year, in college prior to military service will enable them to secure important educational training as a foundation for their role in the war effort.

There is not complete agreement as to whether the emphasis should be in the direction of highly specialized pre-induction education or upon a program of general education. There is almost complete unanimity, however, of Army and Navy as to the nature of the pre-induction training. It should develop, they believe, a satisfactory command of English; provide an historical background of the war; give a basic elementary foundation in mathematics; assure physical stamina; and develop keenness of mind and judgment. For some, languages and the physical sciences will be an asset. From the viewpoint of the armed forces and of industry every day that a college student remains in college he is receiving

the training necessary for more effective war service. The Army, the Navy, and the War Manpower Commission have consistently urged all students, whether or not in a reserve plan or subject to Selective Service action, to continue in college until called. They have maintained that the same applies also to new students who plan to enter universities since to drop out for the purpose of awaiting call is to lose invaluable time in total training.

THE UNIVERSITY'S COUNSELING SERVICE

Everyone recognizes the great importance at this time of realistic counseling for college students so that they can prepare themselves to make the most effective contribution in wartime and in the post-war era. Well before Pearl Harbor the University Personnel Council assembled information about all possible opportunities for military and civilian war service, special emphasis being placed on the specific requirements and the training leading to these opportunities. President Dykstra, immediately after the declaration of war, appointed a special group of faculty men as counselors and expanded the counseling facilities in the office of the University Personnel Council. Cooperative relations with the various branches of the armed forces and with civilian agencies related to the war effort have been constantly expanded and strengthened. Thousands of University students have benefited from this war information and counseling service.

The University maintains this service primarily for the sons and daughters of Wisconsin citizens, but, of course, it is available to anyone desiring assistance in determining a course of action that will lead to greater war usefulness. Students are invited to visit the office of the Personnel Council, located in 123 Bascom Hall, or to write for any information desired. In some cases these students will be referred to other offices, dependent upon the particular questions raised: admissions, to the Registrar (167 Bascom Hall); housing and personal problems, to the offices of the deans of women and of men; scholastic questions about courses and subjects, to the offices of the academic deans; and part-time job-openings to the Student Employment Bureau. In regard to this last area, the director of the bureau has reported that the bureau is swamped with requests for help it is not possible to supply.

Besides the faculty counselors working with men students concerning military and vocational problems involving both training and placement, there is a committee on Occupational Deferment (304 Law Building) that assists students in filling out their Selective Service questionnaires and that advises them in the interpretation of the regulations. These regulations as they pertain to college students are described in Section II.

The most recent personnel effort designed to prepare college women for war tasks and to lay the foundation for their future careers has been the creation of a Womanpower Advisory Committee. Consisting of faculty women, this group will be available to women students for general consultation: discussing future plans,

making decisions regarding further education or actual war work, and in handling other problems relating to the place of women in the war effort. This service is centered in the office of the Dean of Women (100 Lathrop Hall).

THE 1943 SUMMER SESSION OF THE UNIVERSITY OF WISCONSIN

For the first time in its history, the University is offering to all students including freshmen a fifteen-week summer session, the equivalent of a full semester's work. Because American universities have become increasingly important sources of trained manpower, the University Faculty and Board of Regents adopted a revised calendar that would adapt college training to the needs of total war without any loss in standards.

This program was designed to facilitate the use of the University administration and instructional facilities (including staff, library, laboratories and equipment) in the various governmental war training programs, to enable students to accelerate their college training, and to provide, for students who do not attend the summer term, a longer period of summer employment on farms and in industry. Opening June 7 and closing September 18, this session will give the same amount of credit as any normal semester. A freshman may now complete a normal four-year course of study in two years and eight months; thus a freshman starting this June could be graduated in February of 1946.

Because the summer term opens before many high schools close, students who have completed seven semesters of work in the high school and are within three weeks of the successful completion of the eighth semester at the time of the opening of the summer term may be admitted to the University. The principal of the high school must certify, in these cases, that the student is doing such work as would normally lead to graduation at the close of the current semester of the high school, and further that the student meets all the requirements for admission to the University except the evidence of formal graduation and the completion of the last semester's work at the time the summer term opens.

The fall semester opens September 27 with the next semester opening January 27, 1944.

In addition to the fifteen-week summer term designed particularly for undergraduate students, the regular six and eight-week summer sessions will be held, beginning on June 21 and ending July 30 and August 13 respectively. Correspondence about any problem related to the summer school should be sent to the Director of the Summer Session (209 Education and Engineering Building).

NEW AND REVISED COURSES

Aimed and designed especially to train students for meeting a great variety of war problems, more than forty new courses have been introduced into the regular University curriculum. Scores of existing courses have been revised and modified for the same pur-

pose. With respect to the war effort, all departments have re-directed and strengthened their offerings. Consequently, a student is usually best able to prepare himself for the emergencies of war by pursuing a regular course of study at the University.

Training of men and women in those skills demanded by war industries and the military service is one objective of these courses. Another is preparation for the management of business and personnel. Care of the sick, prevention of illness, social welfare in wartime, and conditioning and physical training are being emphasized. Methods in the production, selection, and conservation of food and other materials are being taught. Historical origins and political, economic and social implications of the war are considered, and conversational, diplomatic, scientific and military aspects of foreign languages are being stressed.

Through the Student War Council and several of the University departments a number of non-credit courses directly related to the war effort have been made available for both men and women. Radio communication, first aid, nutrition, canteen, emergency nursing, tractor driving, and radio fundamentals are some of the courses offered under this organization.

COURSES OF STUDY OFFERED AT THE UNIVERSITY OF WISCONSIN

At the present time approximately two thousand uniformed men and women are attending classes on the campus as enrollees in Navy or Army programs which train radio code operators, pilots, and meteorologists. By this summer it is expected that several other groups will be in training either for basic or for specialized programs of the armed forces.

Though the University is reshaping its program at every point where necessary in order to cooperate to the fullest in the national war effort, it is not eliminating its regular offerings of courses and subjects. A freshman may enroll in any of the following:

1. *College of Letters and Science:*

- a. Majors in art history, anthropology, botany, chemistry, classics, comparative literature, economics, English, French, geography, geology, German, history, Italian, mathematics, philosophy, physics, Polish, political science, psychology, Scandinavian, sociology, Spanish and Portuguese, speech, zoology.
- b. Special fields of concentration: medical science, medical technology, bacteriology, division of language and literature, hispanic studies, American institutions, international relations, child development, divisional major.
- c. Special courses: pre-law, pre-medicine, pre-commerce, pre-journalism, pre-education, chemistry course, humanities course, classical humanities course, music course, nursing, applied mathematics and mechanics.

2. *College of Agriculture*: Majors in bacteriology, economics, education, engineering, journalism, agronomy, animal husbandry, biochemistry, dairy husbandry, dairy industry, economic entomology, genetics, horticulture, plant pathology, poultry husbandry, rural sociology, soils, veterinary science, wildlife management, animal science, plant science, social science.

