



College of Home Economics

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## *College of Home Economics*

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McNeal Hall, which houses the main administrative offices of the College of Home Economics, is located at 1985 Buford Avenue, St. Paul, MN 55108 (612/373-0933).

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## CONTENTS

I. General Information .....	2
II. Programs .....	14
Applied Design	
Consumer Food Science	
Costume Design	
Family Relationships	
Food Science and Technology	
General Home Economics	
Home Economics Education	
Housing	
Interior Design	
International Development Collateral	
Nutrition and Dietetics	
Retail Merchandising	
Textiles and Clothing	
Youth Studies Collateral	
III. Course Descriptions .....	39
Design	
Family Social Science	
Food Science and Nutrition	
Home Economics	
Home Economics Education	
Textiles and Clothing	
Youth Studies	
IV. Faculty .....	60

This biennial bulletin, the basic source of information about the College of Home Economics, should be kept handy for repeated reference.

Separate bulletins for the College of Education, College of Agriculture, Graduate School, Summer Session, and other University units are available at the Information Booth in Williamson Hall, Minneapolis, or in 130 Coffey Hall, St. Paul.

### Equal Opportunity

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by Sections 503 and 504 of the Rehabilitation Act of 1973, and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, University of Minnesota, 100 Church Street S.E., Minneapolis, MN 55455, 612/373-7969, or to the Director of the Office of Civil Rights, Department of Education, Washington, DC 20202, or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, DC 20210.

### Access to Student Educational Records

In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of attendance, college and class, major, adviser, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, a student must notify the records office on his or her campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the information booth in Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Coordinator of Student Support Services, 260E Williamson Hall, 612/373-2106.

# College of Home Economics

## I. GENERAL INFORMATION

The College of Home Economics, through its teaching, research, and outreach activities, is concerned with the functioning of individuals within family and other living units, with policies and programs related to elements of the near environment (design, food and nutrition, textiles and clothing, housing, and human relationships involving people of all ages), and with ways people interact with, influence, and are influenced by these elements.

The college offers courses of study for undergraduate, graduate, and nondegree students. Its teaching programs draw upon the broad resources of the University and the metropolitan and statewide communities. The instructional programs reflect the college's commitment to experiential learning and a problem-solving orientation. They are designed to prepare students as skilled and knowledgeable professionals as well as to contribute to their personal growth and ability to participate as responsible members of society.

Research efforts in the college seek to identify and illuminate better ways to address the diverse, interconnected problems and opportunities confronting individuals and family groups. Faculty members work closely with others who have common interests but perhaps differing orientations, both within the college and throughout the University.

Through extension, continuing education, and other efforts resulting from its relationships with the Agricultural Experiment Station and the Agricultural Extension Service, the college serves statewide, national, and international audiences.

Although home economics has always recognized the importance of strengthening the family and maintaining a positive home environment, today its contacts also reach out into industry and business, government agencies, and other units of society dealing with nutrition, housing, clothing, and the environmental aesthetics of the many settings of people's daily activity.

The College of Home Economics is based on the Twin Cities campus/St. Paul. McNeal Hall provides outstanding facilities for the college's teaching and research programs. The Division of Home Economics Education recently moved to the new Vocational and Technical Education Building nearby. Research laboratories and offices for faculty in the areas of foods and nutrition are located in the Food Science and Nutrition Building, while work in quantity foods is housed in a section of the Dining Center. All locations provide access and facilities for the handicapped.

## Administrative Structure and Programs

The College of Home Economics is organized into six units—the Department of Design, Department of Family Social Science, Department of Food Science and Nutrition, Department of Textiles and Clothing, Division of Home Economics Education, and Center for Youth Development and Research. These units provide the courses and the faculty for the college's academic and professional programs.

Close ties are maintained with the College of Education through which the Division of Home Economics Education is administered. Undergraduate students majoring in home economics education begin their studies in the College of Home Economics and jointly register in the two colleges during their junior and senior years.

Based on the assumption that home economics is essentially problem-oriented and involves various areas of expertise, the curricula have been organized into programs that are administered by committees composed primarily of faculty members from one or more departments in the college. Programs focus on a major interest area but maintain an interdisciplinary approach, drawing from such disciplines as communications, the natural

sciences, the social sciences, and the humanities. They are unified by their unique focus on the individual and family and on improving the quality of life for all people. The range of programs offered is designed to serve students interested in highly specialized areas as well as those seeking a general background in home economics. Undergraduate programs (including three options in home economics education) are currently offered in the following areas:

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|---------------------------------------|---|
| Applied Design                        | Housing   |
| Consumer Food Science                 | Interior Design   |
| Costume Design                        | International Development (collateral area of emphasis) |
| Family Relationships                  | Nutrition and Dietetics                                 |
| Food Science and Technology           | Retail Merchandising                                    |
| General Home Economics                | Textiles and Clothing                                   |
| Home Economics Education:             | Youth Studies (collateral area of emphasis)             |
| Consumer-Homemaking                   |   |
| Family Life                           |   |
| Home Economics Occupational Education |   |

The collateral area of emphasis, part of the majority of programs offered by the college, makes each student's curriculum unique. It is a sequence of courses designed to act as a supporting field for the major, enhance career opportunities, capitalize on special interests or talents, and help prepare students to respond to newly emerging societal needs with expertise. For example, a sequence of courses in youth studies and youth work and another in international development supplement the home economics degree programs as well as others within the University. Additional information on these and other collateral areas such as journalism, nursery school, work with aging, and cooperative extension is available in the college office, 32 McNeal Hall.

Audiotapes describing the college's programs and accounts of recent graduates in their new careers are available in the Career Resource Room, 36 McNeal Hall.

## Degrees Offered

**Baccalaureate Degrees**—The major programs in home economics all lead to the bachelor of science degree.

**Postbaccalaureate Degrees**—Professional non-research-oriented degree programs are open to persons who have completed baccalaureate programs in home economics and are interested in building additional professional competence and skills. Of special interest may be the master of education degree, offered by the College of Education and emphasizing home economics education, and the master of agriculture degree, offered by the College of Agriculture and emphasizing a variety of home economics related areas. See the *College of Education Bulletin* or the *College of Agriculture Bulletin* for details.

**Graduate Degrees**—The master of arts, master of science, and doctor of philosophy degrees are offered in a variety of home economics areas through the Graduate School. For information about these programs, see the *Graduate School Bulletin*.

## Admission

The faculty and staff of the College of Home Economics encourage applications from persons belonging to minority and other groups that have been underrepresented in the college. The college is committed to providing equal opportunity to all who seek access to its programs, facilities, and services; establishing fair educational standards and applying them equitably in making decisions about admission and academic standing; and helping to compensate for inequities in society.

## **General Information**

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Your application to a program in the College of Home Economics should be sent to the Office of Admissions and Records, 130 Coffey Hall, University of Minnesota, 1420 Eckles Avenue, St. Paul, MN 55108. A \$15 nonrefundable application (credentials examination) fee, payable to the University of Minnesota, must accompany your application. You may enroll in any quarter or summer term to begin your college work.

Applications must be received by July 15 for fall quarter admission, November 15 for winter quarter admission, February 15 for spring quarter admission, or May 15 for summer admission. Earlier application is advisable so that you can be informed of the special orientation-registration programs available for new students. You are encouraged to attend these programs.

**Freshman Admission**—If you graduated in the upper 50 percent of your high school class and completed 12 units in grades 10 through 12, you may be admitted. The high school courses must include three units in English and one unit each in elementary algebra (accepted if taken in 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. ACT or PSAT scores are also required; they are used as an aid for advising purposes, rather than for making admission decisions.

**Admission With Advanced Standing**—To transfer to the University of Minnesota after completing course work at another college 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. Advanced standing applicants must meet the same high school mathematics requirements as freshman applicants. A copy of your high school transcript forwarded to the Office of Admissions and Records will facilitate action on your application by verifying completion of the mathematics units. Your course work will be evaluated in light of the requirements for the specific undergraduate program you intend to enter.

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 information about transfer of course work, write to the Director of Student Services, College of Home Economics, 32 McNeal Hall, University of Minnesota, 1985 Buford Avenue, St. Paul, MN 55108. You may also arrange to meet with an adviser assigned to the program area you plan to enter.

**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 at which you are currently enrolled. You should apply as far in advance of the quarter you wish to transfer as possible. If you have not completed an algebra course at the University, you should have a copy of your high school transcript sent to the Office of Admissions and Records, 130 Coffey Hall, to verify that you have fulfilled the admission requirement in mathematics.

By calling the College of Home Economics (373-0938), you can make a registration appointment with an adviser from the central advising staff.

**Readmission to the College**—If you were previously enrolled in the College of Home Economics and wish to be readmitted, visit the college office, 32 McNeal Hall. Your request will be reviewed by the director of student services.

Students who are readmitted to the college after an absence of more than two years are advised to complete the curricular requirements in effect at the time they reenter. However, those who had completed more than 130 credits at the time they last attended the college may elect to follow either current requirements or those in effect when they were last enrolled.

**Adult Special Admission**—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. Apply through the Office of Admissions and Records, 130 Coffey Hall.

If you decide at a later date to seek a baccalaureate degree in home economics, you must file a special application for a change of status with the Office of Admissions and Records. To be admitted as a degree student, you will be expected to meet College of Home Economics admission requirements.

If you are planning to enter the Graduate School, you should be aware that there is a limit on the number and type of adult special credits that may be transferred to a graduate program. Contact the Graduate School for information.

**Admission to Graduate School**—Refer to the *Graduate School Bulletin*, or call the Graduate School (373-5542).

**Admission to Summer Session**—Refer to the *Summer Session Bulletin*, or call the Summer Session office (373-2925).

**Senior Citizen Admission**—If you are a Minnesota resident age 62 or older, you may be admitted to University of Minnesota classes when space is available after all tuition-paying students have been accommodated, provided you have completed specified prerequisites. If you take courses on an audit (no credit) basis, there is no charge unless materials or other special fees are involved. If you take courses for credit, a fee of \$6 per credit as well as any special fees are charged. Eligible persons should contact the Office of Admissions and Records, 130 Coffey Hall (373-0706).

## Expenses

Current information on tuition, fees, and other expenses is available in the quarterly *Class Schedule* and the annual *General Information Bulletin*.

## Financial Aid

For information about financial assistance, contact the Office of Student Financial Aid, 199 Coffey Hall, University of Minnesota, 1420 Eckles Avenue, St. Paul, MN 55108.

When applying for financial aid, state that you are a student in the College of Home Economics. 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.

## Registration

Your first obligation as a student is proper registration. Upon registering and paying fees, you are considered to have completed a contract with the University whereby the individual colleges offering the courses agree to make certain instruction and other facilities available to you and you agree to follow established regulations and procedures. Errors in registration, late registration, failure to observe procedures, or excessive changes in registration not only cause an imposition on others, but are costly and time-consuming.

Quarterly class offerings are listed in the *Class Schedule*, which is published just before the registration period each quarter. Check the *Class Schedule* for prerequisites, limitations on enrollment, special registration procedures, and meeting places and times for courses.

## General Information

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Registration periods begin in late August for fall quarter, mid-November for winter quarter, and mid-February for spring quarter. Continuing students register for summer terms in May.

**Obtaining Registration Materials**—If you are enrolling in the College of Home Economics for the first time (as a freshman, new advanced standing, or transfer within the University student), you will receive a letter informing you of a date and place for your first program planning and registration meeting. An adviser will be assigned to help you plan your schedule of courses.

As a continuing student, you will receive registration instructions at your summer mailing address for fall term and in your college mailbox at least two weeks prior to the first day of registration for winter, spring, and summer terms. Registration materials may be picked up in the college office, 32 McNeal Hall, approximately two days before the registration period begins.

Much of the inconvenience associated with registration can be avoided by carefully following instructions in the quarterly *Class Schedule*.

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

You are expected to take the initiative in keeping your adviser informed of your academic progress. Before meeting to have your registration approved you should develop a tentative program for the quarter using the curriculum requirements and course descriptions in this bulletin and the *Class Schedule* as a guide.

**Curriculum Checklist**—When you enroll in the college for the first time as a regular student, a curriculum checklist itemizing all requirements for your major program will be placed in your academic file. Each quarter, as grades are reported, you and your adviser will update the checklist by including course work completed.

If you completed any college work before enrollment, it will be evaluated and entered on the program checklist with an indication of how it was accepted for transfer to your major. If you change majors, a new checklist must be substituted for the initial one.

When you apply for your degree, this checklist must be attached to the degree application and submitted to the college office, 32 McNeal Hall.

**Repeating a Course**—You must repeat any required course in which you received a W or an N grade. You may repeat any course in which you received a D grade. When you repeat a course, the grade from the second attempt is entered on the transcript; the higher grade is used when computing the grade point average. W, D, and N grades from the first attempt remain on the transcript.

**Extra Credit Registration**—There may be times when you would like to work independently and complete extra work in order to receive additional credits in a course. Extra credit registration is designed to provide the opportunity to earn from one to three additional credits through more intensive study of a topic in a regular course or an extension of study to a closely related topic. Extra credit may be earned by completing additional work concurrently with the regular work for a course or after you have taken the course. 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 office, 32 McNeal Hall. Have the permission slip signed by the instructor and submit it with your other

registration materials. Registration for extra credit should be designated by an X after the course number (e.g., Dsgn 1532X) and accompanied by a special course call number provided by the department.

**Independent Study Registration**—To encourage self-directed learning, certain courses in the college may be taken through independent study by following the syllabus of a course without attending classes. Independent study courses are considered part of 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. This special registration requires approval of the department and, in most cases, the instructor. The usual regulations concerning grades, incompletes, and cancellations apply.

To register for independent study, pick up a permission slip at the college office, 32 McNeal Hall, and have it completed in the office of the department offering the course. In most cases you will also have to confer directly with the instructor for permission to register for independent study. The permission slip must be submitted with your other registration materials. Independent study registration should be designated by a Y after the course number (e.g., FScN 1602Y) and accompanied by a special course call number provided by the department.

**Cancelling and Adding courses**—When you register for a course, you enter into an agreement that you will complete the work for which you are enrolled. Any change in registration must be officially recorded. The steps for either cancelling or adding a course are listed below.

1. Obtain a course enrollment request form from the college office, 32 McNeal Hall, or from the Office of Admissions and Records, 130 Coffey Hall.
2. Obtain any necessary signatures (see below).
3. Submit the form to 130 Coffey Hall.

During the first week of a quarter, you may add a course with the approval of your adviser; if the course has been listed as closed, you will also need the instructor's approval. After the first week of the quarter, you need the approval of both your adviser and the instructor to add a course.

Cancellations after a quarter has begun are discouraged. They are often costly in terms of time and money, and perhaps more important, often deny other students places in classes.

During the first six weeks of a quarter, you may cancel a course without grade (W) with your adviser's approval. (The course does not appear on your transcript if it is cancelled in the first two weeks.) After the sixth week of the quarter, you need the approval of both your adviser and the instructor to cancel a course. If you cancel a course after the sixth week and are doing failing work at the time, you may receive a grade of N instead of a W. Cancellations are rarely permitted during the last two weeks of the quarter; approval of the college office is necessary for such cancellations.

**Cancelling Out of College**—If you find it necessary to withdraw from the University before the end of a quarter, you must go to the Office of Admissions and Records to cancel your registration. Cancellation within the first six weeks of a quarter entitles you to a refund prorated to the amount of time you attended class. Mere absence from class or failure to pay fees does not constitute withdrawal.

## Credit

**Credit Load**—The average course load is 14 to 16 credits per quarter. If you are employed or have other outside commitments, you may need to take a lighter load. You must carry a minimum of 12 credits per quarter to be classified as a full-time student. To

## General Information

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take more than 18 credits a quarter you must have a C (2.00) average. To carry more than 21 credits you must have a B (3.00) average in the work of the previous quarter and must obtain permission from the Student Scholastic Standing Committee.

**Credit From Extension Classes**—You must officially transfer credits and grades earned for courses taken through the programs of Continuing Education and Extension at the University of Minnesota in order for them to appear on your transcript. Make your request for such transfer through the Office of Admissions and Records, 130 Coffey Hall, in writing or in person.

**Credit by Special Examination**—You may earn credit for knowledge you have obtained that is equivalent to that required to complete a variety of courses by satisfactorily completing special examinations. The University grants both credit and advanced placement based on scores earned in the English and humanities tests of the College Level Examination Program (CLEP). Apply to take the CLEP tests at 101 Eddy Hall, Minneapolis. The college faculty accepts scores above the 75th percentile in the CLEP English examination in lieu of the Rhet 1101 requirement for the undergraduate programs. Scores in the CLEP humanities examination above the 75th percentile earn credits that may be applied toward the liberal education distribution requirements for category D, Literature, Humanities, and Fine Arts.

**Credit Through Cooperative Education**—Cooperative education integrates practical work experience with academic study. You can earn 2 to 15 credits, depending on your program area, through a preplanned work experience related to your professional program. For further information, contact the Career Services Center, 37 McNeal Hall (376-2759).

**Residence Credit Requirement for a Second Baccalaureate Degree**—If you have earned a baccalaureate degree at another institution, you may earn a bachelor of science degree in the College of Home Economics by completing all degree requirements in a selected program, including a minimum of 45 credits while registered in this college.

**Credit for a Second Major or Minor**—To qualify for a second major in the College of Home Economics or a major or minor in another college of the University, inquire at the college office, 32 McNeal Hall (373-0938).

## Grading

**A-N and S-N Systems**—The University uses two grading systems: the traditional letter grade (A-N) system and the satisfactory-no credit (S-N) system. When you register you must choose the grading system under which you want your class performance to be evaluated. The grading system must be declared at the time of registration and may not be changed after the second week of the quarter.

Under the A-N system, students may satisfactorily complete a course by earning grades of 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 the grade point average (GPA), each credit of A is equivalent to four grade points; B, three grade points; C, two grade points; and D, one grade point. The GPA is computed by dividing the total number of grade points earned by the total number of A, B, C, and D credits earned.

The S-N system is designed to allow students to explore a greater variety of course work while freed largely 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 in the A-N system. Under the S-N system S stands for "satisfactory" and N for "no credit." S and N grades do not carry grade points and therefore are not included

## Satisfactory Progress

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when computing the grade point average; credits of S are, however, counted toward the total credits required for graduation. The following restrictions apply to the use of the S-N system:

1. Courses that are listed in your curriculum by department designator and number (e.g., Rhed 1101-1102) must be taken under the A-N grading system. Courses that are used to fulfill a credit requirement for your curriculum (e.g., minimum of 9 credits in the following) may be taken S-N. However, all professional courses in the major (category E) must be taken A-N unless otherwise indicated.
2. Baccalaureate candidates from the college may present a maximum of 25 percent of the residence credits offered for their degrees in courses in which they received grades of S.
3. The S-N system is available to students of the college irrespective of their academic standing.
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 system only.
5. A course for which a student has previously registered on the A-N system may not be taken at a later date on the S-N system.

Your adviser or the college office will offer assistance if you have questions about the use of the S-N system.

The quarterly *Class Schedule* contains complete definitions of grades and the supplementary symbols W (withdrawal), I (incomplete), X (sequence course), V (visitor or auditor), and T (transfer credits).

**Academic Records and Grade Reports**—Your official grade record is kept by the Office of Admissions and Records. It indicates the outcome of every registration and shows all passing grades, N grades, incompletes, and withdrawals.

Fall and winter quarter grade reports are distributed at the beginning of the next quarter in the college office, 32 McNeal Hall, upon presentation of your student identification card. An official transcript, which includes your spring quarter grades, is mailed to you each summer from the Office of Admissions and Records.

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

## Honors Program

During the 1982-83 academic year, faculty in all Home Economics departments will be responding to an all-college effort to further develop honors program proposals. Expected results include honors seminars, colloquia, honors sections of courses, laboratory research, and other individually designed opportunities for qualified students. A special honors brochure will be distributed by the college office to all students and other interested parties.

