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Purposes and Goals
Macalester is a liberal arts college intent on placing the individual in perspective with his role in a changing world. As such, it is an educational community engaged in the process of continuing renewal.

Macalester students have the opportunity to discuss, reflect upon and apply what men have thought, felt and accomplished in the arts, humanities and sciences for generations past. Equally important, the educational community is involved in many ways with the diverse problems and issues of our time.

Within the Macalester community, respectful concern is paid to the rights, needs and judgments of the individual.

Based upon these ingredients, Macalester assists the student in developing an appreciation for knowledge, a capacity for understanding and the desire for a life of continuing self-education.
OVERVIEW

Historical Sketch
Chartered in 1874, "to afford instruction in English literature, in Ancient and Modern Languages, in Mathematics, the Natural Sciences, and the Professions," Macalester College opened its doors to students in 1885. Named for a generous donor of Scottish ancestry, Charles Macalester, the College was the continuing successor of Baldwin Academy (1853), Saint Paul College, and Jesus College, all of which had been established by its founder and first president, Edward Duffield Neill, a distinguished minister and educator who had also served as secretary to President Lincoln. In 1880, the College was adopted by the Presbyterian Synod of Minnesota and, though independent of church control, continues among the colleges related to the United Presbyterian Church. From the beginning some women students were admitted to the College, and in 1893 the College became fully coeducational.

The first few decades of the life of the College were marked by the dedicated scholarship and the courageous endeavors of its leaders to keep the College solvent. Especially notable were the sacrificial efforts of Dr. James Wallace, President of the College (1894-1906) and teacher of Greek (1887-1927), who wrote with deep feeling that "the educational road from the old log college to present has been long and arduous . . . and many have been the heroic men that have fallen in that weary way."

The second quarter of the present century found the College both academically sound and sufficiently, though not bountifully, supported and committed, under the leadership of President Charles J. Turck, to the broadening of its base of community service. To the stream of ministers and other professional men and women who had graduated from the College were added, in enlarged numbers, teachers, nurses, scientists, civil servants and statesmen. The College was also distinguished by its significant program for foreign students and its lively interest in civic and national affairs.

In recent years the generous gifts of many friends, including the challenge gifts of Mr. and Mrs. DeWitt Wallace, have enabled the College to make marked advances. During this period, the College has been engaged in a concerted effort to lift its academic capacity to a maximal level. The Faculty has been substantially strengthened. The quality of the student body has been greatly enriched. And the academic and co-curricular programs have been given a new flexibility designed to meet the individual needs of students.

In attempting now to clarify continuously revised objectives designed to meet the changing conditions of a new day, the College seeks also to preserve the best in its own rich heritage.

The endowment of the College has grown from $25,000 in 1885 to $28,763,729 (book value). In 1904 an accumulated debt was paid off and a campaign begun for $300,000 endowment. The goal was completed in 1911. In 1916, a second effort raised the endowment to $560,000. The second million dollars of endowment was completed in 1941. The value of the campus and buildings is $21 million. The College is nearing the successful completion of a $32 million Challenge Program begun in 1963 to provide endowment for great teaching and facilities for learning.

Degrees and Accreditation
The Bachelor of Arts degree is awarded to students who fulfill the requirements for graduation. The College also awards the degree of Master in Education to those who complete the requirements.* Macalester is fully accredited as a member by the North Central Association of Colleges and Secondary Schools and the National Council for Accreditation of Teacher Education. Approved by the American Chemical Society, Macalester is also a member of the Association of American Colleges, the Presbyterian College Union, the Minnesota Association of Colleges, the American Association of Colleges for Teacher Education and Associated Colleges of the Midwest. Macalester also holds a Phi Beta Kappa charter.

*The College stopped admitting students to the M.Ed. Program June 1, 1968. Students admitted previously and making normal progress will be permitted to continue their work toward the M.Ed. degree until the summer of 1972.
An Urban Location

Macalester's 50-acre campus is located in a St. Paul residential area about midway between the center of downtown Minneapolis and St. Paul—the Twin Cities. This metropolitan area of 1,800,000, one of the largest industrial, scientific, educational and business centers between Chicago and the West Coast, provides Macalester students with an opportunity to share in the intellectual and cultural diversity of an urban center. Libraries, art galleries, concerts, lectures, governmental agencies, courts and businesses are all available as educational resources.

The resources of the community make possible the exploration through class projects and individual independent research opportunities a variety of political, economic and sociological problems and issues. Many phases of community life, from the religious to the cultural, can become part of a student's total college educational experience.

Many students work as volunteers for Twin Cities social service agencies and learn firsthand the many problems facing modern society. In addition, they enrich their own lives by making a personal contribution in an area of great need.

Among the many cultural organizations that attract the support of Macalester students are the Minnesota Orchestra, the St. Paul Civic Opera Association and the Saint Paul Chamber Orchestra, for which tickets are available at reduced rates. The Guthrie Theatre offers exceptional repertory productions. Excellent plays from Broadway are presented in the Twin Cities in addition to numerous traditional and experimental local theater productions. A large number of distinguished musicians can be heard on the public concert stage during each musical season.

In addition, the major league baseball, football and hockey teams in the Twin Cities provide opportunities for sports spectators, and the climate is ideal for skiers and for other outdoor enthusiasts as well.

Tickets to most events are available on the Macalester Campus; free transportation can often be arranged through the services of the Mac Shuttle Bus.
Old Main for years housed the entire College. Its East wing was begun in 1884 and was dedicated, along with several homes built for faculty, September 16, 1885, when Macalester College formally opened with thirty-six students and seven faculty members. The East wing cost $30,000 and originally housed the dining room, kitchen, laundry and furnace in the basement; classrooms, a reception room and the chapel on the main floor; and 10 double dormitory rooms on the second and third floors. The rest of the structure was completed in 1888 and cost $60,000. Old Main has been remodeled and renovated as the physical plant has grown. Today it houses administrative offices, classrooms and the Departments of History, Philosophy, Political Science, Religion and Sociology and Anthropology.

Carnegie Science Hall, a gift of philanthropist Andrew Carnegie, was built in 1910 and still houses three science departments — Biology, Geology and Psychology — which will occupy the Harvey M. Rice Hall of Science (now being completed). Carnegie also houses the Departments of Geography and Economics and Business and the computer center. It will be remodeled to include, in addition, the Education and History Departments and Audio-Visual Services.

Wallace Hall, dedicated in 1907, was named to honor James Wallace, fifth president of the College and a member of the faculty for 52 years. It is a residence hall for 124 students.

Shaw Athletic Field, which was dedicated at the opening of the 1909 school year, was named in honor of Prof. Thomas Shaw, a former president of the Board of Trustees, who was instrumental in developing the athletic program. Relocated in 1963 at the southeast corner of the campus, it includes a stadium built in 1964 with an interior remodeled in 1969 to house 23 students. It also has football and baseball fields and a track which was the first in the nation to be surfaced with the Tartan Brand all-weather, non-slip material developed by 3M Co.

The Gymnasium, dedicated in 1924, includes a swimming pool, indoor track, handball courts, kinesiological laboratories, locker rooms and offices.

Kirk Hall, first occupied in 1926, is named in honor of the late E. B. Kirk, longtime trustee of the College. It is built on a quadrangle plan in nine sections, all opening onto a central
and Mrs. Charles J. Winton, it was the gift of their three children, Mrs. Carl W. Jones, Charles J. and David J. Winton.

The Field House, dedicated in 1956, is connected to the gymnasium and includes classrooms and offices in addition to athletic facilities. Its floor is covered by 3M's Tartan surfacing.

Dayton Hall, completed in 1957, houses 132 students and was named in honor of George D. Dayton, who was a Trustee of Macalester from 1894 until his death in 1938.

Turck Hall, a residence for 150 students, was opened in 1957 and named in honor of Charles J. Turck, president of the College from 1939 to 1958.

The International Center, at 1635 Summit Avenue, houses the offices of the International Program staff and has facilities for seminars, meetings and discussion groups.

Doty Hall, named to honor Margaret MacGregor Doty, dean of women emeritus, was opened in 1964 and houses 161 students.

Dupre Hall, a residence for 280 students completed in 1964, is named in honor of the late J. Huntley Dupre, a former dean of the College and professor of history.

The Dining Commons, opened in 1964, accommodates 700 diners at a time in the main dining room on the second floor. The building also includes kitchen and dining facilities for special groups.

The Janet Wallace Fine Arts Center, a gift of DeWitt and Lila Acheson Wallace, founders and co-chairmen of the Reader's Digest, is named in honor of Mr. Wallace's mother. The complex is made up of four separate facilities housing art, music, speech and dramatic arts, and the humanities, all linked by a central building containing the Lila Wallace Garden Court, faculty and student lounges and exhibition galleries. It was dedicated October 26, 1965.

Olin Hall of Science, made possible by a gift of the Olin Foundation, houses the Departments of Chemistry, Mathematics, and Physics and Astronomy. Dedicated May 17, 1965, its facilities include a science library, planetarium, astronomical observatory, electron microscope and computer services.

The Weyerhaeuser Memorial Chapel, a hexagonal, glass-
THE CAMPUS

walled structure, was dedicated on May 16, 1969. It is a gift of members of the family of Frederick Weyerhaeuser, who was a Trustee of the College from 1957 until his death in 1961. His widow is a member of the Board of Trustees.

Harvey M. Rice Hall of Science, made possible by a grant from the Olin Foundation, is being constructed adjacent to Olin Hall of Science. It will house the Departments of Biology, Geology and Psychology when it is completed during the fall of 1970. It is named to honor Dr. Rice, president from 1958 to 1968.

The Hugh S. Alexander Alumni House, dedicated May 25, 1969, is named to honor the late Dr. Alexander, an 1899 graduate of Macalester who was chairman of the Geology Department for 42 years before his retirement in 1948. The 14-room building at 1685 Lincoln Avenue houses the alumni staff and facilities for a variety of activities and services.

The Business, Development and Financial Aid Offices are located in a building at 77 Macalester Street, which the College acquired in 1969.

Black House, Macalester's Black Student Center, was opened in 1969 at 1626 Portland Avenue. It houses staff offices, a library and has facilities for social activities, meetings and discussion groups.

The Indian Center, opening in the fall of 1970 at 1656 Princeton Avenue, will house staff offices and maintain space for meetings, educational and cultural programs and social activities.

Four residential houses oriented toward foreign language programs at Macalester will be in operation in the fall of 1970. They include French House, 205 Macalester Street, Russian House, 34 Cambridge Avenue, German House in the east wing of Summit House, and Spanish House, in the west wing.

The Katharine Ordway Natural History Study Area comprises nearly 280 acres of land bordering the Mississippi River about a half-hour's drive southeast of the campus. Its ecological features include a lake, two forests, several ponds, springs, marshes and prairie land. The area also contains a laboratory-field station with research and lecture facilities and eating and sleeping accommodations. It was given by Katharine Ordway, sister of Macalester Trustee Richard Ordway, in 1967.

Macalester's Southwest Center — 35 acres of desert ranchland 10 miles east of Tucson, Arizona — was given to the college in 1969 by Leland D. Case ('22) and his wife, to enable Macalester students to take advantage of the historical, physical and industrial resources of the area. It was first utilized by biology and geology students and faculty during the January 1970 Interim Term.
Student Services

One of the primary concerns of each individual student is to develop a plan for a student career at Macalester that moves him toward a personal educational goal.

A college student lives in an environment unique for its resources for learning. The challenge facing each student is how best to utilize those resources for his own personal growth. However, uncertainty about individual strengths and weaknesses and confusion about the myriad opportunities the future holds are faced by most students. In order to assist the student with his personal planning, self-assessment and wise utilization of College resources, comprehensive advising and counseling services are available.

During the orientation period, freshmen begin to learn first hand the educational resources available to them. The student resident counselors work closely with individuals and small groups of students during the first week on campus. During this period, the student examines and discusses his educational goals and plans his college program with his faculty adviser. While individual students are responsible for making their own decisions regarding their academic courses, faculty advisers continue to serve as resources and counselors during the educational career of the student.

A program of placement-testing in foreign languages and mathematics assists the faculty in placing students at the correct level for continued study in such courses. Additional vocational-interest and psychological-assessment tests are also given so the results will be available for students to use later in the year for further individual counseling on educational plans with a professional counselor.

As a student progresses through the first term and year, numerous questions about his educational progress and plans arise. In addition to the faculty with whom he works in the classroom and his faculty adviser, professional counseling resources are available to assist in examining educational, career, social and personal issues and problems. The extensive counseling and psychological services include:

The Counselors-in-Residence are professional counselors who reside in or have offices in each of the residence halls and who assist students in focusing on issues of personal and educational growth and development in and out of the classroom. Their services are available to all students whether they reside in the residence halls or not.

The Office of the Coordinator of Academic Advising assists individual students with academic planning, and counsels with students who experience academic difficulties.

The Office of Career Planning and Placement provides vocational and career counseling for all students, freshmen through seniors. Extensive files, pamphlets and information sheets on careers are maintained for use by all students. The emphasis of the office is to assist individual students to make use of all possible opportunities during their years at College — in student activities, volunteer service experiences, part-time jobs off and on campus — and to learn through involvement and experience more about their interests and abilities. The office assists students in locating internships in business, hospitals, government agencies, private agencies, laboratories and professional offices on a part-time basis during the academic year and full-time during the summer. Special stipends are available for some of these programs to assist students in positions in which the salaries are limited.

The office also provides counseling on professional and graduate school planning in cooperation with faculty advisers and departmental chairmen. An extensive library of graduate catalogs and information on assistantships and fellowships are available.

One of the primary services is the job placement service for seniors. Counseling on job opportunities, scheduling of job interviews with representatives of industry and specialized agencies such as the government, Peace Corps, and the maintainance of reference credentials are all part of this placement service.

The Department of Education operates a Teacher Placement Bureau which assists Macalester Education graduates in finding teaching positions. The primary functions of the Bureau are: (1) keeping an up to date file of the teacher’s credentials, (2) scheduling appointments with prospective employers, and (3) maintaining lists of available teaching positions.
Involvement and Decision Making in the College Community

While the central concerns of students and faculty revolve around the educational content of the academic program of the College, all members of the campus community, by virtue of their individual and common goals in the same institution, are part of an on-going, inter-related and dynamic college community. The student community, the faculty, the staff, the administrative officials and the Board of Trustees are all part of a complex college society.

Planning for improvements and change, reaction to new problems, developing program and budgets all require decision-making machinery that is responsive to the needs and realities of a college society and the greater society of which the College is a part.

Macalester has striven to respond to this challenge by recognizing that students as well as faculty, administration and trustees have a serious stake and role in defining the directions and emphasis of the educational program and the quality of campus life.

Students serve as voting members on the following College committees that make policy recommendations to the faculty or college administration:


Students also have a chance to voice their views directly at faculty meetings, where individual students are given the opportunity to speak and participate in discussions of the faculty. Students have opportunities to share their concerns and views with the Board of Trustees, both through frequent and regular meetings of student officers, administrative officials, faculty representatives and Board of Trustee representatives and as members of the various committees of the Board of Trustees. The President also meets regularly with leaders of the student government and other representative students involved in campus programs and organizations.

One of the most significant achievements growing out of an intensive student-faculty cooperative study was the statement on "Student Rights, Freedoms and Responsibilities at Macalester College" approved by the student body and the faculty in May of 1969. This comprehensive document consists of three parts: basic student rights, regulations concerning conduct of members of the Macalester College community and constitutions of student governing bodies. It sets forth the rights of all members of the college community, essentially extending the freedoms guaranteed by the Bill of Rights and the due process clause of the 14th Amendment to the college campus. The document places the responsibility for maintaining order and an atmosphere of mutual respect on each individual member of the community and describes judicial recourse through a student judicial system and a Student-Faculty Judicial Council. The document and its parts are subject to review and change by the enacting constituencies.

The Macalester College Student Government (MCSG)

The major organ of the Macalester student government is the Community Council. It provides official representation for the student body in the governing of the College and fulfills such needs as the coordination of student action and the allocation of student funds. The council meets regularly throughout the year, and its meetings serve as a forum for the expression of student viewpoints.

The Community Council makes recommendations to the faculty, administration and Board of Trustees representing student opinion on problems in all areas of College life. It also selects voting members for various joint committees and committees of the faculty and Board of Trustees. It also sets general policies in such areas as financing of student activities and organizations, student government elections and publications.

Community Council includes a president and vice-president elected by the entire campus community: Eight representatives of the off-campus students; twelve representatives of the residence hall students; a representative from the College administration and a representative of the faculty. Half of the members are elected in the spring and half in the fall.

The student body, faculty and administration, through its Community Council, became affiliated in 1947 with the National Student Association. This membership provides an
opportunity for the College community to exchange information and viewpoints with college students across the nation and throughout the world student community.

Membership in the Twin City Inter-College Coordinating Committee (IC3), a unique association of eight small private colleges in St. Paul and Minneapolis, makes possible close cooperation on common problems of a local nature. In addition to the Community Council, the MCSG includes a Publications and Communications Board, a Program Board, a Residence Hall Policy Council, a judicial system and various standing and ad hoc committees.

Student Housing
A student's living arrangements and relationships are influential factors in his personal development. A residence hall is a miniature community, providing an opportunity for the student to receive some of his most effective education in human relations. The counselors-in-residence and the resident counselors cooperate with the student residence hall councils in planning and encouraging an active intellectual and social life.

The College places the primary responsibility for the policies governing the residence halls with the residents of the halls. Each residence hall has a council which establishes and enforces policies under delegation of authority from the Residence Hall Policy Committee which has been officially designated by the faculty to establish policy regarding the residence halls. The Residence Hall Policy Committee has established a housing pattern that has made most of the residence halls coeducational.

Campus Activities and Organizations
The student Program Board is responsible for initiating and coordinating out-of-class activities on campus. Its goal is a living-learning situation in which students can plan and attend the activities they feel are relevant to their educational and personal goals.

Program Board is responsible for more than 150 projects annually. During the 1969-70 academic terms, these included a symposium on sex and marriage, performances by a German theatre troupe, a street dance, concerts by Buffy St. Marie and the Chambers Brothers, a month-long symposium on the environment, a Mae West film festival, free concerts on the mall and coordination of a $100,000 project to remodel the Student Union.

Program Board committees are open to the entire Macalester community. Faculty, administration and staff are encouraged to participate as well as students. The structure is deliberately flexible to accommodate new committees and as many people who wish to be involved for as long as they are interested.

Major standing committees are Popular Attractions, Performing Arts, Social Events, Educational Affairs, Mac Cinema and Coffee House, plus additional committees which currently include Inter-campus Communication, Public Relations and Union Policy. The 12-member board is comprised of the chairman and five members-at-large elected in spring campus elections, plus committee chairman elected from among the membership of the six standing committees. The administrative staff includes a secretary, treasurer and administrative assistant.

Program Board is active in several intercollegiate organizations. The Association of College Unions-International provides a means of communication with both students and staff members with similar interests and goals at other schools. The regional and national conferences offer both formal and informal opportunities to discuss philosophy and practical problems. The National Entertainment Conference and the Association of College Union Concert Managers are geared to the specialized area of dealing with booking agents, locating talent and securing fair prices. At a regional level, the Associated Colleges of the Midwest and in the Twin Cities, the Twin City Inter-College Coordinating Committee, offer closer, more frequent meetings and program coordination.

Program Board works closely with the office of Campus Programming Services in the Student Union, which provides assistance and advice in planning activities, making necessary arrangements and informing the community.

The office works also with other organizations which plan campus activities. Black House and the Black Liberation Affairs Committee present a Black Culture Series and sponsor a student theatre troupe, Black Arts Midwest.

Other student organizations provide a variety of social, educational, cultural, recreational and volunteer activities.
They include:

Academic clubs — Classical, French, Geology, German, Russian and Spanish Clubs; Phi Delta Mu (pre-medical and pre-dental); and Student National Education Association.

Academic honorary societies — Phi Beta Kappa; Alpha Kappa Delta (sociology); Kappa Delta Pi (education); Omicron Delta Epsilon (economics); Phi Alpha Theta (history); Phi Epsilon Delta (dramatics); Phi Lambda Upsilon (chemistry); Pi Kappa Delta (speech); Pi Mu Epsilon (mathematics), and Pi Sigma Alpha (political science).

Athletics — Scots Club (lettermen); Cheerleaders; Rowing Club; Ski Club; Co-Rec (coed) and Women's Recreation Association and an extensive intramurals program.

Citizenship and Community Action — Association of Women Students (AWS); Black Liberation Affairs Committee (BLAC); Campus Chest Committee; Canadian-American Conference; International Club; Mac Student Mobilization Committee to End the War in Vietnam; Native American Coalition (NAC); Off-Campus Commuters Association; Student Project for Amity among Nations (SPAN); Young Americans for Freedom (YAF); Young Democratic Farmer-Labor (YDFL); Young Republicans and Young Socialist Workers.

Communications and Publications — The Chanter (literary magazine); KMAC (campus radio station); The Mac (yearbook); Mac Weekly (newspaper); The Pulse (journal of student opinion) and the Spotlite (directory).

Music — Chamber Orchestra, Collegium Musicum; Concert Band; Concert Choir; Festival Choir; Pipe Band and Highland Dancers.

Speech and Theatre Arts — Drama Choros; Drama Club; Macalester College Debate Union; Macalester Symposium; National Collegiate Players.

During 1969-70 more than 300 Macalester students were involved in Volunteer Community Service programs coordinated in the Office of Career Planning and Placement. Students serve as tutors to children at schools, churches, community centers and agencies in the Twin Cities; as teachers' aides and Scout leaders in inner-city neighborhoods. They work with patients at Hastings State Hospital, with discharged mental patients at a halfway house in St. Paul, and with cerebral palsy patients. Macalester's Tartan Troupers have entertained numerous community agencies and organizations for many years. In addition, members of the Macalester community staff Pooneil Corner, a crisis intervention telephone center started by students and staff members in 1970.

Religious Life
Believing that the religious dimension is an essential part of education, the College offers a variety of opportunities for worship and coming to grips with religious questions. The Weyerhaeuser Memorial Chapel, dedicated in 1969, with its ecumenical sanctuary seating 375, its offices, conference room, library, kitchen and lounge, serves as a campus center for traditional, folk and experimental rock worship services, a meeting place for religious and concerned groups, a platform for dialogue and debate of issues, a stage for creative expression, and a retreat for necessary quiet moments. The Chaplain's office seeks to enable and facilitate the encounter with, and development of, religious commitment through institutes, retreats, groups, and programs co-ordinated with the other departments and centers of the College, the neighborhood, city and regional churches and religious movements, as well as national and international organizations.

International Center
The Macalester College International Center is the campus focal point for the international programs of the Macalester community.

The Center programs include conferences, seminars, discussions, films, open houses, social events and informal activities. Such groups as the International Club and the language clubs regularly meet at the International Center. Foreign students and participants in Macalester's unique Summer Experience Abroad (SEA) and the Student Project for Amity Among Nations (SPAN), sponsored by the colleges and universities in Minnesota, report on their experiences and impressions at regular discussion "study breaks."