In Home Economics students may start their training in foods, nutrition, clothing and textiles, related art, and child development.

3. *College of Engineering*: chemical, civil, electrical, mechanical, metallurgical, mining.
4. *School of Education*: applied art, art education, physical education for men or women, child development, all academic fields as preparation for high school teaching. When students transfer to the School of Education at the beginning of the junior year their major is in the School of Education and not in the College of Letters and Science.

II. OPPORTUNITIES FOR COLLEGE TRAINED MEN

The normal opportunities for University training in non-professional fields and for obtaining the baccalaureate degree are now greatly limited by the needs of the Armed Forces and the operation of Selective Service to that end. Only those male students who are either under eighteen years of age or who fail to qualify physically for military service will be able to attend the University as civilians in war-time.* All others must seek college training through the Army and Navy College Programs; students in these programs will receive the basic pay rate for their branch of the service while in college, and will be in uniform. This, of course, does not apply to those already in training in fields occupationally deferable under Selective Service.

Seventeen-year-old high school graduates may attend college or University until the age of approximately 18 years and six months, and may begin pre-professional or general training which will be extremely useful in the event of their service in the Army or Navy at a later date. Experience has shown that students with one semester or more of college training before entering military service make better progress in the Army or Navy than those who lack such advantages. Students entering either the University summer term or the fall semester are urged to prepare themselves for later duty by taking basic freshman courses in mathematics, physics, English, and history.

The following account of military and civilian opportunities is offered as a guide to young men in determining their choice of service in the war emergency.

* The War Manpower Commission is at present considering the establishment of a Civilian Reserve Corps which would provide college training for selected students in critical shortage areas.

MILITARY OPPORTUNITIES FOR SEVENTEEN-YEAR-OLD HIGH SCHOOL GRADUATES

High school graduates who are seventeen years of age and in good physical condition have the privilege of enlisting directly in the Army Air Force, Naval Aviation, or the Army Enlisted Reserve Corps. In the case of the first two, students may be interviewed by traveling boards which will come to their nearest Army Air Corps, or Navy, Recruiting Station. In the case of Army ERC, men should go to the nearest Army Recruiting Center for processing.

Students who enlist in any of these services are advised to enroll in the university, if at all possible, until the call to active duty is issued. This call will come not later than six months after the enlistee has reached his eighteenth birthday, and although a student is subject to active duty at any time after the age of eighteen, he will be allowed to finish the semester already begun when he was seventeen.

Army Aviation Cadets, upon call to active duty, will be sent to an Air Forces technical training school for six weeks of basic drill, and then some will be assigned to a college or university for five months of pre-flight training. From there, if successful, candidates will proceed to the various stages of flight training.

Many of the Naval Aviation Cadets, upon call to duty, will be sent to a college for two sixteen-week terms to study mathematics, physics, English, and history, as apprentice seamen in uniform, under Navy discipline and pay. After the completion of this period of college training, candidates will go to a flight preparation center and from there to flight training. Students who have completed college subjects required by the Navy will be allowed to elect others in their place.

Army Enlisted Reserve Corps men will, upon call, be sent for twelve weeks' basic training, after which time, if they have completed successfully certain Army tests, they will be sent to a college or university for basic and perhaps advanced work. If not chosen for college training, Army enlistees will be classified in regular army occupations according to aptitudes. For further information on the Army Specialized College Training Program, see the section concerning that subject below.

The seventeen-year-olds will be eligible to take the Navy qualifying examination for the V-12 program which is described below. At the present time this examination is scheduled for sometime in September.

ERC Signal Corps Special Training Program

Seventeen-year-old high school students who have completed one year of high school physics and two years of high school mathematics may be enlisted in the Reserve Corps of the Army and assigned to duty, while they are still seventeen years of age, to the Ashland Vocational School, where they will take a course in radio and communications. The salary while in the school will be \$1020 per year.

After completion of the course, ERC men, who will then be approximately eighteen and a half years of age, will be called to duty in the Army as radio men with special training and will thus be eligible for later status as non-commissioned officers.

MILITARY OPPORTUNITIES FOR EIGHTEEN-YEAR-OLD HIGH SCHOOL GRADUATES

High school graduates from eighteen to twenty-six years of age may (1) enter the Army or Navy Air Corps, (2) write entrance examinations to the Army-Navy-Marine Corps college program (the first of these was given April 2, 1943, and others will follow at periods of approximately six months), (3) join the U. S. Merchant Marine.

1. *Aviation:*

- a. *The Army Air Force.* Candidates who meet the requirements of a mental examination and a rigorous physical test will be given an Air Corps form which, if used in voluntary induction within a period of sixty days, will assign the holder to the U. S. Army Air Corps. The training given will be similar to that outlined above for seventeen-year-olds.
 - b. *Naval Aviation.* Candidates may take tests with a traveling board, and will receive transportation to the nearest Naval Aviation Cadet Examining Board where, if successful in mental, physical and character examinations, they will receive a document certifying their eligibility. If presented to his selective service board for voluntary induction within 90 days of the time of issue, this certificate will allow the candidate to enter the Naval Aviation training program.
2. *Army-Navy tests* for all high school seniors and graduates between the ages of seventeen and twenty-one inclusive (Army), seventeen to nineteen inclusive (Navy), will be given again some time in September, according to present arrangements. Success in these tests will mean that students who express Army preference will receive certificates which, if presented at the induction center at the time of their induction, will mark them as potential college training candidates. They will then be sent for 13 weeks' basic training at the conclusion of which they will go, if qualified, for training to a college or university.

In the case of Navy preference, success in the Navy test means that a candidate will be interviewed by a selection board at the nearest Office of Naval Officer Procurement, and if qualified physically, will be sent to a college or university. The candidates who took the first qualifying examination on April 2, and were accepted, will start their training on or about July 1, 1943. Coast Guard and Marine Corps units will be formed from those men already in V-12, since Coast Guard and Marines are part of the U.S. Navy.

3. *Merchant Marine.* High school graduates between the ages of 18 and 26 who meet a strict physical examination may enlist in the Merchant Marine as apprentice seamen and be trained for sea duty, and later, if qualified, for officer duty on ships of the U. S. Merchant Marine. Men may also apply for admission to the Merchant Marine Cadet Corps for training as officers on merchant ships. Potential apprentice seamen should apply to their nearest U. S. Employment Service office. Candidates for cadet training should apply to the U. S. Merchant Marine, Washington, D. C.

Navy College Training Program (V-12)

At present it is not known whether Wisconsin will have accommodations for a basic V-12 program in addition to the Navy curricula in Engineering and Medicine. Students chosen for the basic program will devote 52 to 58 hours per week to classes, laboratory work, and preparation. After the basic college work, students who by aptitude and preference are eligible to take advanced work, will be assigned to special classes in Engineering, Supply Corps, or Medicine.