## Satisfactory Progress

You are expected to complete a minimum of 50 percent of the courses you attempt each quarter and a minimum of 75 percent you attempt each year with grades of A, B, C, D, or S. These percentages apply to credits for which you were registered after the tenth day of class each quarter. An overall grade point average of 2.00 (C) is also required. Some undergraduate programs require specific grade point averages in courses for the major.

## General Information

Students who do not achieve and maintain these standards are considered by the Student Scholastic Standing Committee and may be advised to reevaluate their academic goals. The accumulation of substandard grades or an excessive number of withdrawals diminishes the student's likelihood of graduation or of transferring to another institution.

The Student Scholastic Standing Committee evaluates each individual case, on the basis of all evidence presented, and recommends continuance or suspension. You may appeal the recommendation through the Student-Faculty Complaints Committee if you think that additional information may modify the decision.

Students are encouraged to seek help from 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 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.

## **Student Scholastic Conduct**

The College of Home Economics is proud of its longstanding tradition of mutual trust and respect among its students, faculty, and administration, who have worked together to achieve a climate of learning characterized by honesty.

The college defines scholastic misconduct to include cheating on assignments; acquiring or using test materials without faculty permission; plagiarizing (representing as a student's own work any part of what was done by another person); submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another student of necessary course materials or otherwise interfering with another student's work; falsifying a record; or any other act that violates the academic rights of another student or involves misrepresentation of a student's own work. The policy for dealing with apparent scholastic misconduct and the reporting, hearing, and appealing procedures are outlined in a college brochure, "Policy and Procedures Concerning Scholastic Misconduct," distributed annually to all students and available in the college office, 32 McNeal Hall.

## **Petitions and Appeals**

**Petitioning**—If you need to request permission to depart from usual procedures and regulations, you must complete a petition form available at the college office, 32 McNeal Hall, or at the Office of Admissions and Records, 130 Coffey Hall. Consult your adviser about writing the petition and for approval. Present your petition to the college office before the fourth week of the quarter for a decision by the Student Scholastic Standing Committee. You may pick up your copy of the decision in the college office after the sixth week of the quarter.

**Student Scholastic Standing Committee**—The college's Student Scholastic Standing Committee is composed of seven faculty members and two students. The committee interprets and enforces faculty policy concerning academic regulations and requirements. It makes final decisions in evaluating transfer credits in light of the aims of the college and the requirements of the various curricula. The committee is also authorized to consider alternative ways of meeting those requirements when permission to depart from normal procedures is requested.

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

Should you encounter a situation in which you question some aspect of the college program, you may wish to carry your concern to your adviser, department head, the College of Home Economics Academic Freedom and Responsibilities Appeals Committee, or the College of Home Economics Student-Faculty Complaints Committee. The committees, composed of faculty and student members, are organized to resolve problems that cannot be handled through usual channels. The college office can provide information about appeals procedures.

## Graduation

**Requirements**—To be recommended for graduation, candidates for the bachelor of science degree must:

1. Complete the prescribed curriculum, including required and elective courses and total credits required, as specified in their degree application.
2. Earn a minimum cumulative grade point average of 2.00.
3. Meet the general University requirements for graduation as indicated in the *General Information Bulletin*.

**Application**—Graduation application deadlines are established by the Office of Admissions and Records and are published as part of registration information materials distributed to students.

In the first quarter of your senior year, and preferably three quarters before you plan to graduate, you must obtain and file an application for a degree with the college office, 32 McNeal Hall. The application must be accompanied by an updated program checklist, available from your adviser. The degree application initiates the preparation of the senior balance sheet listing the total number of credits accumulated, the required courses that remain to be completed, and any deficiencies that must be removed before the degree can be granted.

**Commencement**—The college holds its commencement exercises during the last week of classes in the fall for fall and winter graduates and in spring quarter for spring and summer graduates. The college office informs graduating seniors who have applied for the degree of important facts concerning the graduation ceremony for a given quarter. If your graduation date changes from that indicated on your degree application, it is your responsibility to inform the college office and the Office of Admissions and Records of this change.

**Honors**—To be eligible to graduate "with distinction" from the College of Home Economics, you must rank in the top 10 percent of your class scholastically. To be eligible to graduate "with high distinction," you must rank in the top 3 percent of your class. The Office of Admissions and Records identifies graduating seniors who qualify for these honors based on the cumulative grade point average for courses completed at the University of Minnesota.

## 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 appropriate staff members for answers to specific questions.

## General Information

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**Student Mailboxes**—When you initially register, the college office will assign you a mailbox located in the main lobby of McNeal Hall. New mailbox numbers are issued at the beginning of each academic year.

The mailboxes serve to bring you important communications from your adviser, instructors, the Career Services Center, the college office, student organizations, and other students. You are expected to check your mailbox frequently.

**Student Services Office**—The Student Services office has one major concern—to provide needed 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 other colleges within the University. The Student Services office maintains files on all students, acts as the agent for the Student Scholastic Standing Committee, maintains contact with prospective students, and coordinates undergraduate advising and student governance activities.

**Career Services Center**—To help students secure employment during their academic career or following graduation, the Career Services Center, 37 McNeal Hall, announces openings for full-time and part-time jobs, assists in arranging interviews with employer representatives, offers seminars and workshops on career preparation skills, and maintains a Career Resource Room, 36 McNeal Hall. Staff members are available to discuss and offer assistance with career choices and employment opportunities. During the year the center sponsors programs dealing with various career planning topics. For questions concerning career and job opportunities, call 376-2759.

Additional placement services are available to students in home economics education through the Education Career Development office of the College of Education, 1425 University Avenue S.E., Minneapolis, MN 55414.

A part of the Career Services Center is the Cooperative Education Program, which encourages students to participate in a preplanned work experience related to their professional studies. This program coordinates student work experience activities. Individuals who would like to participate in a co-op program should contact the program office, 37 McNeal Hall (376-2759).

## Student Organizations

**Home Economics Student Board**—The major objectives of the Home Economics Student Board are to initiate, promote, and coordinate activities of home economics student organizations and to serve as a liaison between students and faculty in order to achieve the goals of the college. Board members facilitate communication between the student body, faculty, and administration through their representation on college committees and through the publication of the quarterly student newsletter.

The Home Economics Student Board consists of five elected officers plus representatives from the following groups: the five curricular areas in the college, the freshman class, new advanced standing students, the three home economics organizations (Omicron Nu, Phi Upsilon Omicron, and the Home Economics Association), the St. Paul Board of Colleges, and the Student Center Board. 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, 32 McNeal Hall. Meetings are open to all students in the college. Student members of college committees automatically become non-voting members of the Home Economics Student Board.

**Other Home Economics Student Organizations**—Many of the undergraduate programs sponsor student clubs. Membership and participation in these organizations can add a valuable dimension to your academic program and contribute a great deal to your professional development. Check with the chairperson of your program about these organizations.

Honor societies and professional organizations periodically hold elections to invite selected students to membership.

If you have questions about these organizations, consult the director of student services, 32 McNeal Hall.

**Freshman Board**—This group gives you an opportunity to learn about the University—its organization and administration, its governance and procedures, and student roles in decision making. Freshman students may apply for membership during the two-week orientation-registration program in August or during Welcome Week in September. Freshmen are invited to become members each fall. For further information, inquire at the Student Affairs office, 190 Coffey Hall.

**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. Inquire at the Student Affairs office, 190 Coffey Hall, for more information.

**Student Center Board of Governors**—The St. Paul Student Center sponsors 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 activities. 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, room 42 of the Student Center.

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

## II. PROGRAMS

### Liberal Education Distribution Requirements

Programs in the College of Home Economics are designed to meet distribution requirements that contribute to the liberal education of all students, whatever their major or professional goals. In the broadest sense, a liberal education frees us from the limitations that ignorance places on our powers of judgment and choice. More specifically, a liberal education asks of us that we seek control over the general intellectual instruments for acquiring and communicating knowledge, primarily through the command of language and numbers; understanding of the ways in which natural science has contributed to our knowledge of ourselves and our environment; behavioral, historical, and philosophic perspective on the nature of our own lives and the world in which we live; and appreciation of the creative insights into life and nature provided by literature and the arts.

For electives in any of four liberal education categories, refer to the following list of suggested courses. (Note: some programs require more than the minimum number of credits designated for certain categories below because they serve as preparation for major requirements. When a course is listed in your chosen program (described later in section II) by department and course number, you must complete that specific course.

#### A. Communication, Language, Symbolic Systems (18 credits minimum)

1. English and Foreign Language Communication Skills  
AgJo 1011, 3530  
Comp 1011, 1012, 1013, 1027  
Rhet 1101, 1102, 1147, 1220, 1222, 1226, 1251, 1506, 3254, 3257, 3266, 3551,  
3562, 5551, 5561  
Spch 1101, 1102, 3605  
Foreign Languages—all beginning courses
2. Linguistics, Rhetoric, Logic, Philosophic Studies  
Ling 1001, 3001  
Phil 1001
3. Mathematics  
Math—all courses

#### B. Physical and Biological Sciences (9 credits minimum)

1. The Physical Universe  
Ast 1011, 1015  
BioC 1301-1302, 1303  
Chem 1001-1002, 1003, 1004-1005, 1006  
GC 1111, 1112, 1161, 1163, 1171  
Geo 1001, 1002, 1005, 1111  
NSci 3011  
Phys 1001, 1005, 1041-1042
2. The Biological Universe  
Biol—all courses  
Bot 1009, 1012  
FScN 1020, 3600  
GC 1131, 1132, 1137  
GCB 3002, 3008, 3022  
MicB 3103  
Phsl 1002, 3051

#### C. The Individual and Society (9 credits minimum)

1. Analysis of Human Behavior and Institutions  
Afro 1015, 1025, 1036, 3061, 3072, 5001  
AgEc 1020, 1030, 5580  
Amln 3026, 3131, 3311, 5411  
AmSt 1101, 1102, 1103  
Anth 1102, 5102, 5131, 5141, 5151, 5185  
Chic 1105, 1106, 1107, 3615, 3711, 3345, 3617

CPSy 1301, 3303, 3304, 3311, 3331  
Econ 1001, 1002  
FSoS 5200, 5202, 5210, 5220, 5255  
Geog 1301, 1973, 3331, 3371  
Pol—all courses  
Psy 1001, 3011, 3101, 3604  
Soc 1001, 1002, 1651, 3102, 3103, 3405, 3501, 3505, 3506, 5201  
SSci 3205, 3402, 3981  
SW 1001, 3005, 3984

2. Historical and Philosophic Studies

Afro 1441, 1442, 3011  
AmIn 3111, 3112, 3121  
AmSt 3111, 3112, 3113  
Hist—all courses  
Phil 1002, 1003

**D. Literature, Humanities, and Fine Arts (9 credits minimum)**

1. Literature and the Humanities

AmIn 3116  
AmSt 5101  
Chic 3507, 3508, 3511  
Clas 1042, 3073, 3082  
Eng—all literature courses  
Hum—all courses 1001 through 1101, 3301  
Rhet 1301, 1302, 1303, 1376, 1401, 1424, 1425, 1442,  
3371, 3372, 3373, 3374, 3381  
Foreign Languages—all literature courses

2. The Arts (non-studio courses)

Afro 1301, 3101, 3102, 3105  
Arch 1001, 1021, 1022  
ArtH—all courses  
ArtS 1401  
Dsgn 1501, 3517, 5507, 5509, 5512, 5514, 5515, 5518  
Mus 1001, 1021, 1604, 1605, 1606, 1804  
Th 1101

Because of numerous changes that occur in course numbers, titles, content, and credits, an accurate list of courses that fulfill each of the above categories is difficult to maintain. For an updated list of suggested courses and for approval of courses not on this list, consult your adviser or contact the college office, 32 McNeal Hall, (373-0938).

## Applied Design

This program is appropriate for the student who welcomes the challenge and responsibility involved in planning an interdisciplinary course of study in applied design in consultation with an adviser. The program incorporates a broad base of design course work, an area of specialization, and supporting work in collateral areas of study. Students complete studio work in one of two optional areas—visual communication (e.g., graphic design, history of decorative arts) or crafts design (e.g., fiber-fabric design, jewelry design). Coordinated field assignments give the student the opportunity to acquire practical work experience.

Graduates may choose to pursue further study or may begin directly in an entry-level position in the field. Graduates may find successful careers in arts administration, design education, design retailing, fiber-fabric design, graphic design, jewelry design, museum work, and other work in two- and three-dimensional design. For those planning graduate study, this program provides a good foundation in applied art, graphic design, decorative arts, contemporary crafts, and other related areas.

Students must achieve a minimum grade of C in design courses.

**A. Communication, Language, Symbolic Systems**

Rhet 1101, 1102—Communication (8)  
Rhet 1222—Public Speaking (4)  
Rhet 3551—Professional Writing (4)  
Minimum of 2 additional credits selected from approved courses (may be taken S-N)

## Programs

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### B. Physical and Biological Sciences

Minimum of 9 credits selected from approved courses from at least two disciplines (must be taken A-N)

### C. The Individual and Society

Psy 1001—General Psychology (5)

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

### D. Literature, Humanities, and Fine Arts

ArtH 1002—Introduction to History of Art (4)

(or) equivalent course

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

### E. Professional Courses in the Major

#### 1. Basic design requirements—prerequisite to selection of options

Dsgn 1501—Introduction to Design (3)

Dsgn 1521—Design Process: Color (4)

Dsgn 1523—Design Process: Visual Presentation (4)

Dsgn 1525—Design Process: Two-Dimensional Design I (4)

Dsgn 1531—Surface-Fabric Design I (4)

Dsgn 1532—Fiber Structure Design (4)

Dsgn 1533—Metalsmithing: Introduction to Techniques (4)

Dsgn 3527—Design Process: Three-Dimensional Design (4)

AgJo 5301—Functional Photography (3)

(or) equivalent course

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

12 credits selected from the following art history courses:

Dsgn 3517—History of Costume: Primitive Through 18th Century (3)

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

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

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

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

Dsgn 5518—History of Costume: 19th and 20th Centuries (4)

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

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

#### 2. Option requirements (select one option)

##### a. *Visual Communication* (minimum of 32 credits)

Minimum of 16 credits in the following courses:

Dsgn 3521—Design Process: Color II (4)

Dsgn 3523—Design Process: Visual Presentation II (4)

Dsgn 3525—Design Process: Two-Dimensional Design II (4)

Dsgn 3571—Senior Seminar in Design (1)

Dsgn 3584—Field Experience in Design (cr ar [15 max])

Dsgn 5527—Three-Dimensional Design II (4)

Dsgn 5585—Problems in Design (3-4 [12 max])

Dsgn 5587—Problems in Design: Jewelry (3-4)

Dsgn 5588—Problems in Design: Textiles (3-4)

Minimum of 16 additional credits in other Department of Design courses or related areas selected with approval of your adviser. These may include studio arts courses in drawing (see adviser for list), or Th 5510—Drawing and Rendering for Theatre Designers (2-4).

##### b. *Design: Craft Option* (minimum of 28 credits)

GC 1513—Principles: Small Business Operations (4)

(or) equivalent

Dsgn 3535—Design Process: Materials (4)

Dsgn 3574—Crafts Seminar (1)

Dsgn 3584—Field Experiences in Design (1-5)

Dsgn 5527—Three-Dimensional Design II (4)

Dsgn 5585—Problems in Design: General (2-4)

Fiber-Fabric Design

Dsgn 3531—Surface Fabric Design II (4)

Dsgn 3532—Fiber Structure: Weaving (4)

Dsgn 3537—Fiber Structure: Off-Loom (4)

Dsgn 5531—Surface Fabric Design III (4)

Dsgn 5532—Fiber Structure: Design (4)

Dsgn 5588—Problems in Design: Textiles (3-4 [12 max])

TexC 1601—Laboratory in Basic Apparel Principles (2)

TexC 1602—Fitting the Human Subject (2)

- 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])

**F. Collateral Area**

Minimum of 18 credits from an area selected with approval of your adviser (must be taken A-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 (no more than 25 percent of total [46] may be taken S-N)

## Consumer Food Science

This program is designed to prepare students for employment in the areas of promotion, product development, marketing, and consumption of food. Upon completing the program you should have a sound knowledge of basic scientific principles of food science, consumer aspects of food product development, testing, marketing, advertising, and communication. Required course work includes studies in marketing, agricultural and applied economics, and statistics. In addition, you will select a concentration in one of five collateral areas of emphasis—economics and business administration, sociopsychology, communication, food product development, or nutrition. Through choice of the collateral area, you can help prepare for a particular job emphasis after earning the bachelor's degree, or for graduate study in a specific area such as business administration, agricultural and applied economics, or food science.

Listed below are the requirements for the major in consumer food science. Work closely with your adviser in selecting appropriate courses in biochemistry and chemistry if you are planning to complete a food and product development collateral area or graduate work in food science.

**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)
- Math 1142—Short Calculus (5)

**B. Physical and Biological Sciences**

- Biol 1009—General Biology (5)
- Biol 5001—Biochemistry (4)
- Chem 1004-1005—General Principles of Chemistry (10)
- Chem 3301-3302—Elementary Organic Chemistry I, II (8)
- Chem 3305-3306—Elementary Organic Chemistry Laboratory I, II (4)

## Programs

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### C. The Individual 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. Literature, Humanities, and Fine Arts

Minimum of 9 credits selected from approved courses

### E. Professional Courses in the Major

- FScN 1102—Technology of Food Processing (4)
- FScN 3110—Food Chemistry (4)
- FScN 3112—Food Chemistry Laboratory (2)
- FScN 3123—Microbiology of Foods (5)
- FScN 3272—Introduction to Food Decision Making (2)
- FScN 3403—Experimental Foods (4)
- FScN 3472—Principles of Food Purchasing (4)
- FScN 3600—Principles of Nutrition (4)
- FScN 3622—Nutrition in the Life Cycle (4)  
(or) FScN 5622—Human Nutrition (5)
- FScN 5100—General Seminar (1)
- FScN 5360—Sensory Evaluation of Food Quality (4)
- FScN 5403—Experimental Study of Foods (5)
- FScN 5412—Physicochemistry of Foods (3)
- FScN 5413—Structural-Functional Relations in Food Systems (3)
- AgEc 3101—Microeconomic Theory (4)
- AgEc 3102—Macroeconomic Theory (4)
- Mktg 3000—Principles of Marketing (4)
- Stat 5021—Statistical Analysis I (4)

### F. Collateral Area

In addition to the above requirements, you must select one of the following fields as an area of emphasis. A minimum of 20 credits must be completed in a collateral area. Courses are usually selected from those listed below, but others may be selected in consultation with your adviser. More than one collateral area may be selected.

#### **Economics and Business Administration**

- Acct 1024—Principles of Financial Accounting I (3)
- Acct 1025—Principles of Financial Accounting II (3)
- Acct 3001—Principles of Managerial Accounting (4)
- AgEc 1250—Principles of Accounting (5)
- AgEc 5560—Economics of Consumer Policies (4)
- AgEc 5580—Economic Organization of the Household (4)
- AgEc 5591—Consumption Economics (4)
- BGS 3001—Managerial Economics (4)
- BFin 3000—Finance Fundamentals (4)
- FScN 5390—Introduction to Food Law (4)
- FScN 5474—Food Consumption Economics (4)
- Mgmt 3001—Fundamentals of Management (4)
- Mktg 3010—Buyer Behavior, Marketing Analysis (4)
- Mktg 3020—Marketing Operations Management (4)
- Mktg 3050—Marketing Communications (4)
- Psy 5751—Psychology of Advertising (4)  
(or) Jour 5251—Psychology of Advertising (4)
- QA 3055—Introduction to Management Sciences (4)
- Soc 5201—Introduction to Social Psychology (4)
- Soc 5411—Formal Organizations (4)
- Stat 5022—Statistical Analysis II (5)

#### **Sociopsychology**

If you choose this collateral area you may, with approval from your adviser, substitute BioC 1301-1302-1303 for Chem 3301-3302-3305-3306.