The Center staff is responsible for administering and developing programs for sending Macalester students abroad for work, service, travel or study, and the bringing of foreign
students to the campus. An up-to-date file is maintained on all international programs in which members of the Macalester community may be interested. Experienced counseling for those individuals and groups planning work, study and travel programs abroad is available at the Center. The Center serves as the Office of the Foreign Student Adviser and provides a variety of services to the foreign students on campus. Regular office hours are maintained for foreign-student counseling at the Center. It is also an informal meeting place for both American and foreign students every evening. Television, radio, hi-fi, books, newspapers, magazines and table games provide an atmosphere for relaxed but stimulating conversation for Macites from around the world.

Winton Health Service
The Winton Health Service is located at 1595 Grand Ave. and offers a consulting physician from 9 to 11:30 a.m., Monday through Friday. A registered nurse is on duty from 7:30 a.m. to 8:30 p.m., Monday through Friday. Saturday hours are 8 a.m. to noon.

Services available include consultation with the physician, laboratory facilities, physiotherapy which includes whirlpool diathermy, ultra sound machine, services of a part-time physical therapist, infra-red lamp, ultraviolet lamp (the use of ultra-violet lamps in the residence halls or rooming houses is not permitted) and the X-ray machine for limited use. All cases requiring major surgery and all serious illnesses and accidents are cared for at local hospitals. The College is not responsible for expenditures in such cases. A minimum fee is charged for antibiotics, special drugs and X-rays. All other medications are free.

A voluntary plan of accident insurance is available to students. The policy provides reimbursement up to $2000 for each accident for any medical expenses originating from an accident in which the student is injured. The plan protects all participating students 24 hours a day for the school year, September through June. Full protection is assured during interim vacations and participation in all activities including athletics.

The premium is added to the student's account.

Hospital, Medical and Surgical Group Insurance is also available at favorable group rates to all students. Premiums for this coverage are payable in September for the 12-month period beginning October 1.

Additional information will be furnished upon request.

Educational Resources
This office was established to centralize certain functions which exist to support the instructional programs of the College and to assist in providing improved service to the individual learning needs of students. It has the responsibility for monitoring and supervising the educational effectiveness of the Audio Visual Center, the Educational Research Office, the Individual Learning Center, the Library, and the Simulation Center. It also provides help for faculty and students on academic applications of computers.

Through its constituent offices and other means, the Office of Educational Resources seeks to encourage and support an empirical approach to educational problems and to bring to bear on decision-making at Macalester the results of appropriate studies in higher education. It is also charged with the general responsibility for assisting the personnel and departments of the College in educational planning.

The constituent units of the Office are described in the following paragraphs:

Audio Visual Center
This Center is dedicated to expanding learning possibilities for students through use of non-book media in teaching and learning. The Center includes facilities for such functions as storage of films and other media, previewing of films, and production of instructional materials. Holdings of media materials are included in the main Library card catalogue. The Center functions to inform members of the community about new developments in the area of non-book media and to assist members of the faculty in planning and developing instructional uses of media. The Center staff may be called on to produce instructional materials or advise on where such services may be obtained. The Center also provides audio-visual equipment on loan to individuals and groups within the College.

Educational Research Office
This Office pursues three objectives: to assess the impact of Macalester College upon its students; to engage in research which will lead to a better understanding of the learning process among college students; and to assist in
the collection, interpretation, and dissemination of data which may be used by various segments of the College in decision-making and planning. In working toward these objectives, the Office attempts to respond to the needs of faculty-student committees, academic departments, administrative offices, and individual members of the faculty and student body. Meeting these needs may take the form of short- or long-range projects requested by members of the college community, projects initiated by the Office staff, involvement in inter-college research, or individual consultation with faculty or students. Through these projects and the consultative work of its staff, the Office hopes to play a significant role in the continual improvement of Macalester's learning environment.

**Individual Learning Center**

This Center is designed to work with individual students in achieving a person-centered educational experience at Macalester. Through the Center's varied services students are assisted in planning and in developing skills related to their educational goals, carefully considering appropriate curricular and extra-curricular learning experiences. Special staff assistance is given to the assessment and improvement of writing, reading, spelling, vocabulary, and study strategies necessary for quality college work. The Center provides tutorial assistance to students as needed and administers the college-wide Senior Preceptor program. The Center staff works with students and faculty to implement projects of independent study both on and off campus.

**Simulation Center**

This Center is a research and instructional facility designed to serve faculty and students in the social sciences and other areas. As an experimental program, the Center is dedicated primarily to exploring simulation use in all subject-matter areas. The Center also engages in other activities. As a research facility, it is equipped with computer hardware, including a keypunch, card-sorter, and a terminal connected to an off-campus computer. The Center is also equipped with ten experimental cubicles linked by an internal telephone system. These facilities are available on a College-wide basis for instructional and research purposes. Some of the areas already explored include: Game Theory, Coalition Formation, Interaction Analysis, Bargaining Behavior, Community Politics, and Roll-Call Analysis.
Library Services
Library services of the College support and extend the academic programs of its students, assist in meeting the teaching and research needs of its faculty, and provide study facilities, research materials and recreational reading for the College community. Housed in the Weyerhaeuser Library and Olin Science Library, the collection now numbers about 192,000 cataloged volumes. The library receives nearly 1,500 current periodicals, journals and newspapers. Backruns of important scholarly journals are being built up as funds are available. The present rate of growth approximates 15,000 new volumes annually. Total library expenditures per student have increased steadily to a present level of $160 per student.

During most of the academic year the Weyerhaeuser Library and the Olin Science Library are open and staffed as follows:

Fall Term, Interim Term, Spring Term

<table>
<thead>
<tr>
<th>Day</th>
<th>Weyerhaeuser Library</th>
<th>Olin Library</th>
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<td>Monday</td>
<td>8:00 a.m.-12:00</td>
<td>8:00 a.m.-10:30 p.m.</td>
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<tr>
<td>through</td>
<td>midnight</td>
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<td>Friday</td>
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<tr>
<td>Saturday</td>
<td>9:00 a.m.-10:30 p.m.</td>
<td>9:00 a.m.-12:00 noon</td>
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<td>Sunday</td>
<td>2:00 p.m.-12:00</td>
<td>midnight</td>
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Summer Terms

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<tr>
<th>Day</th>
<th>Weyerhaeuser Library</th>
<th>Olin Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>8:00 a.m.-9:30 p.m.</td>
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<td>Saturday</td>
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<td>Sunday</td>
<td>1:00 p.m.-9:30 p.m.</td>
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Holiday and Reading Days Schedules as Announced

Copies of a “Guide to the Weyerhaeuser Library” are available at the library. This pamphlet gives detailed information to assist all library users.

The library services are so organized that all students have open access to the main book collection. In the periodicals room are found current journals and a small reserve book collection. A curriculum laboratory provides a wide variety of materials in the field of teacher education.

Monographs and journals of interest to the disciplines supported are in the Olin Science Library and are indexed in the Weyerhaeuser Library card catalog. Micro-readers and copying equipment are available to support student and faculty use of library facilities.

The reference and public affairs room houses an extensive reference collection. United Nations, U. S., state and local government documents and their indices are located in this room, as well as pamphlet runs, annual reports, college catalogs and ephemeral publications. Numerous bibliographies to assist faculty and student researchers are also found in the reference area. They cover a wide variety of study areas, such as anthropology, the social sciences, international affairs, all forms of literature, and pure sciences and history.

Special collections of the library include the memorial library of Edward Duffield Neill, strong in early American and Minnesota history; the Arthur Billings Hunt books on American hymnology; the Gustavus Loewingrter Shakespeare collection, the Stella Louise Wood collection of juvenile literature; the J. Harold Kittleson collection of Sinclair Lewis materials, and smaller collections of Willa Cather and Adlai Stevenson materials; the Cyrus B. Yandes collection on field sports; the Norman H. Strouse collection of Mosher imprints; the Charles W. Ferguson materials in linguistics; the Frances Densmore Ethnological Library; the Tartan Room, housing college archival materials; a treasure room for rare books; a growing fine arts collection of Macalester undergraduate work, and collections of art prints, phonograph records and tapes. The library continues to rely on gifts and special purchases to strengthen subject collections in particular areas.

Trained librarians who staff the Weyerhaeuser Library and Olin Science Library organize the collections and provide expert assistance to students and faculty in bibliographic search, book selection, reference work and related areas of academic library service. Members of the staff conduct initial student visits to the library as a part of the freshman orientation program; appear in classes at the invitation of faculty members to discuss with students various methods of making effective use of the library's resources; and instruct students on either a group or an individual basis to develop with them effective search techniques for fully exploiting the
facilities of the library. The continuing goal of the library staff is to develop in Macalester students lifelong habits which will make the intelligent use of books an essential part of each individual's college experience.

All students are encouraged to make full and independent use of the library's resources, knowing that librarians are available to provide assistance when needed. Rules are kept to a minimum, and exceptions can be made when circumstances warrant. Such an operational pattern is based on the assumption that students are mature individuals who make honorable and responsible use of library materials provided by the College.

Because of its urban location, library services at Macalester are backed up by major research collections accessible from the campus. These include: the James Jerome Hill Reference Library, the St. Paul Public Library, the library and manuscript collections of the Minnesota Historical Society, the Minnesota State Law Library, the University of Minnesota Libraries, the Minneapolis Public Library, and special libraries in the metropolitan area. In addition, through a mutual interlibrary use agreement with six other metropolitan area private liberal arts colleges, Macalester students may borrow materials from their libraries.

Macalester College Alumni Association
The Macalester College Alumni Association was incorporated in 1918 as a social or charitable corporation under the laws of Minnesota for the year 1913. Communications to the Association should be sent to the Alumni Office. Checks for contributions should be made out to “Macalester College Alumni Fund.”

Macalester holds the three basic types of memberships in the American Alumni Council: Type A (Alumni Administration), Type B (Educational Fund Raising), and Type C (Publications). The official publication of the Association is the Macalester College Bulletin.

By action of the Board of Directors of the Alumni Association on May 2, 1968, the Hugh S. Alexander Alumni House was established. This facility — a 14-room building at 1685 Lincoln Avenue — houses the professional staff and provides accommodations for nearly 200 persons for such varied activities as seminars, meetings, conferences, receptions and open houses. The House was dedicated May 25, 1969.
Admissions Policies
Any person may apply for admission to Macalester College. All applications will be equitably considered by the Admissions Office, and no applicant shall be barred from admission to the College on the basis of race, religious preference or national origin. The quality of students and faculty who make up the College is of basic importance in determining the impact that the educational process will have on an individual. It is essential that the student have the opportunity to live and study with others who can contribute insights into people and events that his own background may have failed to provide. The College therefore strives to insure that both students and faculty represent varied economic, social and cultural backgrounds.

General Information
The formal admissions application blank may be obtained by writing to the Office of Admissions, Macalester College, St. Paul, Minnesota 55101. Since the Macalester application must be filed in every instance, Minnesota applicants are advised not to file the "Minnesota College Admission Form" which is sponsored by the Association of Minnesota Colleges. The application should be accompanied by a non-refundable application or service fee of $15.

Visitors to the Campus
Prospective students and others desiring guided campus tours should go to the Admissions Office at 58 South Snelling Avenue. It is recommended that visitors notify the Admissions Office of their arrival time in advance. Appointments for tours and interviews will normally be made between the hours of 9 a.m. and 3:30 p.m.
Administrative offices are open from 8 a.m. to 4:30 p.m., Monday through Friday. The Admissions Office is also open for appointments and tours until noon on Saturdays during that portion of the year when classes are in session. The Office of Admissions is closed on legal holidays, such as Christmas, New Year's, Memorial Day, Fourth of July, Good Friday and the following Saturday, and the Thanksgiving weekend.

Methods of Application
REGULAR APPLICATION METHOD
Candidates electing the regular application method are encouraged to file their applications no later than January 15. Since regular applications will be reviewed during the month of February and decisions mailed to candidates early in March, the required College Board Examinations must be taken no later than the January series of tests.

EARLY DECISION PLAN
Macalester's modified early decision plan requires that applications be filed no later than December 31 and that the required College Board Examinations be completed no later than the December series of tests. Students making application under the early decision plan are expected to rank in the top fifth of their graduating classes. These candidates will normally receive word concerning the action on their applications during the month of January and they are expected to make non-refundable tuition and residence hall deposits within 15 days of the date of the letter of approval. If financial aid is required by these candidates, it is essential that the Parents' Confidential Statement is filed sufficiently early to allow the processed form to arrive in the Admissions Office no later than early January.

SINGLE APPLICATION METHOD
As a member of the Associated Colleges of the Midwest (ACM), Macalester offers applicants who wish to apply to more than one ACM school the opportunity to apply to three colleges through the single application method (SAM) for a single application fee of $15. The SAM method of application should be used only if the applicant is interested in two or more colleges of the Associated Colleges of the Midwest and is willing to state his order of preference among the ACM colleges. SAM applicants should take the required College Board tests no later than the December series of tests. More detailed information concerning the plan is available through the Admissions Office.

Entrance Requirements
In general, the admission of students to Macalester College is based upon the following factors:
1. Graduation from an accredited high school with a scholastic record and test scores which indicate that the student is likely to succeed in college.
2. Meeting of the requirement that all applicants for admission to the College as freshmen must take the Scholastic Aptitude Test section of the College Entrance Examination Board and three achievement tests including the English Composition test of the College Board. It is the
ADMISSION

applicant's responsibility to have these test results forwarded to the Admissions Office of the College. It is recommended that students interested in continuing study in the areas of languages or mathematics take achievement tests in those areas.

Information about these tests may be obtained from your high school counselor or by writing to the College Entrance Board, Box 592, Princeton, N. J. A Bulletin of Information, containing rules for the filing of applications, the payment of fees, and a listing of the examination centers will be provided free of charge by the College Board Office. The College prefers that the tests be taken no later than January of the student's senior year.

3. Recommendation as to character, intellectual ability, and purpose by a teacher and by the school superintendent, high school principal, or counselor.

4. Additional evidence regarding character and personality, intellectual curiosity, seriousness of purpose, breadth of interests and activities, and special fitness for pursuing one of the programs offered at Macalester. Such evidence would come from persons who know the student outside of school, such as employers, from records of extra-curricular activities and church activities, and from any other available sources. An applicant is not required to present specified units of credit for admission. But, because of the character of study later required in the College, applicants who present a minimum of four years of English, two years of a single foreign language, three years of mathematics, one year of history and one year of a laboratory science will find the least difficulty in making the transition to college.

All new students must make a deposit of $50 in order to hold their place in the entering class. If the student has been accepted as a resident student, an additional deposit of $50 must be made.

Admission by Transcript or Diploma
FROM ACCREDITED HIGH SCHOOLS AND ACADEMIES
Graduates of accredited high schools and academies are considered for admission to the freshman class, subject to the requirements of the preceding paragraphs, upon presentation of transcripts certifying such graduation. Accredited schools are those on the list of the North Central Association of Colleges and Secondary Schools, the list of Minnesota high schools prepared by the State Department of Education and similar lists of approved high schools of other states.

OF OTHER COLLEGES
Students desiring to receive consideration for transfer to Macalester College from accredited institutions of college grade must present evidence of honorable dismissal and an official transcript of previous collegiate and preparatory record. It is normally expected that the transfer applicant will present a record of "C" average or better. If the Scholastic Aptitude Test of the College Entrance Examination Board has been taken, the results should be requested for Macalester College. The Scholastic Aptitude test will not be required of transfer applicants if they have completed a year or more of college work.

FROM OTHER INSTITUTIONS OF HIGHER LEARNING
Credits from other institutions of higher learning including general colleges, teachers colleges, professional schools and polytechnic institutes will be evaluated according to the nature and quality of the work presented as judged by the Registrar. Students who have attended non-accredited institutions must have their work validated by examination or by showing competency to carry advanced work successfully. Award of credit in such cases may be delayed for one or two terms awaiting such validation.

Admission by Examination
Students not presenting transcripts as provided for above must present a course of study equal to a four-year high school program. Such students may be required to take examinations in the courses presented in order to receive consideration for admission to the Freshman class.

Advanced Placement Program
Students whose scores on the College Board Advanced Placement Examinations are rated 3 (creditable), 4 (honors), or 5 (high honors) will be considered for advanced placement and appropriate credit. Freshmen who wish to apply for advanced placement should arrange to have the test and results transmitted to the Director of Admissions of the College. In some cases, it may be necessary for the student to have a conference with the appropriate department chairman during freshman orientation week. A maximum of six courses may be counted toward a bachelor's degree. A grade of 2 will receive no credit but the department chairman may recommend some exemption. A grade of 1 will carry neither credit nor exemption. Awarding of credit may be deferred until the end of the academic year in order to give the student a chance to prove himself.
Expenses

All charges assessed by the College are due and payable no later than the beginning of each term, before completion of registration and before admittance to classes.

All applicants for admission must pay an application fee of $15 with the submission of an application. This payment is not refundable. A tuition deposit of $50 is required of each student accepted for admission. This deposit must be paid upon notice of admission in order to confirm the student's acceptance. Upon registration in the College, the deposit is applied as a payment against the tuition charge.

Students approved for admission to college residence halls are required to deposit an additional $50, which will be credited against their room costs.

Parents of Macalester students desiring to meet educational costs in a monthly installment basis may obtain information and application materials by writing to College Aid Plan, Inc., 1008 Elm St., Manchester, New Hampshire 03101, or The Tuition Plan, Inc., 575 Madison Ave., New York, New York 10022. Information is also available at the Business Office, Macalester College, St. Paul, Minnesota 55101.

Tuition

The tuition rate for fulltime students entering September 1970 is $2,050 per year.

Interim Term Tuition

Fulltime academic year student ... No additional charge
Fulltime, first term, December graduating student ... ... No additional charge
Fulltime one term student ....... $100
Special or part-time student ........ $200
Studio or private music lessons ...... Negotiated

Other Fees

Special students, cost per semester course ............... $375
Audit fee — per course ............. $10
Music fees — private lessons:
Fulltime student — per term ...... 60
Special students — per term ...... 70

Class lessons in piano — per term ... 20
Class lessons in voice — per term ... 20
Validation and registration after the scheduled period each term is subject to a fine of $5 per day for each late day.

Room and Board Charge 1970-71

All rooms — per student per academic year ............... $400
Board — per student per academic year ................. 550

Refunds

No tuition is refunded or credited after midterm. For purposes of calculating the pro rata tuition refund during the first half of the term, two weeks are added to the date of cancellation notice and the refund or credit is calculated on the proportion that the unused portion bears to the total term. No tuition refunds or credits are granted without first receiving a notice of cancellation from the Office of the Dean of the Faculty.

In cases of prolonged illness which requires the student's withdrawal from the College, refunds or credits are made in tuition and room and board from the end of a two-week period following the beginning of illness, according to the records of the College Health Service. No tuition is refunded or credited on courses completed.

Students leaving the College any time after registration without approval, or by reason of suspension or dismissal, will not be eligible for any refund.

Residence Halls

Macalester College accommodates approximately 60 per cent of its students in campus residence halls. A number of dwellings adjacent to and owned by the College are also available for students.

Applicants interested in living in a residence hall will be provided with a residence hall application at the time they receive the Notice of Admission to the College. The completed room application card and a $50 room deposit should be returned immediately to the Admissions Office. Residence hall accommodations are assigned in order of receipt of the residence hall applications accompanied by the deposit of $50. If the room reservation is cancelled before May 1, the room deposit will be refunded.

All applications for residence hall accommodations are for
the entire academic year. Each dormitory resident is held responsible for the room and board charge for the entire academic year, whether or not continuously occupied. The first term residence hall period ends and the second term residence hall period begins at mid-interim term.

The residence halls and dining rooms are closed during the Christmas and Easter vacations. The yearly board charge does not include providing meals during the Fall Recess from 4:30 p.m., October 23, through November 3, 1970.

Financial Aid
Macalester provides a variety of financial aids to fulltime students through scholarships, work opportunities and loans. The type and amount of aid varies according to the student's need, scholastic standing and contributions to extra-curricular activities.

Financial aid from the College and other sources is viewed as supplementary to the efforts of the student and his family. The student aid-program is designed to give a reasonable amount of financial assistance to a large number of students. In order for the student to be considered for aid, his parent or guardian must submit a Parents' Confidential Statement to the College Scholarship Service. Macalester College receives from CSS a copy of the Parents' Confidential Statement, along with a need analysis. Awards are then made on the basis of demonstrated need.

GENERAL POLICIES
Financial assistance is administered by the Financial Aid Committees under the general policies that:

1. All financial assistance awarded is based on established financial need.

2. Need is defined as the difference between the amount the student and his parents can reasonably be expected to provide for college expenses and the total cost of attending Macalester College. Computation of need will be based on the Parents' Confidential Statement of the College Scholarship Service.

3. Foreign students coming to Macalester College must state their financial situation in writing when applying for admission to the College.

4. Financial assistance for subsequent years is not renewed automatically. Each student who desires aid must file a
college application form and submit a Renewal Parents' Confidential Statement each year he is in attendance at the College. Each student's financial assistance is subject to review annually and to adjustment if the financial need or academic status of the student has changed.

Types of Financial Assistance

GENERAL SCHOLARSHIPS
General scholarships are awarded to entering freshmen who establish financial need. Transfer students are eligible on the same basis as freshmen and must follow the same procedure.

ENDOWED SCHOLARSHIPS
A number of endowed scholarships are available as a result of generous gifts creating endowed funds. The income from these funds is awarded annually to outstanding students who otherwise would be unable financially to avail themselves of a Macalester education. Endowed scholarships generally are restricted to sophomores, juniors and seniors who have shown superior academic performance.

EXPANDED EDUCATIONAL OPPORTUNITIES
A program to expand educational opportunities for students whose opportunities for higher education have been restricted by their economic and cultural backgrounds was begun in the 1969-70 academic year. The program provides total assistance for 75 students of exceptional financial need. At least sixty of these students must come from racial minority groups.

EDUCATIONAL OPPORTUNITY GRANTS
This is a program of Federal grants administered by the College in which the student receives a non-obligating award of funds based on exceptional financial need and evidence of academic or creative promise.

SERVICE CONTRACTS
Service contracts are awarded to students who receive aid in exchange for work in a department of the College. These are awarded for the school year but will be continued for the second term only if fulfilled in a satisfactory manner.

THE FEDERAL WORK-STUDY PROGRAM
The purpose of the Federal Work-Study Program is to stimulate and promote the part-time employment of students, particularly students from low-income families, who are in need of the earnings from such employment to pursue a course of study at Macalester.

LOAN ASSISTANCE
Macalester College participates in the National Defense Student Loan Program, created under the National Defense Education Act of 1958. These loans are available at low interest rate which begins nine months after the student discontinues his studies. The College also has its own loan program. Students applying for either a National Defense Student Loan or a college plan must have a Parents' Confidential Statement on file in the Financial Aid Office.

