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College of
Home Economics



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College of Home Economics

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College of
Home Economics

UNIVERSITY OF MINNESOTA

How To Use This Bulletin

This bulletin is the basic source of information about the College of Home Economics. Keep it at hand for repeated reference.

Section I gives general information about the college.

Section II contains program descriptions and curricular requirements.

Section III describes courses open to undergraduates and to adult special students. For graduate courses, only titles are given—descriptions are found in the *Graduate School Bulletin*.

Section IV lists the faculty.

You will also need to refer to the *General Information Bulletin*. This and other bulletins referred to in the text are available at the information booth in Morrill Hall, in 130 Coffey Hall, or may be obtained by writing to the Office of Admissions and Records, University of Minnesota, St. Paul, Minnesota 55108.



College of Home Economics

I. GENERAL INFORMATION

Rapid change has characterized the 1970's. Resources long taken for granted are becoming scarce, and the search for alternatives is on. Roles of males and females have become blurred. New life-styles and family patterns are evolving, and individuals are attempting to adapt to these modifications.

Throughout history, people have been eager to understand themselves and the world in which they live. But only less than a century ago did they begin to apply the methods of empirical science to their efforts to understand the complex relationships between individuals and social systems.

The role of the College of Home Economics is to help students understand the nature and process of social change, and the effect of social change on people and their near environment. Programs rest upon a firm research base and draw from the many disciplines that deal with human growth and behavior.

Current teaching programs are a far cry from the college's first 2-week lecture course on the principles of economy and cookery, offered in 1884. This first response to the demand that home economics address itself to the pressing needs of the people was well received; the course attracted more than 1,000 students.

The program grew rapidly, and in 1897, the School of Agriculture admitted women into specialized courses in home economics. A college program in home economics was instituted in 1900, and its first graduate (in 1904) later became head of home economics at a leading midwestern institution.

Undergraduate enrollment in the College of Home Economics has almost doubled in the past 10 years, and the current population of nearly 1,300 students has necessitated building expansion. The newly enlarged home economics facility consists of two existing buildings connected by a striking contemporary addition which serves to unify the entire complex. Research in foods, nutrition, and food science has been concentrated in the expanded and renovated Food Science and Nutrition Building.

Although home economics always has recognized the importance of strengthening the family and maintaining a positive home environment, today its contacts reach out into industry and business, government agencies, and other units of society dealing with nutrition, housing, clothing, and the environmental aesthetics in the many settings of people's daily activity. Teaching, research, and extension programs in the college are geared to meet the demands of a changing, contemporary society.

Curricular Philosophy

A dynamic field of study, home economics presents challenging opportunities in a broad variety of areas—from those rooted in the arts to those in the sciences. Based on the assumption that home economics is essentially problem-oriented and draws on various areas of expertise in analyzing problems or needs of a specific nature, the curriculum in the College of Home Economics has been organized into programs, each focusing on a major interest area. The faculty of each program is composed of those contributing to that area.

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Programs are structured to bring information from several disciplines to bear upon problem areas. They provide great flexibility—where student and adviser can make choices to respond to individual student needs and interests. The range of programs permits the college to serve those wishing highly specialized or focused programs, and those seeking general home economics background.

The college currently offers 15 undergraduate programs (including three options in Home Economics Education) to accommodate students with various personal and professional goals:

- Consumer Food Science
- Costume Design
- Family Relationships
- Fashion Merchandising
- Food Science and Technology
- General Design
- General Home Economics
- Home Economics Education:
 - Consumer-Homemaking
 - Family Life
 - Home Economics Occupational Education
- Hospitality and Food Service Management
- Housing
- Interior Design
- Nutrition and Dietetics
- Textiles and Clothing

For students with a special interest in work with youth, a sequence of courses coordinated by the Center for Youth Development and Research has been designed to augment the above programs as well as others within the University.

The curricula in home economics education are offered jointly with the College of Education.

The individual courses that make up the various programs are offered by subject matter departments. The departments also provide the working base for the faculty members involved in the programs.

Audiotapes describing the college's programs are available in 68 McNeal Hall.

Degrees Offered

Baccalaureate Degrees—Programs in home economics all lead to the bachelor of science degree.

Postbaccalaureate Degree—The College of Education offers the master of education degree to students graduating from an advanced professional program. For information about this program, see the *College of Education Bulletin*.

Graduate Degrees—The graduate faculty offers the master of arts, master of science, and the doctor of philosophy degrees through the Graduate School. For information about these programs, see the *Graduate School Bulletin*.

Admission to the College of Home Economics

Your application to a program in the College of Home Economics is handled by the Office of Admissions and Records, 130 Coffey Hall, University of Minnesota,

Admission to the College of Home Economics

St. Paul, Minnesota 55108. See the *General Information Bulletin* for details about application procedures, including what forms to use, deadlines, and related information.

To be accepted for admission you must meet requirements as listed below for the admission category appropriate to you.

Freshman Admission—If you graduated in the upper 50 percent of your high school class and completed 12 units in grades 10-12 you may be admitted. The high school courses must include 3 units in English and 1 unit each in elementary algebra (accepted if taken grade 9), plane geometry, and higher algebra. Nine of these units should be in English, social studies and history, mathematics, natural science, and foreign languages.

Your ACT or PSAT scores are also required.

Admission With Advanced Standing—To transfer to the University of Minnesota after completing course work at another collegiate institution, you must apply for admission with advanced standing. Your previous college record—courses taken, credits earned, grade point average—is considered in making the admission decision. Your course work will be evaluated in relation to the specific undergraduate program you intend to enter. See the *General Information Bulletin* for more information on advanced standing admission and transfer credit.

If you are planning to start your college career elsewhere with the intention of later transferring to the College of Home Economics, program descriptions and curricular requirements presented in Section II of this bulletin should help you select appropriate courses so that the maximum number of credits are accepted when you transfer. For further assistance, write directly to the Central Advising Office, College of Home Economics, University of Minnesota, St. Paul, Minnesota 55108. You may also arrange to meet with an adviser in the program area of your choice.

Change of College Within the University—To enter the College of Home Economics after being admitted to another unit within the University, apply for change of college through the Office of Admissions and Records of the campus in which you are currently enrolled. You should apply as far in advance as possible of the quarter you wish to transfer. By calling the director of student personnel in the College of Home Economics you can make a registration appointment with an adviser from the central advising staff. Registration dates for students who transfer colleges within the University are the same as those for presently enrolled students.

Admission as an Adult Special Student—If you wish to register for particular courses to meet special needs rather than to pursue a degree, you may be admitted as an "adult special" student. Usually such students are 24 years of age or older or already hold a Bachelor's degree. Apply through the Office of Admissions and Records, 130 Coffey Hall, University of Minnesota, St. Paul, Minnesota 55108.

Students admitted to, and registered in, the Graduate School may transfer to their graduate program only the credits earned in their first academic quarter or summer term as an adult special. Such work must be graduate level and must be taught by a member of the graduate faculty, and students must complete the work required of graduate students in the courses. The transfer is accomplished by including the courses on the proposed degree program.

Admission to Graduate School—Refer to the *Graduate School Bulletin*.

Admission to Summer Session—Refer to the *Summer Session Bulletin* and/or the *General Information Bulletin*.

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Admission of Senior Citizens—Minnesota residents age 62 or older are admitted to all University of Minnesota classes on a space-available basis after all tuition-paying students have been accommodated, provided they have completed specified prerequisites. If a course is taken for credit there will be a fee of \$2 per credit. If a course is not taken for credit there is no charge, unless materials or other special fees are involved. Eligible persons should check with Charles Dahl, 130 Coffey Hall, for information.

Human Rights—The Board of Regents has committed itself and the University of Minnesota to the policy that there shall be no discrimination in the treatment of persons because of race, creed, color, sex, or national origin. This is a guiding policy in the admission of students in all colleges and in their academic pursuits. It is also to be a governing principle in University-owned and University-approved housing, in food services, student unions, extracurricular activities, and all other student and staff services. This policy must also be adhered to in the employment of students either by the University or by outsiders through the University and in the employment of faculty and civil service staff.

The University of Minnesota abides by the provisions of Title IX, federal legislation forbidding discrimination on the basis of sex, and abides by all other federal and state laws regarding equal opportunity.

Expenses and Financial Aids

The *General Information Bulletin* carries current fee information and explains the overall financial aids picture at the University.

When applying for financial aid, state that you are a student in the College of Home Economics since several scholarships administered through the Office of Student Financial Aid are available only to students in this college. Recipients of these scholarships are selected according to academic aptitude, vocational promise, personal attributes, leadership, and, in most but not all cases, financial need.

International Student Exchange Scholarship Program—All undergraduate and graduate students are eligible to apply for one-year scholarships to study in universities in Berlin, Malaysia, Nigeria, Norway, and Uruguay. The scholarships cover all costs of the student except those of round-trip travel. Applications are available every fall quarter. For further details about the program, contact the International Student Adviser Office, 719 East River Road, Minneapolis, Minnesota 55455.

Registration

The first obligation of the student is proper registration. Upon selecting specific courses for the coming quarter and paying fees, the student is considered to have a contract with the University whereby the individual colleges concerned agree to make certain instruction and other facilities available to that student. Errors, late registration, failure to observe established procedures, or excessive changes in registration not only cause an imposition on others, but are costly and time-consuming for the individual.

The days, hours, and places of meeting of classes are contained in the *Class Schedule* which is published just before the registration period each quarter. Students should check the *Class Schedule* for course prerequisites, limitations on enrollment, and special registration procedures (see below).

Students who miss opening classes may lose their places in the courses for which they are registered.

HOW TO REGISTER

New students (freshmen and new advanced standing) are sent information about the orientation-registration program planned for them. Detailed instructions are issued with registration materials. Much of the inconvenience often associated with registration can be avoided by carefully reading these instructions. Personnel in the college office will try to answer any questions students may have. Audio tapes explaining the registration process are available for listening in 68 McNeal Hall. For continuing students and students transferring within the University, the usual steps in registration are as follows:

1. Obtain registration materials, including the registration permit, from 32 McNeal Hall. Students in the process of transferring from another University of Minnesota college obtain their registration permit from the college they are leaving.
2. Plan a tentative course program. This must be approved and signed by the adviser.
3. Reserve class places in 130 Coffey Hall. Enrollment in many courses is controlled. The titles of controlled enrollment courses are listed in boldface type in the *Class Schedule*. Class entry cards must be obtained at this time for controlled courses. Courses listed in the *Class Schedule* in lightface type are not controlled and do not require entry permits.
4. Turn in registration materials at 130 Coffey Hall in exchange for a fee statement. The fee statement shows the deadline for payment without late fee penalty. Paying fees by mail is often more convenient than doing so in person.
5. Pay fees. See the *General Information Bulletin* for information about fees and expenses.

Working With Your Adviser—Your faculty adviser approves your course selections, follows your academic progress, and offers assistance in other aspects of your collegiate career. You will work with a central adviser until you have satisfactorily completed about 45 credits and have selected a major. Pre-home economics education students remain with a central adviser until joint registration with the College of Education has been approved. Transfer and advanced standing students work with a central adviser during initial registration or until all transfer credits have been evaluated and special requirements met.

Students are then assigned to an adviser in their program area by the head of the department most closely related to their particular program. Transfer or advanced standing students are assigned a faculty adviser in the major, usually during their first quarter in the college.

It is important that you take the initiative in keeping your adviser informed of your academic progress. Before meeting to approve your registration you should develop a tentative program for the quarter using the curriculum requirements and course descriptions in this bulletin and the *Class Schedule*.

Auditing Courses—You may find that sometime you might wish to register for a course as an auditor rather than take the course for credit. To do so, you must enroll officially in the course and pay the same fee that is charged for regular registration in the course. You must have the approval of your adviser, the instructor, and the Student Scholastic Standing Committee. As an auditor you will not complete course assignments or take examinations nor will you be given a grade or credit for the course.

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Extra Credit Registration—There may be times when you would like to work independently and do extra work in a course and receive additional credits (from 1 to 3) for that work. Extra credit registration is designed to provide you the opportunity for more intensive study of a topic in the regular course or an extension of your study to a closely related topic. Extra credit registration can be arranged concurrently as you study for the regular number of credits offered for a course, or extra work may be arranged after you have taken the course for the regular number of credits. This special registration requires approval of the instructor. The usual regulations concerning fees, grades, and cancellations apply.

To register for extra credit, pick up a permission slip at the college information desk for the instructor to sign. Turn in the permission slip with your other registration materials. Registration for extra credit should be designated by an "X" after the course number; e.g., HE 1001X.

Independent Study Registration—To encourage self-directed learning, certain courses in the college may be taken under independent study by following a course without attending classes. Independent study courses count in your credit load, and carry the usual fees. You are expected to take the final examination if one is required, at the regular time (or at a time set by the instructor), and to meet deadlines for any other required work. The usual regulations concerning grades, incompletes, and cancellations apply.

To register for independent study, pick up a permission slip at the college information desk and have it completed in the office of the department offering the course. In some cases you may also have to confer directly with the instructor for permission to register for independent study. Turn in the permission slip with your other registration materials. Independent study registration should be designated by a "Y" after the course number; e.g., HE 1001Y.

FORMS TO FILE

Home Management Laboratory—If your program requires FSoS 1263—Family Management and Interpersonal Relations Laboratory, FSoS 3263—Home Management Laboratory, or FSoS 3264—Home Management Practicum, you must file an application no later than the third quarter of your junior year indicating possible times when the course can be scheduled.

Applications for FSoS 1263, 3263, and 3264 are available from the college office. A \$10 deposit, payable at the Family Social Science Department office, must be submitted the quarter preceding registration in the course. This deposit confirms your place in the course.

Collateral Field or Area of Emphasis—If your program indicates a requirement for a collateral field or area of emphasis, you should, upon completion of 90 credits:

1. Obtain a form from the college office for listing courses that will comprise the collateral field or area of emphasis.
2. Identify the specific courses you wish to include with one or two alternates in the event that one of the courses cannot be scheduled. The courses identified on the collateral form become part of your graduation requirements.
3. Arrange a conference with your adviser for the approval of your collateral field. Approval must also come from the program chairperson who will forward it to the Office of Admissions and Records for final recording.

CHANGES OF REGISTRATION—CANCEL/ADD

During the first week of the quarter you may add a course with the approval of your adviser, unless the course has been listed as closed in which case you will also need the instructor's approval. After the first week and through the second week of the quarter you need the approval of your adviser, the instructor, and the Student Scholastic Standing Committee.

You can cancel a course without grade during the first 6 weeks of the quarter with your adviser's approval. After the sixth week you need the approval of your adviser, the instructor, and the Student Scholastic Standing Committee.

If you make any changes in your course schedule after initial registration a Cancel/Add slip must be used.

Canceling Out of College—If you find it necessary to leave the University entirely before the end of a quarter, you must go to the Office of Admissions and Records to cancel your registration. Cancellation within the first 6 weeks of a quarter entitles you to a refund prorated to the amount of time you attended class. If you do not attend classes at all, you are entitled to a full refund.

Credit

Credit Load—The average work load is 15-17 credits per quarter. If you are employed or have other outside commitments, though, you may need to plan a lighter load. You must carry a minimum of 12 credits per quarter to be classified as a full-time student. To take more than 18 credits a quarter you must have a C average (2.00 GPA). To carry more than 21 credits you must have a B average (3.00 GPA) in the work of the previous quarter and must secure permission from the Student Scholastic Standing Committee.

Credit From Extension Classes—You may transfer credits and grades for courses taken through the programs of Continuing Education and Extension of the University of Minnesota to your degree program. Make your request through the Office of Admissions and Records, 130 Coffey Hall.

Credit by Special Examination—You may earn credit for many courses without formal registration in them by satisfactorily completing special examinations. The University considers both credit and advanced placement based on test scores from the College Level Examination Program (CLEP). Apply to take the CLEP tests at 101 Eddy Hall, Minneapolis Campus. The college faculty accepts grades above the 75th percentile in the CLEP English examination for fulfilling the Rhet 1101 requirement in its undergraduate programs. Credits earned in the CLEP Humanities examination may be applied toward the Council on Liberal Education all-University requirements in Category D, Artistic Expression.

Petitions and Exemptions

Petitioning—If you need to request a departure from usual procedures and regulations you must complete a petition form available at the college office. Consult your adviser about writing the petition and for approval. The Student Scholastic Standing Committee grants final approval of petition requests. Questions about the process should be brought to the coordinator of undergraduate programs.

Student Scholastic Standing Committee—The Student Scholastic Standing Committee in the College of Home Economics is composed of seven faculty

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members and two students. The committee interprets and enforces faculty policy concerning academic regulations and requirements. It may exempt individual students from regulations that work to the student's educational disadvantage, provided the basic spirit of the regulation is maintained. The committee also makes final decisions in evaluating transfer credits in light of the aims of the college and the requirements of the various curricula. Students with questions about the application of faculty regulations may discuss them with their adviser or at the college office. When a departure from normal procedures seems valid, students may petition this committee to request an adjustment in their program. Petition forms are available at either the College Office, 32 McNeal Hall, or the Office of Admissions and Records, 130 Coffey Hall.

College of Home Economics Appeals Committee—When you have problems or questions, your adviser, the program faculty chairpersons, department heads, members of the Home Economics Board, or personnel of the college office are good sources of information and support.

Should you ever encounter a situation where it appears that the instructor is not fulfilling academic responsibilities in an appropriate manner, or another aspect of the college program appears to be in question, you may wish to carry your concern to either the College of Home Economics Academic Freedom and Responsibilities Appeals Committee or the College of Home Economics Student-Faculty Complaints Committee. These groups, comprised of faculty and student members, are organized to work with those incidents or situations that cannot be handled through usual channels. Check with the college office if you need more information.

Grading System

The University has two grading systems available to students: the traditional letter grade system (A-N) or the satisfactory-no credit system (S-N). When you register you must choose how you want your performance in a class to be evaluated.

Under the A-N system satisfactory completion of a course is indicated by the grades A, B, C, or D. Students whose work is below the D level receive an N (no credit); F grades are not used. For computation of grade point average (GPA), an A = 4 grade points, a B = 3, a C = 2, and a D = 1.

The S-N system is designed to allow students to explore a greater variety of course work while freed somewhat from the pressure of grades. Under this grading system instructors determine their own criteria for satisfactory work in a course. The S is not tied to any letter grade equivalent of the A-N system. Under the S-N system S stands for "satisfactory" and N for "no credit." S and N grades are not included in the computation of the grade point average, but credits of S count toward the total required for graduation. The following restrictions apply to the use of the S-N system:

1. All courses open to undergraduate students may be taken on the S-N and the A-N basis except where specifically restricted by the department offering the course.
2. Baccalaureate candidates from the college may present a maximum of 25 percent of the residence credits offered for the degree in courses in which they received a grade of S.
3. The S-N system is available to students of the college irrespective of their academic standing.

Satisfactory Progress

4. Students may take only one course per quarter on the S-N grading system until they have completed 36 credits. This restriction does not include courses offered on the S-N basis only.
5. S-N registration must be declared at the time of registration and may not be changed after the second week of the quarter. A course for which a student has on some previous occasion registered on the A-N system may not be taken at a later date on the S-N basis.
6. Required courses and courses recommended to fulfill curricular requirements must be taken under the A-N grading system. Prerequisites for required courses and courses in the major must also be taken under the A-N system, unless exceptions are made.

Your adviser or the college office will offer assistance if you have questions about the use of the S-N system. Audio tapes explaining the S-N system are available for listening in 68 McNeal.

Supplementary Symbols Used on the Transcript—The symbol I (incomplete) is assigned when a student neither earns a final grade nor qualifies for a W (withdrawal) as defined below. A student may earn a permanent grade to replace an I with the permission of the instructor (or of the department, if the instructor is unavailable). For the convenience of both the student and instructor, an I should be made up early in the next regular quarter of attendance, but the instructor may extend the time if he or she believes the delay is justified. An I which is not made up by the end of the quarter following its receipt becomes an N on the academic record. When an I is made up, it is removed from the academic record and replaced by the appropriate earned grade. A student does not need to be registered in order to make up an I.

The symbol W indicates official cancellation from a course without grade. This symbol is assigned in all cases of official cancellation during the first 6 weeks of classes regardless of the student's standing. After 6 weeks, W is posted only if the student is not failing at the time of official cancellation. Permission to cancel a course must be granted by the student's adviser and the Student Scholastic Standing Committee.

The symbol X is reported in a continuation course for which a grade cannot be determined until the sequence is completed. The instructor submits a grade for each X when the student has completed the entire sequence.

A symbol T (transferred) indicates credits transferred from another institution or from one college to another within the University when evaluation is required. It is posted as a preceding supplement to the original grade.

Your official grade record is kept by the Office of Admissions and Records. This official transcript is released only at your request and shows only credit earned and grades of A, B, C, D, and S. Supplementary information is kept on an operational record which indicates the outcome of every registration and shows the above grades as well as any I, W, or N grades. These grades also remain on the official transcript until graduation. The operational record is accumulated for the whole year and mailed to you each summer.

If you have any questions about grading symbols and transcripts, contact the Office of Admissions and Records, 130 Coffey Hall.

Satisfactory Progress

In the College of Home Economics, students must earn at least a C average (2.00 GPA) in the major to achieve satisfactory progress. Students who do not achieve and maintain this standard are considered by the Student Scholastic Standing Committee. The committee encourages students to seek help from

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advisers, instructors, and the Student Counseling Bureau (190 Coffey Hall) which maintains a Reading and Study Skills Center and also provides personal and career counseling. If the Student Scholastic Standing Committee finds a student's work unsatisfactory, the student may be dropped for low scholarship. After a period of 9 months the student may petition for readmission.

If you feel you are having difficulties, check with your instructor, adviser, or a staff member in the Student Counseling Bureau immediately rather than waiting until you receive a low grade.

Honor System

Examinations and quizzes in the College of Home Economics are conducted under an honor system which assumes that honesty prevails among the large majority of students. The faculty permits students to conduct examinations and attempts to make all possible provisions to foster the operation of the honor system. You should familiarize yourself with the honor system by reading the brochure available from the college office.

Application to Graduate

During the third quarter of your junior year you should apply for the degree in the Office of Admissions and Records, 130 Coffey Hall. The application confirms your program major and identifies you as a degree candidate. From it, a senior balance sheet is prepared, listing the required credits you have completed as well as the courses you have yet to complete or other deficiencies that must be removed before graduating. You and your adviser use the balance sheet in planning the remainder of your program. It is your responsibility to know and meet all requirements prescribed for graduation in the curriculum you select.