- Mktg 3010—Buyer Behavior, Marketing Analysis (4)
- Psy 3031—Sensation and Perception (4)
- Psy 3201—Introduction to Social Psychology (4)
- Psy 3401—Social Organization (4)
- Soc 5201—Introduction to Social Psychology (4)
- Soc 5355—Opinion and Communication: Social Factors (4)
- Soc 5401—Social Organizations (4)
- Soc 5411—Formal Organizations (4)

### Communication

- FScN 3400—Food Demonstration Techniques (3)
- Jour 3155—Publications Editing (4)
- Jour 3173—Magazine Writing and Editing (4)
- Jour 3231—Advertising Graphics (4)
- Jour 3241—Advertising Copywriting (4)
- Jour 3301—Photojournalism (4)
- Jour 5143—Interpretation of Science and Technology (4)
- Jour 5261—Advertising: Media Analysis (4)
- Jour 5263—Advertising Campaign Planning and Media Strategy (4)
- Jour 5376—Advanced Photojournalism (5)
- Psy 5751—Psychology of Advertising (4)
- Rhet 3254—Advanced Public Speaking (4)
- Rhet 5561—Writing for Publication (4)
- Soc 5201—Introduction to Social Psychology (4)
- Soc 5355—Opinion and Communication: Social Factors (4)

### Food and Product Development

- BioC 5025—Laboratory in Biochemistry (2)
- FScN 5000—Professional Experience Program (4 cr max)
- FScN 5111—Independent Study in Food Science and Nutrition (1-5)
- FScN 5120—Food Microbiology (5)
- FScN 5122—Sanitation and Control of Microorganisms (2)
- FScN 5135—Food Process Engineering I (4)
- FScN 5136—Food Process Engineering II (4)
- FScN 5310—Advanced Food Chemistry (3)
- FScN 5312—Chemical and Instrumental Analysis of Foods (5)
- FScN 5404—Current Issues in Food and Nutrition (2-4)
- FScN 5406—Current Literature in Foods (2-4)
- FScN 5510—Muscle Chemistry and Physiology (4)
- FScN 5512—Meat and Protein Technology (4)
- FScN 5530—Industrial Processing of Fruits and Vegetables (4)
- FScN 5540—Fats and Oils Chemistry and Technology (4)
- FScN 5555—Freezing and Dehydration of Foods (5)
- FScN 5643—Seminar: World Food Supply Problems (4)
- TexC 5625—Color Metrology (3)

### Nutrition

- Phsl 1002—Human Physiology (4)
- (or) Phsl 3051—Human Physiology for Nursing and Physical Therapy Students (5)
- BioC 5025—Laboratory in Biochemistry (2)
- FScN 5622—Human Nutrition (5)

At least 8 credits in courses selected from nutrition, public health, biochemistry, and medicine in consultation with your 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. Emphasis is placed on the development of creative thinking as well as a high degree of technical skill. The program relates principles of total design to industrial production of apparel. Courses in this major include studies in basic and advanced design and construction methods for pattern, fabric, color, texture, costumes, and accessories; textiles, historic costumes, and apparel production from a historical, cross-cultural, and subcultural approach; and art, economics, and humanities as a foundation for understanding people, their lifestyles, and their needs.

### 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 credits minimum)

## Programs

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### B. Physical and Biological Sciences

Chem 1003—Physical World, Chemistry (5)  
(or) Chem 1004, 1005—General Principles of Chemistry (10)  
One course from a discipline other than chemistry to be selected from approved courses

### C. The Individual 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. Literature, Humanities, and Fine Arts

Minimum of 9 credits selected from approved courses; may not include art history

### E. Professional Courses in the Major

ArtH 1002—Introduction to the History of Art (4)  
Dsgn 1521—Design Process: Color (4)  
Dsgn 1523—Design Process: Visual Presentation (4)  
Dsgn 1525—Design Process: Two-Dimensional Design I (4)  
Dsgn 1531—Surface Fabric Design (4)  
(or) Dsgn 1532—Fiber Structure Design I (4)  
Dsgn 1541—Costume Design I (3)  
Dsgn 1543—Fashion Illustration (4)  
Dsgn 1544—Costume Design: Special Techniques (4)  
Dsgn 3517—History of Costume: Primitive Through 18th Century (3)  
Dsgn 3527—Design Process: Three-Dimensional Design (4)  
Dsgn 3541—Costume Design II (4)  
Dsgn 3583—Field Experience in Costume Design (4) (S-N)  
Dsgn 5518—History of Costume: 19th and 20th Centuries (4)  
Dsgn 5541—Costume Design III (3)  
Dsgn 5544—Costume Design Problems (4)  
Dsgn 5589—Problems in Design: Costume (3-4 [12 max])  
TexC 1602—Fitting the Human Subject (2)  
TexC 1603—Advanced Principles of Apparel Production (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 you select with approval of your adviser. The following areas and courses are suggested:

#### Design

Dsgn 1533—Metalsmithing: Introduction to Techniques (4)  
Dsgn 3531—Surface Fabric Design II (4)  
Dsgn 3532—Fiber Structure: Weaving (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 Merchandising (3)  
TexC 1643—Apparel Industries (4)  
TexC 3601—Tailoring (4)  
TexC 3603—Ready-to-Wear Analysis (3)  
TexC 3662—Aesthetics of Clothing (3)  
TexC 3664—Fashion Trend Analysis (4)  
TexC 5600—Advanced Apparel Design and Construction Problems (2-4)  
TexC 5661—Clothing and Human Behavior (4)  
TexC 5662—Clothing Consumption Problems (3)

#### Decorative Arts

Dsgn 5507—History of Decorative Arts I: Textiles (4)  
Dsgn 5509—History of Decorative Arts II: Metals, Ceramics, Wood, and Glass (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 5171-5172-5173—History of Theatre (4-12)
- Th 5512—Advanced Problems in Costuming (4)
- Th 5520—Costuming Crafts and Techniques (4)

### **Journalism and Mass Communication**

- Jour 1001—Introduction to Mass Communication (2)
- Jour 1002—Visual Communication (2)
- Jour 3101—Reporting (4)
- Jour 3201—Principles of Advertising (4)
- Jour 5251—Psychology of Advertising (4)
- Additional elective credits

### **Art Studio**

- ArtS 1101—Drawing I (4)
- ArtS 1701—Photo Medium (4)
- ArtS 3710—Photography (12 max)
- ArtS 5710—Photography (16 max)

### **Other**

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

Business courses, industrial design courses, or study outside United States

### **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 knowledge 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.

### **A. Communication, Language, Symbolic Systems**

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

### **B. Physical and Biological Sciences**

Minimum of 9 credits to be selected from approved courses; must include one course in a biological science and one in a physical science

### **C. The Individual 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—Dynamics of Family Relationships (3)
- (or) FSoS 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)

## Programs

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### D. Literature, Humanities, and Fine Arts

Minimum of 9 credits selected from approved courses

### E. Professional Courses in the Major (must be taken A-N unless offered S-N only)

FSoS 1003—Survey of Family Social Science (2) (S-N only)

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 Applications 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)

FSoS 5220—Family Economics (3)

Minimum of 5 credits in FSoS 5249—Fieldwork: Directed Community Work Experience (3-5 [15 max])

Soc 5505—Family Development (4)

CPsy 1301—Introductory Child Psychology (4)

(or) CPsy 3303—Adolescent Psychology (4)

Three courses in American studies, history, classics, philosophy, women's studies, humanities, Afro-American studies, American Indian studies, East Asian studies, Middle Eastern studies, South Asian studies, or Scandinavian studies

4 or 5 credits in statistics and/or computer programming selected from the following:

Psy 3801—Introduction to Measurement and Statistical Methods (4)

Soc 3801, 3802—Sociological Methods I and II (10)

Stat 1051—Introduction to Ideas of Statistics (4)

Stat 3091—Introduction to Probability and Statistics (4)

Stat 5021—Statistical Analysis I (5)

CSci 1100, 1101—Introduction to FORTRAN Programming I, II (4)

CSci 3101—FORTRAN Introduction to Computer Programming (4)

CSci 3104—Introduction to Programming and Problem Solving (4)

Hist 5797—Methods of Historical Demography (4)

MIS 3098—Elementary COBOL (1)

MIS 5098—Intermediate COBOL (2)

QA 1050—Elementary Managerial Statistics (4)

PsyF 5110—Introductory Statistical Methods (4)

3 to 5 credits in methodology courses in measurement and research design selected from the following:

PsyF 5121—Basic Principles of Measurement (3)

PsyF 5125—Principles and Methods of Evaluation (3)

Soc 3803—Sociological Methods III (5)

Soc 5821—Evaluation Research (4)

SW 3989—Research Methods in Social Work (4)

Psy 1004-1005—Introductory Laboratory Psychology (8)

Hist 3955—Introduction to Writing History (4)

Phil 3105—Introduction to the Theory of Knowledge (5)

Phil 3631—Logic of Scientific Reasoning (5)

### F. Electives

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

## Food Science and Technology

Food science and technology applies modern science and engineering to the manufacture and distribution of food. An understanding of the basic principles and techniques of many disciplines, including chemistry, physics, economics, engineering, microbiology, nutrition, management, public health, and agricultural production, are applied to food processing and preservation as well as to marketing situations. Food scientists and technologists are concerned with the theoretical and practical aspects of the food industry that involve the food chain from production of raw materials to the ultimate utilization of products by consumers. This flexible program permits you to tailor your studies to fit personal career goals. In it you learn to recognize and analyze problems of the food industry and to arrive at solutions through the application of principles of the biological and physical sciences, engineering, and business. You develop competence in a professional

discipline related to the food industry through supplementary studies in an area of emphasis in business administration, chemistry, engineering, microbiology, or public health. Food scientists and technologists should be prepared to meet the challenges of work with cereals, dairy products, fruits and vegetables, meat and poultry products, or fabricated foods of the future.

Many graduates of the program seek employment after earning the bachelor of science degree, while others continue on to graduate study. Among the job areas available are 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 agency work.

### A. Communication, Language, Symbolic Systems

Rhet 1101, 1102—Communication I, II (8)  
Rhet 1222—Public Speaking (4)  
Rhet 3551—Professional Writing (4)  
(or) Rhet 3562—Scientific and Technical Writing (4)  
Math 1142—Short Calculus (5)  
Statistics (4)

### B. Physical and Biological Sciences

Chem 1004-1005—General Principles of Chemistry (10)  
Chem 3301-3302—Elementary Organic Chemistry (8)  
Chem 3305-3306—Elementary Organic Chemistry Laboratory (4)  
Biol 5001—Biochemistry (4)  
BioC 5025—Biochemistry Laboratory (2)  
Phys 1041-42—Introductory Physics (8)  
Phys 1045-46—Introductory Physics Laboratory (2)  
Biol 1009—General Biology (5)  
MicB 3103—General Microbiology (5)

### C. The Individual and Society

AgEc 1020-1030—Principles of Macroeconomics, Microeconomics (9)  
(or) Econ 1001-1002—Principles of Macroeconomics, Microeconomics (8)  
Minimum of 14 credits selected from approved courses

### D. Literature, Humanities, and Fine Arts

9 credits selected from approved courses

### E. Professional Courses in the Major

FScN 1102—Technology of Food Processing (4)  
FScN 3110—Food Chemistry (4)  
FScN 3112—Food Chemistry Laboratory (2)  
FScN 3600—Principles of Nutrition (4)  
FScN 5100—General Seminar (1)  
FScN 5120—Food Microbiology (5)  
FScN 5122—Sanitation and Control of Microorganisms (2)  
FScN 5123—Microbiology of Food Fermentations (2)  
FScN 5135-5136—Food Process Engineering (8)  
FScN 5312—Chemical and Instrumental Analysis of Foods (5)

In addition to the above required courses, a minimum of 20 credits to be chosen from the following courses; a minimum of 8 of the credits must be chosen from FScN 5512, 5522, 5523, 5530, 5540, 5555

FScN 1500—Meat Science (4)  
FScN 5000—Professional Experience Program (1-4)  
FScN 5111—Independent Study in Food Science and Nutrition (1-5)  
FScN 5310—Advanced Food Chemistry (3)  
FScN 5320—Advanced Dairy and Food Microbiology (4)  
FScN 5321—Independent Study in Food Microbiology (1-5)  
FScN 5350—Food Formulation and Product Development (4)  
FScN 5360—Sensory Evaluation of Food Quality (4)  
FScN 5380—Food Packaging (3)  
FScN 5390—Introduction to Food Law (4)  
FScN 5412—Physicochemistry of Foods (3)  
FScN 5413—Structural-Functional Relations in Food Systems (3)  
FScN 5510—Muscle Chemistry and Physiology (4)

## Programs

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- 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 5540—Fats and Oils Chemistry and Technology (4)
- FScN 5555—Freezing and Dehydration of Foods (5)

### F. Areas of Emphasis

In addition to the course requirements specified above, you must complete one of the following seven areas of emphasis as well as sufficient electives to meet the 186-credit requirement for graduation. The area of emphasis is designed to support and complement your major field. Thus, courses in food per se are not acceptable as an area of emphasis while courses in a specialized area such as nutrition are acceptable. 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. FScN 5310 is required of all students selecting this area of emphasis. At least 20 credits of chemistry must be selected, which may include FScN 5310 if not counted in group E. Other credits may include the following:

- Chem 1006—Solution Chemistry (4)
- Chem 3100-3101—Quantitative Analysis (5)
- Chem 5520-5521—Elementary Physical Chemistry (6)
- BioC 5002—Biochemistry (3)

#### Engineering Technology

This area of emphasis is designed 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 your adviser. These should include AgET 5021, 5022, 5023.

Students interested in a four-year food engineering degree should consult the description of the agricultural engineering program 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 include the following:

- ME 3900—Introduction to Engineering Statistics (4)
- (or) Stat 3091—Introduction: Probability, Statistics (4)

At least 20 credits from the industrial engineering courses described in the *Institute of Technology Bulletin*

#### Management

This area of emphasis is designed for the student interested in the problems of the business and economic phases of food industries. At least 30 credits must be selected from course offerings in the Department of Agricultural and Applied Economics, Department of Economics, and School of Management.

BioC 1301-1302-1303 (10) may be substituted for Chem 3301-3302-3305-3306 (12) and Biol 5001-BioC 5025 (6) in category B if desired.

#### Microbiology

This area of emphasis is designed for the student interested in courses 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. These usually include:

- MicB 5321—Physiology of Bacteria (3)

#### Nutrition

This area of emphasis is designed for the student interested in courses related to the nutritional aspects of the food processing industry. At least 20 credits of nutrition-oriented courses must be completed in food science and nutrition, biochemistry, animal science, and related departments, and must include FScN 3622—Nutrition in the Life Cycle (4), FScN 5622—Human Nutrition (5), and Phsl 1002—Human Physiology (4) or Phsl 3051—Human Physiology (5).

#### Public Health

This area of emphasis is designed to provide the necessary background for the variety of activities performed by the sanitarian in either government or industrial work related to the regulatory and quality control of raw materials and finished products in the food field. At least 20 credits are to be selected from course offerings of the School of Public Health. See the *School of Public Health Bulletin* for course listings.

#### Other Areas

The courses presented for the above seven areas of emphasis may not satisfy the needs of every student. With the aid of your adviser, you 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. The area must total at least 20 credits, have a logical focus, and serve to support and strengthen the Food Science and Technology major.

### G. Free Electives

Electives to make a total of 186 credits required for graduation

## General Home Economics

This interdepartmental and interdisciplinary program is designed to provide much flexibility. You can develop an in-depth study in a particular area—within or outside home economics—appropriate to your personal and professional goals. The program includes a broad base of courses that meets the all-University distribution requirements as well as home economics courses in food and nutrition, textiles and clothing, design, housing and household equipment, home management, and family relationships. The remainder of the credits are taken in the collateral area (supporting area of study) and electives.

You may work with your adviser to develop an individualized collateral area, or you may follow one of several defined areas that have been developed with the aid of practicing professionals in the field. Defined collateral areas that are available include the following:

- Agricultural Extension Service
- Business
- Consumer Affairs
- Home Economics Journalism and/or Communications
- Household Equipment and Energy
- International Development
- Nursery School Certification
- Youth Studies
- Working for/with the Elderly

Consult your adviser for collateral area requirements.

### A. Communication, Language, Symbolic Systems

- Rhet 1101, 1102—Communication (8)
- (or) equivalent course
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Writing (4)
- Math 1111—College Algebra (5)

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

- Biol 1009—General Biology (5)
- (or) GC 1132—Biological Science, Human Body (5)
- FScN 1020—Introductory Microbiology (4)
- (or) MicB 3103—General Microbiology (5)
- Chem 1003—Physical World, Chemistry (5)
- (and) Phys 1001—The Physical World (4)
- (or) Chem 1004-1005—General Principles of Chemistry (10)

### C. The Individual 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)
- Anth 1102—Introduction to Social and Cultural Anthropology (5)
- CPsy 1301—Introduction to Child Psychology (4)

### D. Literature, Humanities, and Fine Arts

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

### E. Professional Courses in the Major (must be taken A-N)

- FScN 3600—Principles of Nutrition (4)
- Minimum of 8 additional FScN credits selected from the following:
  - FScN 1102—Technology of Food Processing (4)
  - FScN 1212—Scientific Principles of Food Preparation (5)
  - FScN 1215—Home Preservation of Foods (2)
  - FScN 1500—Meat Science (4)
  - FScN 3272—Introduction to Food Decision Making (2)
  - FScN 3400—Food Demonstration Techniques (3)
  - FScN 3472—Principles of Food Purchasing (4)
  - FScN 3622—Food and Nutrition in the Life Cycle (4)
- Dsgn 1501—Introduction to Design (3)
- Dsgn 1551—Consumer Aspects of Housing (4)
- FSoS 1401—Household Equipment (4)

## Programs

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- FSoS 3260—Home Management Principles (3)
- FSoS 3264—Home Management Practicum (2)
- FSoS 5200—Family Relationships (5)
- TexC 3621—Textiles (5)
- One 5000-level course in home economics (3-5)

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

Minimum of 18 credits selected in consultation with your adviser on the basis of your professional goals and interests; at least one-half the credits must be in upper division courses

### G. Free Electives

Electives to make a total of 185 credits required for graduation; at least one-third should be in 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 educators in school or community settings. Satisfactory completion of one or more of the three curricular options qualifies students for teaching home economics in federally aided and other schools and for educator roles in community, business, and international settings.

During the first two years, you register in the College of Home Economics. Early in the quarter in which you will complete 90 credits of specified courses, and after completion of HEEd 1500 and/or HEEd 1510, you apply for joint admission to the College of Education. To be eligible for admission to the College of Education, you must have earned a grade point average of 2.00 (C) overall and 2.50 (C+) in your major courses. The application form and information about admission procedures should be obtained at the Office of Admissions and Records, 130 Coffey Hall. For admission to clinical experiences, you must have earned a grade point average of 2.00 overall and 2.50 in all major and HEEd courses.

You must complete the liberal education distribution requirements as detailed in the *College of Education Bulletin*. The three curricular options, designed to include appropriate courses to satisfy the liberal education distribution requirements, are consumer-homemaking; family life; and service occupations education with child care and development, food service, or textiles and clothing clusters.

Alternate courses may be substituted for specified courses with department approval. Advisers can provide information about electives.

### A. Communication, Language, Symbolic Systems

- Rhet 1101, 1102—Communication (8)
- (or) equivalent course
- Rhet 1222—Public Speaking (4)
- Rhet 3551—Professional Writing (4)
- 2 elective credits from courses in category A

### B. Physical and Biological Sciences

- Chem 1001-1002—Chemical Principles and Covalent Systems (10)
- (or) Chem 1004-1005—General Principles of Chemistry (10)
- GC 1132—Biological Science, Human Body (5)
- FScN 1020—Introductory Microbiology (4)

### C. The Individual 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. Literature, Humanities, and Fine Arts

- Dsgn 1501—Introduction to Design (3)
- 9 elective credits from courses in category D in such areas as humanities, literature, theatre, design, art, or music

### E. Professional Courses in the Major

One of the three options that follow must be completed.