The Guaranteed Loan program is primarily for students from middle or upper-income families. Under this program an undergraduate student may borrow a maximum of $1,500 from a bank or other financial institution. Because there are some minor differences from state to state in the administration of the Guaranteed Loan program, students are urged to secure further information from their local lending institution.

How to Apply for Financial Aid

New students who are candidates for financial aid at Macalester College must take the following steps:

1. File formal application for admission (including the required $15 application fee) with the Admissions Office.
2. Submit required admissions credentials as requested by the Admissions Office.
3. File the Macalester application for financial aid in the Admissions Office.
4. File the Parents' Confidential Statement with the College Scholarship Service and request that a copy be sent to Macalester College.

Admissions and Financial aid applications may be obtained from the
Office of Admissions
Macalester College
58 So. Snelling Avenue
St. Paul, Minnesota 55105

The Parents' Confidential Statement is normally available in the office of the high school principal or counselor but if necessary it may be obtained from the Macalester Admissions Office.
Honors Program
The purposes of the Honors Program are: to afford certain students an exceptional opportunity to develop their potential for originality; to explore the ramifications of their discipline with a minimum of ancillary requirements; and to teach them subject matter related to their major and their original scholarly and artistic work, in a manner especially designed for them.

A student interested in entering the Honors Program of a department may apply as early as the middle of his sophomore year or as late as the second term of his junior year. Admission to the Honors Program is by vote of the Faculty Curriculum Committee upon recommendation by at least two faculty members. Normally the applicant must have earned a grade point average of 3.0 or higher, but the grade point average requirement is relaxed if other evidence is shown that the student can perform well in the Honors Program.

The program is based in the academic department and each participating department creates Honors courses and programs for its students within the general pattern set by the faculty. Inter-disciplinary programs are encouraged, and a program need not necessarily be related to the student's major. The definition of an Honors course is unrestricted and determined by the department. Common formats are independent studies, seminars and Honors sections in regular courses.

A Student must take at least three Honors courses in the three successive semesters before graduation. (When he enters as a senior, he may be granted an exception.) An outside examiner evaluates the quality of the student's Honors work, and the student may be recognized by the examiner as graduating with Honors or Special Honors. If the outside examiner does not recommend a degree with Honors, the department chairman judges whether the student should receive the designation.

Special privileges often are given to allow the student to give additional time to Honors work. A student may be dropped from the Honors program if his department chairman, faculty adviser and thesis adviser agree that he is not maintaining a superior level of achievement in Honors work and satisfactory achievement in his other courses.

Information on specific department's Honors programs should be obtained from a member of the faculty in the department.

Overseas Programs
Overseas programs for academic credit are coordinated through the International Center in conjunction with appropriate academic departments. Students interested in studying abroad should contact the Director of Overseas Programs at International Center as early as possible. Programs offered which contain options for course credit are described below:

a. Language Programs
The French, German, Spanish and Russian Departments offer semester-abroad programs for intensive study in a language. All programs are for one term, and both Summer and Interim Term may be included in the programs.

(1.) The French Department has a semester-abroad program at Avignon, a branch of the Institute of American Universities and the University of Marseille. Students should be in their sophomore or junior year and have completed at least one of the following French courses — 51, 52 or 53. Students selected for Spring 1971 also will spend the Interim Term in Paris.

(2.) The German Department has a semester-abroad program at the University of Vienna. Summer School during July and August is required in addition to the Fall term. Students must have completed German 32 or its equivalent to be eligible for the program.

(3.) The Spanish Department's semester-abroad program is based in Madrid and is affiliated with the Institute of European Studies. Students should have sophomore or junior standing, good scholastic status and have completed Spanish 32 or its equivalent.

(4.) The Russian Department offers a semester-abroad program at the University of Oklahoma's Munich Center for Russian Language and Soviet Area Studies. Students should have at least a 2.0 average and preferably have completed Intermediate Russian.

b. College of Europe at Bruges, Belgium
A student may choose to apply for Spring Term study of European integration at the College of Europe in Bruges. There is no language requirement, but only a few students (10-12) may go each year. Formal applications should be

SPECIAL PROGRAMS
made in early Fall. At the College of Europe, a student is offered a wide range of social science and humanities courses. Preference is given to junior applicants, though qualified sophomores are encouraged to apply.

(For the language programs and the College of Europe at Bruges, the cost is $200 plus the comprehensive fee for a semester at Macalester. Room, board, tuition and study tours are included in this cost. All students taking a spring or fall program have the option of including a summer experience overseas. Financial assistance will be the same as the amount received by the student if he remained on campus. Additional financial aid may be applied for through the Financial Aid office and International Center.

c. Institute of European Studies
As an affiliate member of IES, Macalester offers its students preferred admission into semester and year abroad programs in Durham, Paris, Nantes, Madrid, Vienna, and Freiburg. Included are general studies opportunities, as well as development of language skills.

d. African-American Institute
As a cooperating college, Macalester may send each year two or three highly selected students for a year of academic work at an African university. Students are recommended to the Institute on the basis of their maturity, adaptability, and academic record.

e. Associated Colleges of the Midwest
Macalester students are eligible to participate in overseas programs sponsored by the ACM. Tuition is paid to Macalester; other expenses are paid to ACM. Year-long, interdisciplinary courses are offered in Costa Rica, Liberia, India, Japan, and Cairo. Interested students should contact the individual program representatives or Professor Dodge.

f. Non-Macalester Sponsored Overseas Programs
A student may choose to attend another college's overseas program. He may receive a leave of absence from Macalester and receive credit from the overseas institution at Macalester. Information concerning possibilities and procedures of application can be obtained from the International Center. The Registrar and relevant departments also should be consulted.

g. FOCUS'D (Foreign On-the-Scene Confrontation with Unusually Significant Developments)
Grants may be received from the FOCUS'D Scholarship Program for terms of study from two-to-six months overseas, generally but not necessarily including a summer. Grants provide, within the limits of funding, full expenses. FOCUS’D grants may be applied for at any time at International Center.

FOCUS’D grants presuppose considerable scholarship in an area before departure. Preparation involves writing a background research paper and submitting a design of further study. Generally, at least six months of preparation and study should be anticipated before departure. Up to three Macalester course credits may be earned for the project undertaken, and this credit must be arranged with individual members of the faculty and as independent studies. The final result of the project is usually a paper entailing analytic research methodology, although other forms of projects may be accepted, such as in the creative or dramatic arts.

h. SPAN (Student Project for Amity Among Nations)
Students interested in SPAN must apply in early spring, 15 months in advance of their departure. Applications may be obtained at International Center. Each year, SPAN selects four countries for intensive study. If his application is accepted, the student begins orientation and language training in the fall. A faculty adviser, who will accompany the students to their countries, meets with them and begins planning for a study project. In June, students go to their countries and spend eight weeks working on their project and four weeks traveling. Financial aid is available both through the SPAN Foundation and through special Macalester funds. Inquiries about SPAN should be addressed to the International Center.

Programs for International Understanding
The International Affairs Program of the International Center is a comprehensive effort to focus attention on world affairs at the College. The major event of the program is the ANNUAL SYMPOSIUM on a topic of vital international interest, featuring addresses by outstanding national and international leaders. Five young men under 25 who have made significant contributions to international understanding are selected each year for the INTERNATIONAL DISTINGUISHED SERVICE AWARD. The International Affairs program also includes a continuing series of meetings, discussions, seminars, films and lectures. Each year, three senior men are selected to participate in the INTERNATIONAL AFFAIRS INTERNSHIP program. The Interns work at the International Center developing their own programs under staff guidance, and staffing Center programs.

The SUMMER EXPERIENCE ABROAD program (SEA) offers summer opportunities for study in language institutes or specialized programs, for work in offices, factories, laboratories, art galleries, farms and volunteer camps in Europe. Students either work or take special training for at least eight weeks and then travel independently throughout Europe. Participants are chosen on the basis of maturity, potential, and contributions to the campus and the community, and are placed in positions abroad for which they are qualified. Transportation is by chartered jet. Fares are subsidized substantially and travel grants-in-aid based on financial need are given to over 75 per cent of the participants. Fall application at International Center.

The WORLD PRESS INSTITUTE brings 15 working journalists to the United States each year for a program of study, work and travel. The journalists are enrolled at Macalester as Resident Fellows in American Studies during the first semester and attend classes and special seminars to learn about the United States. They then serve for three months as working interns on American newspapers, magazines and television stations, after which they tour the country.

Macalester College also sponsors the AMBASSADORS FOR FRIENDSHIP program, which provides an opportunity for foreign and American students to tour the USA and to meet Americans in their homes and on their jobs — to learn of America firsthand. Selected foreign students travel for six weeks during the summer with American students from Macalester serving as drivers and tour coordinators.

Four-College Exchange Program
According to an agreement with Hamline University, the College of St. Catherine, the College of St. Thomas, and Macalester, upper class, full-time, degree-seeking students may take one course per term at any one of the other three colleges tuition free, provided that the home institution has approved the course. Course schedules may be obtained from the Registrar. After selection of a course, an Exchange Program form must be filled out, endorsed by the student's
LEAVES OF ABSENCE

advisor and returned to the Registrar, who will contact the Registrar of the other college concerned and then inform the student of his acceptance or rejection.

A student may enroll in certain liberal arts courses at the University of Minnesota with his tuition paid by Macalester. He must be recommended to the University for enrollment in a given course by the Dean of Special Academic Programs and, in general, courses are limited to fields (such as Hebrew or Japanese) or specialized areas (such as graduate level mathematics or biology) not offered at Macalester.

Knoxville Exchange Program
Macalester has an exchange program with Knoxville College, a predominantly black institution at Knoxville, Tennessee. Students may attend Knoxville for either Fall or Spring Term. Registration is done at Macalester and all fees are collected there. The program is open to everyone, though sophomores and juniors usually are those who apply. Generally, it is desirable to inquire about this program six weeks before the beginning of a term. Further information may be obtained through the Office of Student Services.

Associated Colleges of the Midwest Program (ACM)
In 1969-70, Macalester became associated with the ACM. Participating colleges in addition to Macalester are: Beloit, Carleton, Coe, Colorado College, Cornell, Grinnell, Knox, Lawrence, Monmouth, Ripon and St. Olaf.

The ACM develops special programs and course studies, some of which Macalester will enter. For each of these, a faculty adviser will be named and will be in charge of handling application procedures. The programs and faculty advisers for the programs will be selected and announced early in the Fall Term.

(UMAIE) The Upper Midwest Association for Intercultural Education
Macalester participates in and serves as the headquarters for UMAIE, a consortium of regional colleges which plans a foreign Interim Term curriculum each year. Other institutional members of the organization are Gustavus Adolphus College, Luther College, St. Olaf College, St. John’s University, the College of St. Catherine, Carleton College, Hamline University and Augustana College in South Dakota. This group will enroll over 400 students in 24 courses abroad during January 1971 to study in 14 different countries, in Europe and Latin America.

Assistantship Programs
Three programs enable a significant number of upperclass students to participate in the work of faculty members and academic departments. During 1969-70, approximately 150 students were granted positions on the basis of their academic performance, at stipends ranging from $100 to $200 per four-month term.

SENIOR PRECEPTORS provide instruction to supplement regular teaching in their concentration area, ordinarily to students who feel the need for special help. Instruction is usually carried out on a group basis at no extra cost to the students enrolled.

DEPARTMENTAL ASSISTANTS are assigned tasks which relate to teaching functions on a department-wide level.

Each faculty member teaching full time is entitled to have a STUDENT ASSISTANT to aid in his teaching and research or other creative work and to give the student special opportunity for close individual contact with a faculty member.
General Academic Information

Calendar, Course Patterns and Student Load
The academic calendar is divided into a 14-week Fall Term (September-December), a four-week Interim Term (January) and a 14-week Spring Term (February-May). In addition, there are two four-week Summers Terms in June and July.

Each course offered in the Macalester curriculum is equivalent to four semester credits, except courses in physical education activities, forensics and speech activities, and music ensemble and studio work, as described under Requirements for Graduation in this catalog.

A student usually enrolls in four courses during each of the Fall and Spring Terms and one course during Interim Term. Summer students may take one course each four-week term. During a four-month term, a student may audit an additional course with the permission of the instructor and his adviser. A student may register for credit in a fifth course by petition; approval is usually granted only for students with B-plus averages.

The Interim Term
Courses in the Interim Term are planned to give the student the opportunity for uninterrupted and intensive study of a subject which particularly draws his interest. They are intended to encourage the greatest possible exercise of creative imagination and independent inquiry. Interim courses may include research in libraries, studios, museums or laboratories; contacts with visiting scholars, scientists or creative writers brought to the campus especially for this period; field trips as well as other off-campus projects for the study of political, economic and social institutions; various cultural expressions such as the theater. It is hoped that absence of the customary credit and grading provisions will encourage exploration of subjects a student might otherwise avoid and also encourage pursuit of intellectual inquiry for its own sake. Students are invited to share with faculty members suggestions for course topics and, in cooperation with faculty members, initiate and direct their own courses.

Note: If a student receives a U in an Interim Term he must make up the course in the following summer with a special independent study project in order to register in the next Fall term.

Graduation Requirements
A. COURSES: 31 courses successfully completed are required for graduation.

B. INTERIM: 4 Interim courses successfully completed are required for graduation.

C. PATTERNS OF CONCENTRATION: To insure appropriate depth within an area of knowledge, students are required to elect among (1) a departmental major concentration, (2) a core concentration, (3) an established interdepartmental major concentration or (4) an individually-designed interdepartmental major concentration.

1. A departmental major concentration consists of not less than 7 nor more than 11 courses within one department (including prerequisites) and up to 7 supporting courses outside the department, the total not to exceed 16. Departments will determine those courses, and sequences of courses, which constitute the various patterns for the major in that field. A department may also recommend (but not require) additional electives from among its own offerings or in supporting fields as indicated by the student’s educational and career objectives.

2. A core concentration in a given department consists of two sets of six courses, one set to be within the department, the other set outside of it. In general, departments suggest one or more patterns of courses with particular reference to the sequence within the department. This pattern is designed to meet the needs of the individual student and will also have a rational relation to the pattern of the courses within the department. Each student’s plan for a core concentration must be approved by the department concerned.
CONCENTRATIONS

3. An **interdepartmental major concentration** established by the faculty shall consist of not less than 9 nor more than 16 courses, including supporting courses and prerequisites. The sponsoring departments will determine those courses, and sequences of courses, which constitute the various patterns for the major in that field. The departments may also recommend additional electives as indicated by the student's educational and career objectives.

4. An **individually-designed interdepartmental major concentration** which reflects a disciplined area of inquiry crossing departmental lines may be negotiated between an individual student and a curriculum review board. An individual program requires the support of at least one faculty member who agrees to serve as the student's academic adviser in the course of his program. The curriculum review board will be composed of students and faculty selected by the Curriculum Committee. Final approval of an individual program will require the approval of the Curriculum Committee.

5. A student may obtain **two concentrations** by fulfilling the respective course requirements in those concentrations. Individual courses, where appropriate, may be counted toward both concentrations.

D. **GENERAL DISTRIBUTION REQUIREMENTS:** Each student must take at least one course in the academic division of the natural sciences and mathematics, at least two courses in the division of the humanities and fine arts, and at least one in the division of the social sciences. No more than 24 courses may be taken within one of these academic divisions. Courses may be counted both toward the general distribution requirements and concentration requirements.

Note: Students who transfer into Macalester or who do not proceed continuously toward their degrees are required to enroll in one Interim course for each six courses taken at Macalester during the Fall, Spring and Summer Terms, with the qualification that no more than four Interim courses are required for graduation.

**Curricular Recommendations**

A. **LANGUAGE COMPETENCY:**

1. **Foreign Languages:** Students are encouraged to develop proficiency in a foreign language and familiarity with the literature and culture associated with that language. As one means of achieving this objective, the College endeavors to provide interested and qualified students with the opportunity to study in a foreign country.

2. **English:** Oral and written skills in English are an integral part of all educational work in the Macalester liberal arts program, and departments will continue to provide for development and evaluation of these skills with recommendations for remedial work where necessary.

B. **INDIVIDUALIZED LEARNING:**

1. **Freshman Seminars:** In keeping with its commitment to individualized learning in a liberal arts community, Macalester encourages as many freshmen as possible to participate in a freshman seminar or other similar small-group course which is designed to develop an awareness of the student's own educational needs, the art of self-instruction, awareness of the style of inquiry in a particular discipline, and the relations between fields of knowledge.

2. **Individual Projects:** As many students as possible are encouraged to complete during their undergraduate years an exceptional piece of independent work of intellectual or artistic merit.

C. **INTERNATIONAL PROGRAMS:** Macalester encourages as many students as possible to participate during their undergraduate years in a study program abroad.

**Regulations Concerning Concentrations**

Students must file an approved plan for a pattern of concentration no later than the end of their fourth term. The plan is to be filed with the Registrar. Students in the teacher education program must receive approval from the chairman of the Education Department.

Departments (and "coordinating committees" for non-departmental concentrations) may develop and implement diagnostic and evaluation processes and procedures for students in their programs of concentration which are in addition to processes or procedures occurring within courses.
When students declare an area of concentration they will be given in writing a full description of the requirements for completing that concentration. This will include, in addition to course work, a description of any diagnostic and evaluation processes and procedures required as part of the concentration. Where such processes and procedures are included, copies of representative examinations or other instruments involved will be furnished in department offices and in the library for student use. When changes in programs of concentration occur, students already declared in that area will be permitted to complete the program under the description given them at the time of original declaration or under the new program, at their discretion.

Based on kinds of criteria known in advance by the students, departments (or coordinating committees) will provide to the Registrar for each student graduating with a concentration in that field a statement to be recorded on the transcript that the student graduates (a) in the field, (b) with distinction in the field or (c) with highest distinction in the field.

Each department (and coordinating committee) will establish an advisory committee involving students with the responsibility of advising the department with respect to the instructional program of the field.

For graduation, all courses in the program of concentration must carry an overall average of 2.00 or better. A “D” grade may be included in the program of concentration provided that it is approved by the chairman of the sponsoring department.

Testing Out and Credit by Examination
Students whose mastery of an area of knowledge is exceptional may, upon approval of the Dean of the Faculty and the chairman of the department concerned, take an examination for college credit or for a waiver of requirements in courses for which students are eligible to receive credit in the ordinary manner. Only a superior rating will qualify for college credit and only a very good rating will qualify for a waiver.

Residence Requirement
A bachelor's degree candidate will normally have been in attendance at Macalester College for the full four years. However, students may transfer a maximum of 16 courses or the equivalent of the first two years of college work. The number of years spent in residence is not to be less than two. The senior year must, in all cases, be spent in residence.

Teacher Certification Requirements
A student who works toward a teaching certificate usually has fewer electives in his program than other students because of the number of courses required by the state for teacher certification. Students interested in teaching should begin to set up their study programs early and should consult with the Education Department.

Student teaching is one of the requirements for certification to teach elementary or secondary education. Two credits are required, and may be taken during Spring, Fall or Interim Term. Academic credit is received.

Grading Systems
The regular grading system is based upon the grades A, B, C, D and F carrying, respectively, honor points of 4, 3, 2, 1 and 0. A student’s grade point average (GPA) is computed by the division of his total honor points by the number of courses attempted on the regular grading system.

During the 1970-71 academic year an instructor may at his discretion assign a grade of I (incomplete) and grant a specific extension of time up to one calendar year for completion of the work of a course. If a student does not complete the work for the course by the deadline or does not petition for an extension of the deadline his grade in the course will become an F.

Optional to the student is the S-U system. Any S grade stands for a performance of C work or better, a U grade stands for D or F work. An S or U grade does not figure into the student’s grade point average, but a student earns the same credit for an S grade as he does for an A, B or C grade. Students may choose to take courses on an S-U basis, subject to the following restrictions:

1. Courses taken on an S-U basis may not be taken as part of a concentration, either major or core, except with specific permission of the department chairman. Ordinarily, if a student decides to change his concentration to a new area and already has taken courses in that area on an S-U basis, the courses will be allowed by the department, but written permission must be given by the department chairman.

2. Generally, a student is eligible to take only one course each term on an S-U basis (incoming freshmen excluded). Junior and Senior Honors program participants are eligible to take two courses each term on an S-U basis, and may
also at their department's discretion receive S-U grades in Honors courses of that department.
3. During the 1970-71 academic year, freshmen may take as many courses on an S-U basis as they wish.
4. All Interim Term, applied music, and P.E. activity courses are taught on an S-U basis. Freshmen Seminars may be offered on an S-U basis at the instructor's discretion and then on that basis at the student's option. If a student elects S-U grading in the Seminar, it may be in addition to another S-U course.
5. A student may take a course during Summer Session on an S-U basis, but this will subtract one available S-U option for him in the next term of study.
6. A student must indicate which course or courses (if any) he is taking on an S-U basis when he initially registers. He may change his selection only during the first three weeks of the term. He must make any changes by obtaining a special change of registration form from the Registrar's Office.
7. If a student receives a U in an Interim Term he must make up the course in the following summer with a special independent study project in order to register in the next Fall Term.

Academic Records
A record is maintained by the Registrar of all academic work, including courses graded F, U, I and W as well as courses successfully completed. Transcripts for outside use will be prepared as follows: A Macalester transcript is a record of those courses successfully completed and included by the student in a program of studies for credit.

The transcript does not show courses for which grades of F, U, W or I were received or courses which were successfully completed but which the student does not intend to apply toward graduation. Courses once removed from the list of courses counting toward graduation may not be reinstated except by petition.

A student's overall GPA for such internal purposes as honors, graduation eligibility, probation, etc., will be derived from all courses taken (except those graded S/U), not just those included on the transcript.

Transcripts are released only at the written request of the student. Preparation of each transcript after the first requires the payment of a $1 fee, payable in advance to the Business Office. Additional academic information will be released only if the student addresses a written request to the Dean of the Faculty.

Academic Performance, Probation and Dismissal
Probation is used as a warning to a student that he will, if he does not improve academically, be subject to dismissal. Through the Office of Student Services, an effort is made to provide counseling for students on probation. The student's faculty adviser also is available for counseling. If a student does not demonstrate satisfactory progress in his performance during the following term, he is subject to dismissal from the College.

A. REQUIREMENTS BY CLASSIFICATION
1. A student will be placed on probation at the end of his first term if he has a grade point average* of 1.50 or below, unless he comes under the provisions in B below.
2. A student who has not achieved a cumulative average of 1.80 by the end of his second term will be placed on probation (see also B).
3. A student will be placed on probation if he has a cumulative average below 2.00 at the end of his third term (see also B).
4. A student who has not attained a 2.00 cumulative grade point average by the end of his fourth and all subsequent terms will be subject to dismissal (see also B).
5. In order to graduate from the College a student must have at least a 2.00 cumulative grade point average in all courses taken for credit at the time of graduation.
6. At the end of the spring term, 1971, the following additional regulation on probation and dismissal will apply to all students:

A student will be placed on probation or may be considered for dismissal if he has not successfully completed six regular-term courses by the end of his first two regular terms and nine, thirteen, sixteen, twenty, twenty-three and twenty-seven regular-term
courses by the end of his third, fourth, fifth, sixth, seventh and eighth regular terms, respectively. Under unusual circumstances, a student may petition for a waiver of this regulation. (Students who are enrolled for two or less courses per term will be governed by progress requirements proportionate to those outlined above for full-time students.)