Student Personnel Services

College Information Desk—The receptionist at the college information desk in the College Office, 32 McNeal Hall, will assist you in securing information about the programs and activities of the College of Home Economics. College bulletins and brochures describing the various curricula are available. You will be referred to a staff member for answers to any specific questions.

Student Personnel Office—The Student Personnel Office has one major concern—to provide services for the students in the College of Home Economics. The office processes admission applications of high school students, new advanced standing students, and students who transfer from another college within the University. The Student Personnel Office maintains files on all students, acts as the agent for the Student Scholastic Standing Committee, maintains contact with prospective students, coordinates financial aid for students, and coordinates undergraduate advising and student governance activities.

College Placement Service—To help students secure employment after graduation the Placement Service, 32 McNeal Hall, announces job opportunities and assists in arranging interviews with employer representatives. While the Placement Service concentrates on full-time jobs for graduates, staff members frequently arrange summer work for students with companies offering internships or other types of employment and announce part-time work opportunities during

the course of the school year. In addition, departments are often aware of job opportunities, and you should ask their help.

Additional placement services are available to students in home economics education through the Education Career Development Office of the College of Education. Remember to file necessary forms.

All-University Personnel Services—A number of specialized personnel services are provided by the University for all students (see the *General Information Bulletin* for details):

Educational Benefits, 106 Morrill Hall, Assistance and Outreach, 6 Morrill Hall, Minneapolis

Housing, 190 Coffey Hall, St. Paul

International Student Adviser, 717 E. River Road, Minneapolis

Legal Aid Clinic, 110 Temporary, North of Appleby (formerly Mines), Minneapolis

Married Student Housing, Commonwealth Cooperative, 1250 Fifield Avenue, St. Paul

Reading-Study Skills Clinic, 101 Eddy Hall, Minneapolis

Religious Activities Coordinator, 317 17th Avenue S.E., Minneapolis

Speech and Hearing Clinic, 110 Shevlin Hall, Minneapolis

Student Activities Bureau, 317 17th Avenue S.E., Minneapolis; Coffman Union Program Office, 205 Coffman Union, Minneapolis

Student Counseling Bureau, 190 Coffey Hall, St. Paul

Student Employment Service, 30 Wulling Hall, Minneapolis

Student Financial Aid, 107 Armory, Minneapolis

Student Health Service, St. Paul

Work-Study Program, 107 Armory, Minneapolis

Student Organizations

Home Economics Board—The major objectives of the Home Economics Board are to initiate, promote, and coordinate activities of home economics student organizations and to serve as a liaison between students and faculty in achieving the goals of the college. Board members facilitate communication between students, faculty, and the administration through their representation on college committees. They also participate in long-range planning for the St. Paul Campus and the college.

The Home Economics Board consists of five elected officers plus representatives from the following groups: the five curricular areas in the college, the freshman class, the three home economics organizations (Omicron Nu, Phi Upsilon Omicron, and the Home Economics Association), and the St. Paul Board of Colleges. All students in the college are eligible to file for a position as an officer or as a representative of one of the curricular areas: design, food science and nutrition, family social science, home economics education, and textiles and clothing. Elections are held during spring quarter. You can keep informed about the board's activities and its current membership by checking notices on the student bulletin board in McNeal Hall or by inquiring at the college office. Student members of college committees automatically become members of the Home Economics Board, although they have nonvoting status.

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Freshman Board—This group which meets in the homes of St. Paul Campus faculty members, gives you an opportunity to learn about the University—its organization and administration, its governance procedures, students' role in decision making. Freshman students may apply for membership during the 2-week orientation-registration program in August or during Welcome Week in September. Twenty-five entering freshmen are invited to be members each fall.

St. Paul Campus Board of Colleges—The St. Paul Campus Board of Colleges directs and coordinates student activities and encourages student leadership throughout the St. Paul Campus. Its membership is drawn from all major areas of the Colleges of Agriculture, Forestry, Home Economics, Veterinary Medicine, and Biological Sciences.

The board cooperates with the Twin Cities Student Assembly (TCSA) and the Senate Committee on Student Affairs. It brings questions from the student body to the administration of its member colleges and discusses and reaches decisions on matters of general interest. As a student in the College of Home Economics you may file for election to the board.

Student Center Board of Governors—The St. Paul Campus Student Center provides a wealth of social, cultural, and recreational activities and contributes in many ways to the educational objectives of the campus. You are encouraged to participate in these varied programs. Students representing the academic units on the St. Paul Campus are elected to the Board of Governors which formulates policy for the operation of the Student Center and establishes its budget. For information about the Student Center, its operation, and opportunities to serve on its various planning and programming committees, inquire at the information desk, first floor of the Student Center.

Student Representation on College and University Committees—All College of Home Economics committees and many all-University committees have student representatives. Watch for announcements about filing for positions in the *Minnesota Daily* and on notices posted around the campuses.



II. PROGRAMS AND CURRICULA

Requirements of All Students—The program curricula in the College of Home Economics have been planned to meet the all-University Council on Liberal Education (CLE) distribution requirements. In addition to the specific requirements of each curriculum, the University of Minnesota believes that all of its students, whatever their major or professional goals, should hold in common the search for a liberal education.

The following broad categories are part of every program curriculum and are designed to contribute to your liberal education.

- I. **Communication, Language, Symbolic Systems** (18 credits minimum)
 - A. English and Foreign Language Communication Skills
 - B. Linguistics, Logic, Philosophic Studies
 - C. Mathematics
- II. **The Physical and Biological Sciences** (9 credits minimum)
 - A. The Physical Universe
 - B. The Biological Universe
- III. **Man and Society** (9 credits minimum)
 - A. Analysis of Human Behavior and Institutions
 - B. Historical and Philosophic Studies
- IV. **Artistic Expression** (9 credits minimum)
 - A. Literature
 - B. The Arts

Because of numerous changes that occur in course numbers, titles, content, and credit modules, an accurate list of courses that fulfill each of the above categories is difficult to maintain. You may consult your faculty adviser who is provided with an up-to-date list in the "Advisers' Handbook," or you may confer with the coordinator of undergraduate programs about this information.

By careful planning of the collateral sequence, field experiences, and free electives, you may acquire further depth in a particular area of interest.

Consumer Food Science

This program is designed to prepare students for work in the areas of promotion, product development, marketing, and consumption of food. From consumer education to public relations, graduates may become involved with many different aspects of food science, including developing new products as well as improving existing products, developing and testing new processing and packaging techniques, and writing for various communication media. Those with advanced degrees (M.S. or Ph.D.) may wish to enter research or college teaching positions.

Persons considering graduate work in the consumer food science field may acquire additional preparation in the physical and biological sciences or the social sciences by choosing appropriate collateral areas for the core undergraduate curriculum. A GPA above 2.80 is recommended to meet graduate study entrance standards.

**Program Requirements and Suggested Courses for
CONSUMER FOOD SCIENCE**

A. Communication, Language, Symbolic Systems

- Rhet 1101-1102—Communication (8)
- (or) Comp 1001, 1002—Introductory Composition (8)
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Writing (4)
- (or) Rhet 3562—Scientific and Technical Writing (4)
- Math 1111—College Algebra and Analytic Geometry (5)

B. Physical and Biological Sciences

- Chem 1004-1005—General Principles of Chemistry (10)
- Chem 3301-3302—Elementary Organic Chemistry (10)
- Biol 1011—General Biology (5)
- MicB 3103—General Microbiology (5)
- (or) MicB 5105—Biology of Microorganisms (4)
- Biol 3021—Biochemistry (4)
- BioC 5025—Biochemistry Laboratory (2)
- Phsl 3051—Human Physiology (5)
- (or) Phsl 1002—Human Physiology (4)
- Phys 1031-1032—Introductory Physics: Measurement and Applications (10)
- (or) Phys 1014-1024—Introductory Physics: Concepts in Physics (8)
- (or) Phys 1104-1105-1106—General Physics (15)

C. Man and Society

- AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)
- (or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)
- Psy 1001—General Psychology (5)
- Soc 1001—Introduction to Sociology (4)

D. Artistic Expression

Minimum of 9 credits to be selected from CLE-approved courses

E. Major Requirements

- FScN 1272—Introduction to Food Decision Making (2)
- FScN 1602—Principles of Nutrition (4)
- FScN 3110—Food Chemistry (5)
- FScN 3403—Experimental Foods (4)
- FScN 3472—Principles of Food Purchasing (4)
- FScN 3622—Food and Nutrition in the Life Cycle (4)
- (or) FScN 5622—Human Nutrition (5)
- FScN 5100—General Seminar (1)
- FScN 5360—Sensory Evaluation of Food Quality (3)
- FScN 5362—Sensory Evaluation Laboratory Techniques (1)
- FScN 5403—Experimental Study of Foods (5)
- FScN 5412—Physicochemistry of Foods I (4)
- FScN 5413—Physicochemistry of Foods II (4)
- Stat 3081—Experimental Techniques and Statistical Inference (5)
- (or) Stat 5021—Statistical Analysis I (4)
- (or) Soc 3801-3802-3803—Sociological Methods (12)

F. Collateral Area

In addition to the previously defined course requirements, each student must select one of the following fields as an area of emphasis. A minimum of 20 credits constitutes a collateral area.

Food Chemistry and Product Development

Food Science and Nutrition—1102, 1500, 3730, 5102, 5111, 5120, 5122, 5135,
5321, 5350, 5380, 5404, 5406, 5643
Family Social Science—1401
Textiles and Clothing—3621
Biochemistry—5002
Chemistry—3100, 3101
Mathematics—1142, 1211
Statistics—5201, 5601
Psychology—3031

Consumer Services

Food Science and Nutrition—1600, 3400, 3642, 3720, 3730, 5102, 5404
Design—1501, 1521, 1525, 1551 or 1552, 3558, 5505
Family Social Science—1401, 3260, 3500, 5200, 5201, 5202, 5220, 5404
Textiles and Clothing—3621, 5622
Agricultural Economics—1400, 5580, 5590
Journalism—1001, 1005, 1301, 5251
Sociology—5355, 5411, 5501
Psychology—5751
Industrial Relations—3010
Rhetoric—3254
Secondary Education—5105, 5107, 5108, 5109
Economics—1041 or 5041
Marketing—3098
Business Law—3508

Business

Agricultural Economics—1400, 5580, 5590
Agricultural Economics—3101, 3102, or Economics 3101, 3102
Marketing—3000, 3077, 3098
Journalism—1001, 1005, 1301, 5251
Psychology—3031, 5751
Sociology—3803, 5201, 5411, 5951
Statistics—5201
Industrial Relations—3010
Food Science and Nutrition—1600
Family Social Science—5202

Communications/Mass Media

Jour 1001—Introduction to Mass Communications (2)
Jour 1005—Visual Communications (3)
Jour 1101—Reporting (5)
Jour 1301—Beginning Photojournalism (4)
Jour 3121—Public Affairs Reporting (4)

Suggested electives:

Journalism—3155, 3173, 5221, 5251
Food Science and Nutrition—3400
Family Social Science—5202
Sociology—5201, 5355
Psychology—5201, 5751
Rhetoric—3254

Social Science

Anthropology—1101, 1102, 5141, 5151

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Sociology—5201, 5305, 5355, 5405, 5411, 5501, 5505, 5951

Psychology—1004, 1005, 3031, 5201, 5751

Statistics—5201, 5601

Agricultural and Applied Economics—3101, 3102, or Economics 3101, 3102

Physical and Biological Sciences

Math—1142

(or) Math—1211, 1221, 1231

Chem—1006, 3100, 3101, 3303, 5365, 5501, 5502, 5503, 5520, 5521

BioC—5002, 5751, 5752, 5745, 5746, 5747

Biol—3012

Bot—3131, 5141

Students considering graduate study may substitute up to an additional 18-20 credits from courses listed above for an equivalent number of credits listed under Major Course Requirements upon consultation with their adviser.

G. Free Electives

Electives to make a total of 185 credits required for graduation

Costume Design

This program is designed to help students develop professional competence in the areas of creative fashion, apparel, and accessory design. The concept of total design for personal appearance and adornment is stressed as well as the relationship of total design to mass production. Courses in this major include basic and advanced design and construction methods for pattern, fabric, color, texture, costumes, and accessories; textiles, costumes, and production from a historical, cross-cultural, and subcultural approach; and art, economics, and humanities as a foundation for understanding people, their life-styles, and needs.

Program Requirements and Suggested Courses for COSTUME DESIGN

A. Communication, Language, Symbolic Systems

Rhet 1101, 1102—Communication (8)

Rhet 1222—Public Speaking (4)

Rhet 3551—Professional Writing (4)

(or) Rhet 3562—Scientific and Technical Writing (4)

Foreign language or upper division course in composition or journalism (3 minimum)

B. Physical and Biological Sciences

NSci 1005—Physical World: Chemistry (4)

(or) Chem 1004, 1005—General Principles of Chemistry (10)

One course from disciplines other than chemistry to be selected from CLE-approved courses (9 credits minimum in area of physical and biological sciences but must include two disciplines)

C. Man and Society

AgEc 1020, 1030—Principles of Macroeconomics, Microeconomics (9)

(or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)

Psy 1001—General Psychology (5)

D. Artistic Expression

Minimum of 9 credits to be selected from CLE-approved courses; not to include art history

E. Major Requirements

- Dsgn 1521—Color and Design (4)
- Dsgn 1523—Drawing and Design I (4)
- Dsgn 1525—Two-Dimensional Design I (3)
- Dsgn 1531—Surface Fabric Design (4)
- (or) Dsgn 1532—Structure Fabric Design II (4)
- Dsgn 1541—Costume Design I (3)
- Dsgn 1543—Fashion Illustration (4)
- Dsgn 1544—Costume Design Special Techniques (4)
- Dsgn 3527—Three-Dimensional Design (4)
- Dsgn 3541—Costume Design II (4)
- Dsgn 3544—Costume Design Topics (3)
- Dsgn 3583—Field Experience in Costume Design (4) (P-N)
- Dsgn 5505—Art History (4)
- (or) equivalent course
- Dsgn 5517—History of Costume (4)
- Dsgn 5541—Costume Design III (3)
- Dsgn 5544—Costume Design Problems (4)
- Dsgn 5589—Problems in Design: Costume (3-4 [12 max])
- TexC 1601—Basic Clothing Construction (2)
- TexC 1602—Pattern Fitting: Alteration (2)
- TexC 3604—Flat Pattern Design (3)
- TexC 3605—Draping Design and Construction (3)
- TexC 3621—Textiles (5)

F. Collateral Area

A minimum of 18 credits from one area to be selected by student with approval of adviser. The following areas and courses are suggested:

Design

- Dsgn 1533—Metalsmithing: Introduction to Techniques (4)
- Dsgn 3531—Structure-Fabric Design II (4)
- Dsgn 3533—Metalsmithing: Fabrication (4)
- Dsgn 3536—Metalsmithing: Enameling (4)
- Dsgn 5531—Surface Fabric Design III (4)
- Dsgn 5533—Metalsmithing: Combined Techniques (4)

Textiles and Clothing

- TexC 1641—Introduction to Fashion Merchandising (3)
- TexC 1661—Aesthetic Principles in Clothing Selection (2)
- TexC 3601—Tailoring (3-5)
- TexC 3603—Ready-to-Wear Analysis (3)
- TexC 3642—Apparel Industries (4)
- TexC 5600—Advanced Apparel Design and Construction Problems (2-4)
- TexC 5661—Clothing and Human Behavior (4)
- TexC 5662—Family Clothing Problems (3)
- TexC 5664—Fashion Theory and Analysis (4)

Decorative Arts

- Dsgn 5507—History of Decorative Arts I: Textiles (3-4)

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Dsgn 5509—History of Decorative Arts II: Metals, Ceramics, Wood, and Glass (3-4)

Arth 3008—History of Ancient Art (4)

Additional elective credits

Theatre

Th 1101—Introduction to Theatre (4)

Th 1504—Elements of Technical Theatre (4)

Th 3513—Technical Theatre Production I (4)

Th 5171—History of Theatre (4)

Th 5172—History of Theatre (4)

Th 5173—History of Theatre (4)

Th 5512—Advanced Problems in Costuming (4)

Th 5520—Costume Crafts

Journalism and Mass Communication, Psychology

Jour 1001—Introduction: Mass Communication (2)

Jour 1101—Reporting (5)

Jour 1201—Principles: Advertising (4)

Psy 5751—Psychology of Advertising (4)

Additional elective credits

Art Studio

ArtS 1101—Basic Drawing (4)

ArtS 1701—Introduction: Photo Medium (4)

ArtS 1702—Photography (4)

ArtS 3703—Film Workshop (4)

ArtS 3704, 3705, 3706—Photography II (4)

ArtS 5704, 5705, 5706—Advanced Problems (4)

GC 1513—Small Business (4)

Acct 1050—Principles of Accounting (4)

Mgmt 3001—Fundamentals of Management (4)

Mgmt 3000—Principles of Marketing (4)

Mgmt 3098—Retail Management (4)

Independent work in cultural and subcultural studies in design, clothing and language—historical and modern—chosen in consultation with the adviser

Industrial design courses, or study outside U.S.A.

G. Free Electives

Electives to make a total of 185 credits needed for graduation

Family Relationships

The interpersonal dynamics of dating, marriage, parent-child interaction, and family relationships are the primary focus of this program. The course of study is multidisciplinary in nature, incorporating ideas from anthropology, family sociology, social psychology, and other related areas. Students will have the opportunity to acquire skills in functional management and interpersonal relationships, and in enhancement of marital and family relationships. Through a college-supervised practicum, students may work with a community-based professional on projects related to marital, parent-child, and family relationships. Graduates may engage in service to couples and families or may choose to pursue graduate work in an academic or professional school.

**Program Requirements and Suggested Courses for
FAMILY RELATIONSHIPS**

A. Communication, Language, Symbolic Systems

- Rhet 1101, 1102—Communication (8)
- (or) equivalent course
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Speaking (4)
- Math 1111—College Algebra and Analytic Geometry (5)
- (or) Math 1141—Algebra, Probability, and Pre-Calculus (5)

B. Physical and Biological Sciences

- Biol 1011—General Biology (5)
- Minimum of 4 credits in a physical science to be selected from CLE-approved courses

C. Man and Society

- AgEc 1020, 1030—Principles of Macroeconomics, Microeconomics (9)
- (or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)
- Anth 1102—Introduction to Social and Cultural Anthropology (5)
- FSoS 1001 (or) 1002—Dynamics of Dating, Courtship, and Marriage (3)
- (or) FSoS 1025—Parenthood (4)
- Pol 1001—American Government and Politics (5)
- Psy 1001—General Psychology (5)
- One introductory course in sociology (3-5)
- Three courses, preferably in sequence, from American studies, history, philosophy, or classics

D. Artistic Expression

- Minimum of 9 credits to be selected from CLE-approved courses

E. Major Requirements

- FSoS 3260—Home Management Principles (3)
- FSoS 5001—Human Sexual Behavior (5)
- FSoS 5200—Family Relationships (5)
- FSoS 5201—Family in American Social Structure (4)
- FSoS 5202—Introduction to Social Psychology With Application to the Family (5)
- (or) Soc 5201—Introduction to Social Psychology (4)
- (or) Psy 5201—Social Psychology (4)
- FSoS 5210—Family in World Perspective (5)
- Soc 5505—Family Development (4)
- Phil 5611—Philosophy of Social Sciences (5)
- (or) Soc 5701—Analytical Social Theory (3)
- (or) Soc 5711—Elements of Sociological Analysis (3)
- CPsy 1301—Introductory Child Psychology (4)
- (or) Cpsy 3303—Adolescent Psychology (4)
- 4-5 credits in statistics
- 3-5 credits in methodology courses in measurement and research design
- Minimum of 5 credits in FSoS 5249—Fieldwork: Directed Community Work Experience (3-5 [15 max])

F. Electives

- Electives to make a total of 185 credits required for graduation, to be selected in consultation with the adviser

Fashion Merchandising

This program is designed for students with an interest in clothing and textile fashion items, the consumer, and business. It is designed to prepare students to enter merchandising positions dealing with clothing items or textile articles in a retail fashion store or other fashion marketplace. These graduates may serve in merchandising positions at levels between the manufacturer and the consumer of clothing and textile products.

The program provides students with fundamental knowledge concerning fashion industries, textiles, garment construction, and business procedures as they relate to merchandising fashion items. It may also serve as the basis for graduate study preparatory to teaching fashion merchandising at the college level.

A minimum grade of C must be earned in all courses used to fulfill major requirements and supporting business requirements.

Program Requirements and Suggested Courses for FASHION MERCHANDISING

A. Communication, Language, Symbolic Systems

- Rhet 1101-1102—Communications (8)
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Writing (4)
- (or) Rhet 3562—Scientific and Technical Writing (4)
- Math 1111—College Algebra and Analytic Geometry (5)
- (or) Math 1141—Algebra, Probability, and Pre-Calculus (5)

B. Physical and Biological Sciences

- Chem 1001-1002—Principles of Chemistry (10)
- (or) Chem 1004-1005—General Principles of Chemistry (10)
- (or) NSci 1005—Physical World: Chemistry (4)
- One course from a discipline other than chemistry to be selected from CLE-approved courses

C. Man and Society

- AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)
- (or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)
- Psy 1001—General Psychology (5)
- Soc 1001—Introduction to Sociology (4)

D. Artistic Expression

- Minimum of 9 credits to be selected from CLE-approved courses (from two disciplines)

E. Major Requirements

- TexC 1641—Introduction to Fashion Merchandising (3)
- TexC 1642—Retail Experience Seminar I (1)**
- TexC 3603—Analysis of Construction Techniques and Fabric in Ready-to-Wear (3)
- TexC 3621—Textiles (5)
- TexC 3622—Textiles for Interiors (3)
- (or) TexC 3623—Performance Evaluation of Textiles (3)

**The types of work experiences which will be acceptable for the 300 hours required for the Retail Experience Seminars I, II, and III are described in a handout available from the Textile and Clothing Department office.

- TexC 3662—Aesthetics of Clothing (3)
- (or) TexC 5622—Issues and Trends in Textile Consumer Protection (3)
- TexC 3642—Apparel Industries (4)
- TexC 3643—Fashion Merchandising (5)
- TexC 3644—Retail Experience Seminar II (1)**
- TexC 3645—Retail Experience Seminar III (1)**
- TexC 5661—Clothing and Human Behavior (4)
- (or) TexC 5662—Family Clothing Problems (3)
- TexC 5664—Fashion Theory and Analysis (4)
- 14-15 additional credits to be taken A-N; see adviser for approved list

F. Supporting Business Requirements

- Mgmt 3001—Fundamentals of Management (4)
- Mgmt 3002—Psychology of Management (4)
- Mktg 3000—Principles of Marketing (4)
- Mktg 3065—Retail Management (4)
- Mktg 3098—Introduction: Consumer Behavior (4)
- Acct 1050—Principles: Accounting I (4)
- (or) AgEc 1250—Principles: Accounting (4)
- 12 additional electives in business to be taken A-N

G. Free Electives

Electives to make a total of 185 credits required for graduation

Food Science and Technology

Food science and technology is defined as "the application of modern science, technology, and engineering to the manufacture and distribution of food." Knowledge from many disciplines—including chemistry, physics, economics, engineering, microbiology, nutrition, management, public health and agricultural production—must be applied to food processing, preservation, and marketing situations. Food scientists and food technologists are concerned with the theoretical and practical aspects of the food industry which encompass the food chain from the production of raw material to the ultimate utilization of the product by the consumer.