## 1. Consumer-Homemaking Option

AgEc 5580—Economic Organization of the Household (3)  
(or) FSoS 3500—Consumer and the Market System (3)  
(or) FSoS 5220—Family Economics (3)  
(or) GC 1534—Practical Law (5)  
CPsy 1301—Introduction to Child Psychology (4)  
CPsy 3303—Adolescent Psychology (4)  
Minimum of 2 credits in CPsy 3330—Directed Experiences (1-4)  
FScN 1212—Scientific Principles of Food Preparation (5)  
FScN 3472—Principles of Food Purchasing (4)  
FScN 3600—Principles of Nutrition (4)  
Dsgn 1551—Consumer Aspects of Housing (4)  
TexC 1602—Fitting the Human Subject (2)  
TexC 1603—Advanced Principles of Apparel Production (2)  
TexC 3621—Textiles (5)  
FSoS 1401—Household Equipment (4)  
FSoS 3260—Home Management Principles (3)  
FSoS 5200—Family Relationships (5)

One elective from the following:

Anth 3222—Peoples and Cultures of Middle America (4)  
FSoS 5202—Introduction to Social Psychology With Applications to the Family (5)  
FSoS 5210—Family in World Perspective (5)  
Soc 5505—Family Development (5)

One elective from the following:

TexC 3603—Ready-to-Wear Analysis (3)  
TexC 5622—Issues and Trends in Textile Consumer Protection (3)  
TexC 5661—Clothing and Human Behavior (4)  
TexC 5662—Clothing Consumption Problems (3)

Professional Education Courses (required)

HEEd 3331—Children and Parenting: Curriculum Methods and Materials (2)  
HEEd 5407—Family Life Education: Curriculum Methods and Materials (3)

## 2. Family Life Option

CPsy 1301—Introduction to Child Psychology (4)  
Minimum of 2 credits in CPsy 3330—Directed Experiences (1-4)  
FScN 1212—Scientific Principles of Food Preparation (5)  
FScN 3600—Principles of Nutrition (4)  
Dsgn 1551—Consumer Aspects of Housing (4)  
Dsgn 5567—Housing Alternatives for the Family (4)  
FSoS 5200—Family Relationships (5)

6 credits from the following:

FSoS 3260—Home Management Principles (3)  
FSoS 3500—Consumer and the Market System (3)  
FSoS 5220—Family Economics (3)

6 credits from the following:

TexC 1602—Fitting the Human Subject (2)  
TexC 1603—Advanced Principles of Apparel Production (2)  
TexC 3661—Cultural Perspectives on Dress (3)  
TexC 5662—Clothing Consumption Problems (3)

One elective from the following:

Anth 3222—Peoples and Cultures of Middle America (4)  
FSoS 5202—Introduction to Social Psychology With Applications to the Family (5)  
FSoS 5210—Family in World Perspective (5)  
Soc 5505—Family Development (5)

One elective from the following:

FSoS 5025—Parenting (4)  
CPsy 5339—Parent-Child Relations (4)

One elective from the following:

FSoS 5001—Human Sexual Behavior (4)  
YoSt 5130—Special Topics in Youth Studies (3-5)

## Programs

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12 elective credits from the following:

- Anth 1102—Introduction to Social and Cultural Anthropology (5)
  - Anth 5112—Kinship and Marriage (5)
  - CPsy 3303—Adolescent Psychology (4)
  - CPsy 3304—Introduction to Maturity and Aging (4)
  - CPsy 3331—Processes of Socialization of Children (4)
  - CPsy 5333—Personality Development (4)
  - Psy 3101—Introduction to Personality (4)
  - Psy 5141—Psychology of Women (4)
  - Soc 5505—Family Development (5)
  - Soc 5506—New Forms of the Family (4)
  - Soc 5511—Comparative Family Organization (4)
  - HEEd 5003—Cooperative Education Program: Internship (3)
- Professional Education Courses (both required)
- HEEd 3331—Children and Parenting: Curriculum Methods and Materials (2)
  - HEEd 5407—Family Life Education: Curriculum Methods and Materials (3)

### 3. Service Occupations Education Option

To qualify for licensure as a teacher in service occupations education programs in Minnesota, you must select one or more subject matter clusters: foodservice, child development and care, or textiles and clothing services. In addition to the subject matter preparation, licensure requirements include a specified number of hours of occupational experience in the cluster area.

- CPsy 1301—Introduction to Child Psychology (4)
- CPsy 3303—Adolescent Psychology (4)
- FSoS 1401—Household Equipment (4)
- FSoS 3260—Home Management Principles (3)
- FSoS 5200—Family Relationships (5)
- FScN 1212—Scientific Principles of Food Preparation (5)
- FScN 3600—Principles of Nutrition (4)
- TexC 1602—Fitting the Human Subject (2)
- TexC 1603—Advanced Principles of Apparel Production (2)
- TexC 3621—Textiles (5)
- 3 credits in HEEd 5102—Service Occupations Work Experience (3-6)
- HEEd 5100—Service Occupations Education (3)

#### Cluster Requirements—select one:

*Foodservice Cluster* (minimum of 19 credits)

- FScN 1700—Introduction to Hospitality and Foodservice Management (2)
- FScN 3472—Principles of Food Purchasing (4)
- FScN 3730—Quantity Foods Production Management (5)
- FScN 3740—Design and Layout of Foodservices (4)
- Mgmt 3001—Fundamentals of Management (4)

*Child Development and Care Cluster* (minimum of 20 credits)

- CPsy 3311—Behavioral and Emotional Problems (4)
- (or) CPsy 5315—Introduction to Mental Retardation (4)
- Minimum of 2 credits in
- CPsy 3330—Directed Experiences With Children (1-4)
- CPsy 3331—Processes of Socialization of Children (4)
- Elem 3376—Nursery School-Kindergarten Curriculum (3)
- Elem 3378—Social Learning in Early Childhood Education (3)
- CPsy 5339—Parent-Child Relations (4)

*Textiles and Clothing Cluster* (minimum of 15 credits)

- TexC 1641—Introduction to Merchandising (3)
- TexC 1643—Apparel Industries (4)
- TexC 3604—Flat Pattern Design (3)
- (or) TexC 3605—Draping Design and Construction (3)
- (or) Dsgn 1541—Costume Design I (3)
- TexC 3622—Textiles for Interiors (3)

### OPTIONAL PROGRAM FOR TEACHER COORDINATOR LICENSURE

Home economics teachers who wish to prepare themselves for positions as coordinators of service occupations programs in secondary schools may do so by completing the following courses:

- HEEd 5106—Coordination Techniques for Service Occupations (3)
- HEEd 5301—Curricula, Materials, and Methods for Service Occupations (3)

**F. Education Courses and Other Requirements**

- HEEd 1500—Introduction to Home Economics Teaching (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)  
 HEEd 3601—Clinical Experience (9)  
 HEEd 3611—Fieldwork (3)  
 PsyF 3380—Introduction to Human Relations (3)  
 PubH 3004—Basic Concepts in Personal and Community Health (5)  
 SeEd 3150—Introduction to Secondary Teaching (5)  
 SeEd 3155—Psychological Foundations of Secondary Education (5)  
 SPFE 3090—The School and Society (3)  
 VoEd 5300—Philosophy and Practice of Vocational Education (3)  
 VoEd 5800—Working with Special Needs Students (3) (or, with permission of adviser) PsyS 3106—Exceptional Students in Regular Classes (2)  
 Physical Education—3 credits

**G. Free Electives**

Electives to make a total of 186 required for graduation

Master of education programs in home economics education are offered for licensed home economics teachers and for nonlicensed professional workers in home economics education. See the *College of Education Bulletin* for details.

## Housing

This program is designed to develop skills to help people solve their housing problems. Basic courses in design and family social science emphasize human needs and behavior, designed environments, family relationships, and housing development, alternatives, management, and rehabilitation. An interdisciplinary core of courses offered in departments across the University offers knowledge of planning, financing, political processes, implications of public policy, economic resources, urbanization, and cultural background. After acquiring a firm theoretical base, you will select an area of concentration, based on your career interests, in aging, community development, design, energy, management/marketing, or social service. One of the strengths of the housing program is an internship, a one-quarter practical work experience away from the classroom.

Graduates of this program may work in a wide variety of housing positions reflecting their area of concentration and internship experience. Employers may include government agencies (housing authority, city planning department, advocacy office, heritage preservation commission), neighborhood organizations, financial institutions, private or public housing and property management agencies, and construction or development firms. Another option is to pursue graduate studies to prepare for careers in college teaching or research in a special area of competence.

A grade of at least C is required in all professional courses in the major (Category E).

**A. Communication, Language, Symbolic Systems**—(must be taken A-N)

- 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 and Conference Methods (4)  
 (or) a foreign language  
 (or) mathematics

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

- Minimum of 9 credits selected from approved courses from at least two disciplines, to include:  
 Phys 1001—The Physical World (4)

## Programs

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### C. The Individual and Society—(must be taken A-N)

- 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. Literature, Humanities, and Fine Arts

Minimum of 9 credits selected from approved courses from at least two disciplines; Arch 1021 recommended

### E. Professional Courses in the Major

- Dsgn 1501—Introduction to Design (3)
- Dsgn 1551—Consumer Aspects of Housing (4) (required for all majors except those selecting design option)
- (or) Dsgn 1552—Introduction to Housing and Interior Design (3) (required for all majors selecting design option)
- Dsgn 3563—Environment: Housing and Community (4)
- Dsgn 3570—Senior Seminar in Housing (1)
- Dsgn 5561—Housing Management (5)
- Dsgn 5567—Housing Alternatives for the Family (4)
- Dsgn 5568—Housing Problems of the Family (5)
- Dsgn 5581—Designed Environments and Aging (4)
- FSoS 5200—Family Relationships (5)
- FSoS 5202—Introduction to Social Psychology With Applications to the Family (5)
- FSoS 5255—Public Social Policy and the American Family (4-5)

One of the following courses (required for all majors):

- Stat 1051—Introduction to Ideas of Statistics (4)
- (or) Stat 5021—Statistical Analysis I (5)
- (or) Soc 3801-3802-3803—Sociological Methods I, II, III (15)
- (or) Psy 3801—Introduction to Measurement and Statistical Methods (4)
- (or) Mis 5100—Introduction to Computers and Computer Data Processing (4)
- (or) PsyF 5110—Introductory Statistical Methods (4)

**Interdisciplinary Core** (required for all majors)

- PA 5505—Housing Policy (4)
- Econ 5623—Housing Markets and Public Policy: United States (4)
- Soc 1651—Rural Sociology (4)
- Geog 5372—Metropolitan Analysis I (4)
- Geog 5373—Metropolitan Analysis II (4)
- Ind 1600—Drafting (3)
- ForP 3310—Wood Frame Building Systems and Materials (4)
- Econ 3701—Money and Banking (4)

### Area of Concentration

Minimum of 30 credits in one of the following areas (see adviser for suggested list of courses):

- |                       |                              |
|-----------------------|------------------------------|
| Aging                 | Energy                       |
| Community Development | Housing Management/Marketing |
| Design                | Social Service               |

### F. Internship (S-N only)

- Dsgn 3580—Internship in Housing (15 max)

### G. Collateral Area

12 to 18 credits chosen with the help of your adviser; consult adviser for suggested collateral areas (A-N only)

### H. Free Electives

Electives to make a total of 185 credits required for graduation

## Interior Design

This program is designed to help the student develop competence in solving problems of the immediate physical environment by acquiring (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. A firm base of professional course work and flexibility in the choice of supporting areas of study are offered.

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.

The program is accredited by the Foundation for Interior Design Education and Research.

### 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 selected from approved courses (may be taken S-N)

### B. Physical and Biological Sciences

Phys 1001—The Physical World (4)

Chem 1003—Physical World, Chemistry (5)

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

### C. The Individual 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. Literature, Humanities, and Fine Arts

ArH 1002—Introduction to History of Art (4)

(or) equivalent

Arch 1021—History of Environmental Development: Architecture (4)

(or) Arch 1022—History of Environmental Development: Architecture,

Landscape Architecture (4)

Minimum of 1 additional credit selected from approved courses (may be taken S-N)

### E. Professional Requirements in the Major

Ind 1600—Drafting (3)

(or) Dsgn 1550—Drafting—Basic Drafting Techniques (4) (offered through CEE only)

(or) demonstrated proficiency

Dsgn 1501—Introduction to Design (3)

Dsgn 1521—Design Process: Color (4)

Dsgn 1523—Design Process: Visual Presentation (4)

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

Dsgn 1554—Interior Design I: Spatial Design Experiences (3)

Dsgn 1555—Interior Design I: Interior Design Problems (3)

Dsgn 3527—Design Process: Three-Dimensional Design (4)

Dsgn 3548—Lighting Design for Environmental Spaces (3)

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: Textiles (4)

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

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

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

Dsgn 5515—20th-Century Interiors and Furnishings (4)

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

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

FSoS 1401—Household Equipment (4)

ForP 3310—Wood Frame Building Systems and Materials (4)

TexC 3621—Textiles (5)

TexC 3622—Textiles for Interiors (3)

## Programs

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Select one course from the following:

- AgEc 5580—Economic Organization of the Household (4)
- Dsgn 5567—Housing Alternatives for the Family (4)
- FSoS 3260—Principles of Home Management (3)
- FSoS 5240—Family as an Ecosystem (3)
- FSoS 5301—The Family and Energy Issues (3)

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 in interior design, applied design, or related courses to total 15
2. Dsgn 3576—Internship in Interior Design (15)
3. Dsgn 5555—Honors Thesis Project in Interior Design (15)

Select two courses from the following:

- Acct 1024—Principles of Financial Accounting (3)  
(or) AgEc 1250—Principles of Accounting (5)
- Mktg 3000—Principles of Marketing (4)
- Mgmt 3001—Fundamentals of Management (4)

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

- |                       |                   |
|-----------------------|-------------------|
| Anthropology          | Political Science |
| Family Social Science | Social Work       |
| History               | Sociology         |

### F. Collateral Area

Minimum of 15 credits of related courses selected with approval of your 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 may be taken S-N)

## International Development Collateral

The International Development Collateral is an interdisciplinary sequence of courses and experiences for students, both U. S. and international, interested in the less developed areas of the world. Designed to augment B.A. and M.A. degree programs in any college of the University, it is primarily aimed at those in the College of Agriculture and the College of Home Economics. Its purpose is to integrate aspects of agriculture and aspects of home economics for more effective work and research in rural economic development. Focus is on issues of household and food production, distribution, and consumption, with particular concern for women, children, and families.

Students plan their participation with the coordinator of the collateral and their major advisers. The collateral includes specified required courses and electives. Field placements may be an option.

### Required Courses

- AgEc 5580—Economic Organization of the Household (cr ar)
- FScN 5643/AgEc 5790—World Food Supply Problems (4)
- HEEd/AgEd 5023—Extension Methods for Agriculture Production in Developing Countries (3)
- YoSt 5600—International Development Seminar: Agriculture, Home Economics, Women, and Youth (3)

### Electives

Choose at least two courses in the broad subject matter areas of family, food and nutrition, health, agriculture production and marketing; home/farm management; and in the process skills of program development: planning and administration; non-formal education methods; communication techniques.

For more information, contact the Center for Youth Development and Research, 386 McNeal Hall (376-7624).

## Nutrition and Dietetics

This program is intended for those interested in the field of nutrition and its various applications in dietetics, public health, and nutrition science. The options offered 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- to 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 teaching or research in colleges, universities, or industry.

You must complete the organic chemistry sequence by the end of your sophomore year in order to have the prerequisites to enter courses normally scheduled in the junior year, or you may 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 accredited a coordinated undergraduate program in dietetics at the University. With the cooperation of Twin Cities area hospitals, this program enables qualified students to integrate an internship experience with the final two years of undergraduate study. Upon completing the program, students are assured membership in the American Dietetic Association. Enrollment is limited and interested students should apply to the program director early in their sophomore year.

### A. Communication, Language, Symbolic Systems

- Rhet 1101, 1102—Communication I, II (8)
- (or) equivalent course
- 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

- Anat 1004—Elementary Anatomy (4)
- Biol 1009—General Biology (5)
- Biol 5001—Biochemistry (4)
- BioC 5025—Laboratory in Biochemistry (2)
- Chem 1004-1005—General Principles of Chemistry (10)
- Chem 3301-3302—Elementary Organic Chemistry (8)
- Chem 3305-3306—Elementary Organic Chemistry Laboratory (4)
- MicB 3103—General Microbiology (5)
- (or) Biol 3013—General Microbiology (5)
- Phsl 3051—Human Physiology (5)
- (or) Phsl 1002—Human Physiology (4)

### C. The Individual 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. Literature, Humanities, and Fine Arts

Minimum of 9 credits selected from approved courses

### E. Professional Courses in the Major

- FScN 3110—Food Chemistry (4)
- FScN 3112—Food Chemistry Laboratory (2)
- FScN 3272—Introduction to Food Decision Making (2)
- FScN 3403—Experimental Foods (4)
- FScN 3472—Principles of Food Purchasing (4)
- FScN 3600—Principles of Nutrition (4)
- FScN 3622—Nutrition in the Life Cycle (4)
- FScN 3730—Quantity Food Production Management (5)

## Programs

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- FScN 3750—Management of Foodservice and Hospitality Business Systems (3)
- FScN 5100—General Seminar (1)
- FScN 5622—Human Nutrition (5)
- FScN 5663—Clinical Nutrition Laboratory (3) [1 cr per qtr, concurrently with 5665, 5666, and 5667]
- FScN 5665—Applied Clinical Nutrition I (2)
- FScN 5666—Applied Clinical Nutrition II (2)
- FScN 5667—Applied Clinical Nutrition III (2)
- LaMP 5177—Pathology for Allied Health Students (4)
- Mgmt 3001—Fundamentals (4)
- 4 or 5 additional credits in sociology or anthropology
- 3 credits in psychology of learning selected from:
  - PsyF 5182—Psychology of Student Learning (3)
  - PsyF 5183—Adult Learning and Educational Practice (4)
  - HSU 5011—Instructional Skills for Health Professionals: The Teaching-Learning Process (3)
- 3 to 5 credits in statistics or computer usage selected from the following or in consultation with your adviser:
  - Stat 1051—Introduction to Ideas of Statistics (4)
  - Stat 3081—Experimental Techniques and Statistical Inference (5)
  - Stat 5021—Statistical Analysis I (5)
  - Soc 3801—Sociological Methods I: Descriptive Statistics (5)
  - PsyF 5110—Introductory Statistical Methods (3)
  - PubH 5404—Introduction to Biostatistics and Statistical Decision (4)

### F. Areas of Emphasis

In addition to the course requirements specified above, you must complete one of the five following areas.

#### **Clinical Dietetics and General Dietetics**

The requirements for these options are met by the general program listed in categories A through E above and meet American Dietetic Association requirements for these specializations.

#### **Community Nutrition**

To meet the American Dietetic Association community specialization, add the following courses:

- PubH 3601—Introduction to Public Health Nutrition (3)
- PubH 5380—Applied Human Nutrition (3)

#### **Coordinated Undergraduate Program in Dietetics**

The basic curriculum is similar to that specified in categories A through E above. However, it also includes field experience courses 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**

If you want a nutrition science emphasis or are considering graduate study, you may, after consultation with your adviser, substitute up to 20 credits from the courses listed below for an equivalent number of credits from the major requirements. This option is intended primarily to provide preparation for graduate studies and does not meet the American Dietetic Association requirements for internship.