B. REQUIREMENTS AND CONDITIONS OTHER THAN BY CLASSIFICATION

1. Any student who obtains a grade of F or U in two or more courses or obtains a 1.00 grade average during any term will be subject to dismissal or probation.

2. Any student who is on probation must maintain at least a 2.00 average during the first probation term and must do so on the basis of the number of courses for which he is registered for credit. A student who is continued on probation after a first term in probation will be deemed to be on strict academic probation and will be required to earn a term average sufficiently above a 2.00 to remove himself from probation within a reasonable time, the required term average being determined by the Dean of the Faculty or his representative. Strict probation may be invoked for a first term of probation where that is deemed wise.

3. Any student while on probation who fails to achieve the required average or who incurs a grade of Unsatisfactory in an Interim Term shall be subject to dismissal.

4. While on probation, students must restrict their extracurricular and outside work and may suffer loss of certain privileges such as rights to scholarships or employment by the College.

C. READMISSION FOLLOWING DISMISSAL

A student may apply for readmission at any time. Generally, he is expected to remain out of school at least one four-month term before being considered for re-admission; re-admission immediately after being dismissed is not ordinarily possible. A student may appeal a dismissal decision by applying for immediate re-admission.

*COMPUTATION OF GRADE POINT AVERAGE

Grade point averages are based on a four point scale and are computed by dividing the number of honor points earned by the number of courses completed for a regular letter grade (A, B, C, D, or F).

If the completion of an Incomplete (I) grade raises a student's average above the level necessary for being removed from probation, the probation notation, following the term in which the Incomplete grade was received, will be removed from his permanent record card.

Rules Concerning Registration and Validation

Students are required to register and/or validate at definite times announced in advance by the Registrar. In the case of a student's delay in registration or validation beyond the announced days, a fine of $5 per day will be assessed. Students may not enroll after first two weeks (in Summer Term, first three days) following the first day of classes in each term except by special petition and may be asked to carry proportionately restricted loads.
LEAVES AND WITHDRAWALS

Auditing Courses
A regularly enrolled full-time student in good standing will be charged a fee of $10 for each course audited except that in the case in which the student is taking only three courses for credit, no fee for one audit course will be assessed. To audit a course, an eligible student must register with the Registrar with the approval of the instructor and his adviser. No entry will be made on the student's transcript for auditing a course.

Adding Courses
A student may add a course during the first three weeks of the semester by obtaining the signature of his adviser and the instructor of the course on an add card available in the Registrar's Office.

Withdrawing from Courses
A student may withdraw from a course, after consultation with (but not necessarily approval of) both his adviser and the instructor of the course, at any time before the beginning of the 12th week of the semester. Forms for dropping courses are available in the Registrar's Office.

A student will receive a grade in any course from which he does not officially withdraw.

Withdrawal from the College
A student may request complete withdrawal from the College at any point in a term by consulting with the Dean of Student Services Office. In order to obtain a tuition refund and to avoid F grades, follow the policy described in the section on Admissions, Expenses and Financial Aid.

Students leaving college before the end of a term without officially withdrawing from college will receive the grade of F for all courses being taken during the term of withdrawal.

Leaves of Absence
The Dean of the Faculty may grant a leave of absence for a specified period of time to any student who petitions to leave Macalester for personal reasons or for the purpose of attending another institution. Questions about a leave of absence should be addressed to the Registrar's Office. Petition forms for a leave of absence should be obtained from and returned to the Registrar's Office. Certain specific regulations concerning the leave of absence are noted below:

a. Any student who leaves Macalester for reasons of entering the military service shall be granted a leave of absence upon notification of the Dean of the Faculty.
b. Any student who leaves Macalester because of conviction of a criminal offense which has no relation to a violation of Regulations Concerning Conduct of Members of the Macalester College Community shall be granted a leave of absence upon notification of the Dean of the Faculty.
c. Students presently enrolled under a guaranteed tuition plan who receive leaves of absence are allowed to re-enter under guaranteed tuition.
d. If the Dean of the Faculty denies a petition for a leave of absence, the student may appeal the decision to the Student-Faculty Judicial Council.
e. In order to be guaranteed enrollment for a particular term following a leave of absence, a student must contact the Dean of the Faculty one month in advance of the date on which classes begin in that term.
f. If the student does not return within the specified period of time, he must apply for an extension of his leave prior to its termination. If he does not apply for an extension, he must apply for re-admission at the time he desires to return to the College.

Readmission to the College
Any student not on a leave of absence who was not enrolled or who did not pre-register in the term preceding that term which he wishes to resume his studies is required to make application for re-admission. Application forms should be requested of the Registrar and returned to the Registrar's office at least one month prior to the date of intended registration.

Final Examinations
The following policies will be observed by students and faculty with regard to final examinations.

The Registrar will announce in advance a final examination schedule for the convenience of the College. In this schedule, each course will be reserved a designated two-hour period and a place to be used for a final examination, if needed, as the instructor deems necessary for the proper conduct of the course.

Students may negotiate exemptions or changes in schedule with instructors whenever circumstances warrant such
considerations, as in the case of schedule conflict, three or more examinations in a single day or special senior commitments.

Proctoring, special materials, time allotment and other matters pertaining to the actual circumstances of the examination are entirely the responsibility of the instructor. Students and Faculty are reminded of the policy on Student Violations of Ethical Practices in the statement on "Student Rights, Freedoms and Responsibilities at Macalester College." Students are expected to sit for their final examinations at the time scheduled. Individual requests to take an examination at a different time will have to be approved by the Dean of the Faculty.

Classification of Students
Sophomore standing is granted upon the completion of seven courses and 14 honor points. Junior standing is granted upon the completion of 15 courses and 30 honor points. Senior standing is granted upon the completion of 23 courses and 46 honor points. Special student classification is assigned to non-degree candidates.

Honors in Scholarship
Honors in Scholarship are awarded at graduation on the basis of cumulative grade point average and are entirely independent of the Departmental and Interdisciplinary Honors Program described elsewhere.

To qualify for CUM LAUDE a candidate must attain a cumulative grade point average of 3.3. For MAGNA CUM LAUDE the average must be 3.6. For SUMMA CUM LAUDE the average must be 3.75.

Minimum Size of Classes
The College does not hold itself bound for instruction in any elective course for which fewer than five students have registered. Such classes may, however, be organized at the option of the department chairman with approval by the Dean of the Faculty.

Petitions Related to Academic Regulations and Requirements
A student may seek exception from any academic regulation or requirement by written petition. Petition forms must be obtained from and returned to the Registrar's Office.

Action on such petitions is taken by the Faculty Curriculum Committee or the Dean of the Faculty, as a representative of that committee.
The following course listings are for the Fall and Spring Terms. Separate course listings are issued for the Interim and Summer Terms.

AREA STUDIES PROGRAM

Mr. Armajani, Mr. Berry, Mrs. Johnson, Mr. Mitau, Mr. Swain, Mr. Trask

The Area Studies Program provides students, faculties, and administrators of the four participating colleges (Hamline, Macalester, St. Catherine's and St. Thomas) with an opportunity to study together, work together and plan together, to the end that levels of scholarship may be raised, interest in serious study may be stimulated, and closer bonds of friendship and understanding may be developed. The program seeks to offer to students in these four liberal arts colleges in St. Paul a series of integrated studies on the upper class level, given cooperatively by professors in the four colleges, as a unique contribution to American undergraduate education and to contribute to the life of the community by sharing special lectures and programs as widely as possible with the citizens of St. Paul within the area selected for special study.

Area Studies courses will consider the history, foreign policy, and political, economic, and social institutions as well as the geography, nationalities, natural resources, art, literature, music, religion, education, manners, morals, and customs of the various areas.

70, 71. Area Study of Africa
Upperclass standing. Fall and spring terms.

72, 73. Area Study of Russia
Upperclass standing. Fall and spring terms. (Not offered 1970-71)

74, 75. Area Study of Latin America
Upperclass standing. Fall and spring terms. (Not offered 1970-71)

76, 77. Area Study of the Middle East
Upperclass standing. Fall and spring terms. (To be offered 1971-72)

78, 79. Area Study of East Asia
Upperclass standing. Fall and spring terms. (Not offered 1970-71)

FRESHMAN SEMINARS

Mr. Swain, Mr. Warde, Mr. Fisher, Miss Brewer, Mr. Holtz, Mr. Reedy, Mr. Sanford, Mr. Kester, Mr. Blakely

Freshman seminars allow a limited number of first-year students an opportunity to work closely with a faculty member on a subject of mutual interest in order to develop a genuine sense of intellectual and social community. Seminar groups are restricted to 12 students and ordinarily meet for several hours one afternoon or evening each week in the home of the instructor or in a campus lounge. A seminar counts as an elective course.

Seminar 1. The Social Bond: Shackles or Support
Fall term

Seminar 2. Autobiography
Fall term

Seminar 3. Life and Thought of Mao Tse Tung
Fall term

Seminar 4. Health-related Fitness
Fall term

Seminar 5. Education and Values
Fall term

Seminar 6. Education and Values
Spring term

Seminar 7. The Greek Experience
Spring term

Seminar 8. The Role of the Artist in German Literature
Spring term

Seminar 9. The Poetry (or lack of it) of Contemporary Songs: Dylan, et al.
Spring term

Seminar 10. The Novella: A Neglected Literary Form
Spring term

LATIN-AMERICAN STUDIES PROGRAM

Mr. Fabian, Mr. Satterthwaite (Coordinators)

The Latin-American Studies Program is designed for students with regional interests in South and Central America who plan a career in governmental agencies, in journalism, in education abroad, or work in services to Latin-Americans under the auspices of private groups.

Major Concentrations

A major concentration in Latin American Studies can be taken in either the Spanish or the Geography Department (see Geography and Spanish) and must be complemented by History 51 in either case.
If the student elects to major in Spanish he is expected to take eight courses above the level of Elementary Spanish including Spanish 31, 32 (unless excused by placement), 51, 61, 62, 65 and other courses in Spanish and Spanish-American literature up to the total of eight. A Senior Seminar is also required. The supporting courses should include Geography 42, History 51, and other appropriate courses in Geography, History, Sociology, Political Science or Portuguese (total of four).

A student who elects to major in Geography will take Geography 11, 25, 26, 42, 50, 52, and an independent course on Latin America. Further work in the geographic region of special interest can be arranged. The student should complement the seven courses in geography with History 51, Political Science 45, Sociology 64 and up to five courses in Spanish which must include Spanish 65.

Students in the Latin-American Studies Program are urged to avail themselves of one of the various Macalester College programs for study or travel in Spanish-speaking countries. Students are requested to discuss this program with the two coordinators.

ENVIRONMENTAL SCIENCE

Mr. Webers, Mr. Lanegran (Coordinators)
(This interdisciplinary course also is listed as Biology 15, Geology 15 and Geography 15)

15. Interdisciplinary Course
A multi-disciplined introduction to the scientific aspects of the “physical” environment. The course will stress biological, geographical, and geological facets of the environment with contributions from the disciplines of chemistry, physics and economics. Three lectures and one of the following per week: laboratory, field trip, or seminar. Prerequisite, one course in the science division. Fall term.

THE HUMANITIES PROGRAM

Mr. Donovan (Coordinator)
The aim of the Humanities Program is to present for study and discussion certain classic and seminal statements (both in letters and in art) that express characteristic views of deity, man, and the world, especially in Western civilization.

General Graduation Requirement
Any of the courses in Humanities can satisfy general graduation requirements in the humanities and fine arts division.

Core Concentration
The Humanities core shall consist of twelve courses. The inner core in Humanities normally includes 25, 26, 29, 56, and one course numbered above 90, together with Classics 21 or 22 (Classical Epic and Lyric Poetry; Greek and Roman Drama). Supporting the concentration will be six courses chosen in close consultation with the adviser from one of the following options.

Option A:
Intellectual and Cultural History. Six courses with at least one from each of the first three disciplines:
Art History
Music (Music 10 or Advanced courses in History of Music or Music Literature)
Philosophy
Speech (Selected courses in Rhetoric and Theater)
Religion (Selected courses)
History (Selected courses)

Option B:
Foreign Language Core Concentration. Six courses in literature beyond the elementary courses in a foreign language normally excluding “conversation” courses.

Option C:
English Literature. Six courses in English Literature (excluding English 18) chosen so as to make a meaningful pattern.

25. The Modern World — I
Classics of European art and letters from the 17th and 18th centuries. Fall term.

26. The Modern World — II
The 19th century. Spring term.

29. Major Continental Literature of the Twentieth Century
The expression of ideas in major European literature of the 20th century. Studies in selected representative works. Prerequisite, sophomore standing. This is the same course as English 29.

50. Topics in the Humanities
Seminar or independent study to fill out and pull together the matter of the first four courses. Prerequisite, junior standing.

56. The Medieval and Renaissance World
Classics of European art and letters. Prerequisite, junior standing or permission. Spring term.
65. The Oriental World
Classics of Eastern art and letters.

95, 96. Independent Study
Further reading and the writing of papers based upon the matter of the core and supporting courses. Senior standing and permission.

INTERNATIONAL STUDIES PROGRAM
The International Studies Program is interdepartmental in nature and includes these faculty members and departments:
Miss Dodge (Coordinator)
Mr. Bunting, Economics and Business; Mrs. Johnson, Geography; Mr. Trask, History; Mr. Sigler, Political Science; Mr. Wendt, Psychology; Mr. McCurdy, Sociology and Anthropology

The International Studies Program is designed for (1) students who plan a career in governmental agencies, in the service of international organizations, in journalism, in the foreign service of banks, industrial or commercial organizations, in the missionary field, in the educational field, and (2) students who wish to obtain a general understanding of international relations for more intelligent citizenship in the modern world community.

Recommended Program of Study
Students elect a major from one of the participating social science departments. The student will be expected to fulfill the departmental requirements for the major in that field but it is anticipated that his program of study will have an international focus. Students should consult with the committee members listed above for course advice in the department of their major.

In addition to the major, students are encouraged to develop a competency in one or two additional social science departments by: (a) following an inner core sequence with six courses recommended by one department, or (b) by taking a minimum of six courses selected from two additional participating departments. These additional courses should be selected in consultation with one more committee member or two more committee members, depending on choice (a) or (b), from the above list.

Independent studies across departmental lines are highly desirable. Arrangements for independent studies with guidance from more than one of the committee members listed above are encouraged.

Students will ordinarily make arrangements on their own through the appropriate departments in respect to such language skills as may be applicable to their career goals in the International Studies field although advice will be provided where necessary. Students are normally expected to avail themselves of the opportunities for overseas study or travel available at Macalester College (see Special Overseas Program listings in the catalog).

General Science and Social Science Concentrations (See Education, Page 61)
The Art Department is oriented to meet the needs of four groups of students:

**Group 1.**
Those who wish to explore an approach to knowledge that aims at developing and refining their aesthetic values, through contact with art media in the studio and art theory in the lecture classes.

**Group 2.**
Those with special aptitudes in practical art who plan for a career as artists or who plan to continue their studies in a professional art school.

**Group 3.**
Those who plan to teach art in the public schools. Such students will also require courses in Secondary Education or in Elementary Education (see Education).

**Group 4.**
Those who wish to concentrate further in the theory and history of art in graduate school.

### General Graduation Requirements

Art 30, 34, 35, 42, 49, 60, 61 and 62 count toward the general graduation requirement in fine arts and humanities.

### Major Concentration

**Plan A**
(for students in Groups 1, 2 and 3):
A major concentration for these students will consist of twelve courses, ten from the Art Department and two from without the department. It will include Art 30, 34, 35, 49, 60, 61, 66, 71 or 72 or 75, 98; one additional course selected from the Art curriculum; Philosophy 71 (Aesthetics), and one course from Speech (Interpretation), Music or Literature.

**Plan B**
(for students in Group 4):
A major concentration for these students will consist of twelve courses, ten from the Art Department and two from without the Department. It will include Art 42, 49, 60, 61, 62, 75, 76, 77, 78; one course selected from Painting, Graphics or Sculpture; Philosophy 71 (Aesthetics); and one history course beyond the social science requirement.

### Core Concentration

A core concentration will consist of six courses in Art: 30, 34, 35, 49, 60, 61 and six additional courses to be selected outside of the Art Department. These should not include more than two disciplines and should be programmed with the approval of the Art Department adviser.

### Honors Program

Students interested in Honors work in Art should consult with the department chairman.

**30. Drawing**

Fundamental techniques, varied approaches, and individual development in drawing from the human figure, still life, nature and the imagination. Four two-hour periods per week. Fall and spring terms.

**34. Painting**

Emphasizing a variety of approaches in oil and water-base paints. Four two-hour periods per week. Fall and spring terms.

**35. Sculpture**

Various techniques and materials involving modeling, carving, welding, and bronze casting. Four two-hour periods per week. Fall and spring terms.

**41. Fine Arts in the Elementary School**

Concepts of learning and instruction as they apply to art in the elementary school. Fall and spring terms.

**42. Art, Its Processes and Application**

Four hours of studio to familiarize the student with basic art experiences and techniques in drawing, painting, sculpture, and crafts. Two hours of lecture and discussion relating art to individual growth and its broader application to life. Recommended for students in Education, Psychology, and Sociology. Six hours per week. Spring term.

**49. Principles of Art**

A philosophical approach to the creative field, relating art to man, the creator and consumer, and to the social and psychological. Three hours of lecture and discussion, two hours of studio per week. Fall term.

**50. Topics**

Work in a special area of art, usually with a visiting artist. Area to be announced in advance of registration. For 1970-71, topic will be Ceramics.

**51. Secondary Curriculum and Instruction**

General principles and procedures in instruction and application of these in the specific secondary teaching areas. Fall and spring terms.

**55. Graphics**

Etching, block printing, photography, lithography, and serigraphy. Four two-hour periods per week. Fall term.
60. History of Art — I
Western Art through the Renaissance. Four hours per week. Fall term.

61. History of Art — II
Baroque through Contemporary Art. Four hours per week. Spring term.

62. Art of the Last Ten Years
Major trends in painting, sculpture, and architecture of the past ten years, with special emphasis on historical, aesthetic, and philosophical development. Four hours per week. Fall term.

66. Design
Concentration on elemental visual properties such as color, shape, texture, space and their creative possibilities. Four two-hour periods per week. Spring term.

70. Advanced Drawing
Continuation of Art 30 with greater emphasis on individual expression. Four two-hour periods per week. Spring term.

71. Advanced Painting
Continuation of Art 34. Exploration of additional media to suit expressive needs. Four two-hour periods per week. Fall and spring terms.

72. Advanced Sculpture
Modeling, carving, and casting, with emphasis on the personal approach. Four two-hour periods per week. Fall and spring terms.

75. American Art
A comprehensive study of the painting, sculpture, architecture and household arts of the United States from earliest Colonial times to the present with particular reference to European influences and to indigenous tendencies. Four hours per week. Spring term.

76. Oriental Art
Art and architecture of India, China, and Japan; aesthetic principles; relation to Oriental philosophies. Four hours per week.

77. Primitive Art
Art of the cultures of Africa, Oceania, and the Americas; pre-historic art. Four hours per week.

95, 96. Independent Projects
Independent work in any art medium or in the history of art, with departmental approval. Advanced students in Art concentrations only. Fall and spring terms.

98. Senior Seminar
A synthesis of the knowledge acquired in the Art Department with that of other areas of study. Students in Art concentrations only.

BIOLOGY

The objective of the Biology Department is to educate its students in the content, methods, history, and philosophy of biological science and to relate this science to certain practical and philosophical problems of man. Some of the departmental offerings cover the subject areas recommended by the AIBS Subcommittee on Facilities and Standards as a desirable curricular structure for biology, while other courses examine selected fields in some depth and contribute to a well-rounded major program.

These courses, with the addition of supporting work in other sciences and mathematics, allow preparation for careers based on biological science, with or without formal postgraduate training. These include: professional biology, with Ph.D. training leading to college or university teaching and research; industrial and government research; medicine, veterinary medicine, dentistry, nursing, medical technology, physical therapy, and a variety of para-medical specialties; hospital administration; conservation work; and business careers in the drug and other industries.

A number of departmental activities contribute to the general education of biology students. Phi Delta Mu is a local organization of pre-medical and pre-dental students which brings speakers to the campus, arranges trips to places of interest, holds social events, and helps to disseminate information about preparation for professional school. Alpha Delta Theta, a professional organization for young women interested in medical technology, has an active chapter on campus. The visiting speaker program and other sources are used to bring prominent biologists into the department for visits ranging from a day or so to a term. These visitors work with classes, Honors program groups and individual project students, and also give general lectures open to all students interested in biology. The members of the department staff have skills and a wide range of materials to use in coordinated pre-professional and career advising, as well as in finding part-time or summer positions suitable for biology students.

The department features special strength in field, developmental and physiological biology. However, most of the major fields of undergraduate biology are represented in its offerings, and the major requirement is flexible so that emphasis can be given to one particular interest.

The field biology teaching effort is supported by a 270-acre...
field biology teaching area near the campus, where teachers and students have ready access to natural aquatic and terrestrial habitats adapted to ecological study. Physical facilities have been added to the natural ones. Two field biology courses and the first course include extensive field work. Several distant field trips are made each year under the auspices of the department, which complement the field biology offerings. Each Interim Term at least one off-campus field biology course is offered. This most usually is marine biology, taught at a marine laboratory in Florida.

Occasionally other Interim Term courses are given in such subjects as desert ecology (in Arizona) and winter ecology (in Minnesota).

The department is housed on the campus in a new (1970), well-equipped laboratory building which also contains the electron microscope lab and computer.

Major Concentration
The biology major consists of eight courses of biology, two courses of chemistry, and two elected courses in any department of the science division or the Philosophy Department.

The biology courses are Biology 11, 12 and 13, and five advanced courses selected in consultation with and approved by the major adviser. These advanced subjects must constitute a reasonable sequence within themselves and with the elected courses, but each student is free to propose his own program. Only one of the five advanced courses can be in individual research and independent study (Biology 45, 46, 95, 96). The first three courses should be completed by the end of the sophomore year.

The required chemistry is Chemistry 11 and 12. A qualified student may take Chemistry 13 in place of these, in which case he would have three elected courses in the major instead of two.

The elected courses ordinarily would be chosen from among mathematics offerings relevant to biology, such as calculus and statistics; from geology courses with a strong biological component; from advanced chemistry, particularly organic and analytical; college physics; additional biology; and philosophy courses concerned with logic, metaphysics, or the philosophy of science. Other courses, and subjects in other departments, will be considered if the student proposing them can justify their inclusion in a worthwhile program.