Most Navy V-12 men will become deck or engineering officers for service afloat, and after four 16-week terms of university work, will be sent to midshipman school for three months, after which time they will be commissioned as ensigns in the U. S. Naval Reserve. Students who fail at any point in the Navy courses will be sent to active duty as apprentice seamen.

Physical Training: Physical training conducted under Navy auspices will be compulsory and will consist of (1) early morning exercises, 20 to 30 minutes daily except Sunday, before breakfast, (2) inspection of uniforms and equipment for 15 minutes daily, (3) squad drill 30 minutes per week during the first term, (4) swimming 60 minutes per week during first term for those not able to meet Navy swimming tests.

Voluntary physical exercise may be taken by all students, and may include college athletics insofar as such activity does not interfere with prescribed hours and courses of study. Other extracurricular activities will be permitted, subject to the same conditions as athletics.

Candidates' Classifications: Navy college terms will be of 16 weeks' duration and will start on or about July 1, 1943, November 1, 1943, and March 1, 1944. There are several types of officer candidates to be included in the program. They will receive periods of college training of various lengths:

Aviation Candidates A-V (N)—2 terms
Deck Candidates D-V (G), D-V (S), C-V (S)—4 terms
Supply Corps Candidates SC-V (S)—4 terms
Pre-Medical and Pre-Dental Corps Candidates, MC-V (S)
and DC-V (S)—5 terms

Engineer Candidates E-V(G) and
Pre-Chaplain Corps ChC-V(S)—6 terms
Engineer Specialist Candidates E-V(S), A-V(S), O-V(S),
Civil Engineer Corps CEC-V(S), and
Construction Corps Candidates CC-V(S) all will receive
8 terms.

Most V-12 candidates will receive instruction for their first four terms in mathematics, physics, English, history, navigation, psychology, and drawing.

The Army Specialized Training Program:

This program has been organized to train specialists in engineering, medicine, personnel psychology, languages, physics, mathematics, area studies, optics, acoustics, surveying and other special fields. The curricula for these specialized fields vary in length from two to eight terms.

Eligibility: All men inducted into the Armed Forces who are between the ages of 18 and 21 inclusive, who have completed 13 weeks of basic training, and who are qualified officer material are eligible for the basic college program. Candidates more than 22 years of age may be included in the advanced training programs. Some preferences in curricula will be considered, but the main decision will be based on achievement and aptitude tests and on officer potentialities.

The Basic Program: Men who have not sufficient background to enter the advanced specialized programs, but who qualify on the bases indicated above, will be sent to universities and colleges for the basic program. This consists of 3 twelve-week terms or 9 calendar months. In a typical basic curriculum about two-thirds of the time will be devoted to mathematics, physics, chemistry and other sciences. The remainder of the curriculum will be devoted to history, English and geography. These subjects will occupy twenty-four hours of classroom and laboratory work. Twenty-four hours of supervised study-time will also be set aside. Military instruction (5 hours) and physical exercise (6 hours) will complete the program. Upon successful completion of this program qualified men will be sent on to advanced technical training.

The Army Specialized Training Program already has started at some universities and colleges under contract with the Army, but most of the basic programs will not start until May and June. The University of Wisconsin is expecting to handle the Army Basic College program and the training of specialists in Foreign Language and Area Studies, Engineering, Medicine, and Aviation.

CIVILIAN OPPORTUNITIES

Engineering and Related Technical Fields

At the present time there is a tremendous shortage of adequately trained engineers and technicians in war industries. This need for

civilian engineers and technical trained men, in addition to those being trained by the Army and the Navy for their own purposes, is extremely acute; there is some hope that a plan will be inaugurated soon that will take care of the insistent demands for fully qualified personnel from such fields as aeronautical, automotive, mechanical, electrical, and marine engineering. Though it is true that the accelerated programs of technical studies that some women are taking will enable them to perform certain of these jobs, in many cases the requests are for regular eight-semester college graduates. In order to supply a continuing source of manpower from which to draw, some plan may be provided to train selected students in these critical shortage fields.

Civil Service

In general, students trained in the following shortage fields are eligible for appointment to Civil Service positions. The most important classification from the point of view of students is that of Junior Professional Assistant, which includes more than twenty different occupations, such as legal assistants, economist, psychologist, sociologist, etc. College degrees are in most cases required, although some college seniors may enter if qualified. Entrance is usually by means of a written test. In order to bring about maximum speed in filling war positions, selections are now being made even for junior positions on the basis of submission of credentials indicating training and experience.

The War Manpower Commission together with affiliated agencies has conducted several inquiries regarding personnel needs and shortages, not only in Government agencies but in industrial and professional areas. The following list was compiled by the National Roster of Scientific and Professional Personnel in terms of academic training fields. In every case the number of men and women needed far exceeds the supply either available or now in school.

Management and Administration: Accounting and auditing, Budget administration, Organization and procedure analysis, Personnel management, Purchasing and procurement.

Engineering and Physical Sciences: Architecture, naval; Astronomy, Chemistry, all branches; Engineering, all branches; Geophysics, Geology, Mathematics, Meteorology, Physics, all branches.

Medicine and Related Fields: Dentistry, Medicine, nearly all branches; Nursing (R.N.), Psychiatry, Public health, Hygiene, and Surgery Sanitation.

Social Sciences: Economics, Geography, Psychology, Recreation leadership, Statistics.

Arts and Languages: Foreign languages, Journalism.

Complete lists of opportunities are available at various post offices and at the office of the Personnel Council.

It should be remembered that it is not the policy of Government agencies to ask deferment for their workers, and men intending to obtain training for specific fields in government work should consult their local draft boards before deciding upon their choice of vocation.

SELECTIVE SERVICE

This section applies merely to university students, and to special fields in which they may receive training.

The Selective Service Bulletins No. 10 and No. 11 (amended March 1, 1943) provide that certain students may be considered for occupational deferment. All students in these fields must be (1) attending a recognized college or university, (2) full-time students in good standing and must continue to be so, (3) certified by the institution as competent and giving promise of successful completion of the course.

Scientific and Specialized Fields

The institution must certify that if the student continues his progress, he will be graduated on or before July 1, 1945, in one of the fields listed below: Aeronautical Engineers, Automotive Engineers, Bacteriologists, Chemical Engineers, Chemists, Civil Engineers, Electrical Engineers, Geophysicists, Heating, Ventilating, Refrigerating, and Air Conditioning Engineers, Marine Engineers, Mathematicians, Mechanical Engineers, Meteorologists, Mining and Metallurgical Engineers, including Mineral Technologists, Naval Architects, Petroleum Engineers, Physicists, including Astronomers, Radio Engineers, Safety Engineers, Sanitary Engineers, Transportation Engineers—Air, Highway, Railroad, Water. Graduate students in any of these fields may be considered for occupational deferment if they are also graduate assistants engaged in scientific research (certified by a recognized federal agency as related to the war effort) or instructing in classroom or laboratory in one of these fields for not less than 12 hours per week.