- BioC 5751, 5752, with BioC 5745
- Chem 1006, 3100, 3303, 5520, 5521
- Math 1142 or 1201, 1211, 1221
- 10 to 15 credits of college physics

### G. Free Electives

Electives to make a total of 185 credits required for graduation

## Retail Merchandising

The core of this program consists of retailing, business, and textiles and clothing courses offering product knowledge and a merchandising focus. Students may select one of two areas of emphasis: apparel or home furnishings.

Employment opportunities exist for graduates in many retail operations such as department, mass merchandising, or specialty stores where they may work in buying or sales management. General merchandising positions as manufacturer's representatives are another option.

A minimum grade point average of 2.50 overall is required in courses used to fulfill major requirements and supporting business requirements (categories E and F below).

**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)

**B. Physical and Biological Sciences**

- Chem 1001-1002—Chemical Principles and Covalent Systems (10)
- (or) Chem 1003—Physical World, Chemistry (5)
- (or) Chem 1004-1005—General Principles of Chemistry (10)
- One additional course from a discipline other than chemistry selected from approved courses to total 9 credits

**C. The Individual 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. Literature, Humanities, and Fine Arts**

- ArH 1002—Introduction to the History of Art (4)
- (or) equivalent course
- Minimum of 5 additional credits selected from approved courses

**E. Professional Courses in the Major**

- Dsgn 1501—Introduction to Design (3)
- TexC 1641—Introduction to Retail Merchandising (3)
- TexC 1642—Seminar: Orientation to Retail Merchandising (1)
- TexC 1643—Apparel Industries (4)
- TexC 3621—Textiles (5)
- TexC 3643—Retail Merchandising (5)
- TexC 3644—Retail Experience Seminar I (2)
- TexC 3645—Retail Experience Seminar II (2)
- TexC 3646—Retail Supervision (3)
- TexC 3664—Fashion Trend Analysis (4)

Select one of the following options:

**Apparel Option**

- TexC 3603—Ready-to-Wear Analysis (3)
- TexC 3622—Textiles for Interiors (3)
- (or) TexC 3623—Performance Evaluation of Textiles (3)
- (or) TexC 5622—Issues and Trends in Textile Consumer Protection (3)
- TexC 3662—Aesthetics of Clothing (3)
- TexC 5661—Clothing and Human Behavior (4)
- (or) TexC 5662—Clothing Consumption Problems (3)
- 9 additional TexC or selected Dsgn credits (to be taken A-N)

**Home Furnishings Option**

- Dsgn 1521—Design Process: Color (3)
- Dsgn 1552—Introduction to Housing and Interior Design (3)
- (or) Dsgn 1551—Consumer Aspects of Housing (4)
- Dsgn 3557—Interior Design Resources and Materials (3)
- Dsgn 5507—History of Decorative Arts: Textiles (4)
- (or) Dsgn 5509—History of Decorative Arts: Metal, Ceramics, Wood, and Glass (4)
- Dsgn 5512—History of European Furniture and Interiors (4)
- Dsgn 5514—History of American Furniture and Interiors (4)
- TexC 3622—Textiles for Interiors (3)

**F. Supporting Business Requirements**

- Acct 1024—Principles of Accounting I (3)
- (or) AgEc 1250—Principles of Accounting (5)
- QA 1050—Elementary Managerial Statistics (4)
- (or) Stat 1051—Introduction to Ideas of Statistics (4)
- Mgmt 3001—Fundamentals of Management (4)
- Mgmt 3002—Psychology of Management (4)
- Mktg 3000—Principles of Marketing (4)

## Programs

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Mktg 3010—Buyer Behavior and Marketing Analysis (4)  
Mktg 3065—Retail Management (4)  
MIS 3300—Introduction to Computers and Management Information Systems (4)  
12 additional credits (to be taken A-N)

### G. Free Electives

Electives to make a total of 185 credits required for graduation

Four to eight credits in TexC 5003 and four credits in TexC 5004 may be used as TexC elective credits for category E (apparel option); or a maximum of eight of these credits may be used as electives for category F.

## Textiles and Clothing

This program relates clothing and other textile products in the near environment to the physical, psychological, and social needs of individual consumers and families. Its two basic emphases are: (1) materials and physical behavioral aspects of textile products, especially clothing, and (2) the relationship between clothing and human behavior. Analysis of the textile and clothing needs of people and design of solutions to problems involving those needs help students gain the personal insights and expertise in textiles and clothing necessary for effecting environmental change.

By selecting course work in appropriate supporting areas, majors may prepare for professional work in educational services programs (government agency, business/industry, mass media, community/extension); product analysis or market research (business/industry, government agency); or 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 you may emphasize either textiles or clothing by selecting electives in the desired area. You complete work in a supporting area that is related to your professional interests. Courses in the supporting area may be chosen 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, and 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.

### 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 1009—General Biology (5)  
(or) GCB 3002—Human Genetics and Social Affairs (3 or 4)  
Chem 1001-1002—Chemical Principles and Covalent Systems (10)  
(or) Chem 1004-1005—General Principles of Chemistry (10)

### C. The Individual 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. Literature, Humanities, and Fine Arts

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

**E. Professional Courses in the Major**

- TexC 1602—Fitting the Human Subject (2)
  - TexC 1603—Advanced Principles of Apparel Production (2)
  - TexC 1643—Apparel Industries (4)
  - TexC 1680—Opportunities in Textiles and Clothing (1)
  - TexC 3621—Textiles (5)
  - TexC 3622—Textiles for Interiors (3)
  - TexC 3661—Cultural Perspectives on Dress (3)
  - TexC 3662—Aesthetics of Clothing (3)
  - TexC 3664—Fashion Trend Analysis (4)
  - 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—Clothing Consumption Problems (3)
- 14 to 19 additional credits in TexC courses, with a maximum of 6 credits in any one course. Up to 6 credits in TexC 3003, 5003, 5004 may be used to partially satisfy this requirement. Additional credits in these courses (in excess of 6) may be applied to partially satisfy supporting area or free elective requirements or both.

**F. Supporting Area**

You must complete a minimum of 35 credits (A-N only) in a supporting area. The following areas of emphasis are recommended. Courses must be selected with approval of adviser. Lists of recommended courses for each of the supporting areas are available in the Textiles and Clothing department office, 364 McNeal Hall.

***Apparel Technology***

For those interested in careers related to production of apparel. Graduates might work as consultants in the home sewing industry, as pattern makers in industry, or in related positions in theatres or museums.

***Communications***

For those interested in careers related to publicity, promotion of new products, and public relations in businesses and industries dealing with textile and apparel products.

***Consumer Emphasis***

For those interested in serving as a liaison between the textile and clothing consumer and business, industry, and government. Graduates might work as education/information specialists, textile and clothing consultants, or consumer affairs representatives. Recommended courses focus on social, economic, and political organizations and their influences, people and their relationships with each other, and selected skills in research and presenting information to diverse groups.

***Marketing and Management***

For those interested in careers in marketing and management in the textiles and apparel industries. Recommended courses are primarily in departments in the School of Management.

***Textile Analysis***

For those interested in applying basic skills in logic, scientific reasoning, computation, and statistical method to analyze situations, problems, or products involving textiles and clothing and to arrive at useful conclusions. Graduates might work in business, industry, or public service.

***Preparation for Graduate Study***

For those planning to pursue graduate study. You may concentrate on completing courses in a social science or physical science area that will serve as prerequisites for graduate level courses in the area that relates to textiles and clothing.

**G. Free Electives**

Electives to total 185 credits required for graduation

## **Youth Studies Collateral**

The Center for Youth Development and Research offers a 24-credit collateral area of emphasis in Youth Studies for selected upper division and graduate students registered in any college of the University. The purpose of the collateral is to help students acquire the

## *Programs*

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basic understanding, skills, attitudes, and insights into themselves necessary for study about or continuing work with youth.

The Youth Studies Collateral includes:

1. A designated course for each of three quarters: CPsy 3303 or 5303—Adolescent Psychology; Soc 5952—Youth in Modern Society; CSPP 5110—Communications Procedures; or other courses, depending on student needs.
2. Eight to ten hours per week of direct work with youth throughout the three quarters.
3. A weekly seminar throughout the academic year to discuss and integrate knowledge about and experience with youth.  
Students register for YoSt 5201-5202-5203—Practicum for direct work with youth and the weekly seminar.

For more information, contact the Center for Youth Development and Research, 386 McNeal Hall, University of Minnesota, 1985 Buford Avenue, St. Paul, MN 55108 (376-7624).



4-H youth relax in the McNeal Hall lobby between conference sessions.

### III. COURSE DESCRIPTIONS

**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:

† 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 required in the course listed after the paragraph mark.

# Consent of instructor is required prior to registration.

△ Consent of department or school offering course is required prior to registration.

When no abbreviated department 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. DESIGN PROCESS: COLOR.** (4 cr)  
Color concepts and their applications to design.
- 1523. DESIGN PROCESS: VISUAL PRESENTATION.** (4 cr)  
Development of basic drawing skills for the designer.
- 1525. DESIGN PROCESS: TWO-DIMENSIONAL DESIGN I.** (4 cr)  
Experiments with principles of two-dimensional design.
- 1531. SURFACE FABRIC DESIGN I.** (4 cr; prereq 1521, 1523, 1525 or #)  
Exploration of surface pattern and composition with varied media and materials: dyeing, resist, batik, stencil, block printing, and others.
- 1532. FIBER STRUCTURE DESIGN.** (4 cr; prereq 1521, 1523, 1525 or #)  
Individual designing with loomed and nonloomed structural techniques; weaving, macrame, plaiting, stitchery, and others. (Extension only.)
- 1533. METALSMITHING: INTRODUCTION TO TECHNIQUES.** (4 cr; prereq 1521, 1523, 1525 or #)  
Introduction to techniques used in contemporary metalsmithing and jewelry making.
- 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.
- 1544. COSTUME DESIGN: SPECIAL TECHNIQUES.** (4 cr; prereq 1531, 1541)  
Studio problems with emphasis on line, shape, and color for costumes.
- 1551. CONSUMER ASPECTS OF HOUSING.** (4 cr; prereq 1501)  
Survey of family housing in relation to needs, processes, and alternatives: buying versus renting, policy, economic and other variables, and constraints affecting housing decisions.
- 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.
- 1554. INTERIOR DESIGN I: SPATIAL DESIGN EXPERIENCES.** (3 cr; prereq 1501, 1521, 1523, 1552, Ind 1600)  
Application of design elements and principles to interior design problems, including two-dimensional projects, scale models, and three-dimensional design experiments in the space laboratory.
- 1555. INTERIOR DESIGN I: INTERIOR DESIGN PROBLEMS.** (3 cr; prereq 1554)  
Problems in designing for living space needs with emphasis on behavioral concerns related to interiors.
- 3517. HISTORY OF COSTUME: PRIMITIVE THROUGH 18TH CENTURY.** (3 cr; prereq ArtH 1002 or equiv)  
Emphasis on European costume.

## Course Descriptions

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- 3521. DESIGN PROCESS: COLOR II.** (4 cr; prereq 1521, 1523, or #)  
Continued study of color concepts and their application to design.
- 3523. DESIGN PROCESS: VISUAL PRESENTATION II.** (4 cr; prereq 1523 or equiv)  
Continued development of drawing skills for the designer.
- 3525. DESIGN PROCESS: TWO-DIMENSIONAL DESIGN II.** (4 cr; prereq 1525 or equiv)  
Experiments with principles of two-dimensional design.
- 3527. DESIGN PROCESS: THREE-DIMENSIONAL DESIGN.** (4 cr; prereq 1521, 1523, 1525 or #)  
Study and application of principles of three-dimensional design.
- 3531. SURFACE-FABRIC DESIGN II.** (4 cr; prereq 1531 or #)  
Selection from printed and dyed techniques.
- 3532. FIBER STRUCTURE: WEAVING.** (4 cr; prereq 1532 or #)  
Beginning loom techniques. Studio problems. (Extension only.)
- 3533. METALSMITHING: FABRICATION.** (4 cr; prereq 1533)  
Techniques of raising and forging and other noncasting techniques to create useful objects.
- 3535. DESIGN PROCESS: MATERIALS.** (4 cr; prereq 1521, 1523, 1525)  
Design process to convey visual concepts explored through a series of units in selected materials.
- 3536. METALSMITHING: ENAMELING.** (4 cr; prereq 1533 or #, some metals experience)  
Enamel used as surface decoration on metal jewelry or other useful objects.
- 3537. FIBER STRUCTURE: OFF LOOM.** (4 cr; prereq 1532 or #)  
Off-loom fiber design and techniques in quilting, needlepoint, stitchery, and traditional embroidery. Studio problems. (Extension only.)
- 3541. COSTUME DESIGN II.** (4 cr; prereq 1543, 1544)  
Problems in design of children's garments.
- 3548. LIGHTING DESIGN FOR ENVIRONMENTAL SPACES.** (3 cr)  
Examination of types and uses of lighting, its relationship to color, and energy conservation. Evaluation of light quantity and quality for residential and contract spaces.
- 3550. INTERIOR DESIGN PRESENTATION.** (3 cr; prereq 1555 and 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 3550 or #)  
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 1555, 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.** (3 cr; prereq 3553)  
Problems related to the interior design profession including client-designer relations, fees and compensations, and ethical responsibilities.
- 3562. REAL ESTATE PRACTICE.** (3 cr; prereq 1551 or 1552 or #)  
Appraisal, contract preparation, financing, investment, land development, property management, and sales brokerage. Fulfills requirement to take real estate license examination.
- 3563. ENVIRONMENT: HOUSING AND COMMUNITY.** (4 cr; prereq 1501, 1551 or 1552 or #)  
The housing process from development to occupancy and the many factors involved in this process. Emphasis on design of the physical environment and the relationship of housing to the neighborhood, community, city, and metropolitan area.
- 3570. SENIOR SEMINAR IN HOUSING.** (1 cr [may be repeated for cr]; S-N only; prereq sr housing major or other interested student)  
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 year)
- 3575. SENIOR SEMINAR IN INTERIOR DESIGN.** (1 cr; S-N only; to be taken last 2 qtrs prior to graduation or #)  
Discussion of professionalism and problems in the field, portfolio presentation, and assembly of credentials.
- 3576. INTERNSHIP IN INTERIOR DESIGN.** (max 15 cr; S-N only; prereq 3553, Psy 1001)  
Full-time directed professional work experience with a firm, studio, retail store, or community service organization.

- 3580. INTERNSHIP IN HOUSING.** (Cr ar [5-15 cr]; S-N only; prereq completion of one-half of professional sequence and #)  
International, intercultural, or other directed work in the community that 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 3553, Psy 1001)  
Supervised work-study program with a professional firm, interior design studio, or retail store.
- 3583. FIELD EXPERIENCE IN COSTUME DESIGN.** (4 cr; S-N only; 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 DESIGN.** (Cr ar [max 15 cr]; S-N only; prereq #, plan to be submitted and approved in advance by adviser and employer)  
Supervised work experience with a professional, design studio, retail store, community service, museum, printing or publishing firm, or other appropriate organization. Evaluative report required.
- 3586. DESIGN PROBLEMS.** (1-3 cr)  
Special problems designed to develop specific learning experiences in research, resource development, or exhibition design.
- 5505. HISTORY OF ART AND DESIGN.** (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 ArH 1002 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 ArH 1002 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 ArH 1002 or equiv)  
Furniture and interiors from ancient civilizations through the 19th century.
- 5514. HISTORY OF AMERICAN FURNITURE AND INTERIORS.** (3-4 cr; prereq ArH 1002 or equiv, 5512)  
Styles of American interiors and furnishings from the 17th to the 20th century.
- 5515. 20TH-CENTURY INTERIORS AND FURNISHINGS.** (3-4 cr; prereq 5514 or #)  
In-depth study of 20th-century design of interiors and furnishings from Victorian to the present time.
- 5516. HISTORY OF SCANDINAVIAN MODERN DESIGN.** (3-4 cr)  
Development of modern design in Scandinavia from the turn of the century until present. Media of furniture, glass, textiles, metalwork, and ceramics, major designers, sociocultural setting.
- 5518. HISTORY OF COSTUME: 19TH AND 20TH CENTURIES.** (3-4 cr; prereq 3517 or #)  
Emphasis on American costume. Study of historic costumes from the Department of Design's costume collection.
- 5527. THREE-DIMENSIONAL DESIGN II.** (4 cr; prereq 3527)  
Lectures and studio work based on unitary systems derived from modules. Application of plans based on visual perception exercises to space division in the space laboratory.
- 5531. SURFACE FABRIC DESIGN III.** (4 cr; prereq 3531 and portfolio review)  
Designing in one special surface textile technique. Studio problems. Readings.
- 5532. FIBER STRUCTURE DESIGN.** (4 cr; prereq 3532 and portfolio review)  
Designing in one special structural textile technique—floor loom weaving and/or off-loom fiber techniques. Readings. (Extension only.)
- 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 3604 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 #5541)  
Supervised experience in design production; development of a "line"; professional ethics and business practice.
- 5552. INTERIOR DESIGN III: RESIDENTIAL DESIGN.** (4 cr; prereq 3553, 3557, TexC 3621, FSoS 1401, or #...ForP 3310 and TexC 3622 recommended)  
Advanced problems in planning and furnishing residential spaces to meet individual or family needs.

## Course Descriptions

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- 5554. INTERIOR DESIGN IV: CONTRACT DESIGN.** (4 cr; prereq 3553, 3557, TexC 3621, or #...ForP 3310 and TexC 3622 recommended)  
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.
- 5561. HOUSING MANAGEMENT.** (5 cr; prereq 1551 or 1552, 3563 or #)  
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. HOUSING IN WORLD PERSPECTIVE I.** (4 cr; prereq 3563 or equiv)  
Indigenous housing forms from around the world with emphasis on village and rural housing; analysis of cultural differences; assessment of the nature and quality of forms; application and implications for housing locally and nationally.
- 5566. HOUSING IN WORLD PERSPECTIVE II.** (4 cr; 5565 recommended)  
Response of selected countries to housing problems of low- and middle-income people in urban areas; implications of cultural values and technological changes for housing solutions; examples from Eastern Europe, India, Japan, and other areas.
- 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 lifestyles.
- 5568. HOUSING PROBLEMS OF THE FAMILY.** (5 cr; prereq 1551 or 1555, 3563 or #)  
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.
- 5570. SEMINAR: DESIGN—SELECTED TOPICS.** (1-3 cr per qtr [max 12 cr]; prereq #)  
Study of selected topics through assigned readings, discussions, and lectures by resource people.
- 5571. SPECIAL TOPICS IN APPLIED DESIGN.** (max 9 cr; prereq dependent on specific topic)  
In-depth investigation of a single specific topic, announced in advance.
- 5572. SPECIAL TOPICS IN COSTUME DESIGN.** (max 9 cr; prereq dependent on specific topic)  
In-depth investigation of a single specific topic, announced in advance.
- 5573. SPECIAL TOPICS IN HOUSING.** (max 9 cr; prereq dependent on specific topic)  
In-depth investigation of a single specific topic, announced in advance.
- 5574. SPECIAL TOPICS IN INTERIOR DESIGN.** (max 9 cr; prereq dependent on specific topic)  
In-depth investigation of a single specific topic, announced in advance.
- 5581. DESIGNED ENVIRONMENTS AND AGING.** (4 cr; prereq 1551, 3563 or #; offered alt yrs)  
Design of environments with potential to compensate for deficits in physical and mental functioning; emphasis on older adults and on barrier-free, flexible, and responsive physical environments.
- 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 [max 12 cr]; prereq # and Δ)  
Independent study in design under tutorial guidance.
- 5586. PROBLEMS IN DESIGN: HOUSING AND/OR INTERIORS.** (2-4 cr per qtr [max 12 cr]; prereq # and Δ)  
Independent study under tutorial guidance.
- 5587. PROBLEMS IN DESIGN: JEWELRY.** (3-4 cr per qtr [max 12 cr]; prereq passed portfolio review, # and Δ)  
Independent study under tutorial guidance.
- 5588. PROBLEMS IN DESIGN: TEXTILES.** (3-4 cr per qtr [max 12 cr]; prereq passed portfolio review, # and Δ)  
Independent study under tutorial guidance.
- 5589. PROBLEMS IN DESIGN: COSTUME.** (3-4 cr per qtr [max 12 cr]; prereq 5518 or equiv, passed portfolio review, #)  
Independent study under tutorial guidance.