In addition to a general education, this program is designed to provide the student with attitudes, knowledge, and skills essential for an understanding of the principles of food science. Many graduates of the program will accept employment after earning the bachelor of science degree, and superior students often continue on to graduate study.

Food scientists and technologists have varied and challenging opportunities in food and allied industries, government service, and education. Job opportunities include work in production management, product and process research and development, public health and regulatory agency service, teaching merchandising, advertising, technical service and sales, quality control supervision, and international nutrition, and food agencies.

Food scientists will face a challenge to search out and develop new and better ways to feed our expanding world population. They will be called upon to improve the quality of existing foods and to synthesize new foods from unconventional ingredients.

**The types of work experiences which will be acceptable for the 300 hours required for the Retail Experience Seminars I, II, and III are described in a handout available from the Textile and Clothing Department office.

Programs and Curricula

Program Requirements and Suggested Courses for FOOD SCIENCE AND TECHNOLOGY

A. Communication, Language, Symbolic Systems

- Rhet 1101-1102—Communication (8)
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Writing (4)
- (or) Rhet 3562—Scientific and Technical Writing (4)
- Math 1111—College Algebra and Analytic Geometry (5)
- (or) Math 1141—Algebra, Probability and Pre-Calculus (5)
- (or) Math 1142—Introduction to Calculus (5)

B. Physical and Biological Sciences

- Chem 1004-1005—General Principles of Chemistry (10)
- BioC 1301—Elementary Biochemistry I** (5)
- BioC 1302—Elementary Biochemistry II** (4)
- Phys 1031-1032—Introductory Physics: Measurement and Applications (10)
- Biol 1011—General Biology (5)
- MicB 3103—General Microbiology (5)

C. Man and Society

14 credits to be selected from CLE list of suggested courses

D. Artistic Expression

See CLE list of suggested courses. Most of the courses under categories A and B, except Rhet 3551, should be taken during the freshman and sophomore years. Courses under categories C and D should be distributed over all 4 years.

E. Major Requirements

- FScN 1102—Technology of Food Processing
- FScN 1602—Principles of Nutrition (4)
- FScN 3110—Food Chemistry (5)
- FScN 5100—General Seminar (1)
- (or) FScN 5102—Case Studies in Food Science and Nutrition (5)
- FScN 5120—Food Microbiology (5)
- FScN 5122—Sanitation, Process Microbiology (4)
- FScN 5135—Food Process Engineering (5)

In addition to the above required courses, a minimum of 20 credits chosen from among the following courses:

- FScN 1500—Meat Science (4)
- FScN 5000††—Professional Experience Program (1-6)
- FScN 5102—Case Studies in Food Science and Nutrition (5)
- FScN 5111—Independent Study in Food Science and Nutrition (1-5)
- FScN 5312—Chemical and Instrumental Analysis of Foods (5)
- FScN 5320—Advanced Dairy and Food Microbiology (4)
- FScN 5321—Independent Study in Food Microbiology (1-5)
- FScN 5350—Food Formulation, Product Development (4)
- FScN 5360—Sensory Evaluation of Food Quality (3)
- FScN 5362—Sensory Evaluation Laboratory Techniques (1)
- FScN 5380—Food Packaging (3)
- FScN 5510—Muscle Chemistry and Physiology (4)

** Students interested in chemistry, microbiology, and nutrition as areas of emphasis may substitute Chem 3301, 3302, Biol 3021 and BioC 5025.

††A maximum of 4 credits of FScN 5000 may be included in the required 20 credits provided A-N grading is elected.

- FScN 5512—Meat and Protein Technology (4)
- FScN 5522—Technology of Fluid and Concentrated Milk Products (4)
- FScN 5523—Technology of Fermented Dairy Products (4)
- FScN 5524—Sensory Evaluation of Dairy Products (1)
- FScN 5530—Industrial Processing of Fruits and Vegetables (4)
- FScN 5555—Freezing and Dehydration of Foods (4)

F. Areas of Emphasis

In addition to the previously defined course requirements, each student must select one of the following areas as well as sufficient electives to meet the 186 credits required for graduation. The area of emphasis is designed to support and complement the major field. Thus, courses in food per se are not admissible as an area of emphasis but nutrition would be permitted. It is assumed that a well-conceived area of emphasis will include some 3000- and 5000-level courses.

Chemistry

This area of emphasis is designed for the student seeking a basic and fundamental approach to the chemistry of foods and food processes. At least 20 credits of chemistry must be selected and usually include the following:

- Chem 1006—Solution Chemistry (4)
- Chem 3100-3101—Quantitative Analysis (3/2)
- Chem 3301-3302—Elementary Organic Chemistry (10)
- Chem 5520-5521—Elementary Physical Chemistry (6)
- Biol 3021—Biochemistry (4)**
- (or) BioC 5001—Biochemistry (3)
- BioC 5002—Biochemistry (4)
- BioC 5025—Biochemistry Laboratory (2)**

Engineering Technology

This area of emphasis is for the student interested primarily in the engineering technology aspects of food process development and production. At least 25 credits in a cohesive program are to be selected in consultation with an adviser. These should include Math 1142 and AgEn 5021, 5022, 5023.

Students interested in a 4-year food engineering degree should consult the listings of the Agricultural Engineering Department in the *Institute of Technology Bulletin*.

Industrial Engineering

This area of emphasis is designed for the student with competence and interest in the industrial engineering aspects of the food industry. The requirements:

- Math 1142—Calculus (5)
- ME 3900—Introduction To Engineering Statistics (4)
- (or) Stat 3092—Introduction: Probability, Statistics (4)
- At least 20 credits in industrial engineering (see the *Institute of Technology Bulletin*.)

Management

This area of emphasis is designed for the student interested in the problems of the business and economics phases of the various food industries. The following courses are required:

- AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)
- (or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)
- Statistics (3-4)

**Recommended to replace BioC 1301, 1302.

Programs and Curricula

At least 20 credits from course offerings in the Departments of Agricultural and Applied Economics, Economics, and Rhetoric, and in the College of Business Administration

Microbiology

This area of emphasis is designed for the student who desires courses specifically related to the microbiological aspects of the food processing industry. About 20 credits of microbiology-oriented courses in biochemistry, microbiology, plant pathology, public health, and related departments must be selected and usually include the following:

Chem 3301-3302—Elementary Organic Chemistry** (10)

Biol 3021—Biochemistry (4)**

BioC 5025—Laboratory (2)**

MicB 5321—Physiology of Bacteria (3)

Nutrition

This area of emphasis is designed for students who desire courses specifically related to the nutritional aspects of the food processing industry. The following courses are required:

Phsl 1002—Human Physiology (4)

About 20 credits of nutrition-oriented courses in food science and nutrition, biochemistry, animal science, and related departments

Public Health

This area of emphasis is designed to provide the necessary background for the variety of activities of the sanitarian in either governmental or industrial employment related to the regulatory and quality control of raw materials and finished products in the food field. At least 20 credits must be selected from offerings of the School of Public Health.

Other Areas

The courses presented for the six areas above may not satisfy the needs of every student. With the aid of the adviser, a student may set up a course of study designed to meet specific requirements in another area of emphasis or in a combination of suggested areas. Examples include advertising, journalism, sales, mechanical engineering, statistics, and experimental design. Some 3000- and 5000-level courses must be included.

G. Free Electives

Electives to make a total of 186 credits required for graduation

General Design

This program provides a strong foundation in basic design. The program combines systematic study of the elements and principles of design with intensive laboratory experience in applied design. Courses in drawing, color, and design, and introduction to two- and three-dimensional design are taken prior to concentration in one of two options—general design or crafts design. The emphasis on design in both options makes this program unique at the University and in the state.

Students in both options may prepare themselves for leadership roles in design education in the state, including in community extension programs, community arts councils and resources, continuing education for adults and

**Recommended to replace BioC 1301, 1302.

senior citizens, and teaching youth groups in nonschool settings. This broad training might also provide for opportunities in museum work or in design, crafts, decorative arts, or home economics publications. All options are designed to prepare students for graduate work and professional career renewal.

The general design option is elected by students desiring a broad professional competence in two- and three-dimensional applied design and the decorative arts. The crafts design option is directed toward students who wish to concentrate in fiber-fabric design and/or metal design (jewelry, holloware, etc.) while it emphasizes the development of competence in the general area of applied design for the home and person.

Program Requirements and Suggested Courses for

GENERAL DESIGN

A. Communication, Language, Symbolic Systems

Rhet 1101-1102—Communication (8)

Rhet 1222—Public Speaking (4)

Rhet 3551—Professional Writing (4)

Additional credits selected from CLE-approved courses (may be taken S-N)

B. Physical and Biological Sciences

Minimum of 9 credits to be selected from CLE-approved courses from at least two disciplines (may be taken S-N)

C. Man and Society

Psy 1001—General Psychology (5)

Minimum of 4 additional credits from a second discipline (may be taken S-N)

D. Artistic Expression

Dsgn 5505—Art History (4)

(or) equivalent course

Minimum of 5 additional credits to be selected from CLE-approved courses (may be taken S-N)

E. Major Requirements

1. Basic design requirements—prerequisite to selection of options

Dsgn 1501—Introduction to Design (3)

Dsgn 1521—Color and Design I (4)

Dsgn 1523—Drawing and Design I (4)

Dsgn 1525—Two-Dimensional Design (3)

Dsgn 1531—Surface-Fabric Design I (4)

Dsgn 1532—Structure-Fabric Design I (4)

Dsgn 1533—Metalsmithing: Introduction to Techniques (4)

Dsgn 3527—Three-Dimensional Design (3)

AgJo 5301—Functional Photography (3)

(or) equivalent course

8 credits in studio art courses (may be taken S-N)

12 credits selected from the following:

Dsgn 5507—History of Decorative Arts I: Textiles (3-4)

Dsgn 5509—History of Decorative Arts II: Metals, Ceramics, Glass (3-4)

Dsgn 5512—History of European Furniture and Interiors (3-4)

Dsgn 5514—History of American Furniture and Interiors (3-4)

Dsgn 5517—History of Costume (4)

(and/or) Courses taught in Art History Department (see adviser for list)

(and/or) Courses taught in School of Architecture (see adviser for list)

Programs and Curricula

2. Option requirements (select one option)

a. General Design

A minimum of 16 cr in the following courses:

- Dsgn 3525—Design II (4)
- Dsgn 3523—Drawing II (4)
- Dsgn 5521—Color and Design II (4)
- Dsgn 5585—Problems in Design (3-4 [max 12])
- Dsgn 3582—Field Experiences (3)
- Dsgn 3574—Crafts Seminar (1)

A minimum of 16 additional credits in other Design Department courses, selected with approval of the adviser

A minimum of 8 additional credits in drawing from supporting areas are recommended. Prerequisites to these courses must be completed prior to enrollment in them.

- Dsgn 1543—Fashion Illustration (4)
- Dsgn 3550—Interior Design Presentation (3)
- Art Studio courses in drawing (see adviser list)
- Th 5510—Drawing and Rendering for Theater Designers (2-4)

b. Design: Craft Option

A minimum of 12 credits to be selected from the following:

- Dsgn 1535—Craft Design I (3)
- GC 1513—Principles: Small Business Operations (4) or equiv
- Dsgn 3584—Field Experiences in Fiber/Fabric (1-5)
- Dsgn 3574—Crafts Seminar (1)
- Dsgn 3582—Field Experience in Design (3)

A minimum of 16 credits to be selected from one of the following areas:

Fiber-Fabric Design

- Dsgn 3531—Surface-Fabric Design II (4)
- Dsgn 3532—Structure Fabric Design II (4)
- Dsgn 5531—Surface-Fabric Design III (4)
- Dsgn 5532—Structure Fabric Design III (4)
- Dsgn 5588—Problems in Design: Textiles (3-4 [12 max])

Jewelry Design

- Dsgn 3533—Metalsmithing: Fabrication (4)
- Dsgn 3536—Metalsmithing: Enameling (4)
- Dsgn 5533—Metalsmithing: Combined Techniques (4)
- Dsgn 5587—Problems in Design: Jewelry. (3-4 [12 max])

A minimum of 12 additional credits from the following courses are recommended:

- Dsgn 3584—Field Experiences in Fiber-Fabric (1-10)
- Dsgn 3574—Crafts Seminar (1)
- Dsgn 3582—Field Experiences in Design (3)

F. Collateral Area

A minimum of 18 credits from an area to be selected by student with approval of the adviser (may be taken S-N)

Collateral and supporting areas recommended (consult with your adviser):

- History of Art and Architecture
- Business
- Education and Psychology
- Family Social Science

Youth Studies
Journalism and Mass Communication (includes commercial art)
Landscape Architecture
Social Work
Sociology
Studio Art
Theatre Arts

Other supporting areas may be developed in addition to collateral requirement:

Costume Design
Design and Graphics (calligraphy, illumination, illustration, use of Kerlan collection)
Interior Design
Industrial Design

G. Free Electives

Electives to make a total of 185 credits required for graduation (may be taken S-N; no more than 25 percent of total [46] may be taken S-N)

General Home Economics

This program, interdepartmental and interdisciplinary in focus and function, is designed for the student interested in home economics and in a broad cultural education. The program includes courses which meet the all-University requirements plus a home economics core consisting of courses in food and nutrition, textiles and clothing, housing and household equipment, home management, and family relationships. The remainder of the program has much flexibility and allows the student an opportunity to choose courses to develop depth in an area consistent with personal and professional goals. On the basis of these goals and interests, a collateral field (minimum of 18 credits) is chosen. Collateral areas which students might pursue include home economics extension, nursery school certification, consumer affairs, international programs, journalism, radio and television, animal science, business, horticulture, or subject matter areas in home economics including youth development.

Students wishing to prepare for positions with the Agricultural Extension Service, utility companies, agencies dealing with consumer affairs, or as a nursery school supervisor should consult their adviser for collateral area suggestions which have been developed with the aid of persons actively employed in these areas. Electives (minimum of 50 credits) allow students considerable opportunity to acquire further depth in the chosen collateral field and/or to take courses which broaden their cultural education. The general home economics program draws extensively on courses from many colleges of the University.

Program Requirements and Suggested Courses for GENERAL HOME ECONOMICS

A. Communication, Language, Symbolic Systems

Rhet 1101-1102—Communication (8)
(or) equivalent course
Rhet 1222—Public Speaking (4)
Rhet 3551—Professional Writing (4)
Minimum of 2 additional credits selected from CLE-approved courses

Programs and Curricula

B. Physical and Biological Sciences (must be taken A-N)

NSci 1005—Physical World: Chemistry (4)

(or) equivalent course

FScN 1020—Introductory Microbiology (4)

(or) MicB 3103—General Microbiology (5)

Minimum of 9 additional credits in science to include a course in physics and one in biology (check prerequisites for desired courses to guide your selection)

C. Man and Society

AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)

(or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)

Psy 1001—General Psychology (4)

Soc 1001—Introduction to Sociology (4)

Anth 1102—Introduction to Social and Cultural Anthropology (5)

CPsy 1301—Introduction to Child Psychology (4)

D. Artistic Expression

Minimum of 9 credits to be selected from CLE-approved courses such as humanities, literature, theatre, design, art, or music (may be taken S-N)

E. Major Requirements (must be taken A-N)

Nutrition (5 minimum)

Foods (9 minimum)

Dsgn 1501—Introduction to Design (3)

Dsgn 1551—Consumer Aspects of Housing and Furnishings (4)

FSoS 1401—Household Equipment (3)

FSoS 3260—Home Management Principles (3)

FSoS 3263—Home Management Laboratory (3)

(or) FSoS 3264—Home Management Practicum (4)

(or) FSoS 1263—Family Management and Interpersonal Relations Laboratory (6)

FSoS 5200—Family Relationships (5)

TexC 3261—Textiles (5)

One 5000-level course in home economics (3-5)

F. Collateral Area (must be taken A-N)

A minimum of 18 credits to be planned with the adviser on the basis of professional goals and interests; at least half the credits in the collateral area must be from upper division courses**

G. Free Electives

Electives to make a total of 185 credits required for graduation; at least one-third should be from upper division courses (may be taken S-N)

Home Economics Education

The curricula in home economics education, offered jointly by the College of Home Economics and the College of Education, are designed for those who wish to become teachers in junior or senior high schools. Satisfactory completion of

**See adviser for suggested list of courses comprising collateral areas in journalism, nursing, school certification, extension work, youth development, household equipment, et al.

one of the three curricular options qualifies students for vocational home economics certification which is required for teaching in federally aided schools. The three options are consumer-homemaking, family life, and home economics occupational education with child care and development, food service, or textiles and clothing clusters.

During the first 2 years, students register in the College of Home Economics. Early in the quarter in which they will complete 90 credits of specified courses, including HEEd 1500 and/or HEEd 1510, students apply for joint registration in the College of Education. The application form and information about procedures may be obtained from the Office of Admissions and Records, 130 Coffey Hall, St. Paul Campus. Admission for joint registration should be made during the regular school year.

To be eligible for joint registration, for entrance into clinical experience, and for certification, students must maintain a 2.50 GPA in all major courses and a 2.00 GPA overall.

Divisionally approved alternates may be substituted for specified courses listed below. Each of the three curricular options includes courses that satisfy the Council of Liberal Education distribution requirements.

**Common Requirements For
ALL HOME ECONOMICS EDUCATION CURRICULA**

Related Course Requirements

- Rhet 1101, 1102—Communications I, II (8)
- Rhet 3551—Professional Writing (4)
- Psy 1001—General Psychology (5)
- Soc 1001—Introduction to Sociology (4)
- AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)
- (or) Econ 1001-1002—Principles of Macroeconomics, Microeconomics (8)
- 12 elective credits from courses in Group D, Artistic Expression

Professional Educational Courses (minimum 34 credits)

- SeEd 3150, 3155—Introduction to Secondary School Teaching (10)
- HEd 3090—The School and Society (3)
- HEEd 1500—Introduction to Home Economics Education (2)
- HEEd 1510—Knowledge and Values in Teaching (4)
- HEEd 3520—Home Economics Curriculum and Instruction: Cognitive Learning (5)
- HEEd 3530—Home Economics Curriculum and Instruction: Affective Learning (4)
- HEEd 3620—Curriculum Management (3)
- VoEd 5300—Philosophy and Practice (3)

Special Requirements for All Students

- PsyF 3380—Introduction to Human Relations (3)
- PubH 3004—Basic Concepts in Personal and Community Health (4)
- 3 credits in physical education

Electives (to complete 186 credits)

- Recommended elective: GC 1442—Functions, Problems of Logic (4)

In addition to the common requirements, students will complete one of the three options which follow:

CONSUMER-HOMEMAKING OPTION

Related Course Requirements

- Anth 1102—Introduction to Anthropology (5)
- AgEc 5580—Economic Organization of the Household (4)
(or) FSoS 5220—Family Economics (3)
- Chem 1004, 1005—General Principles of Chemistry (10)
(or) NSci 1004, 1005—The Physical World: Physics, Chemistry (8)
- GC 1132—Biological Science: Human Body (5)
- Rhet 1222—Public Speaking (4)
- CPsy 1301—Child Psychology (4)
- Elective credits (4 or more) in human development chosen in consultation with the adviser; one course from the following: FScN 1020, MicB 1303, Biol 3051, PubH 3151

Major Courses (minimum 52 credits)

- FScN 1212, 1213—Scientific Principles of Food Preparation I, II (7)
- FScN 1600—Sociocultural Aspects of Nutrition (3)
- FScN 1602—Principles of Nutrition (4)
- FScN 3472—Principles of Food Purchasing (4)
- Dsgn 1551—Housing: Selection of Dwelling and Furnishings (4)
- TexC 1601—Basic Clothing Construction (2)
- TexC 1602—Pattern Fitting and Alteration (2)
- TexC 3621—Textiles (5)
- TexC 3662—Aesthetics of Clothing (3)
- FSoS 1401—Household Equipment (3)
- FSoS 3260—Home Management Principles (3)
- FSoS 3500—Family Consumer Decision Making (3)
- FSoS 5200—Family Relationships (5)
- One elective from each of the following areas, selected in consultation with the adviser: consumer-oriented courses in textiles and clothing; consumer-oriented courses in equipment, housing, furnishing, or the family
- Two courses in consumer decision making selected in consultation with the adviser

Professional Education Courses (minimum 12 credits)

- HEEd 3601—Clinical Experience: Teaching Consumer-Homemaking (9)
- HEEd 3611—Fieldwork: Consumer-Homemaking Education (3)

FAMILY LIFE OPTION

Related Course Requirements

- Anth 1102—Introduction to Anthropology (5)
- Biol 1011—General Biology (5)
- Rhet 3266—Discussion Methods (4)
- 12 credits of electives in physical or biological science

Major Courses (minimum of 65 credits)

50 credits distributed among the following areas with a minimum of 6 credits in each area and 15 credits in human growth and development:

- Anthropology
- Family Social Science
- Psychology
- Sociology
- Other areas relating to the family exclusive of home economics

15 credits in home economics courses in the areas of design, food science and nutrition, textiles and clothing, and family social science (FSoS 3260 or 3264, 3263 or 5260, and 5220 may be included)

Professional Education Courses (minimum 12 credits)

- HEEd 3602—Clinical Experience: Teaching Family Life (9)
- HEEd 3612—Fieldwork: Family Life Education (3)

HOME ECONOMICS OCCUPATIONAL EDUCATION OPTION

To qualify for certification as a teacher in a high school home economics occupational education program in Minnesota, a student must select one or more subject matter clusters: food service, child development and care, or textiles and clothing services. In addition to the subject matter preparation, certification requirements include a specified number of hours of occupational experience in the cluster area.