Preprofessional. A premedical, predental, preveterinarian, preosteopathic, and pretheological student may be considered for occupational deferment if (1) it is certified by the preprofessional institution that if he continues his progress he will complete such preprofessional course of study on or before July 1, 1945, and (2) if the recognized professional college certifies that he is unqualifiedly accepted for admission and will undertake professional studies upon completion of his preprofessional work.

Professional. Students who maintain good standing in medical, dental, veterinary or osteopathic schools may be considered for occupational deferment during the period of such professional course. Internes may be considered for occupational deferment for a period not to exceed one calendar year. A student preparing for the ministry in a theological or divinity school recognized as such a school prior to September 16, 1939, is exempt from training and

service under the provisions of the Selective Training and Service Act of 1940.

Agriculture, Forestry, Pharmacy, Optometry. A student in one of these fields will be considered for occupational deferment if the institution certifies that he has completed at least one-half of his undergraduate work and that if he continues his program he will be graduated in a number of months equal to the period of academic study which he has already completed.

Opportunity to Engage in Profession

Following graduation in any of these professional fields, or following an internship, a registrant should be considered for further occupational classification for a period not to exceed sixty days, in order that he may have an opportunity to engage in his profession in the armed forces, or in an essential civilian activity.

These remarks apply only to those already enrolled in a college or university. It is probable that most further training in Engineering, Medicine, Mathematics, and other special shortage fields will be available to students only through the Army-Navy College Training Programs. However, there will still be a number of civilians accommodated at various institutions throughout the country. The establishment of a Civilian Reserve Corps, mentioned earlier, would increase the number of students falling under this category.

The University of Wisconsin maintains an Occupational Deferment Bureau for the benefit of its students in Room 304, Law Building. The Bureau approves qualified applications, handles the relations of the university students with local selective service boards and gives advice to all students in need of it.

Students at the University who are going to the Armed Services by way of Selective Service may consult with a faculty military counselor, or with the Armed Services Representative, 123 Bascom Hall. A full account of the way in which the Army and Navy classify and assign their men is available to all interested students, and university documents relating to academic and extra-curricular achievements of inductees are available upon request. Advice on all problems relating to war service and training is obtainable at the Office of the Personnel Council, 123 Bascom Hall. Interested students or parents are urged to submit their problems either personally or in writing to the Personnel Council.

III. OPPORTUNITIES FOR COLLEGE TRAINED WOMEN

At present the main decision before every highschool girl is whether she should go immediately into a war job, whether she should take one or two years of college before applying for a job, or whether she should go to college with the serious intention of taking her degree. This problem depends entirely upon the indi-

vidual. The answer for the highly-gifted student is not difficult, as her talents can only be used to best advantage if she has not only college, but also, in many cases, post-graduate training. Also, there is a general concurrence of opinion that the above-average student might very well best serve her country by completing an accelerated college program, provided, of course, that she is taking courses which will help her fill the type of position left by the highly-trained men who have been called into active service.

If current estimates of the needs of the armed forces are to be met this year, it will mean that many thousands of men now in essential war industries will have to be replaced. Also, it is obvious that besides replacement in semi-skilled jobs, there will be an increasing demand for highly trained workers. The only reservoir of manpower to which Government and industry can now turn is to the girls and women who so far have not participated in the war effort. This places a heavy responsibility on every woman to decide what her abilities are, and where, with adequate training, she can best fit into this country's war program in all its phases—maintaining our civilian economy, carrying our role as the arsenal of democracy, and being an effective fighting member of the United Nations.

A recent trend seems to indicate that whereas industries formerly were recruiting girls from the freshman and sophomore classes in colleges, they are now, by and large, interested in recruiting seniors. The feeling seems to be that some background in liberal arts gives a girl maturity and judgment which makes her more useful no matter what field of work she may enter. A possibility for some students, therefore, would be to take one-half of the accelerated college program (1½ years) and then apply for one of the several specialized training programs now being offered by the Government and industry.

It should be constantly kept in mind that the emergency need for people trained in the general liberal arts course is as great as any need. The letters and science course offers invaluable practical training in breadth of view, flexibility of mind, and skill in learning new techniques, as well as teaching various skills. If we have tended to forget this, the experience of the war is waking us up. Leading executives and administrators are all telling us that they want women with a broad general education in letters and science to receive special training following this for their business or profession, either on the job or in courses after graduation.

A close examination of the fields listed in the following pages will show how many of them call for such liberal training. Many specify concentration in some particular field, such as economics or the sciences or mathematics. Others, and many more than are listed, allow for general training and can be very successfully entered by women with such apparently impractical majors as philosophy, history, literature.

The liberal arts course also continues to offer all its old values for civilization and must consider the needs and opportunities in the post-war world. And temporarily many of these must be carried

on by women alone while their brothers are in military work. The professional opportunities for students majoring in these fields include all the fields in which women normally work, such, to name a few, as general business, administrative and personnel work, editorial work, publishing, art work of various sorts, museum work, research, writing. Besides this the University has in mind such special fields as reconstruction work and business and professions involving contacts with foreign countries and knowledge of their language, literature, and life.

The following data are not intended to be all-inclusive, but rather to highlight certain areas wherein there is a considerable pressure for college trained womanpower, some of these areas being new and untraditional areas for girls. Because it has professional schools of recognized high standards, Wisconsin is able to give thorough training in many specialized fields. For further information or more comprehensive data either on any of the fields included below or on other fields not specially described, please write to the Dean of Women's office.

NURSING

"One nurse in four will be serving with the armed forces before the end of 1943". To meet national requirements for this year, 65,000 students should register for training. The quota set for Wisconsin last year was 1,287, but only 873 entered schools of nursing.

Our University School of Nursing is one of 80 school programs requiring one or more years of college. (There are also 1,220 hospital schools in the United States with an average three year program, and with high school graduation as the minimum requirement.) Students here may (1) receive a *certificate* by completing a minimum of one year in the University plus 27 months in Nursing School, or (2) receive a *degree* by completing three years in Letters and Science, with a major in some field other than nursing, then taking 27 months in nursing.

Katherine Faville, head of the National Recruiting Program, points out the necessity of having college trained nurses for service abroad during the war and to aid in the reconstruction work immediately following its cessation.

Openings:	Hospitals	Red Cross
	United States Public Health	Schools
	Army and Navy	Technicians
	Industry	Research

Scholarship and Loan Funds: Federal and private help is available. The American Committee for Nursing Scholarships has some \$20,000 to award. There is a bill before Congress at present to establish a "Student War Nursing Reserve". This will provide grants to nursery schools and scholarships which will cover tuition and subsistence during training. Women will enlist for the duration and six months after, to be used in the Army, Navy, public health work, or civilian hospitals. The estimated need for graduate nurses

in 1943 is 372,000, the number available is 259,000, leaving a deficit of 113,000.