**FOR GRADUATE STUDENTS**

(For course descriptions, see the *Graduate School Bulletin*)

- 8521. DESIGN PROCESS: COLOR
- 8523. DESIGN PROCESS: DRAWING
- 8525. DESIGN PROCESS: TWO-DIMENSIONAL DESIGN
- 8531. SPECIAL PROBLEMS IN TEXTILE DESIGN
- 8552. SPECIAL PROBLEMS IN HOME PLANNING AND FURNISHING
- 8556. ENVIRONMENTAL STUDIES IN INTERIOR DESIGN
- 8575. SEMINAR: DESIGN
- 8576. SEMINAR: DESIGN INSTRUCTION
- 8584. READINGS IN DESIGN
- 8585. PROBLEMS: DESIGN
- 8586-8587. PROBLEMS: DESIGN

**Family Social Science (FSoS)**

- 1001. DYNAMICS OF FAMILY RELATIONSHIPS. (3 cr, §1002)  
Application of behavioral sciences to mate selection, interaction in marriage and other committed relationships, sex roles, and maintaining and ending relationships.
- 1002. DYNAMICS OF DATING, COURTSHIP, MARRIAGE. (3 cr, §1001; prereq upper division, married or engaged students)  
For description, 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 members, field representatives, and other appropriate persons. Students will work on small group projects designed to help them better understand and appreciate 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; S-N only)  
An 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, §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. Student spend at least four hours per week in an agency, learning about its policy and services and interacting with its clientele under supervision. Includes participation in a weekly seminar to discuss and solve problems related to the fieldwork experience.
- 1401. HOUSEHOLD EQUIPMENT. (4 cr; prereq soph or #...GC 1163 or Phys 1001 or 1041 recommended)  
Survey of appliances and technological systems in the near environment with emphasis on the consumption and conservation of natural resources and energy sources and human considerations in kitchen and equipment design. Lecture, discussion, and laboratory.
- 3001. COMMUNICATION SKILLS AND INTERVIEWING TECHNIQUES: AN INTRODUCTION. (3 cr; prereq 1001)  
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. AMERICAN WOMEN: THEIR CHANGING STATUS. (4 cr, §WoSt 1005-1006)  
Participation of American women in society with emphasis on the period since 1960. Roles, statuses, education, work, problems, the future.
- 3240. SPECIAL TOPICS IN FAMILY SOCIAL SCIENCE. (3 cr per qtr [max 9 cr]; prereq dependent on specific topic, soph or above, and/or #)

## Course Descriptions

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- 3260. HOME MANAGEMENT PRINCIPLES.** (3 cr; prereq AgEc 1030)  
Development of a theoretical systems framework to analyze behavior in families with emphasis on managerial aspects of behavior: goal setting, planning, and implementing in use of resources.
- 3264. HOME MANAGEMENT PRACTICUM.** (2 cr; prereq ¶3260)  
Laboratory application of principles and concepts of management within the family. Theory applied in family situations.
- 3500. CONSUMER AND THE MARKET SYSTEM.** (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.
- 5002. ADOLESCENT SEXUALITY.** (3 cr; prereq 5001 or #)  
Review of adolescent development. Patterns of sexual behavior during adolescence. Contraceptive use and non-use. Adolescent pregnancy and parenthood. Parental and institutional sex instruction.
- 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; prereq Psy 1001 or equiv, Soc 1001 or equiv)  
The family as an institution and system of relationships. Current developments in study of the 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 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 #)  
Social psychology with applications to courtship, marriage, and the family. Social interaction, communication, social effects on individual functioning, the family as a 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 5112, §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.
- 5218. FAMILY FINANCIAL MANAGEMENT.** (3 cr; prereq FSoS 3260, 5 cr in FSoS or #)  
Analysis of family financial management principles with emphasis on financial planning, credit, savings, investments, Social Security, taxation, estate planning, and life, property, auto, and casualty insurance.
- 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.
- 5231. INTERNSHIP: PLANNING.** (1 cr; prereq #)  
Identification and development of professional skills, needs, and goals in relation to a particular professional role. Preparation for an actual, planned work experience.
- 5232. INTERNSHIP: WORK EXPERIENCE.** (5 cr; prereq 5231)  
Full-time planned work experience in a preprofessional position related to the student's field of study.
- 5233. INTERNSHIP: EVALUATION.** (1 cr; prereq 5232)  
Evaluation of work experience related to general and specific program and professional goals.

- 5240. SPECIAL TOPICS IN FAMILY SOCIAL SCIENCE.** (2-6 cr per qtr [max 16 cr]; prereq dependent on specific 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.
- 5249. FIELDWORK—DIRECTED COMMUNITY WORK EXPERIENCE.** (3-5 cr per qtr [max 15 cr]; prereq 5200 and #)  
Directed preprofessional work experience with families; social, medical, and/or educational orientation.
- 5255. PUBLIC SOCIAL POLICY AND THE AMERICAN FAMILY.** (4 or 5 cr)  
How social legislation in such areas as welfare, housing, child development, and health care affects and, in some cases, determines the nature, structure, and quality of the family as a social institution.
- 5260. DYNAMICS OF FAMILY DECISION MAKING.** (3 cr; prereq 3260 or #)  
Conceptual models of decision making and resource management. Review and critique of current research and literature.
- 5301. THE FAMILY AND ENERGY ISSUES.** (3 cr; prereq 5 cr in FSoS or #)  
Analysis of family behavior as it relates to energy use, the impact of scarce resources on the quality of family functioning, family/energy issues in the future.
- 5404. EVALUATION PROCEDURES FOR HOUSEHOLD EQUIPMENT.** (3-4 cr; prereq 1401 or equiv. 8 addl cr in home economics)  
Procedures and instruments used to determine operating characteristics of selected household appliances and to assess selected physical characteristics of houses.
- 5409. CONSUMER SELECTION GUIDES FOR HOUSEHOLD EQUIPMENT.** (3-4 cr; prereq 1401 or equiv. 3264, #...5220 recommended)  
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.

## FOR GRADUATE STUDENTS

(For course descriptions, see the *Graduate School Bulletin*)

- 8200. SEMINAR: RESEARCH AND INTERPRETATION**
- 8201. STAGE DEVELOPMENT WITH APPLICATION TO THE FAMILY**
- 8203. FAMILY STRESS, COPING, ADAPTATION**
- 8205, 8206. THEORY AND RESEARCH IN FAMILY RELATIONSHIPS**
- 8214, 8215, 8216. MARRIAGE AND FAMILY COUNSELING I, II, III**
- 8221, 8222, 8223. INTERNSHIP IN TEACHING COLLEGE LEVEL FAMILY COURSES I, II, III**
- 8230. DIRECTED STUDY IN FAMILY SOCIAL SCIENCE**
- 8231. SEMINAR IN GENDER ROLES**
- 8251. PROBLEMS: FAMILY SOCIAL SCIENCE**
- 8252. PROBLEMS: FAMILY SOCIAL SCIENCE**
- 8255, 8256, 8257. PROSEMINAR IN FAMILY I, II, III**
- 8261, 8262, 8263. PROCESS SEMINAR FOR FAMILY I, II, III**
- 8266. FAMILY RESEARCH METHODOLOGY I**
- 8267. FAMILY RESEARCH METHODOLOGY II**
- 8270. PRACTICUM IN FAMILY RESEARCH**
- 8551, 8552, 8553. MARRIAGE AND FAMILY COUNSELING INTERNSHIP I, II, III**

## Food Science and Nutrition (FScN)

- 1010. MAN'S FOOD.** (4 cr, §1012)  
Human 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. NUTRITION AND OUR FOOD SUPPLY.** (4 cr, §1010)  
Human nutritional requirements; basis of a balanced diet; diet and physical fitness in heart disease, obesity, cancer; food and diet fads; effect of processing and storage; additives, food safety and FDA; future world food production problems and solutions. Individual one-week dietary survey required.
- 1020. INTRODUCTORY MICROBIOLOGY.** (4 cr; especially for students in home economics; prereq 3rd-qr fr, #)  
Fundamental principles of microbiology. Characteristics of bacteria, yeasts, molds, and other microorganisms; their importance in the preparation and preservation of foods, and their relation to the health and well-being of the individual and the family.
- 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.

## Course Descriptions

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- 1102. TECHNOLOGY OF FOOD PROCESSING.** (4 cr; prereq high school chemistry and biology)  
Introduction to the technology of processing of foods with special reference to the prevention of biological, microbiological, physical, and chemical deterioration. Changes in food composition, microbiological safety, food laws and regulations, technologies of the major food processes such as canning, freezing, and drying.
- 1212. SCIENTIFIC PRINCIPLES OF FOOD PREPARATION.** (5 cr; prereq Chem 1002 or 1005)  
Introduction to composition and chemical and physical properties of foods; interaction and reaction of foods in preparation procedures; evaluation of food products prepared in the laboratory using quality standards.
- 1215. HOME PRESERVATION OF FOODS.** (2 cr; intended for nonmajors)  
Description and demonstration of safe methods of home food preservation. Students prepare various products in laboratory. Methods covered include canning, freezing, fermenting, and drying.
- 1500. MEAT SCIENCE.** (4 cr; prereq Biol 1009)  
(Same as AnSc 1500) Role of antemortem 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)  
Human food habits viewed in terms of historical, social, and cultural perspectives. Influence of different food patterns on nutritional status.
- 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 THE HOSPITALITY AND FOODSERVICE INDUSTRIES.** (2 cr)  
Emphasis on the scope, current trends, growth, and relationship to the community of the hospitality and food-service industries.
- 3110. FOOD CHEMISTRY.** (4 cr; prereq BioC 1302 or Biol 5001)  
Structures, properties, reactions, and functions of basic chemical components of foods. Chemical properties of food systems, influence of processing, storage, and preparation.
- 3112. FOOD CHEMISTRY LABORATORY.** (2 cr; prereq 3110 or 3110)  
Laboratory experiments to investigate chemical properties and reactions of selected food systems and food components.
- 3123. MICROBIOLOGY OF FOODS.** (5 cr, \$MicB 3103, \$VPB 3103; not for majors in food science and technology; prereq Biol 1009 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 value, 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.
- 3272. INTRODUCTION TO FOOD DECISION MAKING.** (2 cr; prereq 3600)  
Factors considered when making food decisions to plan nutritionally adequate and aesthetically pleasing menus for various eating patterns and cost levels. Use of computer to calculate menu nutrient content and to plan menus.
- 3400. FOOD DEMONSTRATION TECHNIQUES.** (3 cr; prereq 1212 or 3403)  
Purposes of and techniques for food demonstrations for the general public and business. Production performance and techniques for TV and motion picture food demonstrations. Effective use of media (films, slides, and other visuals) in the presentation of accurate food and nutrition information for designated audience situations. Opportunity to present one food demonstration to an appropriate audience in the community.
- 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 the basic groups of foods. Relative cost of key nutrients from different foods within a food group. Food prices and indices of change. Laws and regulations pertinent to the labeling of food. Food standards and grades. Relation of these factors to the purchase of food.
- 3600. PRINCIPLES OF NUTRITION.** (4 cr; prereq Biol 1009 and Chem 1004 or equiv in natural science sequence)  
Fundamental principles of nutrition, including essentiality and metabolism of nutrients and results of nutritional deficiencies or excesses. Presented in context of personal, national, and global aspects of human nutrition.
- 3602. NUTRITION IN PROFESSIONAL HEALTH CARE.** (4 cr, \$3600; prereq chemistry, human physiology, pharmacology, pathophysiology, regis in a professional health discipline)  
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. NUTRITION IN THE LIFE CYCLE.** (4 cr; prereq 3272, 3472, 3600, physiology or human biology or #)  
Application of the principles of nutrition to meet the special requirements of growth, development, adult maintenance, and aging. Sociocultural factors affecting food practices.
- 3623. NUTRITION IN THE LIFE CYCLE.** (4 cr; prereq 3272, 3472, 3600, physiology or human biology, regis in coordinated undergrad program in dietetics)  
For description, see 3622.

## Food Science and Nutrition

- 3642. COMMUNITY NUTRITION.** (3 cr; prereq jr, 3600 or equiv, 6 cr psychology, sociology, anthropology or economics)  
Nutrition and health practices of the family in the community; concepts and methodologies for nutrition education.
- 3643. COMMUNITY NUTRITION.** (3 cr; prereq 3600 or equiv, 6 cr 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.
- 3662. INTRODUCTION TO THE CLINICAL PRACTICE OF DIETETICS.** (2 cr; prereq 12 cr in food science and nutrition, regis in coordinated undergrad program in dietetics)  
The practice of dietetics in hospitals, outpatient clinics, public service agencies, and food services.
- 3702. PRINCIPLES OF FOODSERVICE ORGANIZATION AND MANAGEMENT.** (4 cr; prereq sr, Mgmt 3001, regis in coordinated undergrad program in dietetics)  
Systems of foodservice management in the delivery of health care services; selection, supervision, and evaluation of personnel; effective planning and communication with foodservice management personnel.
- 3703. FIELD EXPERIENCE IN FOODSERVICE MANAGEMENT.** (3 cr; prereq sr, Mgmt 3001, 3702, regis in coordinated undergrad program in dietetics)  
Supervised foodservice management experience in a health care facility.
- 3720. ADMINISTRATIVE EXPERIENCE: HOSPITALITY OR FOODSERVICE ENTERPRISE.** (5 cr; prereq 3760, sr in hospitality and foodservice management or #)  
Planned management experience in a selected foodservice or hospitality business, including understanding the operation, planning, purchasing, personnel management, financial management, supervision, and related functions.
- 3730. QUANTITY FOOD PRODUCTION MANAGEMENT.** (5 cr; prereq 3rd-qr soph, 1212 or 3403, 3472)  
Participation in the management procedures used in the selection, storage, preparation, pricing, and service of food in quantity. A quantity foodservice is used as a laboratory.
- 3732. TECHNOLOGY OF INTERNATIONAL CUISINE.** (3 cr; prereq 3123, 3730 or #)  
Technological basis of quantity international cuisine. Application of food technology to quality assurance of recipe formulations and methods.
- 3740. DESIGN AND LAYOUT OF FOODSERVICES.** (4 cr; prereq 3730)  
Arrangement and layout of food production, service, and storage areas. Purchase, maintenance, construction, and operation of equipment related to quantity foodservice.
- 3742. HOSPITALITY FACILITY PLANNING AND DESIGN.** (5 cr; prereq 1700)  
Hospitality managerial planning and design of space; mechanical, electrical, and structural requirements for hospitality facilities.
- 3750. MANAGEMENT OF FOODSERVICE AND HOSPITALITY BUSINESS SYSTEMS.** (3 cr; prereq 3730, Mgmt 3001; not intended for Hospitality and Foodservice Management majors)  
Application of management principles in a foodservice. Business procedures, personnel management, cost control, financial management, 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, 3762, MIS 3100 or #)  
Use of the computer in planning, operating, and controlling production and services, personnel, logistics, finances, and quality control in a small operation unit food and hospitality.
- 3760. HOSPITALITY COST MANAGEMENT.** (4 cr; prereq Acct 1024, 1025)  
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.
- 3790. FOODSERVICE MARKETING, ADVERTISING, AND PROMOTION.** (4 cr; prereq 1700, AgEc 1030 or Econ 1002 or #)  
Theories and practices of market analysis, product planning, and consumer motivation as they relate to enterprises that provide hospitality to people away from home. Determining the needs and interests of the consuming public and how those needs and interests can be satisfied in public eating places, clubs, hospitals, in-plant cafeterias, schools, and other institutions.
- 5000. PROFESSIONAL EXPERIENCE PROGRAM.** (4 cr; not for grad cr; A-N only; prereq 15 cr in food science and nutrition and #)  
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.
- 5111. INDEPENDENT STUDY IN FOOD SCIENCE AND NUTRITION.** (1-5 cr [may be repeated for cr]; prereq Δ)  
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.

## Course Descriptions

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- 5120. FOOD MICROBIOLOGY.** (5 cr; 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 # . . . #5123 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 point concept.
- 5123. MICROBIOLOGY OF FOOD FERMENTATIONS.** (2 cr; prereq 5120 or # . . . #5122 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, in products consumed as food, and in waste utilization.
- 5135. FOOD PROCESS ENGINEERING.** (4 cr; prereq 1102 or #1102, Math 1142, Phys 1041-1042)  
Principles and applications of flow and rheology in Newtonian and non-Newtonian food systems; flow measurement; piping and pump sizing; separation principles (sedimentation, centrifugation, filtration). Principles and applications of forced and natural steady state heat transfer in food processing.
- 5136. FOOD PROCESSING ENGINEERING II.** (4 cr; prereq 5135)  
Engineering and processing principles and food system applications of single-stage and multi-stage evaporators and of unsteady heat transfer (heating and cooling). Engineering and application of design and delivery of thermal processing. Freezing heat transfer principles and applications of humidification and leaching in food processes.
- 5310. ADVANCED FOOD CHEMISTRY.** (3 cr; prereq 3110)  
Changes in chemical structure and functional properties of foods as modified by processing. Additional topics in areas of flavor, color, safety, nutritive value, sweeteners, and irradiation of food.
- 5312. CHEMICAL AND INSTRUMENTAL ANALYSIS OF FOODS.** (5 cr; prereq 3112 or BioC 5025 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,  $\Delta$ ; 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.** (4 cr; prereq 3110, Stat 3081, Stat 5021 or equiv; consumer food science sr or #)  
Fundamentals of sensory perception. Test designs and methods used in studying sensory qualities of foods.
- 5380. FOOD PACKAGING.** (3 cr; prereq 3110, Phys 1042 or equiv)  
Lectures on and demonstrations of packaging principles as applied to food and the food industry.
- 5390. INTRODUCTION TO FOOD LAW.** (4 cr; prereq 1102 or #)  
Federal and state legal requirements and case law history affecting the production, processing, packaging, marketing, and distribution of food and food products.
- 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 to illustrate 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 research tools. 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 dealing 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,  $\Delta$ )  
Assigned readings, reports, and discussions of topics in the experimental study of foods.

- 5412. PHYSICO-CHEMISTRY OF FOODS.** (3 cr; prereq 3110)  
Characterization of crystalline systems, gels, emulsions, foams, and rheological systems; functionality of food macromolecules in these systems.
- 5413. STRUCTURAL-FUNCTIONAL RELATIONS IN FOOD SYSTEMS.** (3 cr; prereq 3110)  
Food as a complex biochemical system. Functionality of various biological entities and chemical constituents of food systems.
- 5462. ADVANCED 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.
- 5474. FOOD CONSUMPTION ECONOMICS.** (4 cr, §AgEc 5550; prereq 3472, AgEc 3101, Stat 5021, or #)  
An analytical and empirical treatment of consumer food behavior. Concentrates on data and methods used to study economic and nutritional aspects of food consumption. Each student pursues an individual project.
- 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 AnSc/FScN 1500 or #, BioC 1302 or Biol 5001)  
(Same as AnSc 5512) Meat proteins: pH, salt, and temperature effects on solubility and functionality. Meat preservation: heating, freezing, curing, and problems of product stability during storage. Sausage manufacture: chemistry, technology, use of preblending and least-cost analysis, and chemical methods of quality control. Recent developments in processing.
- 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 3112, 5123)  
An integration of chemical, microbiological, and physical principles involved in the manufacture and storage of cheeses and fermented milks.
- 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)  
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.
- 5540. FATS AND OILS CHEMISTRY AND TECHNOLOGY.** (4 cr; prereq 3112 or #)  
Nature of fats and oils; their structure, composition, and chemical and physical properties; raw materials for fat and oil products; extraction, refining, hydrogenization, and other industrial manipulations; handling, storage, and analysis and grading of raw materials and finished products.
- 5555. FREEZING AND DEHYDRATION OF FOODS.** (5 cr; prereq 3110, 5120, 5135 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 3600, Biol 5001, Phsl 3051 or #)  
Physiological function and metabolic role 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, §Agro 5200, §Soc 5675, §LACS 5280; limited enrollment; prereq sr or grad student with #)  
A multidisciplinary approach to social, economic, and technical problems of feeding the world's growing population.
- 5662. CLINICAL NUTRITION.** (3 cr; prereq 5622, Biol 3021 or #)  
Application of principles of normal nutrition to clinical problems, with description of altered nutrient requirements under conditions of human disease. Nutritional therapy for common clinical conditions and the effects of treatment on the nutritional status of the patient.