Related Course Requirements

- FScN 1020—Introduction to Microbiology (4)
- GC 1132—Biological Science: The Human Body (5)
- Chem 1004, 1005—General Principles (10)
- GC 1163—Principles of Physics (5)
- (or) NSci 1004, 1005—The Physical World: Physics, Chemistry (8)
- Rhet 1222—Public Speaking (4)
- CPsy 1301—Child Psychology (4)
- Elective credits (4 or more) in human growth and development

Major Courses (minimum 25 credits)

- FSoS 1401—Household Equipment (3)
- FSoS 3260—Home Management Principles (3)
- FSoS 5200—Family Relationships (5)
- FScN 1212—Scientific Principles of Food Preparation (4)
- FScN 1602—Principles of Nutrition (4)
- Selected electives (consult with your adviser) (6)

Cluster Requirements

Food Service Cluster (minimum 18 credits)

- FScN 1700—Introduction to Hospitality and Food Service Management (2)
- FScN 3472—Principles of Food Purchasing (4)
- FScN 3730—Quantity Foods Purchasing and Production (5)
- Selected electives (consult with your adviser)

Child Development and Care Cluster (minimum 18 credits)

- CPsy 3330—Directed Experiences With Children (4)
- CPsy 3331—Processes of Socialization of Children (4)
- Elem 3378—Social Learning in Early Childhood Education (3)
- Selected electives (consult with your adviser)

Textiles and Clothing Cluster (minimum 29 credits)

- TexC 1601—Basic Clothing Construction (2)
- TexC 1602—Pattern Fitting and Alteration (2)
- TexC 3601—Tailoring (4)
- TexC 3604—Flat Pattern Design (3)
- TexC 3605—Draping Design and Construction (3)
- TexC 3621—Textiles (5)

Programs and Curricula

- TexC 3642—Apparel Industries (4)
- TexC 3662—Aesthetics of Clothing (3)
- TexC 5600—Advanced Apparel Design and Construction Problems (2-4)
- Selected electives (consult with your adviser)

Professional Education Courses (minimum 15 credits)

- HEEd 3603—Clinical Experience: Teaching Home Economics Occupations (9)
- HEEd 3613—Fieldwork: Home Economics Occupational Education (3)
- HEEd 5336—Home Economics Occupational Experience (1-9)

Optional Program for Teacher Coordinator Certification

Home economics teachers who wish to prepare themselves for the position of coordinator of home economics occupational programs in secondary schools may do so by taking additional occupational experience and a minimum of 6 additional credits including Coordination Techniques (HEEd 5106 and DE 5105) from the following courses:

- HEEd 5106—Coordination Techniques in Home Economics Occupational Education (2)
- HEEd 5111—Curricula in Home Economics Occupational Education (2)
- HEEd 5301—Materials and Methods in Home Economics Occupational Education (2)
- DE 5100—Organization and Administration of Distributive Education (3)
- DE 5105—Coordination Techniques (2)
- DE 5110—Curricula in Cooperative Vocational Education (2)
- DE 5300—Materials and Methods in Cooperative Vocational Education (2)

Master of education programs in home economics education include Plan I for certified home economics teachers and Plan II for noncertified professional workers in home economics education. See the *College of Education Bulletin* for details.

Hospitality and Food Service Management

The hospitality and food service management program is designed to teach basic principles and techniques essential for employment in three general areas: food service management, hospitality business management, and personnel training and development. The broad scope of the industry and changes in life-styles among the American population make possible a variety of new service-related fields in which students may also concentrate their professional preparation.

Since work in this field involves the application of theoretical principles, course work strives to balance theory and practical experience.

Program Requirements and Suggested Courses for FOOD SERVICE MANAGEMENT OPTION

A. Communication, Language, Symbolic Systems

- Rhet 1101-1102—Communication (8)
- (or) equivalent courses
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Writing (4)
- Math 1111—College Algebra and Analytic Geometry (5)
- (or) Math 1131—Finite Math (5)
- (or) Math 1142—Introduction to Calculus (5)

B. Physical and Biological Sciences

Chem 1004-1005—General Principles of Chemistry (10)
Biol 1011—General Biology (5)

C. Man and Society

AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)
(or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)
Psy 1001—General Psychology (5)
Soc 1001—Introduction to Sociology (4)

D. Artistic Expression

Minimum of 9 credits to be selected from CLE-approved courses

E. Major Requirements

FScN 1212, 1213—Scientific Principles of Food Preparation I, II (7)
FScN 1602—Principles of Nutrition (4)
FScN 1700—Introduction to Hospitality and Food Service Management (2)
FScN 3123—Microbiology of Foods (5)
FScN 3472—Principles of Food Purchasing (4)
FScN 3720—Administrative Experience: Hospitality or Food Service Enterprise (5)
FScN 3730—Quantity Food Purchasing and Production (5)
FScN 3740—Design and Layout of Food Services (4)
FScN 3750—Management of Food Service and Hospitality Business Systems (3)
FScN 3760—Hospitality Cost Management (4)
FScN 3762—Hospitality Financial Management (4)
FScN 5100—General Seminar (1)
Acct 1050-1051—Principles of Accounting (8)
Acct 3255—Managerial Cost Accounting (4)
BLaw 3058—Introduction to Law, and the Law of Contracts and Agency (4)
BFin 3000—Finance Fundamentals (4)
IR 3002—Industrial Relations Systems: Labor Markets and the Management of Human Resources (4)
Mgmt 3001—Fundamentals of Management (4)
MIS 5100—Computer Systems Design (4)
Mktg 3000—Principles of Marketing (4)
PubH 3004—Basic Concepts in Personal and Community Health (4)
Arch 1001—Environmental Design: Man and Environment (4)
Arch 1002—Environmental Design: Tools and Processes (4)
Arch 1003—Environmental Design: Implementation and Evaluation (4)
AgEc 3410—Economic Organization of the Hospitality Industry (4)

F. Free Electives

Electives to make a total of 185 credits required for graduation

Housing

This program provides a multidisciplinary sequence of educational experiences in the study of housing needs and problems of individuals and families. Building upon pertinent courses within the college and in other units of the University, the curriculum develops three options: business and commerce, social service, and design.

Programs and Curricula

Graduates may take positions with public agencies concerned with housing at the local, state or federal level, with private companies as institution managers, with utility companies, or with design firms or contractors. The social service option is designed to prepare students for community service in housing relocation. Graduate study in preparation for college teaching or for research is another postbaccalaureate possibility.

Program Requirements and Suggested Courses for HOUSING

A. Communication, Language, Symbolic Systems

- Rhet 1101-1102—Communication (8)
- (or) equivalent course
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Writing (4)
- (or) Rhet 3562—Scientific and Technical Writing (4)
- Rhet 3254—Advanced Public Speaking (4)
- (or) Spch 3641—Discussion Conference Methods (4)
- (or) a foreign language
- (or) mathematics

B. Physical and Biological Sciences

Minimum of 9 credits to be selected from CLE-approved courses from at least two disciplines, one of which must be physics

C. Man and Society

Minimum of 9 credits to be selected from the following courses according to your area of emphasis:

- AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)
- (or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)
- Psy 1001—General Psychology (5)
- Soc 1001—Introduction to Sociology (4)
- Soc 1002—American Community (4)

D. Artistic Expression

Minimum of 9 credits to be selected from CLE-approved courses from at least two disciplines

E. Major Requirements

Minimum of 33 credits from the following:

- Dsgn 1551—Consumer Aspects of Housing and Furnishings (4)
- (or) Dsgn 1552—Introduction to Housing and Interior Design (3)
- (and) Dsgn 1553—Interior Design I (4) (see design option)
- Dsgn 3563—Art and the Environment (3)
- Dsgn 5561—Housing Management (5)
- Dsgn 5565—Homes of the World (3-4)
- Dsgn 5567—Housing Alternatives for the Family (4)
- Dsgn 5568—Housing Problems of the Family (5)
- FSoS 1401—Household Equipment (3)
- FSoS 3001—Communication Skills and Interviewing Techniques: An Introduction (3)
- FSoS 3260—Home Management Principles (3)
- FSoS 5200—Family Relationships (5)
- FSoS 5202—Introduction to Social Psychology With Applications to the Family (5)

- (or) Soc 5201—Introduction to Social Psychology (4)
- (or) Psy 5201—Social Psychology (4)
- FSoS 5220—Family Economics (3)
- FSoS 5255—Public Social Policy and the American Family (4-5)

30 credits from the following:

- PA 5505—Housing Policy (4) (required for all majors)
- Anth 1102—Introduction to Social and Cultural Anthropology (5)
- Arch 1001-1002-1003—Environmental Design (12)
- Arch 5137—Planning: Urban Function and Structure (4)
- AgEc 5580—Economic Organization of the Household (4)
- Geog 1301—Human Geography (5)
- Geog 3371—Urban Geography (4)
- Hist 3901, 3902—American Urban History (8)
- Pol 1001—American Government and Politics (5)
- Pol 5327—Local Government (4)
- Psy 1004-1005—Introductory Laboratory Psychology (6)
- SSci 3981—Societies of the Future (4)
- Stat 1050—Introduction to Ideas of Statistics (4)
- (or) MIS 3100—Basic Computer Systems (4)
- SW 1001—Introduction to Social Welfare and Community Services (5)

A minimum of 30 credits to be chosen from the following options (student may choose a single option or choose across the options):

Business and Commerce Option

- Acct 1050-1051—Principles of Accounting (8)
- AgEc 5590—Government and Consumers (4)
- AgEc 5620—Regional Economic Analysis (4)
- BA 3002—Business and Society (4)
- BFin 3500—Real Estate Investment Analysis (4)
- BLaw 3058—Introduction to Law, and the Law of Contracts and Agency (4)
- Dsgn 5586—Problems in Design: Housing and/or Interiors (3-4 [max 12])
- Econ 5623—Housing, Markets, Public Policy (4)
- ForP 3310—Manufactured Housing Systems (4)
- Mgmt 3001—Fundamentals of Management (4)
- Mgmt 3002—Psychology of Management (4)
- Mktg 3000—Principles of Marketing (4)
- Mktg 3098—Introduction: Consumer Behavior (4)

Social Service Option

- SW 3005—Social Work Processes: Methods of Intervention (4) (required for this option)
- FSoS 5201—Family in American Social Structure (4)
- (or) Soc 5405—Social Stratification and Mobility (4)
- (and) Soc 5951—Minority Group Relations (4)
- Pol 5328—Metropolitan Government and Politics (4)
- Psy 3031—Sensation and Perception (4)
- Soc 1651—Rural Sociology (4)
- Soc 5401—Social Organization (4)
- Soc 5601—Urban Sociology (4)
- Soc 5605—Urbanization and Social Policy (4)
- Soc 5661—Rural Community Analysis (4)
- (or) Soc 5655—Rural Community (4)
- Soc 5801—Computer Usage in Social Research (4)
- Recommended—Soc 3801, 3802, 3803—Sociological Methods, I, II, III, (15)

Programs and Curricula

Design Option

The following lower division courses are prerequisite to the design option (7 credits may apply to this option only):

AgEn 1010—Technical Drawing (3)

(or) demonstrated proficiency

Dsgn 1521—Color and Design I (4)

Dsgn 1523—Drawing and Design I (4)

Dsgn 1525—Two-Dimensional Design I (3)

Dsgn 1552-1553—Introduction to Housing and Interior Design, Interior Design I (7) (required for this option; see item E above)

Recommended:

Arch 5055, 5056—English, Early American, Modern Architecture (8)

(or) Arth 5545, 5547—American, Modern American, and European Architecture (10)

Arch 5137—Planning: Urban Function and Structure (4)

Arch 5138—Planning: Theory, Methodology (4)

Dsgn 3550—Interior Design Presentation (3)

Dsgn 3553—Interior Design II (4)

Dsgn 3557—Interior Design Resources and Materials (3)

(or) Dsgn 5558—Purchasing Home Furnishings (3)

Dsgn 5552—Interior Design III: Residential Design (4)

Dsgn 5586—Problems in Design: Housing and/or Interiors (3-4)

ForP 3310—Manufactured Housing Systems (4)

FSoS 5404—Evaluation Procedures for Equipment (3-4)

FSoS 5418—Equipment, Independent Study (1-4)

F. Field Experiences

Dsgn 3580—Field Experience in Housing (15)

G. Collateral Area

12-18 credits to be developed by student with help of the adviser; suggested areas of concentration are available from your adviser

H. Free Electives

Electives to make a total of 185 credits required for graduation

Interior Design

This program is planned to prepare students for entrance into the field of interior design. The curriculum is structured to provide a firm professional base and to offer flexibility of choice in supporting disciplines. It is the intent of the program to provide the student with the competence to solve problems of the immediate physical environment by developing (1) an understanding of the relationship between the individual and the environment, (2) a sense of the designer's responsibility to society, (3) a foundation in basic design, (4) an understanding of historical styles and contemporary trends, (5) technical and communication skills, and (6) an awareness of business and professional ethics.

Upon graduation, students may work in residential or contract design, or in community service. Potential employers include interior design studios, furniture stores, lighting companies, wholesale furniture and fabric showrooms, contract design firms, or community service organizations.

Students beginning the curriculum are considered pre-interior design majors. A limited number of students who have met the specified requirements, are

admitted to the interior design program. Contact the program chairperson for further information.

A grade of at least C is required in all interior design courses.

**Program Requirements and Suggested Courses for
INTERIOR DESIGN**

A. Communication, Language, Symbolic Systems

Rhet 1101, 1102—Communication (8)

Rhet 1222—Public Speaking (4)

Rhet 3551—Professional Writing (4)

(or) upper division course in composition

Minimum of 3 additional credits to be selected from CLE-approved courses
(may be taken S-N)

B. Physical and Biological Sciences

NSci 1005—Physical World: Chemistry (4)

(or) equivalent course in chemistry which is a prerequisite to work required in
textiles

Minimum of 5 additional credits to be selected from CLE-approved courses
from a discipline other than chemistry (may be taken S-N)

C. Man and Society

AgEc 1020, 1030—Principles of Macroeconomics, Microeconomics (9)

(or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)

Psy 1001—General Psychology (5)

D. Artistic Expression

Dsgn 5505—Art History (4)

(or) equivalent

Minimum of 5 additional credits to be selected from CLE-approved courses
(may be taken S-N)

E. Major Requirements

AgEn 1010—Technical Drawing (3)

(or) Ag En 3010—Architectural Drafting (4)

(or) Dsgn 1450—Drafting—Basic Drafting Techniques (4)

(or) demonstrated proficiency

Dsgn 1521—Color and Design I (4)

Dsgn 1523—Drawing and Design I (4)

Dsgn 1525—Two-Dimensional Design I (3)

Dsgn 1552—Introduction of Housing and Interior Design (3)

Dsgn 1553—Interior Design I (4)

Dsgn 3527—Three-Dimensional Design (4)

Dsgn 3550—Interior Design Presentation (3)

Dsgn 3553—Interior Design II (4)

Dsgn 3557—Interior Design Resources and Materials (3)

Dsgn 3559—Interior Design Business Procedures and Client Relationships (2)

Dsgn 3575—Senior Seminar in Interior Design (1)

Dsgn 5507—History of Decorative Arts I: Textiles (3-4)

(or) Dsgn 5509—History of Decorative Arts II: Metal, Ceramics, Wood, Glass
(3-4)

Dsgn 5512—History of European Furniture and Interiors (3-4)

Dsgn 5514—History of American Furniture and Interiors (3-4)

Dsgn 5552—Interior Design III: Residential Design (4)

Dsgn 5554—Interior Design IV: Contract Design (4)

Programs and Curricula

Select one of the following alternatives (see adviser):

- 1) Dsgn 3581—Field Experiences (3) or Dsgn 5568—Housing Problems of the Family (5), and additional credits for a total of 15 from interior design, general design, or related courses
 - 2) Dsgn 5555—Honors Thesis Project in Interior Design (15)
- FSoS 1401—Household Equipment (3-4)
TexC 3621—Textiles (5)
TexC 3622—Textiles for Interiors (3)
ForP 3310—Manufactured Housing Systems (4)
FSoS 3260—Principles of Home Management (3)
(or) AgEc 5580—Economic Organization of the Household (4)

Select two courses from the following:

- Acct 1050—Principles of Accounting (4)
(or) AgEc 1250—Principles of Accounting (4)
Mktg 3000—Principles of Marketing (4)
Mgmt 3001—Fundamentals of Management (4)

9 credits selected from the following areas (may be taken S-N):

- Anthropology
Family Social Science
History
Political Science
Social Work
Sociology

F. Collateral Area

Minimum of 15 credits of related courses to be selected by student with approval of the adviser (may be taken S-N)

G. Free Electives

Electives to make a total of 185 credits needed for graduation (may be taken S-N; no more than 25 percent of total credits [46] may be taken S-N)

Nutrition and Dietetics

This program is intended for men and women interested in the field of nutrition and its various applications in dietetics, public health, and nutrition science. The options in dietetics and community nutrition meet the requirements of the American Dietetic Association for membership and for internship. Students completing either option and a 6-12 month hospital or public health internship may seek employment in hospitals or community agencies.

The nutrition science option is planned for those interested in graduate study in this area. Students in this option should maintain a minimum grade point average of 2.80. Employment possibilities for persons holding graduate degrees in nutrition science include college or university teaching or university or industrial research.

Students must normally complete the organic chemistry sequence by the end of the sophomore year, or will be delayed in completing the program. Transfer students who have completed organic chemistry or biochemistry courses that are not as extensive as those listed below are required to take additional courses in both fields.

The American Dietetic Association has approved "under organization" status for a coordinated undergraduate program in dietetics at the University. This program enables qualified students, with the cooperation of Twin Cities area hospitals, to integrate the internship experience with the final 2 years of undergraduate study. Students completing the program are assured membership in the American Dietetic Association. Enrollment is limited, and interested students should apply to the director early in the sophomore year.

**Program Requirements and Course Suggestions for
NUTRITION AND DIETETICS**

A. Communication, Language, Symbolic Systems

- Rhet 1101-1102—Communication (8)
- (or) equivalent course
- Rhet 3551—Professional Writing (4)
- (or) Rhet 3562—Scientific and Technical Writing (4)
- Math 1111—College Algebra and Analytic Geometry (5)
- Minimum of 2 additional credits selected from CLE-approved courses

B. Physical and Biological Sciences

- Chem 1004-1005—General Principles of Chemistry (10)
- Chem 3301-3302—Elementary Organic Chemistry (10)
- Biol 1011—General Biology (5)
- Biol 3021—Biochemistry (4)
- BioC 5025—Biochemistry Laboratory (2)
- MicB 3103—General Microbiology (5)
- (or) Biol 3013—General Microbiology (5)
- Phsl 3051—Human Physiology (5)
- (or) Phsl 1002—Human Physiology (4)

C. Man and Society

- AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)
- (or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)
- Psy 1001—General Psychology (5)
- Soc 1001—Introduction to Sociology (4)

D. Artistic Expression

- Minimum of 9 credits to be selected from CLE-approved courses

E. Major Requirements

- FScN 1600—Sociocultural Aspects of Nutrition (3)
- FScN 1602—Principles of Nutrition (4)
- FScN 3110—Food Chemistry (5)
- FScN 3403—Experimental Foods (4)
- FScN 3472—Principles of Food Purchasing (4)
- FScN 3622—Food and Nutrition in the Life Cycle (4)
- FScN 5100—General Seminar (1)
- FScN 5622—Human Nutrition (5)
- FScN 5662—Clinical Nutrition (5)
- LaMP 5175, 5176—Pathology and Clinical Medicine for Allied Health Students I, II (6)
- Mgmt 3001—Fundamentals (4)
- 4-5 credits in sociology or anthropology
- 3 credits in psychology of learning to be selected from:
 - PsyF 5141—Psychology of School Learning (3)

Programs and Curricula

HSU 5011—Instructional Skills for Health Professionals: The Teaching-Learning Process (3)

3-5 credits in statistics or computer usage

F. Collateral Area

Select one of the following options:

General Dietetics

FScN 3730—Quantity Food Purchasing and Production (5)

FScN 3750—Management of Food Service and Hospitality Business Systems (3)

Therapeutic and Clinical Dietetics

The requirements for this option are met by the general program listed above. Additional courses in anatomy, genetics, physiology are recommended.

Community Nutrition

FScN 1700—Introduction to Hospitality and Food Service Management (2)

FScN 3642—Community Nutrition (3)

PubH 5380—Applied Human Nutrition (3)

One additional course in food service management to be selected by adviser and student

Coordinated Undergraduate Program in Dietetics

The basic curriculum is similar to that described in requirements A through E above. However, it also includes field experience in which didactic and clinical phases of instruction are coordinated. A detailed plan of the coordinated program may be obtained from the Department of Food Science and Nutrition.

Nutrition Science

Students who want a nutrition science emphasis or who are considering graduate study may substitute up to 20 credits from the courses listed below for an equivalent number of major course requirements, on consultation with the adviser.

BioC 5745, 5752, 5743, with BioC 5745, 5746, 5747

Chem 1006, 3100, 3303, 5520, 5521

Math 1141-1142-1211-1222

10-15 credits of college physics

G. Free Electives

Electives to make a total of 185 credits required for graduation

Textiles and Clothing

This program relates clothing and other textile products in the near environment to the physical, psychological, and social needs of individuals and families. Its two basic emphases are: (a) materials and physical behavioral aspects of textiles and (b) human behavioral aspects of clothing. Analysis of the textile and clothing needs of people and design of solutions to problems involving those factors help students gain the personal insights and expertise in textiles and clothing necessary for effecting environmental change.

By selecting appropriate supporting areas, majors may direct their professional goals toward positions in: (a) educational services (government agencies, business/industry, the mass media, community/extension programs), (b) product analysis or market research (business/industry, governmental agencies), or (c)

promotional and training programs (business/industry). This program may also serve as preparation for graduate study in textiles and clothing or other advanced professional programs.

Within the program the student emphasizes either textiles or clothing by selecting electives in the desired area. A supporting area is also planned to correlate with the student's professional interests. Courses in the supporting area may be chosen—according to the student's objectives—from other departments within the college as well as other units within the University such as: anthropology, business, chemistry, design, economics, education, family social science, journalism, sociology, physics, psychology.

A GPA of 2.50 in courses from the Department of Textiles and Clothing is required for graduation. A higher overall GPA is required for admission to graduate study.