For more detailed information, write to Miss Christina Murray, School of Nursing, University of Wisconsin; Miss Given, Bureau of Nursing Education, Capital Annex; or the Dean of Women's Office, University of Wisconsin.

PHYSIOTHERAPY

The following estimates of the needs in this field were made in February, 1943;

United States Army General Hospitals	2100
Civilian Hospitals	1584
Crippled Children's Schools	1682
Children's Bureau, United States Department of Labor	710

To cope with the existing shortage of trained therapists (the former source of the normal supply was graduates of accredited physical education or nursing schools), Wisconsin will offer a special six months course, starting next June. The requirements are: completion of two years of college work, which preferably includes some courses in physics and biology. Graduates of this special, intensive course will be certified by the Wisconsin Medical School to become apprentice physical therapy aids.

After six months apprenticeship service, graduates may become 2nd lieutenants in the Medical Department of the Army.

The Navy's Bureau of Medicine and Surgery has announced that it is planning to replace half of the hospital corps men now serving as physical therapy technicians with WAVES. (If a girl technician has a degree in addition to her therapy training, she may be commissioned as an ensign.) It is estimated that between 200 and 300 women graduates of approved schools of physiotherapy will be needed to replace corps men in Navy hospitals.

MEDICAL TECHNOLOGY

Wisconsin has a special course in this field whereby girls may receive their degree and at the same time be certified as laboratory technicians, to do technical work in laboratories of clinical diagnosis located in hospitals or private clinics. (The course is divided into 90 hours in Letters and Science subjects and 30 in medical technology.)

Because the more experienced technicians are being drawn into the Armed Forces from civilian hospitals, there is an increasing need for beginners. Wisconsin has requests for two to three times the number of its senior girls finishing in this course. Most of the requests have come from the following states: California, Illinois, Oregon, Washington, Wisconsin.

Students majoring in Bacteriology are also eligible for similar positions in the same institutions.

It is possible for a student to complete two years of college and then go directly to a hospital for the technician training course.

PHARMACY

To keep the State of Wisconsin adequately supplied with pharmacists, the University School of Pharmacy should turn out 45 candidates a year. Now, with the Armed Forces absorbing practically every newly certified male pharmacist, it is absolutely necessary that women fill this need completely for the next five years at least. It is imperative that at least 20 girls start to train for this field this year.

Even before the war, pharmacy was becoming an increasingly good and profitable field for women. In many cases they have proved better than men at prescription counters, and the growth of hospital pharmacies has opened an ever expanding area where they are preferred. Women pharmacists are on faculties of pharmacy colleges. They are in laboratories of pharmaceutical and chemical industries. For those who desire to have their own business, women will find especially favorable conditions in pharmacy.

PHYSICAL SCIENCES

1. *Physics:*

The American Council on Education reports (March 23): There are not nearly enough physicists in the whole country to meet the government needs at this time, especially in the fields of ballistics, electronics, radio, electricity, sound, optics, etc.

As this is a *radio war*, every course in physics should include study of the *fundamentals of radio*. (This may also be taken under the Extension Division at night.)

2. *Chemistry:*

In Washington there is particular request for those who have special training or experience in fields of essential oils, rubber, explosives.

3. *Geography:*

There is need for people to compile map data, to construct maps used in vital war work, and to prepare reports on the geography of foreign areas critically concerned in war or post-war plans (two courses in military cartography were offered this semester in the Extension Division, in addition to regular courses in the Department of Geography, for the United States Armed Forces.)

4. *Drafting:*

There is a present and an increasing shortage of draftsmen at all levels of skills and in various fields of specialization (this applies to industry as well as Government). The duties of a draftsman are to prepare clear, complete, and accurate working plans and detail drawings from rough or detailed sketches or notes for engineering or manufacturing purposes according to the specified dimensions; to make charts for representation of statistical data; to make finished designs from sketches; to utilize knowledge of various machines, engineering practices, mathematics, building materials, and other physical sciences to complete the drawings.

AGRICULTURE

In the field of Agriculture there have always been opportunities for women with training in Biochemistry, Plant Pathology, Agricultural Bacteriology, Dairy Industry, and Agricultural Journalism. Many of these now are in positions which deal directly with the war effort. In many cases, with men being called to service, the demand in these fields far exceeds the supply of women trained for these opportunities.

HOME ECONOMICS

Need for dietitians:

Universities that have approved courses for dietitians are asked to double the number now being trained in the field. The Army and the Navy need 1200 dietitians next year. A survey made by the American Dietetic Association shows that only 600 student dietitians will be available in the entire country as of June 1943. Only a part of the 600 will be available for government service because the needs of civilian hospitals must also be considered. Industrial mass feeding projects are draining off some of the available supply. This means that the University of Wisconsin should train from 40 to 50 young women per year as dietitians.

Need for teachers of home economics:

The University placed an average of 36 home economics teachers in Wisconsin in 1941-42 and 1942-43. The number of calls exceeded the number of home economics teachers available. A number of provisional certificates have been issued because the supply of certified teachers did not meet the demand. As a result of the shortage that now exists and the rapid turnover due to war activities, it is estimated that 50 home economics teachers should be placed by the University. Similar shortages exist in other states so that a number of home economics teachers will be enticed away from us.

Need for nursery school teachers:

War industries have recruited, and will continue to recruit, mothers with young children. If these children are not only to be kept off the streets, but are to be properly fed and clothed, the serious need for day-care nurseries in war industry areas must be met. The Lanham Act providing funds for group day-care of children and other types of extended services for school age children has increased the need for young women with nursery school training. It is estimated that there will be applications from public schools to provide services for at least 600 children in Wisconsin. It is essential that the number of women prepared for work in the nursery school be increased as rapidly as possible. It is estimated that 20 or more should specialize in child development. The University has recently established a major in this field.

Need for home agents:

The number of people trained in home demonstration work for the Home Economics Extension Service should be doubled. The federal food production program has increased the number of openings in this type of work. Seven students graduating in 1942 were placed in Wisconsin. Other federal programs such as the Farm Security Administration employ home economics students with similar training for home management supervisors. The growth in the Home Economics Extension Service and other federal programs increased the need for persons in this type of work.

Need for women training in institutional management:

The Office of Defense Health and Welfare Service is currently emphasizing the need for institutional management supervisors in industrial plants. The number of calls exceeds the number of people available. The government civil service requires trained dietitians in certain types of institutions where men are in training for the armed forces. These positions are being filled by persons drawn from civilian positions. The need for trained personnel in government services as well as in large educational institutions and other civilian dining services is acute. It is estimated that Wisconsin should be able to supply at least ten per year for this specialized field.