All students who expect to undertake work toward any kind of graduate degree after leaving Macalester should realize that certain science courses in addition to biology are among prerequisites of graduate and medical schools. These most often include organic chemistry, college physics, calculus, quantitative analysis, and less frequently, other chemistry or mathematics courses. The members of the Biology Department are prepared to assist students in determining the prerequisites of these schools, and in designing a course of study which will include the necessary subjects.

Core Concentration
The department provides for the use of the core concentration plan for students whose interests either do not require a full biology major, or which may demand some courses which cannot fit into a biology major concentration. The six biology courses in a core are Biology 11, 12 and 13, and three advanced courses selected in consultation with the faculty adviser. The remaining six courses may be in any of several other departments, and are selected according to the student's particular requirements, such as preparation for science teaching at the secondary level, physical education teaching, or preparation for medical or dental school. The set of twelve courses must bear a sensible relationship to each other, and all core concentrations require the approval of the department chairman.

Departmental Honors Program
The Biology Department has a full Honors program which qualified students may enter in their fourth, fifth or sixth term. The minimum program consists of a thesis course (Biology 95 or 96) in which the Honors research project is carried out and which may be included as one of the eight Biology courses required for the major. The thesis must be defended before an outside examiner and presented at a departmental seminar. To this minimum program may be added other of the regular advanced courses, modified for Honors candidates and taken for Honors credit; individual independent study for Honors credit; and approved Honors courses in other departments. Interim Term and summer work also may be done for Honors credit, if the student so desires.

An Honors student may have two independent study courses
included within the eight Biology courses required for a
major, but only one such course may be devoted to
the Honors thesis.

11. Principles of Biology
An introductory course considering fundamentals and concepts of
biology in terms of historical background and with emphasis on
modern developments. Lecture and laboratory subjects vary from
the molecular to the eco-system levels of biological interactions,
with an evolutionary approach to their study. The course is open
to non-science majors and satisfies both general graduation and
departmental major requirements. No prerequisite. Three lectures
and two two-hour laboratory periods per week. Fall and
spring terms.

12. Introduction to Zoology
The course is divided between a study of vertebrate and invertebrate
animals. The structure, evolution and physiological function of
organs and organ systems, especially of mammals, is the emphasis
given in the vertebrate part of the course. In the invertebrate
portion, a typical survey is made of the taxonomy, structure and
habitat of selected types from eight phyla. About one week is spent
on embryology, including an introduction to serial sections of chick
embryos. Prerequisite, Biology 11. Three lectures, two two-hour
laboratory periods per week. Fall and spring terms.

13. Introduction to Botany
An elementary course which covers botanical principles and a
survey of the plant kingdom. Particular emphasis is given to the
principles exemplified by seed plants. Prerequisite, Biology 11.
Three lectures, two two-hour laboratory periods per week. Fall and
spring terms.

15. Environmental Science (an interdisciplinary course,
same as Geography 15, Geology 15)
A multi-disciplined introduction to the scientific aspects of the
“physical” environment. The course will stress biological,
geographical and geological facets of the environment with
contributions from the disciplines of chemistry, physics and
economics. Three lectures and one of the following per week:
laboratory, field trip, or seminar. Prerequisite, one course in
the science division. Fall term.

40. Field Zoology
A study of the local fauna, including phylogenetic relationships,
taxonomy, life histories, distribution and behavior. The importance
of these animals economically, ecologically, aesthetically, and in
human health, is emphasized. Study of natural groups of animals in
the laboratory is followed by extensive field observations.
Prerequisite, for biology majors, Biology 11 and 12; for others,
consent of the instructor. Three lectures, two two-hour laboratory
periods per week. Spring term.

41. Ecology
A study of natural communities and the principles which underlie
their structure and change. The physical factors of the environment,
population dynamics, energy flow and conservation are
emphasized. Prerequisite, Biology 11; Biology 12, 13 and 40 are
recommended. Three lectures, two two-hour laboratory periods per
week. Fall term.

42. Parasitology
The adaptations of parasites and some other kinds of animal
symbionts to solutions of their biological problems are studied,
with emphasis on structure, ecology and life cycles. All phyla
containing parasitic species are covered. There is an elementary
taxonomic treatment, and special topics such as immunity and
resistance are treated in the latter part of the course. Prerequisite,
Biology 12. Three lectures, two two-hour laboratory periods per
week. Spring term.

43. Microbiology
A course devoted to the study of microorganisms, with the
emphasis on determinative bacteriology. Prerequisite, Biology 12
or 13; Chemistry 37 recommended. Three lectures, two two-hour
laboratory periods per week. Fall term.

44. Vertebrate Anatomy and Evolution
The study of the origin, evolution and natural history of living and
fossil vertebrates as revealed by their anatomical, ecological and
behavioral adaptations. Laboratories stress the comparative
anatomical study of preserved specimens representing all major
Chordate groups. Lectures stress theoretical aspects. Prerequisite,
Biology 12. Three lectures, two three-hour laboratory periods per
week. Spring term.

45, 46. Individual Research and Independent Study
For freshmen and sophomores, including Honors work. Prerequisite,
consent of the instructor. Fall and spring terms.

49. Embryology
A comparative study of vertebrate development and differentiation.
Laboratory work stresses the anatomical development of the frog,
chick and pig. Lectures emphasize experimental and theoretical
aspects of development. Prerequisite, Biology 12. Three lectures,
two two-hour laboratory periods per week. Fall term.

51. Algae and Fungi
The study of the physiology, morphology, ecology and phylogeny
of the algae and fungi. The laboratory stresses the basic techniques
for the study of these plants. Prerequisite, Biology 13; Biology 43
recommended. Three lectures, one three-hour laboratory period per
week. Spring term.

52. Genetics
A general genetics course giving equal emphasis to the classical
and the modern phases. Prerequisite, Biology 11. Three lectures
and two two-hour laboratory periods per week. Fall term.
CHEMISTRY

61. Histology
A study of the microscopic structure and ultrastructure of animals, with particular attention to structure-function correlations. Prerequisite, Biology 12; Chemistry 12 or 13 recommended. Three lectures per week, and directed independent study laboratory equivalent to six hours per week. Fall term.

63. Plant Physiology
The physiology of plant nutrition, metabolism, and growth and development. Topics include: photosynthesis, intermediary metabolism, mineral nutrition, water relations, auxins and growth, and tropisms. Prerequisite, Biology 13 and Chemistry 37. Three lectures, one three-hour laboratory period per week. Fall term.

64. Cell Physiology and Biochemistry
The study of structural and functional relationships of cells and their physico-chemical environments as revealed by biochemical methods and the electron microscope. Laboratories, while stressing activities of the cell, bring students into contact with current techniques of investigation and analysis such as cell fractionation, micro-respirometry, electron microscopy, electrophoresis, chromatography, etc. Prerequisite, Biology 12 and Chemistry 37. Three lectures, one three-hour laboratory period per week. Fall term.

65. Advanced Botany
The familial characteristics of the Embryophyta, principally the Angiosperms. Other topics pertaining to plant relationships, such as chromatography, metabolic pathways and distribution patterns will be selectively covered as desired. This is mainly a laboratory course. Prerequisite, Biology 13. Two three-hour meetings per week. Spring term.

95, 96. Individual Research and Independent Study
For juniors and seniors, including Honors work. Prerequisite, consent of the instructor. Fall and spring terms.

CHEMISTRY

Mr. Doomes, Mr. Scott, Mr. Schwartz, Mr. Slowinski, Mr. Stocker (Chairman), Mr. Wolsey

The Chemistry curriculum is designed to serve three purposes:

1. To enhance and broaden the general culture of all its students by a consideration of some of the great intellectual achievements and current frontiers in the field of chemistry.

2. To lay the foundation for graduate study and professional careers in chemistry in the academic, research or industrial fields.

3. To provide the training in chemistry necessary for those who plan professional careers in biology, biochemistry, geology, medicine, or dentistry.

General Graduation Requirement
Chemistry 11 or 13 may be used to fulfill the physical science requirement without specific college level prerequisites.

Major Concentration
The major concentration in Chemistry consists of Chemistry 11 and 12, or 13, plus 23, 37 and 38, 55 and 56, 63, Physics 21 and 22, or 26 and 27, Mathematics 22, and 33 or 34, and one year of a foreign language.

Core Concentration
The core concentration in Chemistry includes Chemistry 11 and 12, or 13 and 23, plus 37 and 38, and 55 and 56. Required supporting courses are Physics 21 and 22 or 26 and 27 and Mathematics 21 and 22. Two additional science courses are required and may be chosen from the fields of biology, geology, physics, or mathematics.

Honors Program
The Honors Program in Chemistry includes Honors seminars in Chemistry 38, 55 and 56, plus two seminars chosen from Chemistry 61, 62, 63, 64, and 66. Ordinarily the Honors student will spend at least one summer working on a research problem.

Further Preparation
Students contemplating graduate work should elect additional courses in Chemistry in consultation with the department. The Chemistry Department is approved by the Committee of the American Chemical Society for Professional Training; students wishing to meet the requirements recommended by this Committee should confer with the chairman of the department.

11. General Chemistry
An introduction to the principles of chemistry. The chemical and physical properties of substances are considered and related to the atomic, kinetic, and equilibrium theories. Three lectures, three hours laboratory a week. Fall term.

12. General Chemistry
Continuation of Chemistry 11. Laboratory work in part devoted to qualitative analysis. Prerequisite, 11. Three lectures, three hours laboratory a week. Spring term.
13. General Chemistry
A one-term combination of 11 and 12. For students who have good preparation in chemistry and an aptitude for mathematics. Three lectures, three hours laboratory a week. Fall term.

23. Analytical Chemistry
Application of chemical principles to problems in chemical analysis. Laboratory work includes volumetric, gravimetric, and instrumental methods for quantitative analysis. Prerequisite, 12 or 13. Three lectures, six hours laboratory a week. Spring term.

34. Radiochemistry
Nuclear and radiochemistry and their applications to chemistry and biology. Prerequisite, 23 or consent of instructor. Two lectures, three hours laboratory a week. Spring term.

37. Organic Chemistry
The carbon compounds, their structures, reactions, and syntheses. Prerequisite, 12 or 13. Three lectures, six hours laboratory a week. Fall term.

38. Organic Chemistry
Continuation of 37. Three lectures, six hours laboratory a week. Spring term.

50. Topics in Chemistry
Examination of a topic of general interest in chemistry, the topic to be announced in advance of registration. Prerequisite, permission of instructor. Fall or spring term.

55. Physical Chemistry
Thermodynamics, quantum theory, and reaction rate theory as related to chemical systems. Prerequisite, 12 or 13, Physics 22, and Mathematics 22. Three lectures, three hours laboratory a week. Fall term.

56. Physical Chemistry
Continuation of 55. Three lectures, three hours laboratory a week. Spring term.

61. Qualitative Organic Analysis
Identification of representatives of the major homologous series. Prerequisite, 38. Two lectures, six hours laboratory a week. Fall term.

62. Advanced Organic Chemistry
Stereochemistry and reaction mechanisms. Prerequisite, 56; may be taken concurrently. Three lectures. Spring term.

63. Advanced Inorganic Chemistry
Reactions and structures of inorganic compounds. Prerequisite, 56. Three lectures, three hours laboratory a week. Fall term.

64. Advanced Analytical Chemistry
Instrumental methods of analysis. Prerequisite, 56; may be taken concurrently. Two lectures, three hours laboratory a week. Spring term.

66. Advanced Physical Chemistry
Statistical and quantum mechanics, molecular spectra and structure, and kinetics of chemical reactions. Prerequisite, 56. Seminar. Spring term.

95, 96. Independent Study
Laboratory and library research on an original problem with a thesis. Prerequisite, junior standing and permission of department. Either term.

CLASSICS

Mr. Brooks, Mr. Donovan (Chairman), Mr. Reedy
The program of the Department of Classics is designed to give students knowledge of the languages, literatures, and civilizations of Greece and Rome as well as an awareness of the close relationship of those civilizations and their problems to our own. This program is also designed to prepare students for graduate study in Classics, Comparative Literature, and related fields.

Requirements in Language
Certain departments require a foreign language for their majors; students are urged to consult their advisers about such requirements.

Major Concentration
A major concentration in Classics shall consist of (a) a minimum of eight courses in Greek and one in Classical Civilization, or (b) a minimum of six courses in Latin above the intermediate level and one in Classical Civilization, or (c) a minimum of eight courses in Latin and Greek (not to include Latin 11 or 12) and one in Classical Civilization, or (d) a minimum of two courses in Greek or in Latin and five courses selected from the offerings of the department, together with History 56 (Ancient History) and Philosophy 30 (Ancient and Medieval Philosophies).

Core Concentration
A core concentration in Classics shall consist of (a) six courses in Greek, or (b) six courses in Latin beyond the elementary level, or six courses in Greek and Latin (not to include Latin 11 or 12); or (c) a minimum of two courses in Greek or in Latin and four courses selected from the offerings of the department; six related courses must also be selected from those offered by other departments.
CLASSICS

Classical Archaeology
A student who wishes to prepare for a career in classical archaeology is urged to study at least one ancient language (core concentration a or b above) and to take Classics 55, 56 and History 56. Geography 25 is also recommended. Opportunities for field work in Greece exist for qualified students.

Honors Program
The student admitted to the Honors program in Classics will prepare an Honors thesis, take an Honors comprehensive, and take from three to five Honors courses in Classics. These shall be any courses in Latin and Greek above the intermediate level for which additional work, either reading or a paper, shall be done under the direction of the instructor.

Greek
This course seeks to introduce the student to the reading of Classical Greek literature as quickly as possible. The Attic dialect is primarily studied.
33. Plato
Readings selected from the Dialogues of Plato to illustrate the philosopher's thought and style. The emphasis of this course, as of 34 and 35, will be on developing the student's ability to read Greek with greater ability and precision. Offered in alternate years. Fall term.
34. Iliad
Men at war as seen in Homer's epic poem; the Homeric Question and life in early Greece will also be discussed. Spring term.
35. New Testament
Rapid reading of selections from the New Testament with a brief survey of the differences between Attic and Koine Greek. Offered in alternate years. Fall term.
57. Herodotus
An introduction to the philosophy and methods of the Father of History. Attention will be directed to the anthropological and geographical interests of Herodotus. Fall term.
58. Greek Tragedy
An examination of the Greek view of Tragedy as exemplified in the plays of Aeschylus, Sophocles or Euripides. Spring term.
61. Readings in Greek Prose
Readings from Greek authors chosen by the instructor chiefly from the fields of oratory, history, and philosophy. Fall term.
62. Readings in Greek Poetry
Readings from Greek authors chosen by the instructor from Greek dramatic or lyric poetry. Spring term.
87. Advanced Reading in Greek
Authors chosen after consultation between instructor and student. Either term.

Latin
11, 12. Elementary Latin
A study of the Latin language; reading easy Latin and Caesar.
31. Intermediate Latin
A thorough review of Latin grammar followed by a study of Vergil and other poets of the Augustan Age. Fall term.
32. Intermediate Latin
A study of Roman prose authors, with particular emphasis on the letters and speeches of Cicero. Spring term.
51. Classical Latin Rhetoric
A survey of the theory and practice of Latin rhetoric. Readings from the Ad Herennium, Cicero's rhetorical works, Tacitus' Dialogus, and Quintilian.
52. Latin Elegy
A survey of Latin elegiac poetry. Readings from Catullus, Propertius, Tibullus, and Ovid.
64. Lucretius, De Rerum Natura
Readings from the De Rerum Natura with discussions of the style, language and structure of the poem. Epicureanism will be studied intensively and contrasted with Stoicism.
71, 72. Roman Satire
Readings from Horace, Persius, Martial, and Juvenal during the fall term and from Seneca, Petronius, and Apuleius during the spring term with discussions of the origin, development and nature of satire.
83. Advanced Reading in Latin
Authors chosen after consultation between instructor and student. Either term.

Classical Civilization
(knowledge of Latin and Greek not required)
18. The Ancient World (same as Religion 18)
Study of selected literature of the ancient world in translation, both classical and biblical. Lectures and Discussion.
21. Classical Epic and Lyric Poetry
The study of a process in which the Greeks took traditional forms and materials and molded them into art. Attention will be given to the change from conditions which produced the poetry of Homer and Hesiod to those which favored the expression of the emotions and experiences of the individual. Special emphasis will be placed
on the qualities which distinguish Roman literature from its Greek predecessors.

22. Greek and Roman Drama
A study of the Greek and Roman dramatic forms and their modes of expression, with particular emphasis on the Attic tragedians, Aristophanes, and Seneca. Close attention will be given to the concern of Greek tragedy with the basic problems of life and death, and especially with man's relation to the gods. Aristotle's Poetics will be studied as a basis for criticizing the plays themselves.

55, 56. Classical Art and Archaeology
Selected topics, illustrating the development of Classical Civilization, in the art and archaeology of Greece and Italy.

ECONOMICS AND BUSINESS
Mr. Aslanian, Mr. Bunting (Chairman), Mr. Egge, Mr. Horiba, Mr. Lewis, Mr. Meiselman (on leave Spring term), Mr. Mirus, Mr. Short, Mr. Simpson

The objectives of the Department of Economics and Business are (1) to provide students with a deeper understanding of the nature and functioning of their own and other economic systems, which will also assist them in making sounder and more responsible private and public decisions, and (2) to develop the analytical and empirical skills for rewarding careers in business, government, and public service as well as in preparation for advanced work in graduate and professional schools.

Department Activities
The Bureau of Economic Studies: The Bureau undertakes studies of economic problems and issues. Its facilities are available for faculty research and for introducing students to research skills and discipline.

Honor Societies: Outstanding academic achievement makes Economics and Business students eligible for membership in Omicron Delta Epsilon, national honor society in Economics, and in Pi Gamma Mu, national honor society in the social sciences.

General Graduation Requirement
Any course in the Department, with the exception of Statistics and Accounting courses, will satisfy the general graduation requirement in the social sciences.

Major Concentration
The major concentration in this Department consists of a minimum of eight courses, of which the following are required:

Principles of Economics
Advanced Principles of Economics
Intermediate Micro Economic Analysis
Intermediate Macro Economic Analysis
Basic Financial Accounting
Statistics I

Core Concentration
A core concentration is also available in Economics and Business. The requirements are as follows:

Six courses in the department, four of which shall be the first four courses listed above.

The department is especially interested in encouraging interdepartmental programs involving a core in this department in combination with cores in the Departments of Political Science and Mathematics. In each case such a program would consists of: (1) a six-course core in Economics and Business as described immediately above, and (2) six courses in the Departments of Political Science or Mathematics as approved by the chairmen of those departments.

Honors Program
The Honors Program consists of two courses and is designed to help students develop advanced research skills. During the two seminars the student is expected to develop an individual research project.

Students interested in pursuing the Honors Program are asked to consult with the department chairman during their junior year regarding their course of study.

11. Principles of Economics
An introduction to elementary economic analysis with applications to a range of problems such as inflation, unemployment, farm price supports, balance of payments difficulties, poverty and the distribution of income. Fall and Spring term.

12. Advanced Principles of Economics
Primarily a more advanced and detailed treatment of the topics presented in Economics 11; in addition: the role of economic thought in modern intellectual history (Smith, Mill, Marx, Keynes, etc.); money, banking, business cycles and the balance of payments; applications of economic principles to contemporary economic issues. Prerequisite: Economics 11. Fall and Spring term.
22. Basic Financial Accounting
Use, summary, reporting, theory (alternatives with implications on financial actions), use of accounting for basic forms of business organization; preparation, analysis of accounting statements. Fall term.

23. Basic Managerial Accounting
Problems of administering complex organizations, profit or nonprofit. Cost functions, cash flows, responsibility centers, budgeting, bureaucratic structures, standards, analysis of variances, sources and uses of funds, and capital budgeting. Prerequisite: Economics 22. Spring term.

24. Statistics I
Introduction to the use and programming of computers. Probability theory and statistical analysis, with special applications to economics. Sources and presentation of data; sampling distributions; statistical estimation; linear regression and correlation; index numbers and time series analysis. No prerequisite. Fall term.

25. Statistics II
Introduction to econometrics. Topics will include modern economic research methodology, application of probability theory and inferential statistics, extensions of linear regression analysis, and hypothesis testing. Strongly recommended for majors and those students who intend to pursue graduate study in business or economics. Prerequisites: Economics 22, 24, and Mathematics 21, or consent of instructor. Fall and Spring term.

50. Topics
The subject matter of this course will vary but will not duplicate the content of any other course.

51. Intermediate Micro Economic Analysis
Methodology of economic science; theory of consumer behavior; theory of the firm; market structure and price determination; income distribution; general equilibrium analysis. Prerequisite: Economics 11 and 12. Fall term.

52. Intermediate Macro Economic Analysis
Interindustry relations and national income accounting; the components of aggregate demand; determinants of the demand for and supply of money; the labor market; theory of national income determination. Prerequisite: Economics 11 and 12. Spring term.

56. Capital Markets I
The sources of capital; factors affecting prices in primary and secondary markets for securities; structure, operation, regulation, and economic role of financial institutions in money markets. Prerequisite: Economics 11. Economics 22 recommended. Fall term.

57. Capital Markets II
The application of economic theory to analysis of the demand for and uses of capital by business units; the theory of finance; emphasis on the impact of financial structure and decisions on firm value. Prerequisite: Economics 11. Economics 12, 22 and 56 recommended. Spring term.

58. Public Finance and Fiscal Policy

60. Administrative Accounting

61. Labor Economics
Advanced topics in labor markets, such as the history of wage theory, productivity, wage differentials, women in the labor force, investment in human resources, inequality and poverty, and the effects of labor unions. Prerequisite: Economics 11. Economics 12 recommended. Fall term.

62. International Economics

63. Economic Development
Economic conditions associated with underdevelopment and the particular economic problems of the less developed nations. Study of economic theory in the area of development and critical examination of current economic development policies and programs. Prerequisite: Economics 11. Spring term.

66. Money and Banking
The role of money in a specialized economy; monetary standards; commercial bank portfolio behavior; commercial banks and the Federal Reserve as creators of money; monetary theory; monetary policy; money and business cycles; international monetary issues. Prerequisite: Economics 11. Economics 12 recommended. Spring term.
71. Industrial Organization
The impact of industrial structure on resource allocation and economic welfare; an analysis of the pricing behavior of firms; industrial structure and economic progress; the extent of monopoly; the role of the state as a regulator of business; the impact of factor market structure on the distribution of income; antitrust policy. Prerequisite: Economics 11. Economics 12 recommended. Not offered 1970-71.

72. Economic Thought, Concepts and Systems

76. Business Conditions and Economic Analysis
Business and economic environment; nature of economic change; analysis of methods used to predict change; oral and written reports. Prerequisite: majors, senior standing. Not offered 1970-71.

95, 96 Independent Study
Further study in fields of special interest. Readings, conferences, field work, reports. Prerequisite: Consent of instructor. Either term.

97, 98. Seminars.