**Program Requirements and Suggested Courses for
TEXTILES AND CLOTHING**

A. Communication, Language, Symbolic Systems

- Rhet 1101-1102—Communication (8)
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Writing (4)
- (or) Rhet 3562—Scientific and Technical Writing (4)
- Math 1131—Finite Mathematics (5)
- (or) Math 1111—College Algebra and Analytical Geometry (5)

B. Physical and Biological Sciences

- Biol 1011—General Biology (5)
- (or) GCB 3032—Human Genetics and Social Affairs (3)
- Chem 1001-1002—General Principles: Chemistry (10)
- (or) Chem 1004-1005—General Principles of Chemistry (10)

C. Man and Society

- AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)
- (or) Econ 1001, 1002—Principles of Macroeconomics, Microeconomics (8)
- Psy 1001—General Psychology (5)
- Soc 1001—Introduction to Sociology (4)

D. Artistic Expression

- Dsgn 1501—Introduction to Design (3)
- Minimum of 6 additional credits selected from CLE-approved courses such as humanities, literature, music, art history, theatre arts (no studio or technical courses)

E. Major Requirements

- TexC 1601, 1602—Basic Clothing Construction, Pattern Fitting and Alteration (4)
- TexC 3621—Textiles (5)
- TexC 3622—Textiles for Interiors (3)
- TexC 3642—Apparel Industries (4)
- TexC 3661—Cultural Perspectives on Dress (3)
- TexC 3662—Aesthetics of Clothing (3)
- TexC 5621—Macro-Micro Property Relationships (5)
- TexC 5622—Issues and Trends in Textile Consumer Protection (3)
- TexC 5661—Clothing and Human Behavior (4)
- TexC 5662—Family Clothing Problems (3)

Programs and Curricula

TexC 5664—Fashion Theory and Analysis (4)

14-19 additional credits in TexC courses, with a maximum of 6 credits from any one course

35 credits in supporting area selected with approval of adviser (lists of recommended courses in supporting areas are available for use by students and advisers)

F. Free Electives

Electives to total 185 credits required for graduation

Youth Studies Collateral

The Center for Youth Development and Research provides a one-year, 24-credit collateral area in youth studies for selected seniors registered in any college of the University of Minnesota for undergraduate degree purposes.

The center does not award degrees, nor does it define the collateral area as either a major or a minor. The collateral is viewed as a vehicle to provide students with an interdisciplinary focus on youth for purposes of students work or further training.

The youth studies collateral includes:

1. A designated course for each of 3 quarters: CPsy 3303 or 5303—Adolescent Psychology; Soc 5952—Youth in Modern Society; and a course from either speech and communication or educational psychology emphasizing communication skills and techniques.
2. 8-10 hours per week of direct work with youth throughout the 3 quarters.
3. A weekly seminar throughout the academic year to reflect on and integrate knowledge about and experience with youth. Students register for YoSt 5201, 5202, 5203—Practicum.



III. COURSE OFFERINGS

Course Numbers and Symbols—Courses primarily for freshmen and sophomores are numbered 1000 through 1998; for juniors and seniors, 3000 through 3998; for juniors, seniors, and graduate students, 5000 through 5998. Courses numbered 8000 and above are restricted to students registered in the Graduate School.

The following symbols are used throughout the descriptions:

* Courses in which graduate students may prepare Plan B projects.

† All courses preceding the dagger must be completed before credit will be granted for any quarter of the sequence.

§ Credit will not be granted if the equivalent course listed after the section mark has been taken for credit.

¶ Concurrent registration is allowed with the course listed after paragraph mark.

Consent of instructor is required.

△ Consent of department or school offering course is required.

When no abbreviated departmental prefix precedes the course number listed as a prerequisite, that prerequisite is in the same department as the course being described.

Design (Dsgn)

1501. **INTRODUCTION TO DESIGN.** (3 cr)
Awareness of design in the near environment.
1521. **COLOR AND DESIGN.** (4 cr)
Color concepts and their applications to design.
1523. **DRAWING AND DESIGN I.** (4 cr)
Development of basic skills in drawing for the designer.
1525. **TWO-DIMENSIONAL DESIGN I.** (3 cr)
Experiments with principles of two-dimensional design.
1531. **SURFACE FABRIC DESIGN I.** (4 cr)
Exploration of surface pattern and composition with varied media and materials: dyeing, resist batik, stencils, block printing, and others.
1532. **STRUCTURE FABRIC DESIGN I.** (4 cr)
Individual designing with loomed and nonloomed structural techniques; weaving, macrame, plaiting, stitchery, and others.
1533. **METALSMITHING: INTRODUCTION TO TECHNIQUES.** (4 cr)
Introduction to techniques used in contemporary metalsmithing and jewelry making.
1535. **CRAFT DESIGN I.** (3 cr)
Orientation to craft materials and techniques in nontextile crafts. Metals, wood, plastic, others. Studio problems.
1538. **CONSTRUCTION AND REFINISHING OF HOME FURNISHINGS.** (3 cr; prereq #)
Laboratory problems in refinishing and reupholstering furniture and making slip covers and draperies. Emphasis on design. Techniques suitable for homemakers, extension workers, and teachers. Students must furnish own materials.
1541. **COSTUME DESIGN I.** (3 cr; prereq 1521, 1523 or 1525, or #)
Problems in color, texture, design for the individual. Introduction to sketching. Folk and regional costume.
1543. **FASHION ILLUSTRATION.** (4 cr; prereq 1541 or #)
Human figure sketches and fashion illustration as a form of communication. Emphasis on color, proportion, cut, and fabric detail.

Course Offerings

- 1544. COSTUME DESIGN: SPECIAL TECHNIQUES.** (4 cr; prereq 1531)
Studio problems in stitchery and other special techniques for costume. Emphasis on line, shape, and color.
- 1551. CONSUMER ASPECTS OF HOUSING AND FURNISHINGS.** (4 cr)
Survey of choices, bases for decision, sources of materials and information, relationships of aesthetic and practical functions. Lecture, discussion, laboratory, and field experience.
- 1552. INTRODUCTION TO HOUSING AND INTERIOR DESIGN.** (3 cr, \$1551; prereq soph)
Problems involved in choosing location and planning or selecting a dwelling unit and its furnishings. Emphasis on design and appraisal of individual and family needs.
- 1553. INTERIOR DESIGN I.** (4 cr; prereq 1521, 1552, AgEc 1010 or equiv)
Problems in designing for living space needs. Application of the design elements and principles to interior design projects and the interior space laboratory.
- 3523. DRAWING AND DESIGN II.** (4 cr; prereq 1523 or equiv)
Continued development of drawing skills for the designer.
- 3525. TWO-DIMENSIONAL DESIGN II.** (4 cr; prereq 1525 or equiv)
Experiments with principles of two-dimensional design.
- 3527. THREE-DIMENSIONAL DESIGN.** (4 cr; prereq 1525, 1521, 1523 or \$)
Study and application of principles of three-dimensional design.
- 3531. STRUCTURE-FABRIC DESIGN II.** (4 cr; prereq 1531, 1521, 1523 or \$)
Selection from printed, dyed, woven or nonwoven textiles.
- 3532. STRUCTURE FABRIC DESIGN II.** (4 cr; prereq 1532)
Studio problems. Beginning floor loom weaving, further exploration of off-loom fiber techniques, and introduction of new techniques.
- 3533. METALSMITHING: FABRICATION.** (4 cr; prereq 1533)
Techniques of raising and forging and other noncasting techniques to create useful objects.
- 3535. DESIGN: MATERIALS.** (3 cr)
Studio problems in wood, plastic, and other materials.
- 3536. METALSMITHING: ENAMELING.** (4 cr; prereq 1533 or \$, some metals experience)
Enamel used as surface decoration on metal jewelry or other useful objects.
- 3541. COSTUME DESIGN II.** (4 cr; prereq 1541, 1543)
Problems in production for design of sportswear, day and evening wear, and children's garments.
- 3550. INTERIOR DESIGN PRESENTATION.** (3 cr; prereq 1523 or equiv, 1553, AgEn 1010 or equiv, pass portfolio review)
Methods of rapid rendering for interiors in various media. Presentation techniques for traditional and modern interior details.
- 3553. INTERIOR DESIGN II.** (4 cr; prereq 1553 or \$, and pass portfolio review)
Intermediate interior design; working creatively with design elements as related to interiors. Solutions to assigned problems presented in space laboratory and two-dimensionally.
- 3557. INTERIOR DESIGN RESOURCES AND MATERIALS.** (3 cr; prereq 1553, TexC 3621)
Resources and materials used in interiors and their functional and aesthetic relationship to interior design.
- 3559. INTERIOR DESIGN BUSINESS PROCEDURES AND CLIENT RELATIONSHIPS.** (2 cr; prereq 3553)
Problems related to the interior design profession including client-designer relations, fees and compensations, and ethical responsibilities.
- 3563. ART AND THE ENVIRONMENT.** (3 cr; prereq soph)
Art and design in housing; an individual's role and responsibility; contemporary and historic examples of alternative approaches to design of the physical home environment.
- 3570. SENIOR SEMINAR IN HOUSING.** (1 cr; S-N only; prereq sr housing major and other concerned students)
Discussion of professionalism and problems in the field, job opportunities, and assembly of credentials.
- 3571. SENIOR SEMINAR IN DESIGN.** (1 cr; prereq sr in design)
Discussions of problems in the field, possible goals, and professionalism. Assigned readings and reports.
- 3574. CRAFTS SEMINAR.** (1 cr per yr)

- 3575. SENIOR SEMINAR IN INTERIOR DESIGN.** (1 cr; S-N only; prereq sr in interior design)
Discussion of professionalism and problems in the field, portfolio presentation, and assembly of credentials.
- 3580. FIELD EXPERIENCE IN HOUSING.** (Cr or [max 15 cr]; prereq completion of one-half of professional sequence and §)
International, intercultural, or other directed work in the community which offers a varied experience in housing problems. Seminar, readings, and a major paper required.
- 3581. FIELD EXPERIENCE IN INTERIOR DESIGN: RETAIL OR COMMUNITY SERVICE.** (3 cr; S-N only; prereq Psy 1001, completion of at least one-half professional sequence and §)
Supervised work-study program with a professional firm, interior design studio, or retail store.
- 3582. FIELD EXPERIENCE IN DESIGN.** (3 cr; prereq completion of at least one-half of professional sequence and §)
Minnesota State Fair and other exhibitions.
- 3583. FIELD EXPERIENCE IN COSTUME DESIGN.** (4 cr; prereq completion of at least one-half of professional sequence or §)
Supervised independent work-study program with a professional firm or institution such as a clothing manufacturing firm, accessory design studio, art museum, or free-lance designer.
- 3584. FIELD EXPERIENCE IN FIBER/FABRIC.** (1-15 cr; prereq §)
Independent off-campus experience with professionals. May include attendance at short term workshop, international experience, apprenticeship, or other work.
- 5502. APPLICATION OF ART THEORY IN HOME ECONOMICS.** (3 cr; prereq 5505 or equiv)
Current literature of art in the area of home and family living.
- 5504. CULTURAL RESOURCES OF THE TWIN CITIES.** (2-3 cr)
The broad range of arts represented in the Twin Cities area. Lectures by instructor and practicing professional artists, field trips, selected readings.
- 5505. ART HISTORY.** (4 cr)
Art from the Egyptian period to present. Painting, sculpture, and architecture of the past studied for influence on contemporary period. Field trips.
- 5507. HISTORY OF DECORATIVE ARTS: TEXTILES.** (3-4 cr; prereq 5505 or equiv)
Textiles from early civilization to the 20th century. Design, materials, and techniques.
- 5509. HISTORY OF DECORATIVE ARTS: METAL, CERAMICS, WOOD AND GLASS.** (3-4 cr; prereq 5505 or equiv)
Glass, ceramics, metalwork, wood, and other materials from selected historical periods. Application to interior design.
- 5512. HISTORY OF EUROPEAN FURNITURE AND INTERIORS.** (3-4 cr; prereq 5505 or equiv)
Furniture and interiors from ancient civilizations through the 19th century.
- 5514. HISTORY OF AMERICAN FURNITURE AND INTERIORS.** (3-4 cr; prereq 5505 or equiv, 5512)
Styles of American interiors and furnishings from the 17th to the 20th century.
- 5517. HISTORY OF COSTUME.** (4 cr; prereq 5505 or equiv)
Primitive to contemporary styles. Study of costume from historic collection.
- 5521. COLOR AND DESIGN II.** (4 cr; prereq 1521 and §)
Continued study of color concepts and their application to design.
- 5531. SURFACE FABRIC DESIGN III.** (4 cr; prereq 3531 and portfolio review)
Designing in one special surface textile technique. Studio problems. Readings.
- 5532. STRUCTURE FABRIC DESIGN III.** (4 cr; prereq 3532 and portfolio review)
Designing in one special structural textile technique—floor loom weaving and/or off-loom fiber techniques. Readings.
- 5533. METALSMITHING: COMBINED TECHNIQUES.** (4 cr; prereq 3533)
Combined cast and fabrication techniques to create jewelry and other useful objects.
- 5541. COSTUME DESIGN III.** (3 cr; prereq 3541, TexC 1604 or §)
Advanced problems in draping and sketching. Pencil, crayon, and watercolor techniques. Studies and reports on selected topics.
- 5544. COSTUME DESIGN PROBLEMS.** (4 cr; prereq 5541 or §)
Supervised experience in design production; development of a "line;" professional ethics and business practice.
- 5552. INTERIOR DESIGN III: RESIDENTIAL DESIGN.** (4 cr; prereq 3550, 3553, TexC 3621, FSoS 1401, 9 cr in social science or §)
Advanced problems in planning and furnishing residential spaces to meet individual and/or family needs.

Course Offerings

- 5554. INTERIOR DESIGN IV: CONTRACT DESIGN.** (4 cr; prereq 3550, 3553, 3557)
Design problems related to commercial interiors.
- 5555. HONORS THESIS IN INTERIOR DESIGN.** (15 cr; prereq completion of all other professional courses, program committee approval)
Independent interior design thesis project under tutorial guidance.
- 5556. ENVIRONMENTAL STUDIES IN INTERIOR DESIGN.** (1-3 cr; for postbaccalaureate students; prereq 6 cr in housing, home furnishing, interior design or equiv)
Space, color, light, and arrangement in interiors, work in specially designed laboratories. Review of current research.
- 5558. PURCHASING HOME FURNISHINGS.** (3 cr; prereq 1551 or 1553)
Home furnishings viewed in terms of appearance, cost, use, and upkeep. Includes furniture, floor coverings, fabrics, dinnerware, glassware, and flatware. Slides and actual materials used. Field trips.
- 5561. HOUSING MANAGEMENT.** (5 cr; prereq §)
Career demands for professionalism in housing management. Emphasis on increasing interpersonal skills. Includes historical perspectives, current status of housing, management approaches, psychosocial impact of housing and community design, specific residential populations.
- 5565. HOMES OF THE WORLD.** (3-4 cr; prereq 1551 or 1553 or 3563 or equiv)
Home design in selected regions of the world.
- 5567. HOUSING ALTERNATIVES FOR THE FAMILY.** (4 cr; prereq 1551 or 1552, 3563 or §)
Alternative housing choices for the family in today's market; emphasis on design for special needs of the elderly, the handicapped, and differing life-styles.
- 5568. HOUSING PROBLEMS OF THE FAMILY.** (5 cr; prereq 1551, 1553 or 3563 or equiv)
Housing problems of low-income, elderly and minority individuals and families. Emphasis on rehabilitation of older housing including rehabilitation process, programs, and projects. Students work with a low-income inner city client family on a home improvement project.
- 5584. READINGS IN DESIGN.** (1-3 cr; not open to srs; prereq §)
Independent study and review of books and periodicals. Written reports.
- 5585. PROBLEMS IN DESIGN: GENERAL.** (2-4 cr per qtr [12 cr max]; prereq § and Δ)
Independent study in design under tutorial guidance.
- 5586.* PROBLEMS IN DESIGN: HOUSING AND/OR INTERIORS.** (3-4 cr per qtr [12 cr max]; prereq § and Δ)
Independent study under tutorial guidance.
- 5587. PROBLEMS IN DESIGN: JEWELRY.** (3-4 cr per qtr [12 cr max]; prereq passed portfolio review, § and Δ)
Independent study under tutorial guidance.
- 5588. PROBLEMS IN DESIGN: TEXTILES.** (3-4 cr per qtr [max 12]; prereq passed portfolio review, § and Δ)
Independent study under tutorial guidance.
- 5589. PROBLEMS IN DESIGN: COSTUME.** (3-4 cr per qtr [max 12]; prereq 5517 or equiv, passed portfolio review, §)
Independent study under tutorial guidance.
- 8552. SPECIAL PROBLEMS IN HOME PLANNING AND FURNISHING**
- 8556. ENVIRONMENTAL STUDIES IN INTERIOR DESIGN**
- 8575. SEMINAR: DESIGN**
- 8584. READINGS IN DESIGN**
- 8585. PROBLEMS: DESIGN**
- 8586-8587. PROBLEMS: DESIGN**

Family Social Science (FSOs)

- 1001. DYNAMICS OF DATING, COURTSHIP AND MARRIAGE.** (3 cr, §1002)
Application of principles from behavioral sciences to dating, courtship, mate selection, engagement, mixed marriages, roles of men and women, interaction of marital spouses, and marital stability.

- 1002. DYNAMICS OF DATING, COURTSHIP, MARRIAGE.** (3 cr, §1001; prereq upper division, married or engaged students)
See 1001.
- 1003. SURVEY OF FAMILY SOCIAL SCIENCE.** (2 cr; S-N only)
Broad view of the field of family social science, orientation to the curriculum of the family relationships program. Presentations by faculty, field representatives, and other relevant persons. Students will work in small group projects on topics designed to provide them with a more adequate understanding and appreciation of the family relations field.
- 1025. PARENTHOOD.** (4 cr)
Differing concepts of family roles—father, mother, son, daughter, sister, brother. Their implications for parent-child and sibling interaction. Effects of parenthood on husband-wife relations.
- 1109. SEX IN MODERN LIFE.** (2 cr, §Obst 1109; S-N only)
A general introductory course, designed to help students accept themselves as sexual beings. Biological functioning, the social implications of sexuality.
- 1119. SEX IN MODERN LIFE.** (3 cr, §FSoS 1109; S-N only)
See 1109. Students must attend a discussion section in addition to the lecture.
- 1249. BEGINNING FIELDWORK: DIRECTED COMMUNITY EXPERIENCE.** (3 cr; prereq Soc 1001, §)
Lower division counterpart to 5249 offering freshmen and sophomores the opportunity to learn about various community agencies and their programs while making contributions as staff trainees. At least 4 hours per week will be spent in an agency, becoming oriented to policy and services and interacting with agency clientele under supervision. Participation in a weekly seminar which will serve as a further learning problem-solving medium for the fieldwork experience.
- 1263. FAMILY MANAGEMENT AND INTERPERSONAL RELATIONS LABORATORY.** (6 cr; prereq 3rd-qr fr and above)
An interdisciplinary living experience in the Mildred Weigley House to orient students to a wise use of human and environmental resources and to the dynamics of group living. Group decisions and interaction under supervision of two instructors—one of whom will live in the house and work with students in small group communication and dynamics and the other, a nonresident instructor, who will advise in management procedures.
- 1401. HOUSEHOLD EQUIPMENT.** (3 cr; prereq soph or §...GC 1163 or NSci 1004 or Phys 1031 recommended)
Principles in selection, operation, care, and convenient arrangement of equipment in the home.
- 1402. HOUSEHOLD EQUIPMENT LABORATORY.** (1 cr; prereq 1401 or soph or §)
- 3001. COMMUNICATION SKILLS AND INTERVIEWING TECHNIQUES: AN INTRODUCTION.** (3 cr; prereq 1001)
An introductory training and experience in various communication skills and interviewing techniques for undergraduates. Integration of didactic and experiential training, and preparation for more advanced course work in the department.
- 3015. LIFE-STYLES OF EDUCATED AMERICAN WOMEN.** (4 cr; prereq §)
The roles and statuses of American women compared and contrasted with those of men. Women's education: types, influences, uses. Possibilities and needs for change in terms of various objectives in the future.
- 3240. SPECIAL TOPICS IN FAMILY SOCIAL SCIENCE.** (3 cr per qtr [max 9 cr]); prereq dependent upon specific topic, soph and above, and/or §)
- 3260. HOME MANAGEMENT PRINCIPLES.** (3 cr; prereq AgEc 1030)
Development of a theoretical systems framework for analysis of behavior in families with emphasis on managerial aspects of behavior; goal setting, planning, and implementing in use of resources.
- 3263. HOME MANAGEMENT LABORATORY.** (4 cr; prereq 3260 or §3260)
Residence for one-half quarter in home management house with directed experience in managing and sharing activities and responsibilities. Special fee required.
- 3264. HOME MANAGEMENT PRACTICUM.** (4 cr; prereq 3260 or §3260, §)
Directed experience in management in an approved living situation. Special fee required.
- 3500. FAMILY-CONSUMER DECISION MAKING.** (3 cr; prereq Soc 1001, Psy 1001, AgEc 1030...3260 recommended)
Analysis of the interaction of the family and marketing systems; consumer problems resulting from that interaction.
- 5001. HUMAN SEXUAL BEHAVIOR.** (4 cr; prereq 15 cr in psychology or sociology)
Nature of sexual functioning, sexual development, ethics and attitudes, research problems.