Need for trained personnel in business and government:

Business concerns employ a number of young women in test laboratories. The government is using most of the available silk, nylon and wool for military purposes and new types of fabrics are being provided for civilian uses. Both business and government agencies have increased testing facilities and personnel as materials have been shifted to new uses. A limited number of technical workers in testing laboratories are needed. A larger number of trained workers are used annually in the merchandising of textiles,

clothing, house furnishings and equipment, and in other phases of sales promotion. There is also a call for women trained in home economics and journalism.

SOCIAL WORK

Surveys have indicated that between 10,000 and 15,000 new workers in this field will be needed in the next year.

Registration in graduate schools of social work has rapidly decreased in the last year. Agencies, private and public, which have required this training are slowly being forced to substitute experience as a prerequisite. It is anticipated that within the next six to twelve months, experience will have to be eliminated or reduced considerably, and graduation from college accepted as a prerequisite. However, it is increasingly important that good candidates go on for graduate work in order to meet the demands for highly trained personnel which the war and post-war era make more imperative.

Good private agencies of the family welfare and child welfare type have been requiring graduate school training. Public agencies, employing public assistance workers under Civil Service required by Social Security Act, have not demanded graduate training. However, positions in this field are less in number because of the reduction in unemployment.

Wisconsin's Division of Public Assistance and State Department of Public Welfare have practically exhausted the more eligible persons from the State Civil Service list for county public assistance jobs. Although the case loads of the counties have dropped, there is still need of recruiting for reduced staffs because many of the workers are being drained off into other positions.

The Child Welfare Division of Wisconsin expects to need 30 to 40 child welfare workers within the next two or three years. It has currently been searching for an inservice training supervisor, a senior social worker, and two or three county child welfare workers.

Recreation:

The National Recreation Association reports:

"At the present time, because of the war emergency, there is a very unusual demand for trained and qualified recreation workers. A very large number have gone into recreation work under the Navy, Federal Security Agency, Federal Public Housing, U.S.O., Red Cross, United Seamen's Service."

There has also been an increase in the use of workers to provide programs for war industry employees.

CHILD DEVELOPMENT

A new major in this field which embraces courses in nursery school work, speech correction, child nutrition, child psychology,

or education of handicapped or exceptional children, has just been established at Wisconsin. Electives in these fields may amount to 44 out of 120 required for graduation. Faculty members teaching key subjects in the curriculum will provide consultation services to people from communities throughout the state. (All problems of the child, whether they concern physical welfare or personality adjustment and educational aspects of child development will be considered.)

Some job opportunities for students trained in this field are:

1. Clinical Psychology (State agencies or institutions).
2. Extension Specialist and Visiting Teacher (Child development and parent education).
3. Hospital or Clinic Positions (Dietetics and education in orthopedics, child nutritionist, physical therapy with children).
4. Nursery Schools (Day nursery, private nursery schools, public schools, public health, school health).
5. Research worker in Child Development.
6. Special School Positions (Adjustment teacher, school counsellor, remedial reading).
7. Teacher of Exceptional Children (Accelerated, retarded, defective speech, blind, deaf).
8. Teacher of Child Development and Parent Education.

TEACHING

Critical teacher shortages all over the country have already led to such stringent measures as closing of schools or reducing the standards to the point where high school graduation has been accepted as training. At the close of the present academic year, about 275 graduates will receive the University teacher's certificate. During the preceding year the University teacher appointment office received calls for more than 1300 teachers.

PHYSICAL EDUCATION

Need for teachers of physical education in schools and recreational centers:

The demand for women who are trained in physical education is growing rapidly and is a need which cannot be met unless more students enter the training courses. The awakening of the American people to the necessity for physical fitness has greatly expanded physical education programs in all communities and schools.

There are 25 students in the class to be graduated in physical education from the University in 1943, but requests for teachers received by the department from colleges, universities, and public and private schools numbered 230 in 1942. The number this year will be greatly increased because women will have to teach classes in physical education for boys as well as girls in many public schools during the war.

Requests for teachers of physical education also came from athletic clubs, Y.W.C.A., settlement houses and recreational centers, bringing the total number of requests to the university in 1942 for teachers of physical education to 325, a number nearly equal to the entire number graduating from the department in the past 10 years. This number of requests was nearly double the number received in 1941. These calls for teachers of physical education who were graduates of the university came from 39 states.

Need for women with physical education training in the war services:

More than thirty graduates of the university who received degrees in physical education are now in the WAVES, WAAC, SPARS, U.S.O. centers and the Red Cross. Five of the Red Cross workers are with the armed forces abroad, one is in Iceland. Each day brings more urgent requests from the Services for women with physical education training to lead and direct recreational programs and to assist in the development of physical education programs for enlisted personnel in the Services. These needs for physical education training likewise cannot be met unless many more students enter training schools.

LIBRARY WORK

The estimated shortage in this field was 1000 to 1500 for the end of 1942. Not only are librarians needed in public and school libraries, but there is an ever increasing demand for civilians trained in this field in Army camps and Naval stations all over the country.

Additional requests come from industry. Many large banks, insurance, and scientific organizations have their own "special libraries." Combination requests come for girls trained in science, or secretarial work, and some library courses.

The Wisconsin University Library School has obtained outstanding recognition in the United States. Even during the three years before the present war emergency, it placed its graduates 100 per cent.

JOURNALISM

A recent national poll of small daily newspapers in the United States revealed a current shortage of 2,187 persons, including both news and business departments. It was anticipated that this figure

would be 4,000 by fall. And employers were interested only in women as replacements because of the draft issue.

A survey of weekly newspapers indicated a current lack of 1,500, with expectations that this would reach 2,000 by fall.

Local bureaus of the United Press and International News Service have been willing to employ girls, although the Associated Press has to date not let down the bars. As long as the war lasts, girls are likely to be in demand for everything from reporting to copy reading and production.

BUSINESS OPPORTUNITIES

A. INDUSTRY:

In large manufacturing plants, work demanding college women seniors is typified by the following requests from a large Chicago company:

1. General business and statistical work—We continue to have openings for girls in our various Accounting and Business Research branches who have a background of accounting, statistics, and business administration.
2. Counseling—This job entails direct contact with shop workers and their supervisors. Girls who are doing this work must have majored in the social sciences, preferably with the emphasis on clinical and practical psychology. They should be girls who enjoy working with people and who are emotionally mature.
3. Production Control—This work demands primarily courses in economics and commerce. Girls who have studied production procedures, industrial relations and personnel, are well equipped for this field. They should like to work with figures, although an intensive mathematical background is not necessary. Ability to operate any of the business machines, such as the typewriter or the comptometer, is helpful. Good judgment and mental and emotional stability are necessary, as these jobs are directly concerned with government orders and the pressure involved is considerable.
4. Time and Motion Studies and Piece-Rate Analyses—This is a new field for women. However, we are anxious to hire women for this work who have had a background of mathematics and time and motion work. Girls for this job should be aggressive and, again, able to stand pressure. Any courses in physics and engineering would be extremely useful.
5. Engineering—This in another field only recently available to women and, again, we are most interested in obtaining girls with a college background who have taken engineering

courses. We are able to offer work to girls who have majored in mechanical and electrical engineering. As we are a purely manufacturing organization, we do not have as much to offer chemical engineers as our interests lie primarily along the mechanical and electrical lines.