EDUCATION

Mr. Dierenfield, Mrs. Duvall, Mr. Ekman, Mr. Faix, Mrs. Frazee, Mr. Grissom, Mr. Holtz, Mr. Hultgren, Mrs. Johansen, Miss Lyle, Mrs. O'Brien, Mr. Obsatz, Mr. Prawat, Mr. Ward (Chairman), Mr. Warfield

The State of Minnesota requires that all who are engaged in public school teaching from Kindergarten through 12th grade be certified by the State Department of Education. State requirements are generally as follows: For teaching in the elementary schools, a teacher must have a college degree from an institution which has been approved for teacher education, must have taken a program which included at least 18 semester hours of professional education with a minimum of six semester hours of student teaching. In Minnesota a teacher who spends over half time teaching in a subject must have a college major in that subject, and teaching assignments of one-half time or less require a minor in that field.

The Macalester teacher education programs are accredited by the State of Minnesota, the North Central Association of Colleges and Secondary Schools, and the National Council for Accreditation of Teacher Education.

As candidates prepare themselves for teaching, they will be counseled by an adviser in their major or core concentration and by a second adviser in Education. In addition to the general graduation requirements and the completion of a core or major concentration, the candidate must complete the professional education sequence. After completion of the program and graduation, the candidate is recommended by the College to the State Department of Education for certification.

All candidates should familiarize themselves with the current demands in the different teaching fields, e.g., history, English, science, languages. It is generally recommended that students preparing themselves for secondary school teaching select major concentrations and that elementary school candidates pursue core concentrations. Some core concentrations are desirable as preparation for secondary school teaching. The differences between the social science major and core concentrations should be noted. A social science major concentration may be selected by those preparing to teach in the elementary schools. Students should not hesitate to question members of the Education Department and the various academic departments regarding these differences as well as possible combinations of courses. The Macalester course offerings are designed to meet the career needs of the students as well as preserve the integrity of the disciplines.

Elementary Program
Ordinarily, students may be identified with the elementary education program as freshmen. However, they are encouraged to make formal application to the Teacher Education Committee by the end of the sophomore year. The Teacher Education Committee is composed of faculty members who constitute a cross section of the academic
areas of the College. Each individual will be reviewed by the committee. Acceptance into the elementary program is based on (1) scholarship, (2) recommendations from the major or core department, (3) health and physical conditions of the candidate adequate to the needs of the professions, (4) command of English, both written and oral, and (5) possession of traits of character and personality suited for teaching. A 2.5 overall average normally is required before admission to the program. Admission to the program does not automatically entitle the candidate to student teaching. The candidate must file application for student teaching after he has been admitted into the program. A 2.5 overall average is required to student teach.

In addition to the general graduation requirements and an appropriate concentration, elementary teacher candidates must satisfactorily complete the following courses in Education:

40. Educational Foundations
41. Fine Arts in the Elementary School
49. Educational Psychology
52. Reading in the Elementary School
53. Science, Health and Mathematics in the Elementary School
63. English-language Arts and Social Studies in the Elementary School
65. Student Teaching (2 units)

(Note: Education 84, Philosophy of Education, or Education 92, School and Society, may be substituted for Education 40 by upperclassmen.)

Two different experiences of student teaching are required. The elementary candidate may decide to fulfill this requirement within a two- or three-unit program. The candidate may elect to receive one or two units for a semester all-morning experience. The choice will be dictated by the candidate's program. This all-morning semester of student teaching constitutes one experience. A second experience may be taken during the Interim Term for one unit. The Interim Term student teaching provides the opportunity for an all-day student teaching experience in the public schools. It is also possible for a limited number of elementary candidates to elect one unit of student teaching during the summer session. Afternoon teaching in the public schools may be taken for one unit only.

Elementary education students must take Physical Education 217, 218. Math 16 is required of all elementary students. This course may be listed as a general graduation requirement or as part of the supporting six courses in a core concentration.

The student must pass a proficiency test in the use of audio-visual materials. Arrangements are made by contacting the Audio Visual director.

Elementary Education students who desire Kindergarten endorsement should take an additional course, Education 94, Kindergarten Theory. One of the units of student teaching will be completed in the Macalester Children's Center or in a public school kindergarten.

Students who wish Junior High School endorsement must take an additional course, Education 95, The Junior High School. The student teaching assignment will include one unit in a junior high school.

Secondary Program
Candidates for secondary school certification should make application for admission to the secondary program at the time they take their first course in education or by the end of their sophomore year. Applicants normally must have an overall grade point average of 2.5 and an overall average of 2.6 in their major or core concentration. Each individual applicant will be considered by the Teacher Education Committee and acceptance is based on the same criteria as listed under the elementary program. The candidate must file application for student teaching after he has been admitted into the program.

In addition to the major or core concentration and the general graduation requirements, the following courses in Education must be satisfactorily completed by students in the secondary program:

40. Educational Foundations
49. Educational Psychology
51. Secondary Curriculum and Instruction
64. Student Teaching (2 units)

(Note: Education 84, Philosophy of Education, or Education 92, School and Society, may be substituted for Education 40 by upperclassmen.)

Application forms and further information are available at the Education Department.
General Science Concentration
Mr. Jones (Coordinator)

The core concentration in General Science is designed to prepare students to teach general science in the secondary schools. To provide the broad science background needed to teach general science, the curriculum is planned to include courses from each branch of science and to insure an adequate background in mathematics.

Core Concentration
A core concentration in General Science is basically a core concentration in one of the science fields. It consists of a six-course sequence in one science (Biology, Chemistry, Physics, or Geology) and two courses in each of the other three sciences. Students who do not have an adequate preparation in mathematics for the physics and chemistry courses must take as electives sufficient mathematics to correct this deficiency. The student's final plan for the core concentration is to be approved by the coordinator. This program is restricted to those students who plan to teach.

Social Science Concentrations
Mrs. Johnson (Coordinator)

Both the major and the core concentrations in Social Science are designed to prepare students to teach the social sciences at the elementary or secondary school levels. It is advisable to discuss the program with the coordinator, who must sign the approved program, not later than the junior year. The following sequences are recommended:

I. Preparation to Teach in Elementary Education
Students who have been accepted in the Elementary Education program may elect a major concentration in Social Science which consists of:

A. Six courses in any one of the following departments: Economics, Geography, History, Political Science, or Sociology.

B. Four additional courses from the above listed departments and Psychology. These additional courses must not be taken from the core department. These courses may be from (a) four different departments or (b) two courses each from two different departments or (c) two courses from one department and one course from each of two additional departments.

II. Preparation to Teach in Secondary Education
Students who have been accepted in the Secondary Education program may elect a core concentration in Social Science which consists of:

A. Six courses in any one of the following departments: Economics, Geography, History, Political Science, or Sociology.

B. Six additional courses from the above listed departments, excluding the core department, with two courses from two departments and one course each from two departments, or three courses from one department and one course each from three departments.

The requirements may be stated in formula as follows:
6-1-1-1-1
6-2-2
6-2-1-1

Certification After Graduation
Individuals with a baccalaureate degree from Macalester or another accredited college may apply for admission into the teacher education program to work toward certification. The candidate for elementary or secondary certification will be screened by the Teacher Education Committee. If the elementary candidate lacks preparation in certain areas, i.e., modern math, he will be required to take such courses. If the secondary candidate does not present a major comparable to the Macalester major, he will be required to take additional courses. In addition, the candidate must finish the professional education sequence as outlined under the elementary and secondary sections and must successfully complete the student teaching requirements.

Persons interested in this program should consult with the Department of Education and with the Registrar.

Student Teaching
The culmination of the professional education program is student teaching. After the candidate's application for student teaching has been approved by the Teacher Education Committee, he will be assigned to the appropriate classroom or grade level in the public schools. Macalester candidates are placed in the public schools of Minneapolis, St. Paul, and
the surrounding metropolitan area. The candidates are responsible for their own transportation. In cases of accidents traveling to and from the schools, liability resulting from such accidents involves the insurable interest of the individual auto owners or pedestrian and auto owner — as the case may be. While the candidates are on the premises of the participating schools, they must have liability insurance. This may be obtained by joining SNEA or the student MFT, or by obtaining private insurance.

Other Activities
The local chapter of the Student National Education Association (SNEA) is a group made up of both elementary and secondary students. All education students are welcome and each year a slate of meetings is planned. Subscriptions to two education journals are given to members. Students also may join the Minnesota Federation of Teachers (MFT) and in so doing be eligible for participation in activities of that organization.

The Kappa Delta Pi honorary education society is open for membership by invitation. A high scholastic average is required. A scholarly quarterly journal is provided each member and several meetings are held throughout the year.

Teacher Placement
The College operates a Teacher Placement Bureau which assists Macalester Education graduates in finding teaching positions. The primary functions of the Bureau are: (1) keeping a current file of the teacher's credentials, (2) scheduling appointments with prospective employers, and (3) maintaining lists of available teaching positions. The responsibilities of the teacher are: (1) paying a placement fee and the compiling of credentials, (2) initiating contacts with prospective employers, and (3) informing the Bureau when a position has been obtained.

Placement folders or credentials should be compiled early in the senior year. Materials on placement are available at the Placement Office in the Education Department. Since prospective employers are particularly interested in the reports on student teaching, it is advisable to complete student teaching before the last term of the senior year.

40. Educational Foundations
Social, philosophical and historical concepts and developments as these are related to education. Fall and Spring terms.

41. Fine Arts in the Elementary School
Concepts of learning and instruction as they apply to the areas of art and music in the elementary school. Fall and Spring terms.

49. Educational Psychology
Human growth and development in childhood and adolescence as they relate to education. Fall and spring terms.

51. Secondary Curriculum and Instruction
General principles and procedures in instruction and application of these in the specific secondary teaching areas. Fall and Spring terms.

52. Reading in the Elementary School
Approaches to the building of skills, abilities, and competencies in a developmental reading program. Fall and Spring terms.

53. Science, Health, and Mathematics in the Elementary School
Methods, materials, and approaches in building skills, abilities, and competencies in elementary school science, health, and mathematics. Fall and spring terms.

55. English-Language Arts and Social Studies in the Elementary School
Methods, materials, and approaches in building skills, abilities, and competencies in elementary school language arts and social studies. Fall and spring terms.

64. Student Teaching (Secondary)
Student teaching in the public schools at the secondary level. Observation as well as actual student teaching. Fall, interim, and spring terms.

65. Student Teaching (Elementary)
Student teaching in the public schools at the elementary level. Observation as well as actual student teaching. Fall, interim, and spring terms.

66. Student Teaching (Kindergarten)

67. Student Teaching (Junior High)

84. Philosophy of Education
System approaches and philosophical analysis approach to education and educational language, respectively. Fall and spring terms.

90. Guidance in Education
Theories and principles of guidance and their application in teaching and counseling programs in elementary and secondary schools.

92. School and Society
Study of such topics as church and state, nationalism and education, politics and educational ideology, pressure groups and education, structure. Fall and spring terms.
collegiate levels in terms of aims, curriculum organization, and teaching methods.

94. **Kindergarten Theory**
Processes and approaches to learning and teaching in the kindergarten situation. Fall and spring terms.

95, 96. **Independent Study**

501. **Learning in Education**
Theories and constructs with application to education. For M.Ed. students. Summer session.

502. **Research in Education**
Methodology — descriptive and experimental, statistical tools, and education design needed for M.Ed. paper. For M.Ed. students. Summer session.

503. **Elementary and Secondary Curriculum**
History, organization, control patterns, and trends of elementary and secondary school curriculum. For M.Ed. students. Summer session.

504. **Internship**
General observation and participation in varied activities, plus actual teaching, in elementary or secondary schools. For M.Ed. students. Fall and spring terms.

**ENGLISH**

Mr. Baer, Mr. Berger, Mr. Blakely (on leave Fall term),
Mr. Foster (Chairman), Mr. Gamble (on leave Spring term),
Mr. Greenberg, Mr. Hedgepeth, Mr. Henry (on leave Spring term),
Mr. Huelster, Mrs. Kane (on leave Spring term),
Mr. Keenan, Miss Meister, Mr. Murray, Mr. Olson, Mr. Warde,
Mr. Patnode, Mr. Wm. Thompson, Mrs. Toth, Mrs. Vanouse.

**General Graduation Requirement**
Any course below English 91 counts toward the general graduation requirements in humanities and fine arts. The following courses are especially recommended for students majoring outside the humanities and fine arts division: 18, 23, 24, 27, 29.

**Major Concentration**
Eleven courses in English and five courses in supporting department(s).

The courses in English must include: two or three courses in British literature before 1660, three or two courses in British literature 1660-1900 (to a combined total of five); one course in American literature before 1900; and one course in British and/or American literature of the 20th century.

The five supporting courses must be either from a single department, or from at least three of the following areas: philosophy, religion, music, art, speech and dramatic arts, literature of another language, British and American history, humanities, classical literature.

Each student must develop a major plan with his adviser. Majors are reminded that appropriate topic, seminar, and special studies courses may be applied toward the distribution requirements in British and American literature outlined above. The department strongly recommends that major plans include a variety of modes of study: i.e. courses dealing with one or two major authors; courses dealing primarily with a literary type, such as the novel or drama; courses dealing with literary periods; and courses of an advanced and specialized nature, such as topics, seminars, literary criticism or independent study.

Upperclass English courses will regularly contain practice in writing both exposition and criticism, which will be carefully evaluated for its presentation as well as for its content.

Those who plan to teach in high schools must include English 91 as one of the eleven courses. Beyond these courses they must also take Speech-Dramatic Arts 36 and either Speech-Dramatic Arts 20 or 30.

**Core Concentrations**

I. **Basic Core Concentration in English**.
Six courses in English and six from one or two other departments. The six courses in English may not include 18 and shall include: one course in British literature before 1660; one course in British literature 1660-1900; one course in American literature before 1900; and one course in American and/or British literature of the 20th century. Certifying teachers must also take 91 as one of their six courses.

The six supporting courses must come from one or at the most two related departments. The student is required to present a written rationale for these supporting courses before his core plan is approved by his adviser and the department.

II. **American Studies Core Concentration in English** (Mrs. Kane, adviser)
Six courses in American literature 50 or above, including
ENGLISH

51, 52, 53. Three of these six courses must be taken during the junior and senior years.

The six supporting courses must include three American history courses selected from History 13, 66, or 91, together with three of the following courses: Art 75, Journalism 59, Political Science 20 and 35, Sociology 40, Geography 41, Philosophy 50 (when its topic is American).

III. British Studies Core Concentration in English
(Mr. Baer, adviser)

Six courses in British literature from one of the following epochs: A. Medieval through Augustan; B. Renaissance through Romantic; C. Mid-18th Century to the present; together with six supporting courses relevant to the epoch of British literature selected.
The six English courses must be chosen from one of the following groups: A. 25, 61, 62, 71, 72, 75, 91; B. 26, 55, 61, 62, 63, 64, 65, 66, 72, 75, 91; C. 26, 27, 28, 55, 56, 64, 65, 66, 91. When the topics are appropriate, English 50, 97 and 98 may be included in any of these three sequences.

The six supporting courses must be composed of: one course in European history (preferably 71 or 72); one course in the literature of France, Spain, Germany, Russia, or the Classical World; and four courses from Art 60, 61; Philosophy 31, 32, 50 (when appropriate), Political Science 48, 82; Geography 40; Music 113-4; Humanities 25, 26, 56; Religion 20, 23.

Special Studies
The department does not offer an Honors Program. Instead students may take Special Studies (see below).

18. Literature and Writing
Sections are organized by the instructor around a topic or type of literature which will be listed and described in advance of registration. Some emphasis on composition. Creative writing sections require instructor's permission.

23. American Writers
Intensive study of important figures in 19th and 20th century American literature. Does not fulfill major concentration requirement in American literature. Open to freshmen.

24. Modern Dramatic Literature
Critical exploration of the most important American and continental plays of the 20th century. Open to freshmen.

25. Survey of English Literature
The historical development of English literature from its beginnings through Milton. Open to freshmen.

26. Survey of English Literature
Continuing English 25 to the early 20th century. Open to freshmen.

27. The Twentieth Century Novel: British and American
Reading lists are selected by the instructors and published in advance of registration. Open to freshmen.

28. Twentieth Century Poetry: British and American
Sophomore standing required.

29. Major Continental Literature of the Twentieth Century
Same as Humanities 29. Modern works translated into English. May be used by English major and core concentrators only as a supporting course. Sophomore standing required.

33. Advanced Rhetoric
Study of recent work in grammar and rhetoric as applied to expository and persuasive writing.

50. Topics
The subject matter of this course, announced in advance of registration, will vary but will not duplicate the content of any other course.

51. Early American Literature
From colonial times through Melville and Whitman. Sophomore standing required.

52. American Literature of the Gilded Age.
From Mark Twain through Crane. Sophomore standing required.

53. American Literature of the 20th Century
Prerequisite, 51 or 52.

55. The Novel
Various manifestations of longer fiction to the early 19th century.

56. The Novel
Continuing 55 in both England and America to the early 20th century.

61. Elizabethan Literature
Non-dramatic literature centering in Spenser's Faerie Queene.

62. The Early 17th Century
The non-dramatic literature of the Stuart and Commonwealth periods.

63. The Age of Satire
Dryden, Swift, Pope and their contemporaries.

64. The Mid and Late Eighteenth Century
Literature from Fielding to Blake.
65. The Romantic Period
The poetry of Wordsworth, Coleridge, Keats and Shelley, and selected prose of the period.

66. The Victorian Period
Major writers from Tennyson through Hardy.

71. Chaucer

72. Shakespeare

75. English Dramatic Literature to 1642
English medieval drama, leading into Elizabethan plays and concluding with the closure of the theaters in 1642. Shakespeare is excluded.

91. The English Language
A historical and descriptive approach to Modern English. Required of all teachers certifying in English.

92. Criticism
The history, theory, and application of criticism in literature.

93. Advanced Writing
Practice in the various forms of prose writing, including the expository. Prerequisite, instructor’s permission.

94. Advanced Creative Writing
Emphasis on either poetry or prose. Prerequisite, instructor’s permission.

95, 96. Independent Study
Permission of instructor required. Students electing the departmental Special Studies Program must take two units of Independent Study concurrently.

97, 98. Seminar
Topics and prerequisites to be announced in advance of registration.

FRENCH

Mrs. Guilbert, Mr. C. Johnson, Mr. P. Lee, Mr. W. Lee, Mrs. Peters, Mr. Sandberg (Chairman), Miss Schubert

The French Department has a triple objective: a) to prepare competent students and future teachers of French language and literature, b) to provide the kind of language training needed by non-French majors for study in their own field, for travel, or for future professional needs c) to provide the kind of broadening knowledge of a new language and culture which has traditionally been a part of the liberal arts education. Accordingly, many diverse courses have been developed to meet the variety of needs among the students.

Major Concentration
A major concentration in French should equip a graduate with a proficiency in language skills, and a knowledge of culture and literature necessary to teach in secondary schools or to enter first rate graduate schools. In addition, the student should be able to think analytically and express himself effectively in English. Finally, as an educated person he should be able to identify the significant issues of his time and see them in historical perspective.

The courses required in French shall consist of eight courses beyond 31, among which are included 51, 52, 53 and (a) for a language specialization: 55, 72 and the senior seminar, or (b) for a literature specialization: 73, one language skills course and the senior seminar.

In order to help attain the goals stated above, the student will choose four supporting courses according to his vocational interests. Those strongly recommended are: (a) for those students who intend to teach French — courses in a second foreign language, English, humanities or history: (b) for those students who are going into government work, business or allied fields — supporting courses in political science, history, economics, geography.

Finally, the student will select: (a) one course in the social sciences (in addition to graduation requirements) or (b) one course in the humanities and fine arts (in addition to graduation requirements) chosen from philosophy, art, music, and another literature than French.

Strongly recommended is the STUDY ABROAD PROGRAM (see below)

Core Concentration
The core plan includes six courses beyond 31 among which are included: (a) for those specializing in language skills: 51, 52, 53 and 55 or 72 and the senior seminar; (b) for those specializing in literature: 51, 52, 53, one or two literature courses and the Senior Seminar.

For either of these patterns six additional courses are to be chosen from outside the department with the approval of the adviser and the department(s) concerned. Some acceptable patterns would be:

1. Six courses in a second foreign language beyond the elementary level.
2. Six courses in the humanities and fine arts.
3. Six courses in English literature beyond the freshman level.
4. A combination of (2) and (3).
5. Six courses in history, political science, geography which are relevant to France and the study of the French language.
6. Six courses from a group in the comparative arts, with at least one from each of the following: art history, music, philosophy; the three other courses may be chosen from religion, speech, humanities or English literature.

And, finally, the student will select: (a) one course in the social sciences (in addition to graduation requirements) or (b) one course in the humanities and fine arts (in addition to graduation requirements) chosen from philosophy, art, music, and another literature than French.

**Senior Comprehensive Examinations**
Majors and cores are advised to take the Graduate Record Examination and are required to take a written/oral examination which is the final of the Senior Seminar. (See specific departmental policy).

**Honors Program**
For students accepted into the Honors Program, any of the advanced courses in literature may be taken as Honors courses if additional Honors work is done. French 95, 96, Independent Study, and French 98, Senior Seminar, may also be adapted for Honors work.

Students should consult with the department chairman to work out details of their own programs, which will be arranged to suit their individual needs.

To receive departmental Honors in French, a student must complete satisfactorily at least three Honors courses, present a thesis showing independent and original work and defend successfully his thesis before an outside examiner.

**Study-Abroad Program in Avignon, France**
This program last six to eight months, with a January orientation-Interim Term in Paris, the Spring Term in Avignon, and a summer open to student travel/work options.

Direction is by Macalester faculty jointly with the Institute for American Universities and the University of Aix-Marseille. Course offerings are in French language, literature, and other fields (e.g. history, philosophy, government), taught by French university professors. The program is open to juniors with at least two courses beyond French 32. Participants need not be French majors. While in France the students will live with local residents. The courses will all transfer as regular Macalester courses (four courses per term and one interim course). No more than three courses will be counted towards the French major. They cannot be substituted for the following required courses: 51, 52, 53, 73. The French major will have to take, on campus, any additional courses necessary to meet the departmental graduation standards at the end of his senior year.

**Placement Tests**
Students who have studied French before and desire to continue it should plan on taking the placement tests given during orientation week so that they may begin at the appropriate level.

11, 12. Elementary French
Pronunciation, elementary conversation, reading and essentials of grammar. A programmed course which emphasizes learning for mastery and which permits highly motivated students to accelerate their progress. Fall and Spring terms.

21, 22. French for Reading Knowledge
This sequence is designed for students in the arts and sciences for whom a reading knowledge of French is necessary either now or in graduate school. No attention is given to speaking or writing. The student is introduced to the sound system of French. French 21 presupposes no previous acquaintance with French. French 22 is intended for students who have some background in French. Fall and Spring terms.

12, 31. Elementary — Intermediate French
Pronunciation, conversation, reading, and writing. This sequence is intended for students who have had some background in French but who are not able to go immediately into 31. Four hours a week in class and two hours in the laboratory. Fall and Spring terms.

31, 32. Intermediate French
Will give equal emphasis to the four skills of speaking, aural comprehension, reading, and writing and are recommended for those who wish to do advanced work in French. French 12 or satisfactory score on the placement test. Fall and Spring terms.