Course Offerings

- 5025. PARENTING.** (4 cr; prereq 5200 or 5202, CPsy 1301)
Parenting methods, the child's development from infancy through adolescence. Designed to help students identify differing parenting techniques, develop their own parenting approach, and conduct parenting classes.
- 5200. FAMILY RELATIONSHIPS.** (5 cr, §Soc 5501; prereq Psy 1001 or equiv, Soc 1001 or equiv)
The family as an institution and system of relationships. Current developments in study of family. Changes in American society and their influence on family life.
- 5201. FAMILY IN AMERICAN SOCIAL STRUCTURE.** (4 cr; prereq 5200, 25 cr in social science courses exclusive of economics, or §)
The family as a social institution interrelated with the economic, political, and other social institutions of society. Sources of change in the family and effects of other subsystems or social structures on the family viewed within the framework of sociological theories which might be useful in understanding the process or change.
- 5202. INTRODUCTION TO SOCIAL PSYCHOLOGY WITH APPLICATIONS TO THE FAMILY.** (5 cr, §Psy 5201, §Soc 5201, §PsyF 5170; prereq Psy 1001 and introductory sociology or §)
Introduction to social psychology with applications to courtship, marriage, and the family. Social interaction, communication, social effects on individual functioning, family as small group, social influence, social ecology, person perception, social motivation, interpersonal attraction, and other topics.
- 5205. THEORY AND RESEARCH IN FAMILY RELATIONSHIPS.** (3 cr; prereq 5200 or equiv, Soc 3803 or Soc 5804 or §)
Scientific method in study of family relationships. Current theoretical questions discussed, and hypotheses derived, tested, and analyzed in laboratory sessions.
- 5206. THEORY AND RESEARCH IN FAMILY RELATIONSHIPS: PROJECT DEVELOPMENT AND EVALUATION.** (3 cr; prereq 5205, sr, §)
Pilot research projects are developed, carried out, and evaluated with small sample of families. Projects will build upon theoretical frameworks and research methods that are relevant to the family field.
- 5210. FAMILY IN WORLD PERSPECTIVE.** (5 cr, §Anth 5312, §Soc 5511; prereq 5200 and Anth 1102 or §)
Comparison of kinship, marriage, family organization, the family life cycle, and modes of family functioning across cultures; relationship to economic, political, religious, and other institutions, with emphasis on adaptations of the family to urbanization and industrialization.
- 5219. PROBLEMS IN FAMILY FINANCIAL MANAGEMENT.** (3-4 cr; prereq 3260 or 3001, 5260, or §)
Financial management processes, modification of management behavior by application of behavioral techniques.
- 5220. FAMILY ECONOMICS.** (3 cr; prereq 3260 or §)
Variations in family income, saving, spending, and decision making related to socioeconomic factors. Conceptual development and research on economic problems of families.
- 5230. INDEPENDENT STUDY IN FAMILY SOCIAL SCIENCE.** (Cr or [max 4 cr per qtr])
Independent reading or research under faculty supervision.
- 5240. SPECIAL TOPICS IN FAMILY SOCIAL SCIENCE.** (2-6 cr per qtr [max 16 cr]; prereq to be set up by instructor specific for each topic)
Review of research and discussion.
- 5241. SEMINAR IN FAMILY AND SOCIAL PROBLEMS.** (4 cr; prereq 5200 or equiv, 5202 or Soc 5201 or Psy 5201)
Social problems as they affect family structure and functioning. Concepts of "social problem" and "deviance." Research findings in problem areas. Topics include: Alcoholism, divorce, mental retardation, illegitimacy, etc.
- 5249. FIELDWORK—DIRECTED COMMUNITY WORK EXPERIENCE.** (3-5 cr per qtr [max 15 cr]; prereq 5200 and §)
Directed preprofessional work experience with families, with social, medical, and/or educational orientation.
- 5255. PUBLIC SOCIAL POLICY AND THE AMERICAN FAMILY.** (4-5 cr; prereq §)
How social legislation in the areas of welfare, housing, child development, health care, etc., affects and, in some cases, determines the nature, structure, and quality of the family as a social institution.
- 5260. HOME MANAGEMENT PRINCIPLES.** (3 cr; prereq AgEc 1030)
Development of a theoretical systems framework for analysis of behavior in families with emphasis on managerial aspects of behavior: goal settings, planning and implementing in use of resources.

- 5404. EVALUATION PROCEDURES FOR HOUSEHOLD EQUIPMENT.** (3-4 cr; prereq 1401 or equiv, 8 adtl cr in home economics)
Procedures and instruments used to determine operating characteristics of selected household appliances and to assess selected physical characteristics of houses.
- 5407. TOPICS IN HOUSEHOLD EQUIPMENT.** (1-3 cr; prereq 1401, total of 15 cr in physics, foods, textiles and clothing)
Assigned readings, reports, and discussion of topics in household equipment.
- 5409. CONSUMER SELECTION GUIDES FOR HOUSEHOLD EQUIPMENT.** (3-4 cr; prereq 1401 or equiv, or 3264..5220 recommended and #)
Construction and operating components of current models of selected appliances. Suitability of the appliances in light of research-based recommendations for kitchen and laundry planning.
- 5414. CONSTRUCTION AND USE CHARACTERISTICS OF HOUSEHOLD APPLIANCES.** (3-4 cr; prereq 1401)
Thermal, mechanical, and electrical characteristics of ranges, refrigerators, and home freezers. Use of the equipment.
- 5416. EQUIPMENT IN THE HOME LAUNDRY AND KITCHEN.** (3-4 cr; prereq 1401, FScN 1212)
Thermal, mechanical, and electrical characteristics of laundry equipment. Use of the equipment. Meal preparation in kitchens planned and set up by student groups.
- 5418. EQUIPMENT: INDEPENDENT STUDY.** (Cr or [1-4 cr per qtr, max 8 cr]; prereq 5404, 5414 or 5416, #)
Independent research and/or reading in the area of home equipment under faculty supervision.
- 8200. SEMINAR: RESEARCH AND INTERPRETATION**
- 8201. STATE DEVELOPMENT WITH APPLICATION TO THE FAMILY**
- 8205, 8206. THEORY AND RESEARCH IN FAMILY RELATIONSHIPS**
- 8214, 8215, 8216. MARRIAGE AND FAMILY COUNSELING I, II, III**
- 8220. FAMILY LIFE EDUCATION**
- 8231. SEMINAR IN GENDER ROLES**
- 8250. SEMINAR: FAMILY RELATIONSHIPS**
- 8251. PROBLEMS: FAMILY SOCIAL SCIENCE**
- 8252. PROBLEMS: FAMILY SOCIAL SCIENCE**
- 8266. FAMILY RESEARCH METHODOLOGY I**
- 8267. FAMILY RESEARCH METHODOLOGY II**
- 8402. A SEMINAR IN HOUSEHOLD EQUIPMENT**
- 8411. PROBLEMS: HOUSEHOLD EQUIPMENT**
- 8412. PROBLEMS: HOUSEHOLD EQUIPMENT**
- 8551, 8552, 8553. MARRIAGE AND FAMILY COUNSELING**

Food Science and Nutrition (FScN)

- 1010. MAN'S FOOD.** (4 cr)
Man's nutritional needs; food composition, world food supply, consumption patterns, acceptance, quality programs and regulations, food preservation, commercial processes, packaging, marketing, national and international food programs.
- 1012. FOOD FOR THOUGHT—FOR FOOD.** (4 cr)
Nutritional requirements of man, basis of a balanced diet, effect of processing and storage on food quality and nutritional value, chemical additives and food safety, FDA, food fads, dieting, future world food production problems and answers. Individual 1-week dietary survey to be conducted.
- 1020. INTRODUCTORY MICROBIOLOGY.** (4 cr; especially for students in home economics; prereq 3rd-qtr fr, #)
Fundamental principles of microbiology, characteristics of bacteria, yeasts, molds, and other microorganisms, their importance in the preparation and preservation of foods, relation to health and well-being of the individual and the family.

Course Offerings

- 1030. UNDERSTANDING CHEESE.** (2 cr; intended for nonmajors)
Conversion of milk into cheese; cheese curing, optimum characteristics of many varieties of natural cheese; fondue, process, and club cheese; nutritional value and care of cheese in the home.
- 1102. TECHNOLOGY OF FOOD PROCESSING.** (4 cr; prereq high school chemistry and biology)
Introduction to the technology of processing and distribution of foods with special reference to the prevention of biological, physical, and chemical deterioration. Changes in food composition, microbiological safety, food laws and regulations, technologies of the major food processes such as canning, freezing, drying, cereal and oilseed processing.
- 1212. SCIENTIFIC PRINCIPLES OF FOOD PREPARATION I.** (4 cr; prereq 2 qtrs inorganic chemistry)
Introduction to composition, nutritive value, and chemical and physical properties of foods; interaction and reaction of foods during preparation procedures; evaluation of food products prepared in laboratory using quality standards; introduction to experimental study of foods.
- 1213. SCIENTIFIC PRINCIPLES OF FOOD PREPARATION II.** (3 cr; prereq 1212)
Continuation of FScN 1212 with the addition of individual and group projects to illustrate work area layouts and the sequence of tasks in food preparation.
- 1215. HOME PRESERVATION OF FOODS.** (2 cr; intended for nonmajors)
Description and demonstration of safe methods of home food preservation. Students will prepare various products in laboratory. Topics will include canning, freezing, fermenting, salting, drying, and others.
- 1272. INTRODUCTION TO FOOD DECISION MAKING.** (2 cr; prereq 1602 or 1600)
The decision-making process related to the provision of nutritionally adequate food for a variety of eating patterns.
- 1500. MEAT SCIENCE.** (4 cr; prereq Biol 1011)
(Same as AnSc 1500) Role of ante- and postmortem factors in altering the anatomy, function, and biochemical properties of muscle during its conversion to meat; importance of these changes to meat quality and the manufacture, selection, preparation, and palatability characteristics of meat and meat products.
- 1600. SOCIOCULTURAL ASPECTS OF NUTRITION.** (3 cr)
Food habits of man viewed in terms of historical, social, and cultural perspectives. Influence of different food patterns on nutritional status.
- 1602. PRINCIPLES OF NUTRITION.** (4 cr; prereq one course in biology and one course in chemistry or equiv in natural science sequence)
Survey of fundamental principles of nutrition including requirements for various nutrients and results of excess or deficient intake of these nutrients.
- 1603. FAMILY NUTRITION.** (2 cr; intended for nonmajors)
Basic concepts in nutrition emphasizing interrelationships between nutrients and the human requirement for specific nutrients. Current controversial nutrition topics.
- 1700. INTRODUCTION TO HOSPITALITY AND FOOD MANAGEMENT.** (2 cr)
Introduction to the hospitality and food service industry, emphasizing its scope, current trends, growth and orientation as a business delivery system.
- 3110. FOOD CHEMISTRY.** (3 or 5 cr [3 cr for lect taken separately]; prereq BioC 1302 or §)
The chemical properties of foods and food constituents as influenced by processing and storage.
- 3123. MICROBIOLOGY OF FOODS.** (5 cr, §MicB 3103, §VB 3103; not for majors in food science and technology; prereq Biol 1011 and 10 cr college chemistry, or 1020 or §)
Incidence and sources of microorganisms in foods. Principles involved in the control of microorganisms in foods for prevention of spoilage and public health hazards. Enhancement of keeping quality, nutritive and flavor attributes of food by the activities of microorganisms, as found in the manufacture of cheese or other fermented food products. Principles involved in sanitation and destruction or inhibition of growth of microorganisms through use of physical and chemical agents.
- 3400. FOOD DEMONSTRATION TECHNIQUES.** (2 cr; prereq 1213 or 3403)
Purposes and techniques of demonstrations for the general public and in business. Production techniques and performance for television and motion picture demonstrations.
- 3403. EXPERIMENTAL FOODS.** (4 cr; prereq 3110)
Principles and modern concepts of food systems and preparation; laboratory projects to illustrate effects of different procedures and ingredients.
- 3472. PRINCIPLES OF FOOD PURCHASING.** (4 cr; prereq 5 cr in food science and nutrition)
Principles of purchasing basic groups of foods. Relative cost of key nutrients from alternates within the food group. Food prices and indices of change. Laws and regulations pertinent to the labeling of food. Food standards and grades. Functional role of food additives.

- 3602. NUTRITION IN PROFESSIONAL HEALTH CARE.** (4 cr, §1602; prereq chemistry, human physiology, regis in a professional health discipline or §)
General principles of nutrition in professional health care. Nutrition as a factor in attaining and maintaining health. The role of the health practitioner in nutrition education.
- 3622. FOOD AND NUTRITION IN THE LIFE CYCLE.** (4 cr; prereq 1602, 3472, physiology of human biology, or §)
Application of the principles of nutrition to meet the special requirements of growth, development, adult maintenance, and aging. The delivery of nutrients from foods as influenced by various life styles and stages.
- 3623. FOOD AND NUTRITION IN THE LIFE CYCLE.** (4 cr; prereq 1602, 3472, physiology or human biology, regis in coordinated undergrad program in dietetics)
Application of the principles of nutrition to meet the special requirements of growth, development, adult maintenance, and aging. The delivery of nutrients from foods as influenced by various life styles and stages. Emphasis on professional education for nutritional care of various age groups.
- 3642. COMMUNITY NUTRITION.** (3 cr; prereq jr, 1602 or equiv, 6 cr of psychology, sociology, anthropology or economics)
Nutrition and health practices of the family in the community; concepts and methodologies for nutrition education.
- 3643. COMMUNITY NUTRITION.** (4 cr; prereq 1602 or equiv, 6 cr of psychology, sociology, anthropology or economics, regis in coordinated undergrad program in dietetics)
Nutrition and health practices of the family in the community; concepts and methodologies for nutrition education. The development of competency in application of nutrition principles to problems in the community.
- 3662. INTRODUCTION TO THE CLINICAL PRACTICE OF DIETETICS.** (2 cr; prereq 12 cr in food science and nutrition, regis in the coordinated undergrad program in dietetics)
An introduction to the practice of dietetics in hospitals, outpatient clinics, public service agencies, and food services.
- 3702. PRINCIPLES OF FOOD SERVICE ORGANIZATION AND MANAGEMENT.** (4 cr; prereq sr, Mgmt 3001, regis in coordinated undergrad program in dietetics)
Systems of food service management in the delivery of health care services; selection, supervision, and evaluation of personnel; effective planning and communication with food service management personnel.
- 3703. FIELD EXPERIENCE IN FOOD SERVICE MANAGEMENT.** (3 cr; prereq sr, Mgmt 3001, §3702, regis in coordinated undergrad program in dietetics)
Supervised food service management experience in a health care facility.
- 3720. ADMINISTRATIVE EXPERIENCE: HOSPITALITY OR FOOD SERVICE ENTERPRISE.** (5 cr; prereq 3750, sr in hospitality and food service management or §)
Planned management experience in a selected food service or hospitality business, including understanding of the operation, planning, purchasing, personnel management, financial management, supervision, and related functions.
- 3730. QUANTITY FOODS PURCHASING AND PRODUCTION.** (5 cr; prereq 3rd-qr soph, 1212 or 3110, 3472, preregistration with instructor)
Participation in the management procedures used in the selection, storage, preparation, pricing, and service of food in quantity. A quantity food service is used as a laboratory.
- 3740. DESIGN AND LAYOUT OF FOOD SERVICES.** (4 cr; prereq 3730)
Arrangement and layout of food production, service, and storage areas. Purchase, maintenance, construction, and operation of equipment related to quantity food service.
- 3750. MANAGEMENT OF FOOD SERVICE AND HOSPITALITY BUSINESS SYSTEMS.** (3 cr; prereq 3730, Mgmt 3001)
Application of management principles in a food service or hospitality business. Business procedures, personnel management, cost control, advertising, and related administrative problems. Field trips may be required.
- 3752. FOOD AND HOSPITALITY OPERATIONS: APPLICATION OF COMPUTER SYSTEMS TO SMALLER UNITS.** (4 cr; prereq 3730, 3750, MIS 5100 or §)
Use of the computer in planning, operating, and controlling production and services, personnel, logistics, finances, and quality control in a small unit food and hospitality operation.
- 3760. HOSPITALITY COST MANAGEMENT.** (4 cr; prereq Acct 1050)
Cost accounting applied to the hospitality services industry.
- 3762. HOSPITALITY FINANCIAL MANAGEMENT.** (4 cr; prereq 3760, 4 cr in statistics)
Financial management and forecasting applied to the hospitality industry.

Course Offerings

- 5000. PROFESSIONAL EXPERIENCE PROGRAM.** (1-6 cr; not for grad cr; prereq 15 cr in food science and nutrition and #; grading S-N, A-N when required)
Up to 12 weeks of planned experience in a selected position in the food industry; evaluative reports and consultations with faculty advisers and employers.
- 5100. GENERAL SEMINAR.** (1 cr; S-N only; prereq sr or #)
Literature review and presentation of papers in selected areas of food science and nutrition.
- 5102. CASE STUDIES IN FOOD SCIENCE AND NUTRITION.** (5 cr; prereq sr, #)
Experiences in problem solving; integration of the various aspects of food science by means of a team approach to solving a current problem.
- 5111. INDEPENDENT STUDY IN FOOD SCIENCE AND NUTRITION.** (1-5 cr [may be repeated for cr]; prereq #)
Individual laboratory or library research in an area related to food chemistry, food processing, nutrition, food service, or hospitality management. Open to students in any college who wish to gain experience in the food science and nutrition area.
- 5120. FOOD MICROBIOLOGY.** (3 or 5 cr [3 cr for lect taken separately with #]; prereq MicB 3103)
Relationship of environment to occurrence, growth, and survival of microorganisms in foods; evaluation of microbiological quality of dairy and food products; characteristics and activities of bacteria, yeasts, and molds related to food spoilage; utilization of microorganisms in manufacture of dairy and food products; recognition and control of food-borne pathogens and food poisoning.
- 5122. SANITATION AND CONTROL OF MICROORGANISMS.** (2 cr; prereq 5120 or #; 2 hrs lect with 1 hr lect and 3 hrs lab in alt wks; concurrent regis in 5123 is advised, especially for food science and technology majors)
Factors that influence the control and destruction of microorganisms; chemical, physical, and microbiological principles in cleaning and sanitizing food processing equipment; inactivation of microorganisms and thermal process evaluation; microbiological preservation methods; development of sanitation programs; microbiological criteria; hazard analysis and critical control point concept.
- 5123. MICROBIOLOGY OF FOOD FERMENTATIONS.** (2 cr; prereq 5120 or #; 2 hrs lect with 1 hr lect and 3 hrs lab in alt wks; concurrent regis in 5122 is advised, especially for food science and technology majors)
Characteristics of bacteria, yeasts, and molds involved in dairy and food fermentations; properties of lactic bacteriophages and methods of control in dairy fermentations; composition and factors that influence activity of dairy and food starter cultures; microbiology of natural and controlled fermentations; use of microorganisms in production of single cell protein and other products consumed as food, and in waste utilization.
- 5135. FOOD PROCESS ENGINEERING I.** (3 cr; prereq 1102, Math 1142, Phys 1031-1032)
Discussion and demonstration of fluid flow, heat transfer, sanitation design, refrigeration, mass transfer, process control, and waste treatment as used by the food processing industry.
- 5136. FOOD PROCESSING ENGINEERING II.** (3 cr; prereq 5135)
Continuation of 5135.
- 5312. CHEMICAL AND INSTRUMENTAL ANALYSIS OF FOODS.** (5 cr; prereq 3110, Chem 3101 or #)
Application of quantitative physical, chemical, and instrumental methods of analysis to the examination of food products; evaluation of methods and interpretation of results.
- 5320.* ADVANCED DAIRY AND FOOD MICROBIOLOGY.** (4 cr; prereq sr, 5122 or #)
Microbiology of food starter cultures; composition of starters, nutrition and metabolism inhibitors in milk, strain association and compatibility, preservation and mass production, and bacteriophage in cheesemaking. Influence of food environments on spore formation, activation, germination, and resistance. Natural and microbial toxicants in foods, occurrence, techniques (general and specific) for monitoring their presence, and control.
- 5321. INDEPENDENT STUDY IN FOOD MICROBIOLOGY.** (1-5 cr; prereq sr or #; hrs ar)
Laboratory or library research on problems related to the microbiology of dairy and food products.
- 5350. FOOD FORMULATION, PRODUCT DEVELOPMENT.** (4 cr; prereq course in statistics; lab hrs ar)
Application of concepts and techniques of experimental design to the solution of food science problems. Case studies, computer programming and use emphasized.
- 5360. SENSORY EVALUATION OF FOOD QUALITY.** (3 cr; prereq 3110, Stat 3081 or 5021)
Fundamentals of flavor perception, sensory methods used in measuring quality of food products.
- 5362. SENSORY EVALUATION LABORATORY TECHNIQUES.** (1 cr; prereq 5360 or 5360)
Laboratory projects in sensory evaluation of food quality.

- 5380. FOOD PACKAGING.** (3 cr; prereq Phys 1031, 1032 or equiv)
Lecture and demonstration of the properties of various packaging materials and their uses in the food industry.
- 5402. MODERN FOOD PREPARATION PRINCIPLES AND PRACTICES.** (2-4 cr; prereq organic chemistry and 15 cr in food science and nutrition)
Experimental bases of principles underlying present-day food preparation practices; development of experiences illustrative of such principles in high school teaching, dietetics, and foods in business.
- 5403. EXPERIMENTAL STUDY OF FOODS.** (5 cr; prereq 5360 or #)
Individual laboratory experimentation and comprehensive literature search on a problem in foods. Statistics and computers as a research tool. Data analysis and interpretation for a scientific paper.
- 5404. CURRENT ISSUES IN FOOD AND NUTRITION.** (2-4 cr; prereq 15 cr in food science and nutrition or #)
Evaluation of popular and scientific literature as it deals with nutrition, food additives, food safety, food fads, health foods, environmental contamination, the consumer movement, naturally occurring food toxicants, processed foods, synthetic foods, organically grown foods.
- 5406. CURRENT LITERATURE IN FOODS.** (2-4 cr per qtr [max 6 cr]; prereq 5413)
Assigned readings, reports, and discussions of topics in the experimental study of foods.
- 5412. PHYSICO-CHEMISTRY OF FOODS I.** (4 cr; prereq 3110, Biol 3021...one course in physical chemistry recommended)
Food as a complex biochemical system. Functionality of various biological and chemical constituents of foodstuffs. Physical and chemical changes induced in food systems through preparation and preservation. Survey of current literature.
- 5413. PHYSICO-CHEMISTRY OF FOODS II.** (4 cr; prereq 5412)
Continuation of FScN 5412.
- 5462. ADVANCE TOPICS IN SENSORY EVALUATION OF FOOD.** (2-4 cr; prereq 5360)
Review of current literature pertinent to specific topics under active investigation.
- 5472. FOOD PURCHASING.** (4 cr; prereq principles of economics and 15 cr in food science and nutrition)
Cost-quality relationships of diverse food products as affected by technological changes. Composition and nutritive value of processed and formulated food products. Function of food additives. Recent legislation pertinent to labeling and grading food products.
- 5473. ADVANCES IN THE MANAGEMENT AND PREPARATION OF FOOD.** (2-4 cr; prereq 3403, 3472 or equiv)
Recent developments in food materials and methods of preparation; their implications for the management of time, money, and energy expenditures.
- 5510. MUSCLE CHEMISTRY AND PHYSIOLOGY.** (4 cr; prereq BioC 1302 or #)
(Same as AnSc 5510) Fundamental properties of muscle ultrastructure, chemistry and physiology as they relate to muscle protein, growth, contraction, energy metabolism, adaptive responses, rigor mortis, and conversion of muscle to meat.
- 5512. MEAT AND PROTEIN TECHNOLOGY.** (4 cr; prereq BioC 1302 or #)
(Same as AnSc 5512) Meat proteins: effects of pH, salt, and temperature on hydration and emulsification; methods of fractionation. Meat preservation: effects of heat, freezing, curing, and problems of product stability during storage. Sausage manufacture: chemistry, technology, least-cost analysis (graphical and computer methods), and chemical methods of quality control (rapid and classical methods of proximate analysis).
- 5522. TECHNOLOGY OF FLUID AND CONCENTRATED MILK PRODUCTS.** (4 cr; prereq 3110, 5135, 5120 or #)
Application of scientific principles to problems involved in processing fluid and dehydrated milk systems and their control. Demonstration of basic processing operations including heating, cooling, homogenization, evaporation, drying, crystallization, and freezing.
- 5523. TECHNOLOGY OF FERMENTED DAIRY PRODUCTS.** (4 cr; prereq 3110, 5120)
Chemical, microbiological, and physical principles involved in the processing of cheeses, buttermilk, yogurt, and sour cream.
- 5524. SENSORY EVALUATION OF DAIRY PRODUCTS.** (1 cr; prereq 5360 or #)
Laboratory and commercial procedures for evaluating the sensory properties and market quality of dairy products. Cause and identification of common defects in flavor, physical properties, and appearance.
- 5530. INDUSTRIAL PROCESSING OF FRUITS AND VEGETABLES.** (4 cr; prereq 3110, 5120, and 5135 or #; 3 lect and 3 lab hrs per wk)

Course Offerings

Relationship of chemical, physical, and microbiological principles to commercial processing of fruits and vegetables from procurement of raw products through preparation, preservation, packaging, storage, transportation, and merchandising. Emphasis on preservation methods involving heat, sterilization, and freezing.