6. Radio Inspection—We have recently employed a number of college graduates who have majored in mathematics and physics for technical and radio inspection and we are eager to obtain more women with this background. Women are rapidly taking over many of the men's jobs in this field and are proving highly successful in their work. This is primarily defense work and girls who have a physical science background are finding this job very stimulating.

As in Federal Government, there is an increasing demand in industry for technicians and scientific workers in almost every field. Besides the electrical industry, there are positions to be filled in rubber companies which are working with rubber substitutes, oil refineries which are also experimenting with certain synthetic rubber formulae, chemical companies which are doing research in plastics, etc.

Perhaps the single largest demand (outside of the clerical field) from industrial concerns and government ordnance plants is for girls trained to do chemical analysis and testing in laboratories. These demands can often be filled by girls who have completed two years of college training which has comprised 15 credits of chemistry, including quantitative analysis.

Training Programs

Indicative of the need for college girls in technical and assistant engineering fields are the training programs which have been set up within the last 6 months by several of the large aircraft corporations and radio concerns.

These programs range from specialized courses of 8 weeks to 10 months. All expenses are paid by the companies and approximately \$10 to \$25 per week paid to students while in training. Some of these programs demand four years of college, others two years. The emphasis is generally on mathematics and/or chemistry, physics, engineering. Upon completion of the training programs, students are offered jobs by the company which has trained them (average salary \$150. per month to start). Most of these companies offer continuous chance for development and continued opportunities after the war for girls who do a good job.

B. BANKING:

New fields in credit, investments, and economic research, as well as supervisory positions are now open to college girls, in large banks. Women are also filling the jobs of tellers and other posts of responsibility.

Some banks have a formal training program for girls with college training which starts them out in a department where they must become acquainted with all the correspondence, executives, and business associates of the firm. Others place individual girls immediately in the department where they will work, under the tutelage of an expert in the field. Some background in accounting, economics, or mathematics is desirable.

C. INSURANCE:

Here, too, training is the keynote. College girls are put through a six-weeks schooling period in the home office of the company. Their carfare is usually paid to this town and their salary begins at once. Candidates serve a 3-month probation period after their training, in the field.

The specific work for which they are trained consists of:

1. Claims adjusting—involving first hand investigation of casualty insurance claims, which demands girls who can gain confidence of others at once and who have sound business judgment.
2. Underwriting—consists of acquiring background and ability to make sound evaluations of the risks a company agrees to assume.

D. TRANSPORTATION:

1. Airlines. It is estimated by the Office of Defense Transportation that women will soon comprise 40% of the airlines personnel. College girls are now being trained to be Traffic Controllers at airports and airways. The duties of such positions are exacting and responsible, being directly related to the safety of human life. College girls are also trained as Reservation Agents, Stewardesses, and Dispatch Clerks. One company has a woman traffic manager in San Diego.
2. Railroads. Girls with a minimum of 2 years of college will be trained as stewardesses. In certain sections of the east they have been trained as ticket agents. There is a continuous demand for good secretaries.

E. UTILITIES:

1. Gas and Light Companies request college girls with training in commerce, business administration, and mathematics for positions in accounting and general clerical fields. Again a

training program (with salary approximating about \$115 per month) is the starting basis, girls then being placed in a company according to their interest and ability. These companies also offer opportunities in their home economics demonstration departments for girls trained in Home Economics.

2. Telephone companies. In large cities telephone companies want college girls to train as "Service representatives". After instruction in all the departments, these girls are assigned a number of individual customers to whom they act as personal representative of the company. Company supervisors are later chosen from this group.

STATISTICS

It appears there will be a steady demand for people with training in one or more branches of statistics, particularly in the field of price analysis. In general, there is need for people to plan procedures and techniques for the solution of statistical problems, and to devise formulas for the reduction of data; analyze quantitative statistical material in such fields as money, labor problems, marketing, and agricultural problems; select methods of presenting information and make charts, diagrams, tables or graphs for analysis and presentation; search out and condense data; type reports and summaries. A statistician must possess a thorough knowledge of mathematics through analytical geometry and at least the elementary field of economics.

U. S. GOVERNMENT—FEDERAL CIVIL SERVICE

3,000,000 federal workers is the current estimate as against 917,000 in 1918. Only about ten per cent of this number function in Washington. If peace does not come before July 1944, it is expected that the total will reach 3,750,000.

The chief source of recruitment at the college level is via the *Junior Professional Assistant* examination. Any senior who is within a semester or last term of graduation from college may take the examination. However, the following majors are particularly in demand now: Economics, History, Public Welfare, Statistics, Mathematics, Agriculture, Economic Geography, Public or Business Administration, Library Science. The salary is \$2,000 plus overtime for a standard workweek of 48 hours. Applicants with majors in such fields as English, Language, Music and Education are in limited demand for professional positions but may be certified readily for clerical positions paying \$1,620 or \$1,800.

Following are some of the typical positions:

Junior Administrative Assistant:

Duties: Appointees will act as "leg-men" for high grade administrative assistants. Many such positions are part of training program for future government administrators and incumbents receive assignments in the various operating divisions of the agency and also in the various staff units such as personnel, fiscal, purchasing, planning, etc. Qualifications: Background in public administration.

Junior Editorial (Information) Assistant:

Duties: Appointees will gather information, write articles and press releases, edit manuscript, etc. Qualifications: A background in English and Journalism is desired. A course in the operation of the federal government is helpful.

Housing Apprentice (\$1,620):

Duties: Appointees will learn the various aspects of the administration of public housing projects for low-income groups such as maintenance of premises and equipment, site planning, budgeting and fiscal management, tenant selection, sanitation and health, education, recreation and group activities. Qualifications: Courses in economics, public administration, and sociology are desired. Less emphasis is placed upon courses than on personality factors of an applicant, including "trainability" and interest in the public housing field as a career.

Junior Engineer (\$2,000):

Qualified women are urgently needed in the fields of mechanical, electrical, industrial, aeronautical, and marine engineering, and naval architecture. Requirements are a college degree with major in astronomy, chemistry, geology, mathematics, physics, or engineering sciences, with at least six semester hours in strictly engineering subjects.

Junior Physicist (\$2,000):

In both Government and industry, the most critical manpower shortage exists in the field of physics. In the Government physicists are employed chiefly in the Bureau of Ships of the Navy Department, National Bureau of Standards of the Department of Commerce, National Institute of Health, Bureau of Home Economics,

Food and Drug Administration, Bureau of Plant Industry, Bureau of Standards. Requirements for Junior physicist is a college degree with a major in physics.