32. Intermediate French
Intermediate French is offered in the Fall term for those who have completed French 31 or those who have received a score on the placement test that places them at this level. Fall term.
50. Topics
Special courses organized according to student interest. See departmental announcement of courses intended for the forthcoming term.

51. French Conversation
Intensive training in oral usage and phonetics. Study of special grammatical patterns. Small conversation groups with natives. Four hours a week, daily laboratory work. Prerequisite, French 32 or equivalent. Fall and Spring terms.

52. Composition and Introduction to Literary Criticism
Training for the study of literature. Readings and class discussion of French masterpieces leading to essay writing and literary criticism. Four hours a week. Prerequisite, French 32 or equivalent. Required for advanced literature courses. Fall and Spring terms.

53 The Civilization of Modern France
The major historical, political, social, economic, and artistic developments of the contemporary scene. Extensive use of audio-visual materials, current periodicals, and publications. Four hours a week. Prerequisite, French 32 or equivalent. Fall term.

55. Advanced French Conversation
Oral skills and corrective phonetics. Intensive work in drama and speech. Four hours a week, daily laboratory work and weekly session with a native tutor. Prerequisite French 51 or equivalent. Fall and Spring terms.

56. The Classical Age
Seventeenth century literature. The great classic writers: Corneille, Racine, Moliere, Descartes, Pascal, La Fontaine, Boileau, and others. Four hours a week. Prerequisite, French 52 or consent of instructor. Offered Spring term 1971 and alternate years.

57. The Age of Enlightenment
Eighteenth century literature. Major emphasis on Montesquieu, Voltaire, Rousseau, Diderot and the Encyclopedists. Four hours a week. Prerequisite, French 52 or consent of instructor. Offered Spring term 1972 and alternate years.

58. Contemporary French Literature
Contemporary poetry, novel, drama. Four hours a week. Prerequisite, French 52 or consent of instructor. Spring term.

59. Medieval and Renaissance Literature
Reading of representative works of French literature from the Chanson de Roland through the Essais of Montaigne. Four hours a week. Prerequisite, French 52 or consent of instructor. Fall 1971 and alternate years.

95, 96. Independent Study
Advanced students may undertake individual projects involving library or laboratory research with a comprehensive report or thesis. Prerequisite, junior or senior standing, departmental approval. Either term.

98. Senior Seminar in French Literature
Studies to round out the field of the major concentration. Required of all seniors. Prerequisite, senior standing, departmental approval. Spring term.
(3) To prepare for admission to graduate schools, (4) To begin without further training professional work such as in planning, in federal agencies, in business and industry.

The Department offers all basic topical courses such as human, urban, economic, and physical geography, three regional courses of developed and underdeveloped regions and maintains a well-equipped cartographic laboratory. The Department participates in several interdisciplinary programs. See International Studies Program, Social Science Program, Latin-American Studies Program, Environmental Science Program.

General Graduation Requirements
All courses but Geography 25, 26 and 55 may be used to fulfill the general graduation requirement in social science. Human Geography best serves the needs of students in fields other than geography as a general course and is required as a preparation for courses in geography numbered above 50 except 52, which has no prerequisite. Courses before 50 are open to all students without prerequisites.

Major Concentration
A major concentration consists of seven courses and must normally include Geography 11 and 25 and one Senior Seminar. The student will complement his course of study with a view toward his vocational goals in consultation with the adviser and pursue an individualized course of study with reference to three major types of concentration, i.e., regional/cultural; urban/cultural; and physical/environmental. Suggested course sequences are available in the Department.

Students are urged to avail themselves of the various opportunities offered by the College for travel and study abroad and to acquire some facility in a foreign language or statistics as it pertains to their interest.

Core Concentration
A core concentration in Geography consists of six courses in Geography which must include Geography 11 unless the student is excused by the chairman of the Department and six complementary courses selected by the student in consultation with the adviser and in consideration of his vocational goals, particularly in the field of teaching.

Honors Program
The Honors program in Geography must include at least two courses numbered 95-98. Folders explaining thesis requirements in Geography are available from the department.

Further Preparation
To meet requirements for graduate study, a student with a major or a core concentration in Geography should select supplementary courses from the social sciences, the natural sciences and the humanities and fine arts in consultation with the department chairman.

11. Human Geography
Introduction to the basic concepts and fundamental questions of geography. Major topics covered will be human perception of earth space and spatial ordering systems; the growth and distribution of human population, the localization and functioning of primary circulation systems on the surface of the earth: human ecology and man's perception of his environment; principles of the analysis of spatial diffusion. Fall and Spring terms.

15. Environmental Science (an interdisciplinary course, same as Biology 15, Geology 15)
A multi-disciplined introduction to the scientific aspects of the "physical" environment. The course will stress biological, geographical and geological facets of the environment with contributions from the disciplines of chemistry, physics and economics. Three lectures and one of the following per week: laboratory, field trip, or seminar. Fall term. Prerequisite, one course in the science division.

25. Cartography and Aerial Photo Interpretation
Training in planning and designing simple maps and charts; the techniques of applying and mapping data. Aerial photography in planning. Fall term.

26. Physical Geography
Human land use and settlement patterns in their physical environment. Weather and climate, micro-climatology and pollution, water-balance, soils and vegetation, on local and world regional scales. Landscape erosion (Geomorphology) with particular emphasis on Anglo-America. Field trips to contrasting environments in local region. Map and air photo laboratory sessions. Fall term.

40. Europe Including U.S.S.R.
General regional characteristics of the physical environment; the distribution of population and resources and the patterns of circulation. Forces underlying the unity and diversity of cultures and economies; regional differences in the stages of economic development. Political and economic geography of the Common Market, Efta and Comecon. American and Soviet interests in Europe. Emphasis on those countries of students' regional and language interests. Spring term.
41. Urban Geography
A discussion of the phenomena of urbanization in relation to patterns of circulation and distribution of resources. Study of models and theories useful in urban geography and their relation to the contemporary city with focus on the Twin Cities and their hinterland. A survey of major world cities. An examination of problems confronting cities and attempts at their solution. Field work required. Fall and Spring terms.

42. Latin America
An assessment of major physical geographic features and the distribution of settlement, transportation, agricultural resources and minerals. Regional development and cultural change in selected regions of Latin America. Spring term. See Latin-American Studies Program.

44. Economic Geography
Agricultural and industrial resources, trade patterns, phenomenology of location and dynamics of transportation. Resource attitudes and resource management. Spring term.

45, 46. Independent Study — Lower Division

50. Topics — Geographical Problems in Economic Development
Environmental and cultural factors in the use of land and resources in developing regions. Class participation and individual studies of the role of agricultural change, population migration, and urbanization in the process of economic development. Spring term. Prerequisite, permission of the instructor.

52. Indian Americans and Their Environment
The historical and pre-historical geography of Indian American land use and settlement. Indian attitudes toward environment; Indian-white relations in the use of natural resources from colonial times through establishment of reservations to the present. Fall term.

53. Africa

55. Climatology
Elements of weather and climate and their basic controls; mechanisms of the general circulation of the atmosphere; weather disturbance in middle latitudes; description and analysis of climatic types. Fall term. (Not offered in 1970).

56. Urban Field Course
A research methods course in which students will conduct an individual inquiry in one of the following sub-fields of Urban Geography: spatial structure of urban areas; spatial interaction; problems of economic localization; problems of environmental quality and factors in intra-urban residential mobility. All work is expected to be focused within the Twin Cities Metropolitan Area or other accessible locations. Students will be expected to participate in group projects and to complete an individual study which may produce either a written report or a map. Spring term. Prerequisite, Geography 41.

64. Political Geography
Boundaries and the role of geography in international affairs. Theories in political geography, intensive study of reasons for boundary frictions. Spring term.

65. Historical Geography
The genesis of American landscapes. Emphasis on the Middle West and settlement geography. Field trips and individual projects. Fall term.

95, 96. Independent Study — Upper Division

97, 98. Senior Seminar
For geography majors only. The history of geographic thought and methods is studied through individual reports and papers. Fall and Spring terms.

GEOLOGY
Mr. Kilenyi, Mr. Lepp (Chairman, on leave Spring term).
Mr. Southwick, Mr. Webers (on leave Fall term)
The introductory courses in Geology (Geology 11, 12) are designed chiefly for the non-science major. These courses seek to provide the general college student with an appreciation of the scientific principles and techniques that are used to investigate planet Earth, and to inform him about the composition, materials, major processes, and history of our planet.

The major program in Geology is aimed chiefly to prepare students for graduate study which is a prerequisite for most professional work in geology. Although the regular departmental major is designed for students planning careers in Geology, special programs involving further training in Biology, Chemistry, Physics, or Mathematics are available for students interested in entering fields such as Geochemistry, Geophysics, Oceanography, Paleontology, or Astrogeology.

In recent years there has been a marked upsurge in the demand for secondary school teachers of Earth Science. The core major in Geology is most often selected by students wishing to enter this field.
General Graduation Requirement
Students wishing to fulfill the general graduation requirement in science should take Geology 11.

Major Concentration
The major concentration consists of the following courses: Geology 11, 12, 31, 32, 36; Mathematics 21 or 14, Chemistry 11, 12 plus two courses in either Biology or Physics. In addition, students will be expected to select at least three electives in geology. Students planning careers in areas such as geochemistry, geophysics, oceanography or paleontology may substitute advanced courses in biology, chemistry, physics or mathematics for some or all of the geology electives. Some proficiency in a foreign language (German, Russian or French) is recommended for students anticipating graduate work in one of the earth sciences.

Core Concentration
The core concentration consists of six courses in geology and six courses from a related field or fields. The core concentration is particularly suited for prospective secondary school Earth Science teachers. Students planning to enter this field should take Geology 11, 12, 31, 32, 36 plus one geology elective and six courses from three or more of the following: astronomy, biology, chemistry, geography, mathematics or physics. Other core combinations are available. All require departmental approval.

Honors Program
Qualified students are urged to apply for admission to the Honors program at the beginning of their junior year. Honors students are required to complete at least one term (Geology 95, 96) and one interim term of independent research and to participate in the senior seminar (Geology 98). Students frequently devote one summer to field or laboratory work related to their Honors thesis. For further details on the Honors program consult the department chairman.

Further Preparation
Students preparing for graduate study in the Earth Sciences should select additional courses in mathematics, biology, chemistry or physics chosen in consultation with the department. A course in physical chemistry is strongly recommended. A summer field camp or one or more summers of field experience in the mining or petroleum industry is frequently a requirement for admission to graduate programs in geology. Consult with the department chairman for recommended field camps or for possible summer employment in geology.

11. Physical Geology
Materials and structure of the earth. Processes acting on and in the crust of the earth to produce change. Origin of landforms. Five hours lecture-laboratory per week. Local field trips. Fall and Spring terms.

12. Historical Geology
Origin of the earth and solar system, physical history of the earth, particularly of North America, and history of life on earth. Prerequisite, Geology 11. Three lectures and two hours of laboratory per week. Field trip. Spring term.

15. Environmental Science (an interdisciplinary course, same as Biology 15, Geography 15)
A multi-disciplined introduction to the scientific aspects of the "physical" environment. The course will stress biological, geographical and geological facets of the environment with contributions from the disciplines of chemistry, physics and economics. Three lectures and one of the following per week: laboratory, field trip, or seminar. Prerequisite, one course in the science division. Fall term.

31. Mineralogy
Crystallography and crystal chemistry. Physical and chemical properties and occurrence of the common minerals. Identification of minerals in hand specimen, microscopically, and by X-ray diffraction. Prerequisite, one course in chemistry and consent of instructor. Three hours lecture and four hours laboratory per week. Fall term.

32. Structural and Field Geology
Primary and secondary structures of rocks, mechanics of rock deformation. Use of orthographic and stereographic projections in solving structural problems. Introduction to mapping techniques. Three hours lecture and two-hour laboratory per week. Prerequisite, Geology 12.

36. Stratigraphy and Sedimentation
Principles of stratigraphy and sedimentation and their application in the interpretation of sedimentary environments. Classification and origin of sediments, sedimentary structures, diagenesis, index fossils and depositional environments. Three hours lecture and two hours laboratory per week. Prerequisite, Geology 12 or consent of instructor.
50. Topics in Geology
Topics of current interest in geology such as geological oceanography, the future of earth resources, water resources, the geology of the moon, etc. The topic for discussion during a given term will be announced prior to registration. Prerequisite, consent of instructor.

51. Paleontology
Taxonomy, morphology, paleoecology and evolution of both vertebrates and invertebrates. Use of fossils in stratigraphy and as indicators of paleoenvironments. Prerequisite, Geology 12 or consent of instructor. Three lectures and one two-hour laboratory per week. Local field trips and one all-day field trip to southern Minnesota.

61. Geomorphology and Glacial Geology

65. Petrology
The origin and occurrence of igneous, sedimentary, and metamorphic rocks. Introduction to experimental phase equilibria studies with applications to natural systems. Geochemistry of element distribution to the crust. Use of the petrographic microscope in the study of rock thin sections. Prerequisite, Geology 31. Three hours lecture and four hours laboratory per week.

67. Economic Geology
Occurrence, characteristics and origin of mineral deposits. Factors controlling the distribution of elements in the earth's crust. Relation of mineral deposit theory to problems of mineral economics, discovery and evaluation of deposits. Field trip to mining regions. Three hours lecture and two hours laboratory per week. Prerequisite, Geology 11 and consent of instructor.

95, 96. Independent Study
Independent study of geologic problems or preparation of senior research thesis. Prerequisite, junior standing and consent of department. Either term.

98. Senior Seminar
Reports and discussion of senior thesis projects. Review of major topics in geology. Prerequisite, senior standing and consent of instructor.

GERMAN
Mrs. Albinson, Mr. Clark (Chairman), Mr. Dye, Mr. Sanford, Mr. Sorenson, Mr. Westermeier

The purpose of the major sequence is to equip the student with language skills necessary to the study of German literature and culture, to study the significant literature in original texts, and to prepare him to teach the language and/or to continue the study of the literature and language in graduate school.

In Elementary, Intermediate and Conversation courses use will be made of the Foreign Language Laboratory.

Language Requirements
Since certain departments require some language proficiency for majors in their particular areas, students are advised to inquire of their advisers which ones they are.

Major Concentration
A departmental major in German shall consist of a minimum of nine courses beyond the elementary level (German 11 and 12, or their equivalent). A major shall include 31 and 32 (or their equivalent), 51 and 52. At least four supporting courses to be chosen according to the vocational interests of the students are strongly recommended: for those interested in teaching German, courses in another foreign language, in humanities, in English, and in history.

Core Concentration
The core concentration for future teachers shall include six courses: German 31, 32, 51, 52, and two additional literature courses.

The core concentration for those planning graduate study courses should include six courses: German 31, 32 and four courses to be chosen from literature or linguistic offerings.

In addition, courses from outside the department to be selected by the student with the approval of his adviser and the department concerned would include the following acceptable patterns: (1) six courses in a second foreign language beyond elementary level; (2) six courses in humanities; (3) six courses in English literature beyond freshman level; (4) a combination of 2 and 3; (5) six courses in history, political science, and geography to be chosen from courses relative to German; (6) six courses from the comparative arts with at least one from each of the following disciplines: art, history, music. The other three may be chosen from religion, speech, humanities, philosophy and English literature.
GERMAN

Honors Program
Applicants for Departmental Honors will be accepted into the following courses by permission of the department chairman and arrangement with the instructor: 57, 60, 61, 63, 64, 65, 66 and 67. All Honors students will carry out at least one independent study program (courses 95, 96) under their thesis adviser. Interim Term individual study projects are additionally recommended to Honors students and may be carried out with any qualified member of the staff.

11, 12. Elementary
Essentials of grammar, elementary conversation and reading. For beginning students in German. Four class hours a week plus laboratory periods.

31, 32. Intermediate
Grammar review, conversation and selected readings in classical and modern German texts. Students with two or three years of high school German will be admitted after satisfactorily passing a qualifying foreign language examination. Prerequisite, German 12 or the equivalent. Four hours per week plus laboratory periods.

34. Science Readings in German
Reading material from the various sciences forms the basis for a study of vocabulary and translation techniques. An alternative to German 32. Prerequisite, German 31 or by examination. Four hours a week. Spring term. (Offered alternate years if sufficient enrollment.)

50. Topics
The subject matter of this course will vary from term to term, depending upon instructor's interest and student desire. Prerequisite, German 32 or instructor's permission.

51. Conversation and Composition
Special emphasis placed on pronunciation and general audio-lingual proficiency and the improvement of writing techniques. Prerequisite, German 32, 34, or equivalent. Four hours a week. Fall term.

52. Advanced Conversation and Composition
Prerequisite, German 51. or its equivalent. Four hours a week. Spring term.

53. Introduction to German Literature
A transitional course between the intermediate level and advanced literature classes. An examination of the main literary genres is through the reading of representative German texts. Four hours a week. Fall term.

55. German Culture and Civilization
The development of German culture and its contributions to civilization of the present period in terms of social, historical, political, intellectual and artistic figures and events. Four hours a week. Alternate years.

57. Early Literature
Study of the various genres and their exponents from the beginning to the Enlightenment. Prerequisite, German 53 or permission of instructor.

60. Introduction to Germanic Philology
Fundamentals of comparative linguistics, phonetic and phonemic systems, the history of German from its Indo-European origins to the rise of New High German and German dialects. Prerequisite, one course in the 50 series or permission of the instructor.

61. Advanced Grammar and Stylistics
Intensive study of the more sophisticated points of German grammar and style through translation into German of material from the works of major writers and the writing of critical essays in German on literary subjects. Prerequisite, German 52 or permission of instructor.

63. Age of Goethe I
Selected works from the Enlightenment, Sturm und Drang, and early Classicism. Prerequisite, German 53 or permission of instructor.

64. Age of Goethe II
The later works of Goethe and Schiller; the works of Kleist, Tieck, Wackenroder, Novalis and the Schlegels. Prerequisite, German 53 or permission of instructor.

65. Nineteenth Century Literature I
Comprises the writings of the later romanticists and the major 19th century dramatists. Prerequisite, German 53 or permission of the instructor.

66. Nineteenth Century Literature II
Includes close study of the works of Stifter, Gotthelf, Keller, Storm, C. F. Meyer, Fontane, and Hauptmann. Prerequisite, German 53 or permission of the instructor.

67. Twentieth Century Literature
Selected reading of writers from Naturalism to the present. Prerequisite, German 53 or permission of the instructor.

95, 96. Independent Study
Advanced students may undertake individual projects involving library or laboratory research, with a comprehensive report or thesis. Prerequisite, departmental approval. Either term.
The Department of History offers courses in the development of ideas and institutions in different eras and cultural areas. Courses in history contribute not only to general education but to the preparation of students for graduate education in history and allied fields, teaching, law, the ministry, international service and relations, library and archival work, the foreign service, research, and understanding of an individual's place in society.

**General Graduation Requirement**

History 11, 13, and 15 fulfill the requirement in social science. If properly prepared, a student with the permission of the Chairman of the Department may elect a higher level course to fulfill the general graduation requirement.

**Major Concentration**

A. History

Nine or eleven courses in Division A, Basic Courses*; Division B, Intermediate Courses, and Division C, Advanced Courses and Seminars.

*(Credit for basic History courses — 11, 13 and 15 — is possible by test-out through Departmental, Advanced Placement, or College Entrance Examination Board Achievement Examination. Departmental examinations for the three courses will be given on request during Freshman Orientation Week and at other times during the Fall and Spring terms. Interested students should consult members of the Department.)*

B. Supporting Courses

Because those who choose history as their field of concentration have varied post-college plans, it is not desirable to hold them to a uniform predetermined program. Consequently, students will be advised individually on the selection of five to seven supporting courses from other departments.

**Core Concentration**

Six courses in history and six additional courses will be selected from other fields in consultation with the departmental adviser.

The above procedure will likewise apply to the program of Social Science core curriculum.

A core concentration may also be taken with an American Studies emphasis consisting of six courses in history, three in political science, and three in American literature and philosophy.

**Honors Program**

The Department encourages Honors work for junior and senior students of demonstrated ability. The Chairman nominates students on recommendation of members of the Department. Honors work may be done in regular courses or independent courses. The former is favored for juniors and the latter for seniors. Students are required to write an Honors paper and to pass an examination on this paper given by an outside examiner.

**Participation In Other Programs**

The Department of History cooperates in the Area Studies, International Studies, and Social Science programs.

**Division A: Basic Courses**

Topical surveys of the ideas, forces, and institutions basic to the development of each area. These courses are given each term.

11. Modern Western Civilization

A survey of Western civilization from the Reformation and the beginnings of the Scientific Revolution to the present.

13. American Civilization

A topical analysis of United States history from the colonial period to the present, emphasizing significant ideas, forces, and institutions.

15. Asian Civilizations

Areas and themes in Asian history. Subject matter will vary from section to section. Titles and descriptions of work of sections will be published in advance of registration.

17. Introduction to the Study of History

The nature and history of historical study and its relation to other disciplines, methodology, and practical exercises in historical research.

**Division B: Intermediate Courses**

Courses designed for students who desire a more detailed
introduction to a specific geographical area or country.

50. Topics
Occasional courses offered by faculty, topics announced.

51. History of Latin America
A topical study of the life and development of the Latin American republics from colonial times to the present.

52. History of the Middle East
The political, social, and religious institutions of Islam in Iran, Turkey, and the Arab world and their transformation in encounters with the West.

53. East Asian History
Intensive analytical studies of various periods and themes in East Asian History. Emphasis will be placed on China and Japan in alternate terms.

54. Europe Since 1914
A study of political, economic, and social developments in Europe from the beginning of World War I with emphasis on comparative history and international relationships.

55. History of Africa
A survey of Africa from earliest times to the present, followed by study in depth of selected topics.

56. Ancient History
Classical Greek and Roman history with special emphasis upon the eras of Herodotus and Thucydides and the last two centuries of Republican Rome.

66. Periods in United States History
An intensive analytical and problem-oriented study covering one of the following broad chronological periods: 1607-1789, 1789-1840, 1840-1877, 1877-1920, 1920-present.

71. British History
A survey of British social, economic, and political history from 1445 to the present.

73. Modern French History
The history of France from 1815 to the present, the internal development of the nation as well as the nation's external relationships. Much emphasis will be given to the nature of life in France.

74. History of Russia
A study of the social, religious, and political institutions of Tsarist Russia and their transformation under Marxism during the Soviet period.

75. German History
Analysis of major events, issues, personalities, and historiographical problems of Germany since 1871.

Division C: Advanced Courses and Seminars
Offerings in this division are designed to provide students the opportunity to follow individual interests and focus in depth on critical issues and particular periods. These classes will be limited in size to facilitate student-professor interaction and will include student research and reports. Titles of these courses will appear in the class schedule published by the Registrar. Subject matter can be determined by the instructor either on his own initiative or on the suggestion of a group of students. As prerequisite for these courses students should have completed the related basic course or have the consent of the instructor.