- 5555. FREEZING AND DEHYDRATION OF FOODS.** (5 cr; prereq 5135, 3110, 5120, or §)
Principles involved in the processing, handling, and storage of frozen, dry, and intermediate moisture foods with emphasis on the physicochemical properties of water in foods.
- 5622. HUMAN NUTRITION.** (5 cr; prereq 1602, Biol 3021, Phsl 3051 or §)
Physiological function and metabolic rate of nutrients and factors influencing the utilization of nutrients in the human body.
- 5642. FIELD EXPERIENCE IN COMMUNITY NUTRITION.** (3-18 cr; prereq at least one course in human nutrition and §)
Application of nutrition information to problems of health and welfare; assigned readings, discussions, and experience in a community agency.
- 5643. SEMINAR: WORLD FOOD SUPPLY PROBLEMS.** (4 cr, \$AgEc 5790, \$PIPa 5200, \$Soc 5675, \$VCS 5280; limited enrollment; prereq sr or grad student with §)
A multidisciplinary approach will examine social, economic, and technical problems of feeding the world's growing population.
- 5662. CLINICAL NUTRITION.** (5 cr; prereq 5622, BioC 5002 or Biol 3021 or §)
Application of principles of normal nutrition to clinical problems with description of altered nutrient requirements under conditions of human disease. Diet therapy as an applied aspect of clinical nutrition.
- 5664. FIELD EXPERIENCE IN CLINICAL NUTRITION.** (3-18 cr; prereq a course in human nutrition and §)
Application of nutrition information to problems of health and disease; assigned readings, discussions, and experience in a clinical facility.
- 5665. APPLIED CLINICAL NUTRITION I.** (2 cr; prereq sr in coordinated undergrad program in dietetics)
Description of pathology and diet therapy in diseases of the mouth, esophagus, stomach, intestine, liver, pancreas, and gallbladder.
- 5666. APPLIED CLINICAL NUTRITION II.** (2 cr; prereq 5665)
(Continuation of FScN 5665) Description of pathology and therapy in diseases of the kidney and urinary tract, anemia, allergy, hypertension, parathyroid disease.
- 5667. APPLIED CLINICAL NUTRITION III.** (2 cr; prereq 5666)
(Continuation of FScN 5666) Description of pathology and therapy in diseases of the cardiovascular system and of the metabolic system.
- 5668. ADVANCED CLINICAL NUTRITION.** (2 cr; prereq 5662 or §; offered at Rochester and Twin Cities)
An integrated approach to prevention and treatment of illness focusing upon the role of nutrition in total medical care.
- 5693. SELECTED ASPECTS OF NUTRITION.** (2-4 cr per qtr [max 12 cr]; prereq sr, 1212, 1602, or §)
In-depth treatment of a single, preselected aspect of nutrition in any one offering. Teaching procedure and approach to be determined by nature of topic and student needs. Specific topic to be announced in advance of course offering.
- 5694. METABOLIC BASIS FOR THERAPEUTIC NUTRITION.** (4 cr; prereq 5664 or §; offered at Rochester and Twin Cities)
Physiological and biochemical bases for dietary treatment, dietary principles related to adequate nutrition. Case study presentations and clinical experience included.
- 5702. SELECTED ASPECTS OF FOOD SERVICE MANAGEMENT IN HEALTH CARE FACILITIES.** (3 cr; prereq 3 cr elementary statistics, 6 cr economics, §)
Management techniques applied to food services for health care facilities. Methods of analysis and control.
- 5730. VOLUME RECIPE FORMULATION, PRODUCTION AND CONTROL.** (5 cr; prereq sr, 3110, 3740, 5360, or §)
The technology associated with the operation of food facilities producing 3,000 to 100,000 or more meals a day; analysis and selection of ingredients for industrial types of food processes, specification of optimum operating conditions and establishment of controls to insure that products comply with specifications. Laboratory examination of ingredients and process control methodology.
- 5740. DESIGN AND LAYOUT OF FOOD SERVICES.** (4 cr; prereq 3740)
Problems related to the design and layout of remodeled and new food services.

- 5750. SELECTED ASPECTS OF FOOD SERVICE AND HOSPITALITY BUSINESS MANAGEMENT.** (4 cr; prereq 4 cr elementary statistics, 3750, MIS 5100, Acct 3255)
Management techniques applied to a food service or hospitality business. Methods of analysis and control.
- 5752. FOOD AND HOSPITALITY OPERATIONS: CORPORATE APPLICATION OF COMPUTER SYSTEMS.** (4 cr; prereq 3752, Acct 3255 or #)
Use of the computer in planning, operating, and controlling production and services, personnel, logistics and finances, quality assurance and quality control in a multiunit corporate food and/or hospitality operation.
- 5790. QUANTITY FOOD PREPARATION PRACTICES.** (3 cr; prereq baccalaureate degree and current or impending affiliation with occupational food program in a secondary school)
Storage, preparation, service, and pricing of selected menu items. Students investigate and seek solutions to problems related to quantity food service. Opportunity to integrate lectures, laboratory experiences, and independent study with instructional programs in occupational foods.
- 8101. RESEARCH SEMINAR**
- 8310. ADVANCED FOOD CHEMISTRY**
- 8311. FLAVOR CHEMISTRY**
- 8312. REACTION KINETICS OF FOOD DETERIORATION**
- 8322. THERMAL PROCESSING OF FOOD**
- 8401. INDEPENDENT STUDY: FOOD SCIENCE**
- 8403. ADVANCED TOPICS IN FOOD SCIENCE**
- 8412. INTERRELATIONSHIPS AND FUNCTIONS OF FOOD COMPONENTS**
- 8621. INDEPENDENT STUDY: NUTRITION**
- 8622. ADVANCED HUMAN NUTRITION I**
- 8623. ADVANCED HUMAN NUTRITION II**
- 8692. HUMAN METABOLIC STUDIES IN HEALTH AND DISEASE**
- 8693. ADVANCED DIET THERAPY**

Home Economics Education (HEEd)

- 1500. INTRODUCTION TO HOME ECONOMICS EDUCATION.** (2 cr; prereq soph)
Structure and function of teaching; nature of home economics teachers' work, emphasis on specific teaching options; impact of schooling on growth and development of pupils.
- 1510. KNOWLEDGE AND VALUES IN TEACHING.** (4 cr; prereq 1500 or #)
Roles of the home economics teacher in creating and using knowledge and in weighing and fostering values.
- 3315. ADULT EDUCATION IN HOME ECONOMICS.** (3 cr; prereq 3520 or #)
Objectives; problems affecting community and family life; methods of helping adults and out-of-school youth in solving problems in home living.
- 3325. PRACTICUM IN CHILD DEVELOPMENT.** (1 cr; prereq 3320 or ¶3320 and Δ)
Observation and experience with children as a method of teaching child development in the home economics program.
- 3520. HOME ECONOMICS CURRICULUM AND INSTRUCTION: COGNITIVE LEARNING.** (5 cr; prereq 1510)
Broad overview of elements of curriculum; objectives, assessment, and strategies related to cognitive learning.
- 3530. HOME ECONOMICS CURRICULUM AND INSTRUCTION: AFFECTIVE LEARNING.** (4 cr; prereq 3520 or #, SeEd 3150, 3155 or ¶SeEd 3150, 3155)
Objectives, assessment, and strategies related to affective learning.
- 3601. CLINICAL EXPERIENCE: TEACHING CONSUMER HOME MAKING.** (9 cr; prereq ¶3611, ¶3620, Δ; S-N only)
Classroom teaching in selected Minnesota school.
- 3602. CLINICAL EXPERIENCE: TEACHING FAMILY LIFE.** (9 cr; prereq ¶3612, ¶3620, Δ; S-N only)
Classroom teaching in selected Minnesota school.

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- 3603. CLINICAL EXPERIENCE: TEACHING HOME ECONOMICS OCCUPATIONS.** (9 cr; prereq ¶3613, ¶3620, Δ; S-N only)
Classroom teaching in selected Minnesota school.
- 3605. FIELD EXPERIENCE FOR EXTENSION HOME ECONOMISTS.** (6 cr; prereq §; S-N only.)
Observation, participation, and experience under supervision in the Agricultural Extension program on the St. Paul Campus and in a selected county program.
- 3611. FIELDWORK: CONSUMER-HOMEMAKING EDUCATION.** (3 cr; prereq ¶3601, ¶3620, Δ; S-N only)
Individualized instruction conducted in selected programs in the field and on campus.
- 3612. FIELDWORK: FAMILY LIFE EDUCATION.** (3 cr; prereq ¶3602, ¶3620, Δ; S-N only)
Individualized instruction conducted in selected programs in the field and on campus.
- 3613. FIELDWORK: HOME ECONOMICS OCCUPATIONAL EDUCATION.** (3 cr; prereq ¶3603, ¶3620, Δ; S-N only)
Individualized instruction conducted in selected programs in the field and on campus.
- 3620. CURRICULUM MANAGEMENT.** (3 cr; prereq ¶3601 or ¶3602 and ¶3611 or ¶3612, §)
Classroom activities including laboratory.
- 3900. INDEPENDENT STUDY.** (1-9 cr per qtr [max 9 cr]; prereq jr and §)
Study of selected topics in home economics chosen in collaboration with staff.
- 5106. COORDINATION TECHNIQUES IN HOME ECONOMICS OCCUPATIONAL EDUCATION.** (2 cr; prereq DE 5105 or ¶DE 5105)
Application in secondary and postsecondary cooperative and project plan programs; certification course for home economics teacher-coordinators.
- 5111. CURRICULUM IN HOME ECONOMICS OCCUPATIONAL EDUCATION.** (2 cr; prereq DE 5110 or ¶DE 5110)
Application in secondary and postsecondary home economics education; certification course for home economics teacher-coordinators.
- 5300. HOME ECONOMICS CURRICULUM.** (3 cr; prereq 3530 and §)
Examination of research and literature; development of units of study and programs at elementary and secondary levels; production and evaluation of materials.
- 5301. MATERIALS AND METHODS IN HOME ECONOMICS OCCUPATIONAL EDUCATION.** (2 cr; prereq DE 5300 or ¶DE 5300)
For teacher-coordinators of cooperative and project plan home economics education; certification course for home economics teacher-coordinators.
- 5305. HOME ECONOMICS CURRICULUM: COLLEGE LEVEL.** (3 cr; prereq §)
Examination of research and literature; course and program development in higher education; analysis of current college programs; production and evaluation of curriculum materials.
- 5310. METHOD IN TEACHING HOME ECONOMICS: THEORY AND TECHNOLOGY.** (3 cr; prereq 3530 and §)
Derivation of theory for educational method from relevant research; application to educational objectives; analysis of technology related to teaching method.
- 5315. EVALUATION: THEORETICAL AND TECHNICAL ASPECTS.** (3 cr; prereq 3530, §)
Collecting and interpreting evidence related to achievement of objectives, emphasizing higher levels of cognition and affective behaviors.
- 5320. ADULT EDUCATION IN HOME ECONOMICS.** (3 cr; prereq 3315 or §)
Planning a community program; teaching procedures; special problems.
- 5325. TRENDS IN HOME ECONOMICS EDUCATION.** (3 cr; prereq 5300 or 5305)
Current status; purposes, programs, content emphasis, research, problems and issues in the field.
- 5331. HOME ECONOMICS OCCUPATIONAL EDUCATION.** (3 cr per qtr [max 12 cr]; prereq sr or tchg exper or §)
Career opportunities; needed competencies; development of instructional units; objectives, teaching-learning experiences, appraisal procedures; preparation of teaching materials.
- 5336. HOME ECONOMICS OCCUPATIONAL EXPERIENCE.** (1-9 cr; prereq jr, sr, home economics education major only and §)
Observation and experience in the chosen occupational cluster; weekly seminars on guidance and teaching of students.
- 5337. HOME ECONOMICS OCCUPATIONAL SEMINAR.** (3-9 cr per qtr [max 9 cr]; max 3 cr may be used in a degree program; prereq §)
Current practices and career opportunities in business and industry; planned experiences in work environments and related seminar.

- 5400. WORKSHOP: HOME PLANNING AND FURNISHING.** (3 or 4 cr per qtr [max 12 cr]; prereq Δ)
Problems at high school and adult levels; use of new materials and techniques; group and individual projects to meet the needs and interests of experienced teachers.
- 5405. WORKSHOP: CHILD DEVELOPMENT AND HUMAN RELATIONS.** (3 or 4 cr; prereq grad)
Recent emphasis on growth and guidance of individuals; materials and techniques for high school and adult levels to attain better understanding.
- 5410. WORKSHOP: FOODS AND NUTRITION.** (3 or 4 cr per qtr [max 12 cr]; prereq Δ)
Problems in teaching at high school and adult levels; use of new materials and techniques; group and individual projects for experienced teachers.
- 5415. WORKSHOP: MATERIALS FOR INSTRUCTION.** (1-4 cr; prereq grad or teacher in service)
Problems in selection and use of new materials for instruction in home economics.
- 5420. WORKSHOP: ADULT EDUCATION.** (3 or 4 cr per qtr [max 12 cr]; prereq Δ)
Procedures in teaching adults; planning the program; use of new materials and techniques; group and individual problems.
- 5425. WORKSHOP: HOME EXPERIENCE AND EXTENDED EMPLOYMENT.** (3 or 4 cr per qtr [max 12 cr]; prereq Δ)
Methods of using the extended period of employment effectively; techniques for selection, execution, and evaluation of home experiences; group or individual problems for experienced teachers.
- 5430. WORKSHOP: CONTEMPORARY PROBLEMS IN HOME ECONOMICS EDUCATION.** (3 or 4 cr per qtr [max 12 cr]; prereq Δ)
Consideration of topic of current concern in home economics education.
- 5500. PROSEMINAR: HOME ECONOMICS EDUCATION.** (2 cr; required of all new grad students)
Relation of the processes and standards of rational thought to professional competence and the goals of a graduate program of study.
- 5600. PRACTICUM: ADULT EDUCATION.** (3 cr; prereq $\$$)
Individual field assignments under supervision.
- 5900. READINGS IN HOME ECONOMICS EDUCATION.** (1-3 cr; prereq $\$$)
Independent study under tutorial guidance.
- 5910. INTEGRATING PAPER.** (3 cr; prereq MEd student)
Independent paper integrating learnings from a course or courses in education with learnings in home economics education.
- 8300. RESEARCH METHODS**
- 8305. RESEARCH METHODS**
- 8500. SEMINAR: CURRICULUM DEVELOPMENT**
- 8505. SEMINAR: SUPERVISION OF STUDENT TEACHING**
- 8510. SEMINAR: IMPROVEMENT OF INSTRUCTION IN ADULT EDUCATION**
- 8515. SEMINAR: TEACHER EDUCATION**
- 8520. SEMINAR: HISTORY AND PHILOSOPHY OF HOME ECONOMICS EDUCATION**
- 8525. SEMINAR: ADMINISTRATION AND SUPERVISION OF HOME ECONOMICS PROGRAMS**
- 8530.* SEMINAR: HOME ECONOMICS EDUCATION**
- 8900.* PROBLEMS: HOME ECONOMICS EDUCATION**

Textiles and Clothing (TexC)

- 1601. BASIC CLOTHING CONSTRUCTION.** (2 cr; $\text{\textcircled{1}}$ 1602 required)
Basic principles and techniques for creating clothing.
- 1602. PATTERN FITTING AND ALTERATION.** (2 cr; $\text{\textcircled{1}}$ 1601 required)
Analysis of figure problems; alteration of commercial patterns to adjust to any figure problem. Development of individual patterns from commercial basic patterns.
- 1641. INTRODUCTION TO FASHION MERCHANDISING.** (3 cr)
Techniques and psychology of selling related to consumer needs, store organization and policies.
- 1642. RETAIL EXPERIENCE SEMINAR I.** (1 cr; S-N only; prereq 1641, 100 hrs approved work experience)

Course Offerings

Discussion of problems encountered in selling fashion merchandise in specific work experience. Analysis of sales methods and consumer contracts. Five 2-hour seminars.

- 3601. TAILORING.** (4 cr; prereq 1601, 1602, 3621, or §)
Problems in tailoring a lined wool garment; speed tailoring techniques.
- 3603. READY-TO-WEAR-ANALYSIS.** (3 cr; prereq soph, 3621)
Interrelationship of fabric characteristics, construction methods, and garment function in judging quality of ready-to-wear.
- 3604. FLAT PATTERN DESIGN.** (3 cr; prereq soph, 1601 or proficiency, 1602, 3662, or Dsgn 1525)
Principles of flat pattern design; drafting and advance pattern development.
- 3605. DRAPING DESIGN AND CONSTRUCTION.** (3 cr; prereq soph, 1601 or proficiency, 1602, 3662 or Dsgn 1525)
Techniques in fitting and draping as a basis for creative designing in fabric. Emphasis on relation of fabric to design and construction methods.
- 3621. TEXTILES.** (5 cr; prereq soph, Chem 1002 or 1005 or NSci 1005 or §)
Basic physical, chemical, and biological characteristics of fiber, yarn, and fabric structures; interrelationship with choice, maintenance, and performance of consumer textiles.
- 3622. TEXTILES FOR INTERIORS.** (3 cr; prereq 3621, §)
Developments and trends with reference to fiber, yarn, construction and finish of textiles for upholstery, and floor, wall, and window coverings.
- 3623. PERFORMANCE EVALUATION OF TEXTILES.** (3 cr; prereq 3621)
Standard laboratory methods for rapid prediction of textile performance in the consumer environment; problems in specifying care procedures for labeling.
- 3642. APPAREL INDUSTRIES.** (4 cr; prereq Econ 1002 or AgEc 1003)
Structure, operation, and problems of domestic and foreign apparel industries including ready-to-wear, couture, and auxiliary fashion sector. Interrelationships with the textile industry and distributors.
- 3643. FASHION MERCHANDISING.** (5 cr; prereq 1641, Mktg 3065)
Merchandise selection and controls, sales analysis, model stocks and buying plans.
- 3644. RETAIL EXPERIENCE SEMINAR II.** (1 cr; prereq 1642 and an addtl 100 hrs approved work experience; S-N only)
Discussion of store organization and management policies in a specific work experience related to fashion merchandising. Five 2-hour seminars.
- 3645. RETAIL EXPERIENCE SEMINAR III.** (1 cr; prereq 3644, 3643 or ¶3643 and an addtl 100 hrs approved work experience; S-N only)
Discussion of merchandising policies, practices and controls in a specific work experience related to fashion merchandising. Five 2-hour seminars.
- 3661. CULTURAL PERSPECTIVES ON DRESS.** (3 cr; prereq Anth 1102 or Soc 1001)
The influence of cultural ideals and standards on dress. How dress evolves in response to society's needs, values, and technology.
- 3662. AESTHETICS OF CLOTHING.** (3 cr; not open to srs)
Perception of design elements and art principles in clothing related to individual physical differences. Experience in creating illusions related to clothing and appearance.
- 3683. PRACTICUM: TEXTILES AND CLOTHING CONSUMER PROBLEMS.** (3-12 cr; prereq 2nd- or 3rd-qr sr, §)
Individual problems for solution by field, externship, or laboratory work.
- 5600. ADVANCED APPAREL DESIGN AND CONSTRUCTION PROBLEMS.** (2-4 cr per qtr [max 12 cr]; prereq 3621, §)
Analytical study and construction of advanced apparel design utilizing draping and flat pattern techniques. Relating the latest technological developments in textiles to garment design.
- 5601. PROBLEMS IN CLOTHING CONSTRUCTION.** (3-5 cr per qtr [max 10 cr]; prereq §)
Discussion and laboratory work in clothing construction problems. Topics may vary with demand.
- 5603. EXPERIMENTAL STUDIES IN CLOTHING CONSTRUCTION.** (3-5 cr; prereq 6 cr in construction or teaching experience, §)
Comparative study of selected procedures relative to areas of clothing construction and fabric difference.
- 5621. MACRO-MICRO PROPERTY RELATIONSHIPS.** (5 cr; prereq 3622 or 3263)
Relating visual and tactile properties of textiles to microscopically and submicroscopically detectable physical and chemical determinants.