## Course Descriptions

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- 5663. CLINICAL NUTRITION LABORATORY.** (1-2 cr; S-N only; prereq 5662 or 15662 or 5665 or 15665)  
Application of the principles of normal and clinical nutrition to diet therapy. Techniques of therapeutic diet writing, patient interviewing, and patient instruction in dietary management.
- 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 5622 or 15622, Biol 5001 or #)  
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 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 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, 3600 or #)  
In-depth investigation of a single, preselected aspect of nutrition. Teaching procedure and approach determined by nature of topic and student needs. Specific topic announced in advance.
- 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 FOODSERVICE MANAGEMENT IN HEALTH CARE FACILITIES.** (3 cr; prereq 3 cr elementary statistics, 6 cr economics, #)  
Management techniques applied to foodservices for health care facilities. Methods of analysis and control.
- 5705. FIELD EXPERIENCE IN FOODSERVICE ADMINISTRATION.** (3 cr; prereq enrollment in dietetic internship)  
Supervised experience in food organization and management in a health care facility or other quantity food production unit. (Extension only.)
- 5730. VOLUME RECIPE FORMULATION, PRODUCTION AND CONTROL.** (5 cr; prereq sr, 3110, 3740, 5360 or #)  
Technology associated with the operation of food facilities producing 3,000 to 100,000 meals a day; analysis and selection of ingredients for industrial types of food processes, identification of optimum operating conditions and institution of controls to insure that products comply with specifications. Laboratory examination of ingredients and process control methodology.
- 5740. LARGE VOLUME KITCHEN ENGINEERING AND DESIGN.** (4 cr; prereq 3740)  
Engineering of commissaries for production, energy, equipment, space, and work force optimization.
- 5750. QUALITY ASSURANCE IN FOODSERVICE SYSTEMS.** (4 cr; prereq 4 cr statistics, 3760, Mgmt 3001, Mktg 3000, IR 3002)  
Management systems in foodservice operations. Quality assurance as a base for long-term return on investment. Policies, procedures, and standards manual. Integration of management and technology for error-free operations.
- 5752. COMPUTER SYSTEMS IN HOSPITALITY OPERATIONS.** (4 cr; prereq CSci 3103 or MIS 3101)  
Systems analysis and specification of computer software in planning, operating, and controlling the integrated operations of production and services, personnel, logistics, finances, quality assurance, and quality control in a corporate or individual hospitality system.
- 5755. CURRENT TOPICS IN HOSPITALITY MANAGEMENT.** (4 cr [may be repeated for cr, max 8 cr]; prereq #)  
In-depth examination of timely issues. Content varies from quarter to quarter.
- 5757. HOSPITALITY PERSONNEL ADMINISTRATION.** (4 cr; prereq IR 3002, FScN 3760 or equiv. or #)  
Selection, training, and appraisal of employees, job analysis and description, legal considerations, and compensation issues in the hospitality industry. Projects and small-group experience.
- 5772. FOODSERVICE SYSTEMS TECHNOLOGY AND MANAGEMENT SEMINAR.** (1 cr per qtr, normally taken sr yr [may be repeated for cr]; prereq 400 hrs supervisory level work experience)  
Integration of foodservice technology education. Clinics, case studies, lectures, discussions, and research projects on current industry topics. Visits to industry operations and interaction with industry guest lecturers.
- 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 secondary school instructional programs in occupational foods with which they are associated.

## FOR GRADUATE STUDENTS

(For course descriptions, see the *Graduate School Bulletin*)

- 8101. RESEARCH SEMINAR
- 8120. FOOD PROCESS MICROBIOLOGY
- 8205. GENERAL SEMINAR
- 8311. FLAVOR CHEMISTRY
- 8312. REACTION KINETICS OF FOOD DETERIORATION
- 8313. TOPICS IN LIPID CHEMISTRY
- 8315. FOOD PROTEINS
- 8322. MICROBIOLOGY AND ENGINEERING OF FOOD STERILIZATION PROCESSES
- 8323. MICROBIAL STARTER CULTURES
- 8324. MICROBIAL TOXINS AND TOXIC MICROORGANISMS IN FOODS
- 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
- 8624. ADVANCED HUMAN NUTRITION III

## Home Economics (HE)

- 1003. SEMINAR: COOPERATIVE EDUCATION PROGRAM. (1 cr; S-N)  
Preparatory training for participation in off-campus work experience. Allows student to identify and develop professional skills, needs, and goals related to a particular professional role. Emphasis on placement skills and defining objectives for a planned work experience with employers and faculty adviser.
- 5191. DEVELOPMENT IN HOME ECONOMICS. (2 cr)  
Discussion of the development of home economics with emphasis on current problems.

## 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.
- 3021. EDUCATION THROUGH EXTENSION METHODS. (3 cr, \$AgEd 3021; prereq soph)  
Role of nonschool agencies in rural and agricultural education; method and techniques of formal and informal instruction in school and nonschool educational programs.
- 3315. ADULT EDUCATION IN HOME ECONOMICS. (3 cr)  
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 13320 and Δ)  
Observation and experience with children as a method of teaching child development in the home economics program.
- 3331. CHILDREN AND PARENTING: CURRICULUM, METHODS, AND MATERIALS. (2 cr; prereq 1 special section of CPsy 3330 for HEEd majors or #)  
Appropriate methods and materials for teaching concepts at the secondary and adult levels.
- 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.

## Course Descriptions

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- 3530. HOME ECONOMICS CURRICULUM AND INSTRUCTION: AFFECTIVE LEARNING.** (4 cr; prereq 3520 or #, SeEd 3150, 3155 or fSeEd 3150, 3155)  
Objectives, assessment, and strategies related to affective learning.
- 3601. CLINICAL EXPERIENCE.** (3-18 cr; S-N only; prereq 3620 and f3611, Δ)  
Classroom teaching in consumer homemaking, family life, and home economics occupational education in selected Minnesota schools.
- 3611. FIELDWORK.** (3 cr; S-N only; prereq 3620 and f3601, Δ)  
Individualized instruction in consumer homemaking, family life, or occupational education programs in the field and on campus.
- 3620. CURRICULUM MANAGEMENT.** (3 cr; prereq 3530 or f3530)  
Planning, developing, organizing, and evaluating home economics program.
- 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.
- 3910. EDUCATIONAL METHODS FOR HOME ECONOMISTS.** (3 cr; S-N optional; prereq jr, non-HEEd major)  
A survey course to allow students to explore and gain experience in methods used by home economists in nonschool settings.
- 5003. COOPERATIVE EDUCATION PROGRAM: INTERNSHIP.** (3 cr per qtr [max 9 cr]; S-N only; prereq 1500, HE 1003 and #)  
Planned work experience focusing on educational competencies for nonschool settings. Students assume defined responsibilities of a position. A maximum of 3 credits may be applied to an M.A. or M.Ed. program.
- 5021. EDUCATION THROUGH EXTENSION METHODS.** (3 cr, \$AgEd 5021; prereq grad student or #)  
Role of nonschool agencies in rural and agricultural education; methods and techniques of formal and informal instruction in school and nonschool educational programs.
- 5023. EXTENSION METHODS FOR DEVELOPING COUNTRIES.** (3 cr, \$AgEd 5023)  
Extension methods to promote the rapid adoption of improved practices.
- 5024. EXTENSION HISTORY AND PHILOSOPHY.** (3 cr, \$AgEd 5024; prereq #)  
Independent study, under tutorial guidance, of the origin, philosophy, historical development, objectives, and organizational structure of the Cooperative Extension Service.
- 5025. EXTENSION PROGRAM DEVELOPMENT.** (3 cr, \$AgEd 5025)  
Planning, implementing, and evaluating the program development process.
- 5026. EXTENSION ADMINISTRATION** (3 cr, \$AgEd 5026; prereq #)  
Administration of the Cooperative Extension Service at the county, area, and state levels.
- 5027. PRACTICUM: PLACEMENT FOR EXTENSION EXPERIENCES.** (9 cr per qtr [max 9 cr], \$3605, \$AgEd 5027; S-N optional)  
Observation of activities of county extension staff; familiarization with staff, program planning and development, county committee, youth activities, and office activities; opportunity to participate in functions of an extension educator.
- 5100. SERVICE OCCUPATIONS EDUCATION.** (3 cr [max 12 cr], §5331)  
Development of occupational programs; exploration of career opportunities; identification of competencies for career clusters; development of objectives, learning experiences, and appraisal techniques; preparation of teaching materials; licensure course for instructors.
- 5102. SERVICE OCCUPATIONS WORK EXPERIENCE.** (3-6 cr [max 3 cr applied to a graduate degree, max 12 cr], §5336; S-N optional; prereq #)  
Observation and directed experience in selected occupational cluster with application to teaching. Each credit requires 85 hours of paid occupational experience; work experience course for licensure requirements.
- 5104. CURRICULA, METHODS, AND MATERIALS FOR SERVICE OCCUPATIONS.** (3 cr, §5301)  
Examination of curricula, including methods and materials, for occupational clusters related to cooperative secondary and postsecondary programs; licensure course for instructor-coordinators.
- 5106. COORDINATION TECHNIQUES FOR SERVICE OCCUPATIONS.** (3 cr)  
Responsibilities of instructor-coordinators in cooperative secondary and postsecondary programs: guidance, selection, and placement of students in training agencies; articulation, supervision, and evaluation of training; licensure course for instructor-coordinators.
- 5108. SEMINAR IN SERVICE OCCUPATIONS.** (3-9 cr [max 3 cr applied to a degree program, max 9 cr], §5337; prereq #)  
Exploration of current practices and career opportunities in business and industry, including planned experiences in work environments.
- 5153. CONSUMER EDUCATION: CURRICULUM, METHODS, AND MATERIALS.** (3-4 cr; prereq §BDE 5153)  
Objectives, content, curriculum organization, teaching methods, materials, and evaluation methods for the elementary, secondary, postsecondary, and adult levels.

## Home Economics Education

- 5200. SEMINAR: WORKING WITH YOUTH THROUGH ADULTS.** (1-3 cr per qtr [max 9 cr incl AgEd 5200 and YoSt 5200]; S-N optional)  
Interdisciplinary seminar focusing on definition of the profession; essential skills for workers; youth needs, roles, relationships with adults; development and management of a system of support.
- 5300. HOME ECONOMICS CURRICULUM.** (3 cr)  
Examination of research and literature; development of units of study and programs at elementary and secondary levels; production and evaluation of materials.
- 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: ATTITUDES, VALUES, AND KNOWLEDGE.** (3 cr)  
Derivation of theory for educational method from relevant research; application to educational objectives, strategies, and student motivation.
- 5315. EVALUATION: THEORETICAL AND TECHNICAL ASPECTS.** (3 cr)  
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)  
Planning a community program; teaching procedures; special problems.
- 5325. TRENDS IN HOME ECONOMICS EDUCATION.** (1-4 cr per qtr [max 12 cr])  
Current status; purposes, programs, content emphasis, research, problems and issues in the field.
- 5400. WORKSHOP: HOME PLANNING AND FURNISHING.** (1-4 cr per qtr [max 12 cr])  
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.
- 5403. TEXTILES AND CLOTHING EDUCATION.** (3 cr)  
Curricula, methods, and materials for teaching consumer, social, cultural, psychological, and technical aspects; analysis of family clothing and textile-related problems; decisions at middle, secondary, and adult levels; evaluation and critique of instructional design.
- 5405. WORKSHOP: CHILD DEVELOPMENT AND FAMILY RELATIONS.** (1-4 cr per qtr [max 12 cr])  
Recent emphasis on growth and guidance of individuals; materials and techniques for high school and adult levels to attain better understanding.
- 5407. FAMILY LIFE EDUCATION: CURRICULUM, METHODS, AND MATERIALS.** (1-3 cr per qtr [max 12 cr]; prereq 3620 or equiv)  
Materials, curriculum articulation, teaching techniques, evaluation for high school and adult levels; theoretical foundations for preparation and critique of curriculum.
- 5410. WORKSHOP: FOODS AND NUTRITION.** (1-4 cr per qtr [max 12 cr])  
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 per qtr [max 12 cr])  
Problems in selection and use of new materials for instruction in home economics.
- 5420. WORKSHOP: ADULT EDUCATION.** (1-4 cr per qtr [max 12 cr])  
Procedures in teaching adults; planning the program; use of new materials and techniques; group and individual problems.
- 5430. WORKSHOP: CONTEMPORARY PROBLEMS IN HOME ECONOMICS EDUCATION.** (1-6 cr per qtr [max 12 cr])  
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.
- 5505. SEMINAR: SUPERVISION OF STUDENT TEACHING.** (2 cr)  
Examination of research pertinent to purposes, procedures, evaluation, and interpersonal relations.
- 5520. PHILOSOPHY OF HOME ECONOMICS.** (4 cr; prereq #)  
Application of philosophic thought to conceptions of home economics upheld in literature and practice.
- 5600. PRACTICUM: ADULT EDUCATION.** (3 cr; prereq #)  
Individual field assignments under supervision.
- 5900. READINGS IN HOME ECONOMICS EDUCATION.** (1-3 cr per qtr [max 12 cr]; prereq #)  
Independent study under tutorial guidance.

## Course Descriptions

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**5910. INTEGRATING PAPER.** (3 cr)

Independent paper integrating learnings from a course or courses in education with learnings in home economics education.

**5920. DIRECTED EXPERIENCE.** (1-6 cr; S-N optional; prereq #)

Opportunity for individualized learning experience not covered by regular courses.

### FOR GRADUATE STUDENTS

(For course descriptions, see the *Graduate School Bulletin*)

**8300. RESEARCH METHODS**

**8305. RESEARCH METHODS**

**8500. SEMINAR: CURRICULUM DEVELOPMENT**

**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**

**8631. PRACTICUM: HOME ECONOMICS TEACHER EDUCATION**

**8900. PROBLEMS: HOME ECONOMICS EDUCATION**

## Textiles and Clothing (TexC)

**1601. LABORATORY IN BASIC APPAREL PRINCIPLES.** (2 cr, 1601-1602†)

Programmed learning approach to basic principles of apparel construction. Introductory experience for novices only.

**1602. FITTING THE HUMAN SUBJECT.** (2 cr; prereq Δ)

Analysis of a variety of body forms. Use and modification of sizing systems. Relation of fabric to the human body.

**1603. ADVANCED PRINCIPLES OF APPAREL PRODUCTION.** (2 cr; prereq 1602 or †1602)

Problem solving approach to apparel construction. Analysis of materials, labor cost, and production techniques.

**1641. INTRODUCTION TO MERCHANDISING.** (3 cr; prereq †1642)

Techniques and psychology of selling related to consumer needs, store organization and policies.

**1642. SEMINAR: ORIENTATION TO RETAIL MERCHANDISING.** (1 cr; S-N only; prereq †1641; to be taken 1st or 2nd qtr on campus)

Orientation to careers in retailing and preparation for field experience.

**1643. APPAREL INDUSTRIES.** (4 cr; prereq Econ 1002 or AgEc 1030)

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.

**1680. OPPORTUNITIES IN TEXTILES AND CLOTHING.** (1 cr; S-N only)

Professional opportunities; useful educational background; program planning to maximize individual potential.

**3003. COOPERATIVE EDUCATION PROGRAM.** (1-3 cr; S-N only; prereq soph, HE 1003, #)

A planned work experience relating activity in business, industry, or government to the student's area of study. Written consent of faculty supervisor prior to registration is required.

**3601. TAILORING.** (4 cr; prereq 1603)

Principles of structuring tailored garments. Analysis of hand, machine, and fusing methods.

**3603. READY-TO-WEAR-ANALYSIS.** (3 cr; prereq 3621)

Analysis of garments relative to product performance, mass production principles, and consumer value.

**3604. FLAT PATTERN DESIGN.** (3 cr; prereq soph, 1603, 3662 or Dsgn 1525 or Δ)

Principles of flat pattern design; drafting and advance pattern development.

**3605. DRAPING DESIGN AND CONSTRUCTION.** (3 cr; prereq soph, 1603, 3662 or Dsgn 1525 or Δ)

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, Chem 1003, or Chem 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.
- 3641. FIELD STUDY IN TEXTILES AND CLOTHING.** (1 cr; S-N only; prereq soph)  
One-week field trip between winter and spring quarters to a major market city (e.g., New York, Los Angeles, Dallas). Scheduled visits to apparel and textile manufacturers' showrooms, pattern companies, major designers' workrooms, fashion publications, resident buying offices, museums, etc. Opportunity to survey major retail operations. Preparatory and follow-up seminars required.
- 3643. RETAIL MERCHANDISING.** (5 cr; prereq 1641, Mktg 3065)  
Merchandise selection and controls, sales analysis, model stocks and buying plans.
- 3644. RETAIL EXPERIENCE SEMINAR I.** (2 cr; S-N only; prereq 3rd-qr soph, 1641, 1642, and 200 hrs or †200 hrs approved selling experience)  
Integration of work experience with classroom study accomplished through individual analysis and participation in group discussion of selected topics.
- 3645. RETAIL EXPERIENCE SEMINAR II.** (2 cr; S-N only; prereq 3643 or †3643, 3644 and addtl 200 hrs or † addtl 200 hrs approved selling experience)  
Integration of work experience with classroom study accomplished through individual analysis and participation in group discussion of selected topics.
- 3646. RETAIL SUPERVISION.** (3 cr; prereq Mgmt 3001, Mgmt 3002 or #)  
Techniques of management, motivation, and supervision with specific attention to retailing environment. Participation through case study in discussion of management by objectives and participative management approach to retail supervision.
- 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; prereq Psy 1001, Dsgn 1501 or #)  
Perception of design elements and artistic principles for clothing applied in specific laboratory problems.
- 3664. FASHION TREND ANALYSIS.** (4 cr; prereq Soc 1001, Psy 1001)  
Factors that influence the acceptance or rejection of apparel and other textile products at the consumer level. Analysis of current trends and future projections.
- 5003. COOPERATIVE EDUCATION PROGRAM.** (4-8 cr; 5003-5004†; not for grad cr; S-N only; prereq sr, †5004, #, minimum GPA of 2.50)  
A planned work experience relating activity in business, industry, or government to the student's area of study. Written consent of faculty supervisor prior to registration is required.
- 5004. COOPERATIVE EDUCATION INTEGRATIVE PAPER.** (4 cr; 5003-5004†; not for grad cr; A-N only; prereq sr, †5003, #)  
Paper analyzing a problem encountered in the planned work experience in terms of the student's area of study.
- 5600. ADVANCED APPAREL DESIGN AND CONSTRUCTION PROBLEMS.** (2-4 cr per qtr [max 12 cr]; prereq 3621, #)  
Analytical study of and construction for advanced apparel design utilizing draping and flat pattern techniques. Relating the latest technological developments in textiles to garment design.
- 5603. EXPERIMENTAL STUDIES IN APPAREL.** (3-5 cr; prereq 6 cr in construction or teaching experience, #)  
Study of selected procedures in areas of apparel production and design.
- 5621. MACRO-MICRO PROPERTY RELATIONSHIPS.** (5 cr; prereq 3622 or 3623)  
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; analysis of federal, state, and local legislation as well as voluntary industrial systems; case histories; change mechanisms
- 5623. THE DYEING MEDIUM AND COLOR.** (3 cr; prereq 3621, Dsgn 1521, or #)  
Principles of dye selection for specific fibers; precision dyeing for exploring perceived color relationships and expanding the utility of this medium.
- 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.