Junior Meteorologist (\$2,000):

The U. S. Weather Bureau is looking for people to fill these positions and they are urging women to train and apply. They require a college degree, including mathematics through differential and integral calculus, twelve hours of physics, six hours in synoptic and dynamic meteorology. Also they are sponsoring two training courses for these positions. The first is sponsored jointly by the Weather Bureau and the Civil Aeronautics Administration: (1) Scholarships providing free tuition and subsistence. Requirements are a private pilot's license; at least two years of college with a minimum of two semesters of calculus (one of differential and one of integral), and at least two semesters of general physics. (2) Tuition-only scholarships are provided for girls with the same educational background but without a pilot's license.

A major in practically any of the sciences will qualify for positions as junior scientist. The sciences most in demand are physics, mathematics, geology, geography, astronomy, chemistry, and metallurgy.

Other federal positions not requiring degrees but some college training and urgently in need of personnel are:

Technical and Scientific Aid:

Appointees will perform sub-professional technical and scientific work in the following optional branches: radio, explosives, chemistry, physics, fuels, metallurgy. The demand for personnel far exceeds the supply, particularly in physics and metallurgy. Positions are located in Washington, D. C. as well as throughout the country. Some of the agencies in Washington which are urgently in need of persons qualifying under this announcement are the National Bureau of Standards, National Institute of Health, Bureau of Mines, Bureau of Plant Industry, Bureau of Home Economics, Navy Department. Outside of Washington they are needed by the War and Navy Departments, arsenals and ordnance laboratories, and by the various regional laboratories of the Department of Agriculture. Women are particularly needed who have completed 2 years of college work with courses in mathematics, at least through trigonometry.

Engineering Draftsman:

Draftsmen are needed in all fields, including aeronautical, automotive, mechanical, radio, ship, statistical, topographic, general. Re-

quirements: Enrollment or completion of a college course in drafting, or a war-training course in engineering drafting, or a thorough drafting course requiring actual classroom work in a drafting school, or at least three semesters of training in drafting in high school, or six-months of full-time paid drafting experience.

Junior Inspector-Trainee (Ordnance Material):

As trainee in the capacity of Under-Inspector of Ordnance Material, appointees will receive training and instruction in the fundamentals of inspection of ordnance materials to determine compliance of such materials with technical specifications. Education: two years of college which includes 6 hours of each of the following: chemistry and/or physics, and mathematics including trigonometry. Training course: for appointee will be at a college selected by the employing Ordnance District, or at the ordnance plant itself. The course will involve full-time study (8 hours a day, 5 days a week) for a period of three months. After training, successful appointees will be reclassified as Junior Inspector (salary changed from \$1440 to \$1620). The Ordnance Department requires the appointees to sign a statement indicating that it is their intention to remain in the service for a minimum of two years.

Junior Occupational Therapy Aid (\$1620):

While requirements call for a minimum of two years of college, with 9 semester hours in trade and industry, or arts and crafts, and one year of experience, the Commission urges applicants who have had some courses in this field to apply even though they do not meet all requirements. They may be considered for certain positions because of the shortage of fully qualified personnel.

In addition to the above, there are numerous positions in the clerical field: stenographic, statistical, machine operators, bi-lingual stenographers, clerks, typists, etc.

ARMED FORCES

WAAC, WAVES, SPARS, MARINES—all are relying on young college trained women to fill the officer berths in their expanding units. Present directives provide for senior girls being enlisted and placed on inactive status until they graduate. No specific college program is required—in general a well rounded background which will equip candidates for adjustment to specific activities is desired. While the WAAC at present is an auxiliary, not technically in the Army, the WAVES, SPARS, MARINES, are a part of the Navy, Coast Guard and Marines. The list of positions wherein these

women will replace men expands almost weekly, ranging now from aerographers to woodworkers.

WAAC (Age 21-44):

1. Members may serve either in the U. S. or overseas, have the widest range of work activities of any of the women services.
2. There is no stipulated education requirement. All candidates must enter as auxiliaries and receive 4 weeks basic training. Potential officers will then be chosen from the ranks and be sent to Officer Training School. On the basis of aptitude tests, others will be sent to Specialist Schools.
3. WAAC is organized by companies and sent out to camps and bases in command units under their own company officers (many leaders to serve as company officers are needed).
4. Training Schools:

General & Officer—Fort Des Moines, Iowa; Daytona Beach, Florida.

Radio Operators & Mechanics—Kansas City, Mo.

Mess Management—Fort Riley, Kansas.

Ordnance—Camp Holabird, Baltimore.

Administration—Fort Washington, Md.

WAVES, SPARS (Age 20-49):

1. Candidates may apply for Officer Training in the beginning. To qualify one must be a college graduate or have 2 years of college and 2 years of work experience considered valuable.
2. Candidates for the WAVES must have had a minimum of 2 years of mathematics either in high school or college. This is not required of SPARS.
3. Those who fail to receive commissions after 3-months officer training may return to civilian life or enlist in the ranks.
4. Proportion of those in the WAVES for whom technical knowledge is important is somewhat larger than in the WAAC.
5. Many WAVES and SPARS will be working singly or in small groups, distributed through various activities of shore bases and offices of the Navy.

6. Training Schools:

Officer—Smith College; Mount Holyoke College.
Indoctrination ("Boots" Camps for enlisted)—Cedar Falls,
Iowa; Milledgeville, Ga.; Hunter College, New York.
Special Training—Wisconsin—Radio Operators.
Indiana—Storekeepers.
Oklahoma A & M—Yeomen (clerks, stenographers, etc.).

MARINES (Age 20-50):

1. Newest to be organized. Will use same schools as WAVES and SPARS.
2. Training period varies from 2 to 6 months.
3. For final technical training in certain fields, candidates may be assigned to one of the big Marine or Naval training stations.
4. Approximately 9,000 women will be assigned to aviation ground force.

STUDENT PART-TIME WORK

Girls interested in earning part of their college expenses while attending college, may secure the following positions from the Student Employment Bureau on the campus:

Stenographers	Care of children
Laboratory technicians	Preparation of meals
Clerks	Housework
Waitress work	Linotype operators (if experienced)

This year the demand for the above personnel far exceeded the supply available. In summer, students are also wanted for all types of work in canning factories, resorts, camps, etc.

Interested readers of this bulletin will realize that the information contained here is of May, 1943, and that both military and civilian programs are in process of change. The University of Wisconsin will of course adjust its curriculum and its student personnel program accordingly, and up-to-date information will always be available in the Office of the University Personnel Council, 123 Bascom Hall.

Interested readers of this bulletin will realize that the
to be a new combined party is a fact and the fact that
and citizens throughout the are in process of doing. The
of America will be a new party as a result of
in which the united people of America will be
information will always be available in the Office of the U.S.
Public Information Service, U.S. Department of State.

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L E McCutcheon

Ext