- 5622. ISSUES AND TRENDS IN TEXTILE CONSUMER PROTECTION.** (3 cr)
The needs of the textile consumer for protection from deception and hazard; critical analysis of federal, state, and local legislation as well as voluntary industrial systems; case histories; change mechanisms.
- 5623. TEXTILE STRUCTURING.** (3 cr; prereq 3622)
Comprehensive survey of classical and nonclassical operations for forming textiles and the resultant spectrum of textile constructions; development of a realistic limiting perspective for textile design and a more rational base for predicting hazard and performance in service and recycling.
- 5624. TEXTILE COLORATION AND FINISHING.** (5 cr; prereq 5621)
Comprehensive survey of processes and operations for coloring and finishing textiles; development of a rational base for predicting hazard and performance in service and recycling, and a realistic limiting perspective for textile design.
- 5625. COLOR METROLOGY.** (3 cr; prereq 3623)
Theory of color perception and measurement; analysis of color order systems; instrumentation; application to unambiguous numerical color specification and description of small color difference; noncolor components of surface appearance.
- 5626. RECYCLING PROCESSES.** (3 cr; prereq 5621)
Principles and practices in recovery of initial appearance of textile products including wet and dry cleaning, domestic and commercial.
- 5627. ANALYTICAL METHODS FOR CONSUMER TEXTILES.** (3-6 cr [no cr if cr for both 3622 and 3623 has been received and only 3 cr if cr for either of these has been received]; prereq 3621)
Standard laboratory methods for rapid performance prediction of textile fabrics and products in the consumer environment; study of textiles for interiors with reference to fiber, yarn, construction and finish.
- 5641. TOPICS IN MERCHANDISING.** (3 cr per qtr [max 6 cr]; prereq 3643, 3644 and/or #)
Study of a current issue related to merchandising textile and clothing products. Topic may vary each quarter.
- 5642. RETAILING INTERNSHIP.** (12 cr; prereq 3643, sr in fashion merchandising, minimum GPA 2.50)
Full quarter of supervised managerial work experience in off-campus cooperating retail stores. Applicants screened, interviewed, and selected for available internships.
- 5661. CLOTHING AND HUMAN BEHAVIOR.** (4 cr; prereq sr, 3662 or equiv, Soc 1001, Psy 1001, or #)
Clothing in relation to individual and group behavior patterns; personal and social meaning attributed to dress; conventions and standards influencing clothing choice and use.
- 5662. FAMILY CLOTHING PROBLEMS.** (3 cr; prereq 3621, AgEc 1030 or Econ 1002, Soc 1001, Psy 1001 or #)
Clothing problems as part of the consumption process of individual families and households; personal, social, and economic factors affecting the acquisition, use, maintenance, and discard of clothing.
- 5664. FASHION THEORY AND ANALYSIS.** (4 cr; prereq Soc 1001, Psy 1001)
Fashion theories and factors which influence fashion adoption and diffusion. Analysis of fashion trends.
- 5685. INTERNATIONAL DEVELOPMENTS IN TEXTILES AND CLOTHING.** (4 cr; prereq #)
Comparison of production, distribution, and consumption in the United States and Europe. Effects of world trade on supply and distribution.
- 5686. EUROPEAN FIELD EXPERIENCE IN TEXTILES AND CLOTHING.** (6-12 cr; prereq 5685 and #)
One quarter abroad in comparative study of design, production, distribution, and consumption of textiles and clothing in European market centers. Includes lectures, field trips, individual study projects, and observation periods in selected textile and clothing industries, businesses, and related organizations.
- 8621. READINGS IN TEXTILES**
- 8622. STRUCTURE AND PROPERTIES OF TEXTILE MATERIALS**
- 8623. MECHANICAL-PHYSICAL METROLOGY**
- 8624. CHEMICAL METROLOGY**
- 8625. PROBLEMS: TEXTILES AND CLOTHING**
- 8626. INDEPENDENT STUDY AND WRITTEN REPORTS: TEXTILES**
- 8627. COMFORT FACTORS IN CLOTHING**

Course Offerings

8661. READINGS IN CLOTHING

8663. PROBLEMS: CLOTHING AND TEXTILES

8680. SEMINAR: TOPICS IN CLOTHING AND TEXTILES

Center For Youth Development and Research (YoSt)

5120. INDEPENDENT STUDY IN YOUTH STUDIES. (Cr ar [max 12 cr]; prereq #)

Independent reading and/or research under faculty supervision.

5130. SPECIAL TOPICS IN YOUTH STUDIES. (3-5 cr per qtr [max 15 cr]; prereq #)

Review of research and discussion.

5131. PROGRAMS AND SERVICES FOR YOUTH. (3 cr; prereq SW 3102, Soc 5952, CPsy 5303, #)

Analysis of main types of youth-serving organizations. Includes national and local organizations both voluntary and public with emphasis on agency philosophy, goals, program, funding and development, staffing patterns. Agencies in juvenile justice, health, recreation, and education. Examples from Minnesota.

5132. ACTION LEARNING FOR YOUTH. (3 cr; prereq HED 3090, CPsy 5303, #...5131 recommended)

Purposes of service and action-learning in schools and youth-serving agencies. Development and implementation of programs in which adolescents perform valued service and work in their communities. Evaluation of action-learning programs.

5133. YOUTH AND HEALTH. (3 cr; prereq 5131, Soc 1001, CPsy 5303, PubH 3004, #)

A basic course on the medical and health status of youth. Age-specific morbidity data with respect to youth. Introduction of youth development concepts for use in sociomedical and sociohealth problem analysis and program development.

5201-5202-5203. PRACTICUM. (4 cr per qtr; prereq acceptance into youth studies collateral)

Two-hour seminar and 8-10 hours of fieldwork each week. Reflect on and integrate knowledge about youth with ongoing experience in work with youth.

5230. WORK WITH YOUTH—INDIVIDUAL. (3 cr per qtr; prereq Soc 1001, Psy 1001, CPsy 5303, #)

Basic assumptions underlying work with youth. Emphasis on how adolescents, in particular, learn to get along with themselves. Special issues and concerns of adolescents and of persons who work with them.

5231. WORK WITH YOUTH—FAMILY. (3 cr per qtr; prereq 5230, FSoS 5200, or #)

Basic assumptions underlying work with youth. Emphasis on how adolescents, in particular, learn to get along with themselves and their role in the family. Special issues and concerns of adolescents and of persons who work with them.

5232. WORK WITH YOUTH—GROUP. (3 cr per qtr; prereq 5230, Spch 5411 or #)

Basic assumptions underlying work with youth. Emphasis on how adolescents, in particular, learn to get along with themselves, their role in the family, relationships with peers and on the job. Special issues and concerns of adolescents and of persons who work with them.

8001-8002-8003. ADVANCED SEMINAR IN YOUTH STUDIES

SUPPORTING COURSES

Rhetoric (Rhet)

1101. COMMUNICATION I. (4 cr)

Writing from observation and personal experience. Emphasis on expository and descriptive prose that is clear, vigorous, honest, and economical. Attention to effectively written sentences and sound paragraph construction.

1102. COMMUNICATION II. (4 cr)

Writing from research and from personal observation. Emphasis on the research paper, including techniques of drawing hypotheses, examining indexes and guides, selecting, evaluating, and organizing evidence, constructing paraphrases, and assembling footnotes and bibliography. Attention to effective sentences and forceful style.

1147. EFFICIENT READING. (3 cr)

Designed to increase reading rate, comprehension, and vocabulary. For persons of average or above-average reading ability who wish to achieve or maintain superior scholastic status. Not a remedial course.

- 1220. PRINCIPLES OF HUMAN COMMUNICATION.** (3 cr)
The dimensions of human communication. The origins and nature of language, development of language in the individual, theories of intrapersonal, interpersonal and small group communication, the role of public speaking in America, and the impact and development of the mass media. Emphasis on the relationship between language and human values, attitudes, beliefs, and behaviors.
- 1221. AN INTRODUCTION TO INTERPERSONAL COMMUNICATION.** (3 cr; prereq 1101 and 1102)
The dimensions of interpersonal communication. Designed to introduce theories, problems, and practical exercises of interpersonal communication to enable students to become better communicators in interpersonal situations. Principles and experiences of interpersonal communication including factors related to interpersonal perception, orientation, contents, models, choice, attraction, barriers and breakdowns.
- 1222. PUBLIC SPEAKING.** (4 cr; prereq completion of rhetoric communication requirement)
Practical course in fundamentals of speechmaking. Emphasis on organizing the speech and projecting it to the audience.
- 1226. PARLIAMENTARY PROCEDURE, LEADERSHIP, AND PARTICIPATION.** (3 cr; prereq completion of rhetoric communication requirement)
Individual participation in the creation and development of a functioning organization using rules of parliamentary procedure as its basis for doing business. The history, theories, and processes of democratically oriented organizations.
- 1251. EFFECTIVE LISTENING.** (3 cr)
Designed to increase listening comprehension by developing three central abilities. Readings, research, theory, and practice.
- 1301. HUMANITIES: THE ENLIGHTENMENT.** (5 cr)
Introduction to the interdisciplinary humanistic study; the French Revolution, Napoleonic era, rise of rationalism, humanism, neoclassicism. Readings in Pope, Voltaire, Locke, Rousseau, Tolstoy, Burke, and others.
- 1302. HUMANITIES: THE INDUSTRIAL REVOLUTION.** (5 cr)
The industrial transformation of Europe; the British Empire; liberalism and the romantic response; socialism. Readings in Smith, Bentham, Carlyle, Ruskin, and Marx; Zola, Ibsen, and Dostoyevsky.
- 1303. HUMANITIES: THE AGE OF DARWIN.** (5 cr)
The impact of evolutionary thought; religion and morality in a changing society. Readings in Darwin and the evolutionists; Nietzsche, Shaw, Thomas Mann, and others.
- 1401. INTRODUCTION TO LITERATURE.** (4 cr)
Analysis of literary structural forms and stylistic devices; poetry, drama, and prose fiction.
- 1424. WORLD LITERATURE I.** (5 cr)
Examination and analysis of selected master works of continental and Middle Eastern literature from the ancients through the Renaissance.
- 1425. WORLD LITERATURE II.** (5 cr)
Examination and analysis of selected master works of continental literature from the neoclassical period to the present.
- 1442. NOVEL AND SHORT STORY.** (4 cr)
Analysis of selected European and American fiction. Emphasis on literary style in relation to themes of prose fiction.
- 1451. INTRODUCTION TO DRAMATIC LITERATURE.** (4 cr)
Selected readings from Greek literature to the present. Emphasis on the development of dramatic art form.
- 1500. INFORMATION ORGANIZING, MAPPING, AND WRITING.** (3 cr)
A systems approach to identifying, organizing, and writing information. Students will categorize information according to a classification scheme and assign each hunk of information into labeled blocks. Term project will be the mapping and blocking of an actual program. Compatible with information storage and retrieval, technical writing, and programmed instruction.
- 1506. ORIGINAL WRITING.** (3 cr)
Systematic analysis of short story techniques. Through reading and writing short stories, the student is acquainted with basic constants of the art. Emphasis is on writing, but the course also provides a different way of reading and appreciating short stories.
- 3166. SCIENTIFIC AND TECHNICAL GRAPHICS.** (4 cr; prereq #)
A survey of graphic methods of transferring scientific knowledge. Designed to acquaint students with types and methods of using graphics in technical communication. Includes a

Course Offerings

- contemporary and historical overview of the use of graphics in scientific and technical disciplines. As many types of graphics as possible will be used in class such as the illustrated lecture, videotape, 35mm slides, etc.
- 3192. COMMUNICATION FOR INTERNATIONAL EXCHANGE GROUPS.** (3 cr; prereq intermediate knowledge of oral and written English)
Communication and culture will be the focus of this lecture/discussion course for international exchange groups of similar national origins. Communication processes and skill areas, factors such as animal, interpersonal nonverbal, and intercultural communication. Facets of American literature, painting, and architecture studied.
- 3254. ADVANCED PUBLIC SPEAKING.** (4 cr; prereq 1222)
Training for specific speech situations most likely to be encountered professionally, soon after graduation. Psychology of communication, especially as related to use of visual aids, demonstration, performance methods, and radio.
- 3266. DISCUSSION METHODS.** (4 cr; prereq completion of rhetoric communication requirement)
Study of and practice in structured and unstructured discussion. Emphasis on group dynamics and the psychology of leadership. Practice in leading meetings, debating, planning radio programs, organizing in-service training programs, evaluating group progress.
- 3270. SPEECH: SPECIAL PROBLEMS.** (1-5 cr; prereq §)
Supervised reading and research on advanced speech-communication topics not covered in regularly scheduled speech offerings.
- 3280. AMERICAN WOMEN COMMUNICATORS.** (3-5 cr; prereq completion of rhetoric communication requirement)
Effective communication by American women traced historically and original texts of speeches by women (both in print and on tape) analyzed. Students examine the rhetoric used in available speeches and, where possible, evaluate the vocal delivery used. Influential written communications examined where speech texts are unavailable. Individual research into special areas of American culture to discover influential women speakers or analyze the most important speeches of individual women allows students to follow their particular interests.
- 3321. HUMANITIES: THE GREEK HERITAGE.** (5 cr)
The literature, philosophy, and arts of ancient Greece central to understanding contemporary Western society. Readings in Homer, the tragedians, Plato, Aristotle, Thucydides.
- 3322. HUMANITIES: THE ROMAN AND MEDIEVAL HERITAGE.** (5 cr)
The continuing relevance of the literature, philosophy, theology, and arts of the Roman past and of the Middle Ages. Readings in Virgil, Lucretius, Augustine, the poetry of courtly love, medieval theology, Dante.
- 3323. HUMANITIES: THE RENAISSANCE AND REFORMATION.** (5 cr)
The literature, philosophy, arts, and scientific advances of the early and high Renaissance; the Reformation and Counter-Reformation in the Church. Readings in Machiavelli, Copernicus, Galileo, Luther, Calvin, St. Ignatius, Pascal.
- 3324. HUMANITIES: ASIATIC CULTURE.** (5 cr)
Asiatic religious and philosophical systems; introduction to the art, architecture, and music of Asia. Readings in classical and modern Asiatic literature; Buddhism, Taoism, Confucianism.
- 3371. HUMANITIES: AMERICAN INDIVIDUALISM.** (5 cr)
Examination and evaluation of conflicts arising from the varied individualistic traditions in America. Readings in Emerson, Thoreau, Mark Twain, Whitman, Jack London.
- 3374. HUMANITIES: SPECIAL PROBLEMS.** (1-5 cr; prereq §)
Primarily for supervised reading and research on topics not covered in regularly scheduled humanities offerings.
- 3381. HUMANITIES: 20TH-CENTURY CULTURE.** (5 cr)
The changing structure of 20th-century culture from World War I to the present, Freudianism, communism, fascism, modern movements in literature, the visual arts and music existentialism.
- 3471. AMERICAN LITERATURE.** (5 cr)
Analysis of philosophical and social concepts that have shaped American culture, as reflected in literature.
- 3473. CONTEMPORARY LITERATURE.** (4 cr)
Reading and analysis of significant works of modern literature.
- 3551. PROFESSIONAL WRITING.** (4 cr; 3551 or 3562 is required of all students unless exempted through dept exam; prereq jr)
Projects and reports in professional communication: the résumé, application letter, interview; professional journals; the review of literature; specialized bibliographic tools; the feature article.

- 3562. SCIENTIFIC AND TECHNICAL WRITING.** (4 cr; 3562 or 3551 is required of all students unless exempted through deptl exam; prereq jr)
Methods of exposition in scientific and technical writing; types of reports; audience analysis; continuous practice in report writing.
- 5000. PROFESSIONAL EXPERIENCE PROGRAM.** (1-6 cr; not for grad cr; prereq #)
Internship in technical communication designed to give majors practical on-the-job experience with communication problems. Students intern as writers or editors at the University of Minnesota or in industry.
- 5100. TECHNICAL COMMUNICATION: SPECIAL PROBLEMS.** (Cr ar; prereq #)
Designed for supervised reading, research, and work on advanced technical communication projects not covered in regularly scheduled courses.
- 5147. ADULT READING PROGRAMS.** (2 cr)
Problems, methods, and research in this field. Survey and evaluation of program designs including those suitable for TV.
- 5150. DIRECTION OF TRAINING IN BUSINESS AND SERVICE ORGANIZATIONS.** (4 cr; prereq freshman communication or equiv)
Business, industrial, and service organizations, and their inpost and outpost training programs. The scope and sequence of specialized training and development programs, the job of the typical director of training and development, and skills required for entry into the field. Students make an onsite visitation of a training and development office in a selected business and/or service organization and conduct descriptive research concerning effectiveness of the program involved.
- 5165. STUDIES IN ORGANIZATIONAL COMMUNICATION, CONFLICT AND CHANGE.** (4 cr; prereq freshman communication or equiv)
The roles of internal and external organizational communication, conflict-problem identification, and change processes. Contemporary theory and research in organizational development. Methods of problem identification and diagnosis. Change processes and applications to actual organizational setting.
- 5170. MANAGERIAL COMMUNICATION.** (4 cr)
Systematic analysis of communication techniques and procedures for the manager. Emphasis on manager's ability to achieve vertical and horizontal understanding and acceptance. Includes readings, guest speakers, and a term project.
- 5175. PRINCIPLES OF LANGUAGE DEVELOPMENT.** (4 cr)
Analysis through history and semantics of principles of the English language. The course is based on the premise that an understanding of how English has evolved will generate a more enlightened attitude in its use.
- 5180. INTERNSHIP IN TECHNICAL COMMUNICATION.** (Cr ar)
Designed to give technical communication majors practical on-the-job experience with communication problems. Students will intern as technical communicators at the University or in industry or government.
- 5257. SCIENTIFIC AND TECHNICAL PRESENTATIONS.** (4 cr; prereq 1222 and 3562 or 3551 or #)
Training for specific presentation situations related to technical or scientific topics. Emphasis on audience analysis and adaptation, techniques of support and visualization, organization for clarity and accuracy, and of interpreting and answering questions. Students will make and evaluate technical and scientific presentations. Emphasis on seminar reports and professional conference papers.
- 5357. HUMANITIES: SEMINAR IN AMERICAN AGRARIANISM.** (3 cr; prereq #)
An interdisciplinary seminar in humanities. Roots of the agrarian ideal in European thought and in early America. Individual research into and evaluation of the agrarian tradition in American social and political philosophy, and in the history of imaginative literature, the fine arts, and popular culture.
- 5500. RESEARCH IN COMMUNICATION STRATEGIES.** (4 cr; prereq #)
(Same as AgJo 5500) Introduction of basic research design and methodology in communication. Emphasis on application of various research methods to particular communication strategies or settings.
- 5551. REPORT AND THESIS WRITING.** (3 cr; prereq 3551 or 3562 or #)
For graduate students and seniors anticipating graduate work. Organization of reports and theses; library investigation; presentation of data; methods of documentation. Emphasis on revision of manuscripts and improvement in style of writing.
- 5561. WRITING FOR PUBLICATIONS.** (4 cr; prereq 3551 or 3562)
The professional as communicator; analysis of markets: professional, trade, and general; information sources and topic selections; communicating environmental information; adaptation to the specialized and general reader; writing and preparing manuscripts for publication; marketing techniques.

Course Offerings

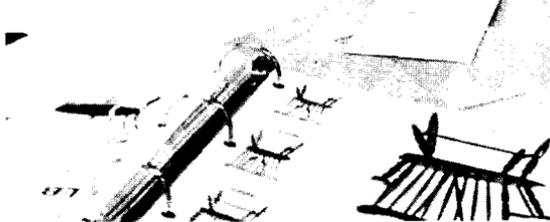
5600. TRANSFER OF TECHNOLOGY. (4 cr; prereq one of the following: 5257, Jour 5133, Engl 3085, PubH 5070 or #)

(Same as AgJo 5600) Methods of transferring scientific and technical knowledge and practice from those individuals and organizations who possess it to those who need it. Review of research in diffusion and transfer methods at different technical levels. Tools, methodologies, and assessment procedures for an actual program of technical or scientific subject matter. Planning state-of-the-art or frontier technology seminars and impact analyses for scientists, engineers, and/or segments of the public required.

5700. COMMUNICATION IN TECHNICAL AND ENVIRONMENTAL IMPACT ASSESSMENT. (4 cr; prereq sr or grad standing, course in statistics and #)

The theories and processes involved in technical assessment and environmental impact statement preparation. Preparation will be analyzed and discussed. Case studies of technology assessment and forecasts and environmental impact statements. Planning of process and project management in an actual impact assessment will constitute the term project.

8251. SEMINAR: LISTENING COMPREHENSION



IV. FACULTY

Program Committee Chairpersons

Consumer Food Science—Joan Gordon
Costume Design—Homa Amir-Fazli
Family Relationships—Paula Berry, David Olson
Fashion Merchandising—Barbara Nemecek
Food Science and Technology—Paul Addis
General Design—Tim Blade
General Home Economics—Geraldine Gage
Home Economics Education—Joan McFadden
Hospitality and Food Service Management—Louise Mullan
Housing—Virginia Nagle
Interior Design—Ann Erickson
Nutrition and Dietetics—Margaret Doyle
Textiles and Clothing—Ruth Franzen

Departmental Faculty

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Natalie Gallagher

Assistant Professor

Marie Christenson
Gertrude Strinden

Instructor

Barbara Conklin
Jane Lillestol

DESIGN

Professor

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Marian O. Bagley
Eugene Larkin

Associate Professor

Richard Abell
Homa Amir-Fazli
William Angell
Ann Erickson
Alice Goacher
Virginia Nagle
Joseph Ordos
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Timothy Blade
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Evelyn Franklin
Delores Ginthner
Suman Shenoi

Lecturer

Don Lee

FAMILY SOCIAL SCIENCE

Professor

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Reuben L. Hill
Edna Jordahl
Gisela Konopka
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David H. Olson
Paul C. Rosenblatt

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Michael Baizerman
James L. Hawkins
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Wanda Olson

Assistant Professor

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Alan Briskin
Richard Fowler
Sheila Henry
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Instructor

Nancy Dahl
Ruth Fuller

Lecturer

Carol Anderson

Faculty

FOOD SCIENCE AND NUTRITION

Professor

Elwood F. Caldwell, head
Paul B. Addis
Eugene C. Allen
Francis F. Busta
Margaret D. Doyle
Joan Gordon
Theodore P. Labuza
Howard A. Morris
Lura M. Morse
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Patricia B. Swan
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Edmund A. Zottola

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Assistant Professor

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Zata M. Vickers
Joseph J. Warthesen

Instructor

Elaine H. Asp
Marjorie Fruin
Shirley Goers
Madge Hanson
Eulalia Harder
Sharol Hopwood
Edith Johnson
Donna P. Meiske
Robert P. Olson
Sister Mary Moira Tighe
Isabel Wolf

Lecturer

Eulalia Harder
Alfred T. May
John E. Snow

HOME ECONOMICS EDUCATION

Professor

Joan McFadden, head
Marjorie Brown
Emma Whiteford

Assistant Professor

Ardell Wantoch

Instructor

Edna Anderson
Marge Wiisman

HOME ECONOMICS EXTENSION SPECIALISTS—FAMILY LIVING

Professor

Evelyn P. Quesenberry, program director

Assistant Professor

Susan S. Meyers

Instructor

Barbara Beatt
Patricia Kramm
Kathleen M. Magnum
Ronald L. Pitzer

TEXTILES AND CLOTHING

Professor

Margaret P. Grindereing
Robert F. Johnson

Associate Professor

Ruth Franzen

Assistant Professor

Lois Ingels
Barbara Nemecek
Gloria Williams

Instructor

Sherri Gahring
Wanda Sieben

Lecturer

Marilyn DeLong
Samuel Druy

YOUTH DEVELOPMENT AND RESEARCH, CENTER FOR

Professor

Gisela Konopka

Associate Professor

Michael Baizerman
Ruth Teeter

Assistant Professor

Willis Bright

Veryl Cashman
Miriam Seltzer

Instructor

Christopher Clauson
Diane Hedin
James McDonough
Mary Urzi





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