## Course Descriptions

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- 5625. COLOR METROLOGY.** (3 cr)  
Theory of color perception and measurement; analysis of color order systems; instrumentation; application to unambiguous numerical color specification and description of small color differences; noncolor components of surface appearance.
- 5626. RECYCLING PROCESSES.** (3 cr; prereq 5621)  
Principles and practices in recovery of initial appearance and properties of textile products; application to restoration of historic textile materials; water pollution by effluent from wet cleaning processes.
- 5627. ANALYTICAL METHODS FOR CONSUMER TEXTILES.** (3 cr, §3623; prereq 3621)  
Standard laboratory methods for rapid prediction of performance of textile fabrics and products.
- 5628. CHARACTERIZATION OF YARNS AND WOVEN FABRICS.** (3 cr; prereq 3621)  
Techniques of dimensional and structural characterization of yarns and woven fabrics; the relationship of these characteristics to performance of such fabrics in textile products.
- 5629. CHARACTERIZATION OF KNITTED FABRICS.** (3 cr; prereq 5628 or #)  
Techniques of dimensional and structural characterization of knitted fabrics; the relationship of these characteristics to performance of such fabrics in textile products.
- 5630. PRINCIPLES OF TEXTILE METROLOGY.** (3 cr, prereq #)  
Metrology as a dynamic and vital adjunct of the distribution and use of textile materials. Test evaluation, development, and use; interpretation of results; data reduction; case studies; investigative metrology.
- 5631. TEXTILES FOR INTERIOR ENVIRONMENTS.** (3 cr, §3622; prereq 3621)  
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 or #)  
Study of a current issue related to merchandising textile and clothing products. Topic may vary each quarter.
- 5660. TOPICS IN APPAREL AND ADORNMENT.** (3-5 cr per qtr [max 10 cr]; prereq #)  
Discussion and laboratory work in sociocultural and aesthetic area of clothing. Topic will vary.
- 5661. CLOTHING AND HUMAN BEHAVIOR.** (4 cr; prereq sr, 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. CLOTHING CONSUMPTION PROBLEMS.** (3 cr; prereq 3621, AgEc 1030 or Econ 1002, Soc 1001, Psy 1001 or #)  
Clothing problems as part of the consumption process of individuals and families; consequences of personal and socioeconomic conditions; impact of technology and public and private policy on the planning, acquisition, use, maintenance, and discard of clothing.
- 5668. AFRICAN DRESS.** (3 cr; prereq 3661, Anth 1102, Soc 1001 or #)  
Sociocultural analysis of dress (apparel, accessories, and body modification) of various African peoples with emphasis on cultural patterns of technology, aesthetics, ritual, morality, and symbolism as related to dress. External influences on Africa as well as African influence on other continents.
- 5680. SPECIAL TOPICS IN TEXTILES AND CLOTHING.** (2-5 cr per qtr [max 10 cr]; prereq dependent on topic, Δ)  
Review of research and methodology in organized group sessions. Topics in developing areas of the discipline vary and will be announced prior to registration.
- 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 observations of activities in selected textile and clothing industries, businesses, and related organizations.

## FOR GRADUATE STUDENTS

(For course descriptions, see the *Graduate School Bulletin*)

- 8621. READINGS IN TEXTILES**
- 8622. STRUCTURE AND PROPERTIES OF TEXTILE MATERIALS**
- 8623. MECHANICAL-PHYSICAL METROLOGY**
- 8624. CHEMICAL METROLOGY**
- 8625. PROBLEMS: TEXTILES AND CLOTHING**
- 8627. THERMAL PROPERTIES OF TEXTILE MATERIALS**
- 8661. READINGS IN CLOTHING**

## Center for Youth Development and Research

8663. **PROBLEMS: CLOTHING AND TEXTILES**  
8666. **AESTHETIC CONCEPTS RELATED TO APPAREL DESIGN**  
8680. **SEMINAR: TOPICS IN CLOTHING AND TEXTILES**

### Center for Youth Development and Research (YoSt)

- 5120. INDEPENDENT STUDY IN YOUTH STUDIES.** (Cr or [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 dependent on specific topic)  
In-depth investigation of one area of youth studies. Teaching procedure and approach determined by specific topic and student needs. Topic announced in advance.
- 5131. PROGRAMS AND SERVICES FOR YOUTH.** (3 cr; prereq SW 3102, Soc 5952, CPsy 5303, or #)  
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 5131, SPFE 3090, CPsy 5303, or #)  
Purposes of service and action-learning programs 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, or #)  
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.
- 5200. WORKING WITH YOUTH THROUGH ADULTS.** (1-3 cr per qtr; prereq BA degree or #)  
Interdisciplinary 3-quarter seminar on essential knowledge and skills to meet youth needs, through relationships with adults; development and management of system of support for youth work.
- 5201-5202-5203. PRACTICUM.** (4 cr per qtr; prereq acceptance into youth studies collateral)  
Two-hour seminar and 8 to 10 hours of fieldwork each week. Students 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, or #)  
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, their relationships with peers and on the job. Special issues and concerns of adolescents and of persons who work with them.
- 5330. APPROACHES TO COUNSELING YOUTH.** (3 cr; prereq Psy 5303, SW 3004, Soc 5952, Psy 5001 or #)  
Problems of adolescence. Rationale and methods of counseling in a range of everyday settings.
- 5331. ORGANIZATION OF SERVICES FOR YOUTH.** (3 cr; prereq 5330 or #)  
Identification and analysis of types, gaps, and outcomes of services for adolescents.
- 5332. TREATMENT APPROACHES FOR YOUTH IN CONFLICT.** (3 cr; prereq 5331 or #)  
Range of treatment methods and their rationale for working with adolescents in conflict.
- 5333. UNDERSTANDING AND WORKING WITH ADOLESCENTS.** (4 cr; no prereq)  
Normal range of changes, experiences in adolescent development. Roles of parents, adults, youth workers in relationship to young people. Methods and approaches to foster healthy growth and development.
- 5401. COMMUNICATING WITH ADOLESCENTS ABOUT SEXUALITY.** (3 cr; prereq 6 cr social sciences, experience in work with youth, or #)  
Sexual development and experience, emphasizing how adults can be comfortable to communicate more effectively with young people. Sexual patterns, variations, roles, power, exploration, sex education.
- 5402. SERIOUS ADOLESCENT SEXUALITY PROBLEMS: SEXUAL ABUSE, RAPE, INCEST, PROSTITUTION, AND UNPLANNED PREGNANCY.** (3 cr; prereq 6 cr social sciences, experience in work with youth, or #)  
Focus on serious sexuality problems some adolescents face, knowledge and skills needed by adults to prevent or respond helpfully to these problems.

## Course Descriptions

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- 5403. INTERVENTION AND COUNSELING WITH ADOLESCENTS AND FAMILIES REGARDING SERIOUS SEXUALITY PROBLEMS.** (3 cr; prereq YoSt 5402, experience working with adolescents on serious sexuality problems, or #)  
Social and psychological dynamics of serious sexuality problems, available methods of intervention.
- 5501. YOUTH AND WORK.** (3 cr; prereq Soc 1001, Econ 1001, CPsy 3303, or #)  
Development of frame of reference to guide or structure direct work with youth in the context of policies and programs concerning youth in the labor market.
- 5600. INTERNATIONAL DEVELOPMENT SEMINAR: AGRICULTURE, HOME ECONOMICS, WOMEN, AND YOUTH.** (3 cr; prereq Econ 1001, Soc 1001, Psy 5303, or #)  
An interdisciplinary seminar integrating aspects of agriculture and home economics in the context of women, youth, and families in order to establish a working concept of rural economic development.
- 5631. HEALTH NEEDS AND PROBLEMS OF ADOLESCENT FEMALES.** (4 cr; no prereq)  
Major health concerns, behaviors, and problems of adolescent females. Current and alternative approaches to service delivery and intervention. Assessment of needs of specific groups (parents, abused youth) and local program response.

### FOR GRADUATE STUDENTS

(For course description, see the *Graduate School Bulletin*)

#### 8001-8002-8003. ADVANCED SEMINAR IN YOUTH STUDIES



Design students and their instructor critique a final problem in a class on visual communication.



The McNeal Hall lobby is a popular place to meet or study.

## IV. FACULTY

### Program Committee Chairpersons

Applied Design—Joe Ordos  
Consumer Food Science—Joan Gordon  
Costume Design—Suman Shenoj  
Family Relationships—Paula Berry  
Food Science and Technology—Sita Tatini  
General Home Economics—Gertrude Strinden, Mary Ann Guadagno  
Home Economics Education—Ruth Thomas  
Housing—Evelyn Franklin  
Interior Design—Delores Ginthner, Virginia Nagle  
International Development Collateral—Miriam Seltzer  
Nutrition and Dietetics—Dennis Saviano  
Retail Merchandising—Samuel Druy  
Textiles and Clothing—Peter Brown, Marilyn DeLong  
Youth Studies Collateral—Miriam Seltzer

### Department Faculty

#### Administration

(32 McNeal Hall)

*Professor*

Keith N. McFarland, *dean*  
Signe T. Betsinger, *associate dean*

*Associate Professor*

Natalie Gallagher

*Assistant Professor*

Gertrude Strinden

#### Design

(240 McNeal Hall)

*Professor*

Mary Stieglitz, *head*  
William Angell  
Marian O. Bagley  
Eugene Larkin

*Associate Professor*

Richard Abell  
Harold Alexander  
Homa Amir-Fazli  
Timothy Blade  
Ann Erickson  
Virginia Nagle  
Joseph Ordos

*Assistant Professor*

Charlene Burningham  
Evelyn Franklin  
Delores Ginthner

*Instructor*

Roger Peterson  
Suman Shenoj

*Lecturer*

Harris Birkeland  
Sharon Gustafson  
Don Lee  
Holly Ryan

#### Family Social Science

(290 McNeal Hall)

*Professor*

Hamilton I. McCubbin, *head*  
Jerome Beker  
Geraldine M. Gage  
Richard N. Hey  
Reuben L. Hill  
Gerhard Neubeck  
David H. Olson  
Paul C. Rosenblatt

*Associate Professor*

Michael Baizerman  
Pauline Boss  
Dorothy Goss

*Assistant Professor*

Diane Hedin  
M. Janice Hogan  
Sander Latts  
James Maddock  
Wanda Olson

*Assistant Professor*

Paula Berry  
Mary Ann Guadagno  
Mark Schaefer  
Shirley Zimmerman

*Instructor*

Becky L. Yust

## Food Science and Nutrition

(228 Food Science and Nutrition)

### Professor

Elwood F. Caldwell, *head*  
 Paul B. Addis  
 Eugene C. Allen  
 William M. Breene  
 Francis F. Busta  
 A. Saari Csallany  
 Richard J. Epley  
 Joan Gordon  
 Theodore P. Labuza  
 Larry L. McKay  
 Howard A. Morris  
 Vernal S. Packard, Jr.  
 Irving J. Pflug  
 Gary A. Reineccius  
 Patricia B. Swan  
 Sita R. Tatini  
 David R. Thompson  
 Edmund A. Zottola

### Associate Professor

Eugenia A. Davis  
 Annette T. Gormican  
 Oscar P. Snyder, Jr.  
 Zata M. Vickers  
 Joseph J. Warthesen  
 Isabel D. Wolf

### Assistant Professor

Elaine H. Asp  
 Amarjit S. Bakshi  
 Steven D. Clarke  
 Mary E. Darling  
 Marjorie F. Fruin  
 Allen S. Levine  
 Louise M. Mullan, Jr.  
 Dennis A. Saviano  
 Joanne L. Slavin  
 David E. Smith

### Instructor

Madge Hanson  
 Margaret L. Olson  
 Robert P. Olson  
 Carolyn P. Thomas

### Lecturer

Lorraine F. Anderson  
 Wayne H. Clifford  
 Mary A. Jones  
 Alfred T. May  
 Karen E. Moyness  
 Sister Mary Moira Tighe

## Home Economics Education

(386 McNeal Hall)

### Associate Professor

Ruth Thomas, *head*

### Assistant Professor

Jerry McClelland  
 Jane Pihlal  
 Marilyn Rossmann

## Extension Home Economics—Family Living

(48 McNeal Hall)

### Professor

Barbara Klixbull  
 Dennis Seefeldt

### Associate Professor

Irene Ott, *program leader*

### Assistant Professor

Lois Goering  
 Patricia Kramm  
 Kathleen M. Mangum  
 Lorilee Sandmann

## Textiles and Clothing

### Professor

Joanne B. Eicher, *head*  
 Margaret P. Grindereng  
 Robert F. Johnson

### Associate Professor

Peter Brown  
 Marilyn DeLong  
 Ruth Franzen

### Assistant Professor

Sherri Johnson  
 Gloria Williams

### Instructor

Cherilyn Nelson  
 Wanda Sieben

### Lecturer

Samuel Druy

## Youth Development and Research, Center for

(386 McNeal Hall)

### Professor

Jerome Beker, *director*  
 Michael Baizerman  
 Robert ten Bonsel

### Associate Professor

Diane Hedin  
 Byron Schneider  
 Ruth Teeter

### Assistant Professor

Robert W. Blum  
 Willis Bright  
 Miriam Seltzer

### Instructor

Daniel E. Conrad  
 J. Pamela Weiner

### Lecturer

Veryl Cashman



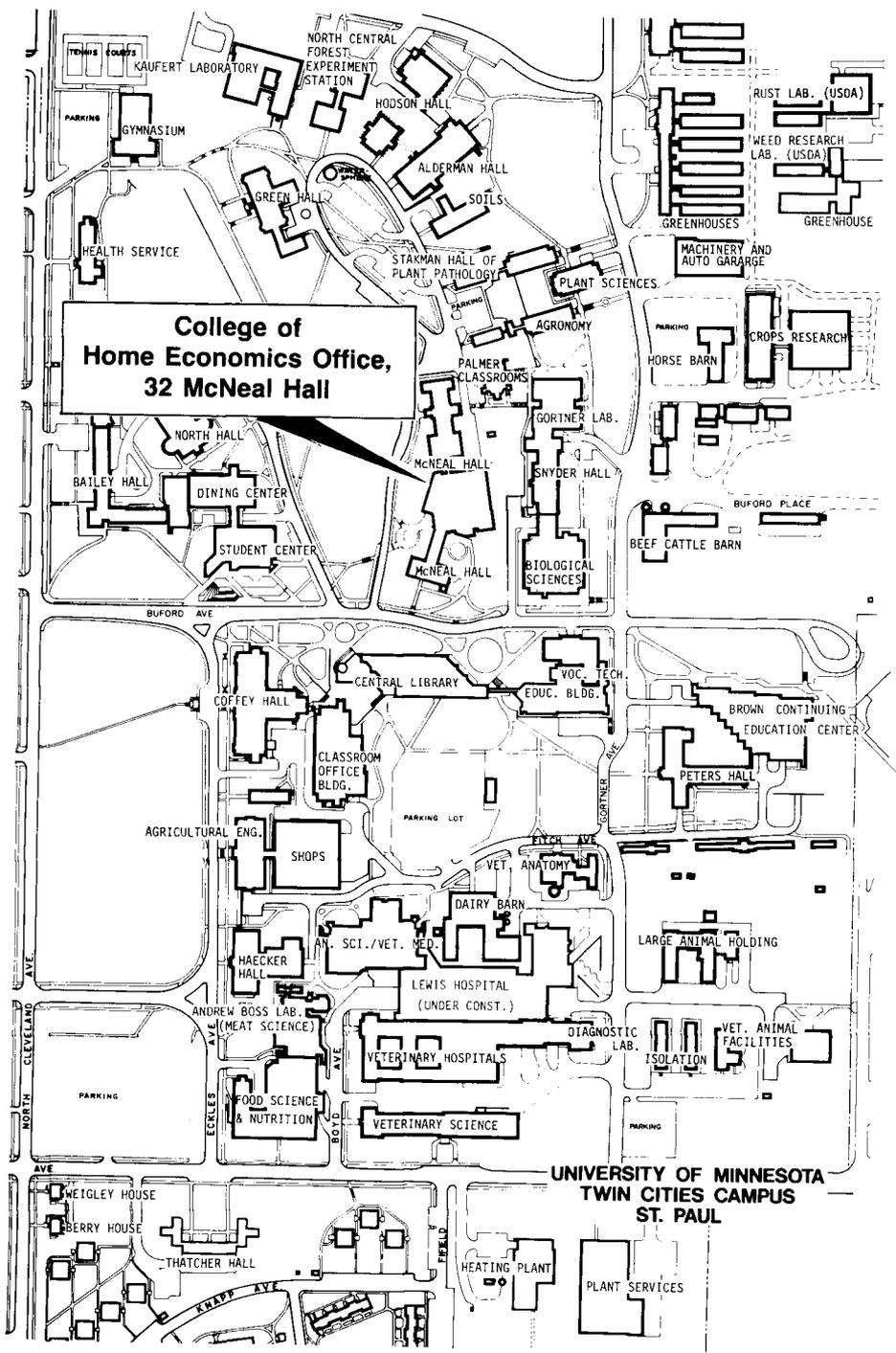
An interior design student plans the layout for a small restaurant.

# INDEX

Adding Courses .....	7	Home Economics Courses .....	51
Administrative Structure and Programs .....	2	Home Economics Education Courses .....	51
Admission .....	3	Home Economics Education Program .....	26
Adult Special Student .....	5	Home Economics Student Board .....	12
Advanced Standing Student .....	4	Honors, Graduation with .....	11
Adviser .....	6	Honors Program .....	9
Appeals Committee .....	10	Housing Program .....	29
Application to Graduate .....	11	Independent Study .....	7
Applied Design Program .....	15	Interior Design Program .....	30
Cancelling and Adding Courses .....	7	International Development Collateral .....	32
Career Services Center .....	12	Liberal Education .....	14
Center for Youth Development and Research .....	37	Majors (see Programs)	
Change of College .....	4	Nutrition and Dietetics Program .....	33
Collateral .....	3	Petitions and Appeals .....	10
Commencement .....	11	Placement .....	12
Consumer Food Science Program .....	17	Program Chairpersons .....	60
Cooperative Education .....	8	Programs .....	14
Costume Design Program .....	19	Readmission .....	12
Course Descriptions .....	39	Records, Access to .....	1
Credit Load .....	7	Registration .....	5
Curriculum Checklist .....	6	Repeating a Course .....	6
Degrees Offered .....	3	Residence Credits .....	8
Department Heads, Offices .....	60	Retail Merchandising Program .....	34
Design Courses .....	39	Satisfactory Progress .....	9
Equal Opportunity .....	1	Scholastic Conduct .....	10
Expenses .....	5	Second Major or Minor .....	8
Extension Credits .....	8	Special Examination .....	8
Extra Credit .....	6	Student Organizations .....	12
Faculty .....	60	Student Personnel Services .....	11
Family Relationships Program .....	21	Student Scholastic Conduct .....	10
Family Social Science Courses .....	43	Student Scholastic Standing Committee .....	10
Financial Aid .....	5	Student Services Office .....	12
Food Science and Nutrition Courses .....	45	Textiles and Clothing Courses .....	54
Food Science and Technology Program .....	22	Textiles and Clothing Program .....	36
Freshman Admission .....	4	Youth Studies Collateral .....	37
General Home Economics Program .....	25	Youth Studies Courses .....	57
General Information .....	2		
Grading .....	8		
Graduation .....	11		



Two Home Economics students stop to chat outside of McNeal Hall.



**College of Home Economics Office,  
32 McNeal Hall**

**UNIVERSITY OF MINNESOTA  
TWIN CITIES CAMPUS  
ST. PAUL**