91. Studies in American History
Topical or chronological treatment of an area or region such as the American frontier, the South, and Latin America, or of a special topic such as black history, nationalism and sectionalism, liberalism and conservatism, contemporary American problems, intellectual and social history, urban history, and diplomatic history.

92. Studies in European History
Topical or chronological study in depth of major problems or areas such as Tudor-Stuart England, Renaissance humanism, the era of the French Revolution, modern European intellectual history, socialist and labor history, and diplomatic history.

93. Studies in Non-Western History
Topical or chronological study of major problems or areas such as the Middle East or East Asia in the twentieth century, Western imperialism in the Middle East or East Asia, and the intellectual background of the Arab, Persian, Turkish, or Chinese Revolutions.

94. Special Studies
Topics which are not confined to a particular area or region, such as nationalism, philosophies of history, and imperialism and colonialism.

95, 96. Independent Studies
Conferences, research papers and reports based on independent work in the fields of history.

JOURNALISM

Mr. Moses (Chairman)

The Journalism Department offers four courses (16 semester
credits), plus advanced independent study. Completion of the four courses will admit a student to most journalism graduate schools. Together with practical work on Mac news media, it will qualify many students for a beginning position in journalism. Journalism courses are not open to freshmen without permission of the instructor.

57. News Writing
Basic techniques in straight news, feature, interpretive stories. Fall term.

59. History of News Media and Media Law
Development of communications industry in U.S. and of laws and regulations governing it. Fall term.

64. Public Opinion
A study of how opinions are formed, modified, and measured, and their relation to the mass media. Spring term.

68. Radio and Television News
Basic writing techniques for radio and television news; media relations with government; critique of electronics news and documentaries. Students will prepare newscasts under studio conditions with cameras and video tape playback for critiques. Spring term.

95, 96. Independent study
Further study in fields of special communications interest. Offered by permission to limited number of juniors and seniors. Either term.

MATHEMATICS

Mr. Braden, Mrs. Hedgepeth, Mr. Kirch,
Mr. Konhauser (Chairman), Mrs. Probst, Mr. Rabenstein
(on leave 1970-71), Mr. A. W. Roberts, Mr. Schue, Mr. Ulmer

The Department of Mathematics offers courses in pure and applied mathematics for students with the necessary motivation and insight to prepare for graduate study in mathematics, for students preparing for elementary and secondary school teaching, for students majoring in the natural and social sciences, and for students who wish to acquire an appreciation of the spirit of modern mathematics. The department chapter of Pi Mu Epsilon, national mathematics honorary society, regularly sponsors guest speakers and student programs.

General Graduation Requirement
Mathematics 14, 16, or 21 may be used toward the fulfillment of the graduation requirement in the natural sciences and mathematics. Course 11 may not be used for this purpose. Most entering students who are well prepared in high school mathematics and who wish to continue with mathematics in college will register for Mathematics 21. Courses 14 and 16 are designed to meet special needs as stated in the course descriptions. Course 11 is designed for students who do not have adequate mathematical background to begin with Course 21. The need for this course as a prerequisite to Course 21 will be determined by the College Board score or by a special pre-test in mathematics.

Major Concentration
Courses 21, 22, 33, and 34, or their equivalent, and courses 61 and 62 are required of all students majoring in mathematics. Two additional courses numbered 51 or higher are required and should be selected in consultation with a departmental adviser. Courses 56 and 70 may not both be counted in the minimum requirement of eight courses for the major.

A written examination on elementary mathematics including the elements of linear algebra and differential equations will be given during the first week after spring vacation. This examination is normally taken by students in their fourth term and roughly covers the content of Mathematics 21, 22, 33, and the part of 34 covered up to spring vacation. The questions will not necessarily be confined to the specific topics covered in these courses. A list of topics to be covered by the examination will be furnished to the student before the end of the first term. This examination is regarded as a qualifying examination for a major in mathematics. Students who do not pass it in their sophomore year may take it again in their junior year. The examination must be passed with a satisfactory grade before a student is permitted to graduate with a major in mathematics.

In his senior year, each student majoring in mathematics and not in the Honors program is required to prepare a paper which is of such a nature as to require the student to draw together the ideas from several courses. This paper may be done in connection with a current course that the student is taking or with a course taken previously, but it may not count as one of the interim term courses. This paper may be presented to the Department either in typewritten
form with due regard for punctuation and literary style, or it may be presented orally before the staff members of the Department.

Students who are preparing to teach mathematics in the secondary schools are required to include courses 51, 54, 56, 61 and 62 in their program of upper level courses in order to meet Minnesota requirements for certification.

A student preparing for graduate work in mathematics should include Courses 61, 62, 81, 83, 84, 97 and 98.

**Core Concentration**
The core concentration consists of six courses including 21, 22, 33, 34 and two upper level courses. In addition, the program should include six relevant courses in a related field or fields. In mathematics the core concentration should be elected only in such rare instances where the student's total program does not allow time for a full major. The program for preparing elementary teachers is one such instance where the core concentration is useful.

The same qualifying examination is required for the core concentration as for the major concentration. However the requirement of a senior paper is waived.

**Honors Program**
Qualified students are encouraged to enter the Honors program at the beginning of their junior year. Honors students are required to complete satisfactorily a minimum of three Honors courses and prepare a paper which must be defended successfully before an outside examiner. Two of the Honors courses must be Mathematics 97 and 98. The other Honors courses may be any courses in mathematics numbered 51 or higher in which the student gains Honors credit by extraordinary treatment of the topics in the courses, the nature and extent of which have been mutually agreed upon, in advance, by student and instructor.

**Further Preparation**
It is strongly recommended that any student who wishes to prepare for graduate work or research in mathematics should obtain a reading knowledge of French, German, or Russian.

**Placement Test**
As a prerequisite to any courses in college mathematics, it is assumed that a student has taken at least two years of college preparatory mathematics, consisting of a year of algebra and a year of geometry or the same material in integrated courses. Scores on the College Board achievement test in mathematics (Level II, Intensive) will be used, when available, to place students at the proper level in their beginning mathematics course. Students who have not taken this test will be given a placement test prior to registration in mathematics courses.

**11. Basic College Mathematics**
The purpose of this course is to prepare students for Math 21. College-level topics in algebra and trigonometry are emphasized. This course does not fulfill the graduation requirements in natural sciences and mathematics and should be taken only by students who desire further work in mathematics and who are not yet ready for Math 21. Fall term.

**14. Introduction to Statistics**
An introduction to the theory and applications of statistics, suitable for students in the physical, biological, and social sciences, and for liberal arts students in general. The course stresses both logical development and practical utilization. Topics include: probability distributions, measures of dispersion, sampling, testing of hypotheses, and correlation. Prerequisite, proficiency in intermediate high school algebra. Spring term.

**16. Fundamental Mathematics**
Designed for students in Elementary Education, but sufficiently broad in scope that it can be applied toward the graduation requirement in the natural sciences and mathematics. Topics include the nature of mathematical proof, number systems, algebraic systems, and sets. Prerequisite, proficiency in the elementary algebraic operations. Either term.

**21. Analytic Geometry and Calculus**
An integrated course in analytic geometry and calculus, open to students who have a strong background preparation in algebra and trigonometry. Prerequisite, satisfactory score on pre-test or Mathematics 11. Either term.

**22. Calculus**
Further study of the differentiation and integration of functions of a real variable with applications in geometry and the sciences. Prerequisite, Mathematics 21. Either term.

**33. Linear Analysis**
Introduction to linear algebra, including such topics as real vector spaces, subspaces, linear independence and dependence, geometric vectors, linear transformations, matrices, and determinants. Applications of linear algebra to differential equations, particularly linear differential equations. Prerequisite, Mathematics 22. Fall term.
34. Intermediate Calculus
Solid analytic geometry, vector analysis, multiple integrals, partial differentiation, applications to geometry and physics. Prerequisite, Mathematics 22. Spring term.

51. Mathematical Statistics
An introduction to the theory and application of statistics, employing calculus where it is appropriate. Topics include: measures of dispersion, correlation, probability, sampling, estimation of parameters, and testing of hypotheses. Continuous probability distributions are treated much more extensively than in Math 14. Prerequisite, Mathematics 34 or consent of the instructor. Spring term.

54. Modern Geometry
The various postulates of Euclidean and non-Euclidean geometry. Projective geometry and its relations to affine, Euclidean, hyperbolic, and elliptic geometries. Prerequisite, Mathematics 34. Fall term. Offered 1971-72 and alternate years.

56. Foundations of Mathematics
Introductory treatment of the foundations of mathematics and of concepts that are basic to mathematical knowledge. Historical development of the logical structure of the main branches of mathematics, with especial attention to geometry, algebra, and analysis. Particular attention to deductive systems and their role in modern mathematics. Prerequisite, Mathematics 34. Fall term. Offered 1970-71 and alternate years.

58. Advanced Calculus for Applications
Topics of importance in many fields of applications, at a level that requires a background in elementary calculus. The main topics considered are vector analysis, Fourier series and integrals, ordinary differential equations, special functions, and partial differential equations of mathematical physics. Prerequisite, Mathematics 33 and 34. Fall term.

61. Linear Algebra
Vectors and vector spaces, matrices, systems of linear equations, determinants. Prerequisite. Mathematics 34. Fall term.

62. Abstract Algebra
Groups, rings, fields, and properties of number systems. Prerequisite, Mathematics 61. Spring term.

70. Advanced Logic
Procedures and findings of symbolic or mathematical logic. Identical with Philosophy 70. Prerequisite, Philosophy 40 and permission. Spring term. Offered 1971-72 and alternate years.

81. Theory of Functions of a Complex Variable
Algebra of complex numbers, analytic functions, the Cauchy-Riemann equations, Cauchy's theorem, the Cauchy integral formula, Taylor and Laurent series, the residue theorem, and conformal mapping. Prerequisite, Mathematics 83. Spring term. Offered 1970-71 and alternate years.

83. Theory of Functions of a Real Variable (Course I)
Elementary set theory, the real number system, topology of the real line, metric spaces, continuity and differentiability of functions, functions of bounded variation. Prerequisite, Mathematics 34. Fall term.

84. Theory of Functions of a Real Variable (Course II)

95, 96. Independent Study
Individual project including library research, conferences with instructor, oral and written reports on independent work in mathematics. Subject matter may complement but not duplicate material covered in regular courses. Arrangements must be made with a department member prior to registration. Prerequisite, departmental approval. Fall and spring terms.

97. Topics in Mathematics
Seminar with the students and the instructor sharing the lectures. Subject matter varies from year to year and is usually in the field of special competency of the instructor. May be included in program of student more than one time. Prerequisite, junior standing and consent of the instructor. Fall term.

98. Topics in Mathematics
Continuation of Mathematics 97. With the aid of the instructor, each student selects a special topic to investigate. The results of the investigation, carried out under the guidance of the instructor, must be presented in a paper acceptable to the instructor and to the Department of Mathematics. Designed to be taken by senior Honors candidates. Prerequisite, Mathematics 97. Spring term.

MUSIC
Mr. Anderson, Mr. Betts, Mr. Forner, Mrs. Frazee, Mr. Hammer (Chairman), Mr. King, Mr. Komorous, Mr. Warland.
The Department of Music offers courses for the following: (1) those planning to enter graduate study in performance, musicology or composition within a strong liberal arts program; (2) those planning teaching careers in secondary or elementary education; (3) those wishing to pursue music as an avocation. A careful balance is maintained between courses in theory, literature, history and performance. Special emphasis is given to creative work in composition.
Any Macalester student may begin or continue private study on an instrument or in voice, and all students are invited to audition for Band, the Choirs, Orchestra, Pipe Band, Highland Dancing, and Chamber Music. Students who are taking a major or core concentration are expected to be taking private lessons and performing in one of the ensembles each term. Fees for studio courses are described elsewhere in this catalog. It should be noted that students taking studio work during an Interim Term must arrange to pay to the instructor, directly, a fee which will be agreed upon at that time with the instructor.

**General Graduation Requirement**
Music 10 will normally be used to satisfy the humanities and fine arts general graduation requirement. Other music courses, particularly Music 11, may also be used for this purpose, with permission of the instructor.

**Major Concentration**
Music 11 (Fundamentals of Music) must be passed before entry into the program. Both Music 11 and Music 14 (Elementary Theory) should be taken during the freshman year if possible, and certainly no later than the sophomore year, since these courses are prerequisite to most of the other required music courses. In any case, the history-literature sequence must begin no later than the fall term of the student's junior year.

a. Major Concentration in Music: Music 14, 23, 24, 41, 42, 43, 52, 53, one course of applied lessons and one course of ensemble.

b. Major Concentration in Music for Teacher Preparation: Music 14, 23, 41, 53; one from 42, 43, or 52; 71, 73; one from 72, 74, or 76; one course of applied lessons and one course of ensemble. Also note that: (1) Education 41 and 51 provide further work in conducting and rehearsal techniques. (2) The three-course sequence chosen from Music 71, 72, 73, 74, and 76 should be started in the sophomore year. (3) In order to provide maximum time in music education courses, the student should elect to do practice teaching either Interim and Spring Terms, or in the Spring Term only, of the senior year. (4) A student interested in a Music Supervisor position (which entails teaching music only, at any level from kindergarten through twelfth grade) should elect to take Music 76 and plan to take one of the practice teaching courses at the elementary level and one at the secondary school level.

**Core Concentration**
Music 11 must be passed before entry into the program, and should be taken no later than the fall of the sophomore year. Core concentration: Music 14, 23; three Music courses approved by the chairman and one course of applied lessons and ensemble; six courses outside the department selected by the student and the chairman of the department.

**Honors Program**
The following courses may be taken as part of the music Honors program: Music 24, 31, 41, 42, 43, 52, 53, 92, 93, 95, 96, 98. Other projects will be worked out by the student and the department chairman.

**Graduate Study**
Students preparing for graduate study should continue their work in piano to a point where they can sight-read music comparable in difficulty to a Mozart sonata. They should take as electives Music 91, 95, 96, and, if possible, Music 92, 93.

**Department Activities**
The Collegium Musicum is an organization, open to all students, which sponsors student recitals, student composers' concerts, and other presentations related to music. The department encourages and helps sponsor such organizations as stage band, jazz ensembles, and informal chamber music groups.

**10. Music Appreciation — Bach, Mozart, Beethoven, Stravinsky**
The music of these four composers in the context of their cultural surroundings and in relation to other world cultures. Fall and Spring terms.

**11. Fundamentals of Music**
Key and time signatures, scales, intervals, primary chords, ear-training, sight-singing, elementary keyboard harmony, improvisation. Prerequisite, permission of the instructor. Fall term.

**14. Elementary Theory**
This course will continue the ear-training and sight-singing aspects of Music 11 and will include written and keyboard exercises in harmony through secondary seventh chords. Prerequisite, Music 11 or permission of the instructor. Spring term.

**23. Advanced Theory**
Continuation of ear-training, sight-singing, written and keyboard harmony through extended alteration of tertian harmony. Prerequisite, Music 14. Fall term.
24. Contemporary Techniques
Study of compositional techniques in 20th Century music with emphasis on analytical and performance skills. Prerequisite, Music 23. Spring term.

31. Composition
Preparation of original pieces for performance. Prerequisite, Music 24 or permission of the instructor. Fall term.

41. History of the Pre-Baroque Era
A synopsis of the music of early civilizations and a general history of music's development from the Golden Age of Greece through the Renaissance. Prerequisite, Music 14 or permission of the instructor. Offered 1971-72 and alternate years. Fall term.

42. Music Literature — Baroque
The study and analysis of music written from the time of Monteverdi to Handel. Prerequisite, Music 14 or permission of the instructor. Offered 1971-72 and alternate years. Spring term.

43. Music Literature — Classic
The study and analysis of music written in the period covered from the Mannheim School to early Beethoven. Prerequisite, Music 14 or permission of the instructor. Offered 1971-72 and alternate years. Fall term.

52. Music Literature — Romantic
The study and analysis of music written in the period covered from middle Beethoven through Mahler. Prerequisite, Music 23 or permission of the instructor. Offered 1970-71 and alternate years. Spring term.

53. Music Literature — Contemporary
The study and analysis of music written in the 20th Century. Prerequisite, Music 24 or permission of the instructor. Offered 1971-72 and alternate years. Fall term.

71. Secondary School Music — Instrumental
Playing string and woodwind instruments, survey of publishers and methods. Class and laboratory sessions, conducting. Offered in 1971-72 and alternate years. Fall term.

72. Secondary School Music — Instrumental
Playing brass and percussion instruments, survey of publishers and methods. Class and laboratory sessions, conducting. Offered in 1971-72 and alternate years. Spring term.

73. Secondary School Music — Choral
Introduction to choral conducting with emphasis on score preparation and conducting technique as it relates to literature of all stylistic periods in the history of music. Prerequisite, permission of the instructor. Offered 1970-71 and alternate years. Fall term.

74. Secondary School Music — Advanced Choral
Continuation of choral conducting with emphasis on rehearsal techniques, diction, phrasing, literature for chorus and orchestra, and the organization and development of choral ensembles. Prerequisite, Music 73. Offered 1970-71 and alternate years. Spring term.

76. Elementary School Music Supervision

90. Instrumental Conducting
The study of problems related to score reading and conducting techniques for conductors of instrumental ensembles. Prerequisite, permission of the instructor. Offered 1971-72 and alternate years. Spring term.

91. Modal Counterpoint
Writing in the forms and employing the practices of the 16th Century. Prerequisite, Music 14. Offered 1970-71 and alternate years. Fall term.

92. Orchestration
The study and practice of scoring instruments for orchestra and band. Transposition, terms, symbols and manuscript preparation. Prerequisite, permission of the instructor. Offered 1970-71 and alternate years. Spring term.

93. Experimental Music
Preparation and performance of original works involving unusual techniques or sound sources such as music for tape recorder and music derived by chance. Prerequisite, permission of the instructor. Fall term.

95, 96. Independent Study
Creative, interpretive, and research projects. Prerequisite, permission of the instructor. Fall and spring terms.

97, 98. Seminars

Applied Music

Performance Ensembles

The following organizations are open to all Macalester students. Selection of members is usually made on the basis of auditions in the fall. Students joining an organization are expected to remain active in it throughout both Fall and Spring terms. However, it is possible in certain cases to join an ensemble through audition the second term. Course credits may be earned in all groups but Music 119, 120, 131, and 132 as follows: (1) A course unit will consist of four terms of applied music either in one area or two areas. If in two areas, each shall consist of two consecutive...
terms. If in one area, each block of two terms must be consecutive (consecutive terms may be Fall-Spring, or Spring-Fall). (2) Applied music participation will be graded on an S-U basis; a student must receive an S in each component term to receive an S for the whole course. (3) A student may receive no more than two course units of credit for applied music. (4) A student may take applied music courses in two areas each term and earn a full course credit at the end of two consecutive terms.

111, 112. The Macalester College Band
Readings, preparation and performance of concert band literature.

113, 114. The Macalester College Pipe Band
Instruction in the pipes and drums. Performances at Macalester and community functions.

115, 116. The Macalester College Orchestra
Readings, preparation and performance of orchestral literature.

117, 118. The Macalester College Festival Choir
Public presentation of major choral works with orchestra; campus and community appearances.

119, 120. Highland Dance
Instruction in traditional Scottish highland dances. Performance at Macalester and community functions.

131, 132. Scottish Country Dance
Instruction in traditional Scottish folk dances. Performances at Macalester and community functions.

215, 216. The Macalester Chamber Music Ensemble
Preparation of trio, quartet, and small ensemble literature for public presentation.

217, 218. The Macalester College Concert Choir
A selected group of about 40 singers. Presentation of chamber music with and without orchestra; performances on campus, in the community and on tour.

Studio Courses

Private half-hour lessons may be taken by any Macalester student in voice, piano, organ, guitar, orchestral and band instruments. Credit for all these may be earned as described under the ensembles listed above. Fees are given elsewhere in this catalog. Upon recommendation of their instructors, a limited number of students may be approved by the department chairman to receive one hour lessons at no extra fee (nor extra credit). Class lessons in piano and voice are available at a reduced fee. A bulletin describing the music lesson program at Macalester in detail may be obtained from the Music Department office.

121, 122. Class Lessons in Piano
Open to students with less than one year of piano study.

123, 124. Class Lessons in Voice
Open to students with less than one year of voice study.

101, 102. Private Music Lessons
Instruction in instrument or voice, Freshman level.

201, 202. Private Music Lessons
Instruction in instrument or voice, Sophomore level.

301, 302. Private Music Lessons
Instruction in instrument or voice, Junior level.

401, 402. Private Music Lessons
Instruction in instrument or voice, Senior level.

PHILOSOPHY

Mr. Abraham, Mr. Chase, Mr. Garvin, Mr. T. Hill, Mr. Martin, Mr. Vollrath, Mr. West (on leave 1970-71), Mr. White (Chairman)

The purpose of philosophy courses is to encourage and assist students in critical thinking and reflective evaluation with reference to basic presuppositions in the humanities, the arts, the sciences, and the various modes of man's practical endeavor. Such courses present philosophical problems in historical and logical perspective and stress their current relevance. Philosophy concentrations may lead to college teaching or help to build foundations for careers in religion, science, law, education, and other areas. They contribute significantly to life orientation regardless of vocational choice.

Major Concentration
Eight courses in philosophy, including:

- Philosophy 31 (Foundations of Philosophy)
- Either Philosophy 30 (Ancient and Medieval Philosophy) or Philosophy 32 (Recent Philosophy)
- Philosophy 40 (Logic and Scientific Method)
- One of the following: Philosophy 25 (Ethics), Philosophy 65 (Theory of Knowledge), Philosophy 66 (Metaphysics)
- Philosophy 98 (Seminar)

Two courses in a single science or in mathematics; or

Chemistry 13
Two courses in the social sciences (history and/or psychology recommended)

One course in religion (course to be approved by the Philosophy Department on the basis of the course syllabus)

Reading competence in one language other than English, to be certified by the appropriate language department

Four courses in a single department supportive of the major program; if any of these courses satisfy other requirements, they may count for both; this requirement is void if it necessitates taking more than the 16 courses that a department may require.

Core Concentration
Six courses in philosophy, including:
- Philosophy 31
  - Either Philosophy 30 or 32 is strongly recommended
- Philosophy 40
- Philosophy 98
  - One of the following: Philosophy 25, 65, 66

Either three courses in each of two departments or four or more courses in one other department, these courses to be supportive of the student's objectives for the core in philosophy

Two courses in a single science or mathematics as specified for major program

Two courses in the social sciences as specified for the major program

One course in religion as specified for the major program

Reading competence in a language other than English strongly recommended

Note: Exceptions and alternatives to these requirements may be made with the approval of the Philosophy Department.

Senior Comprehensive Examinations
Students majoring in philosophy will take the Undergraduate Record Examination and an oral and written examination administered by an outside examiner; students coring in philosophy will take the URE and an oral examination.

15. Problems of Philosophy
The course deals with basic issues common to human thought such as the problems of truth and knowledge, mind and body, freedom and determinism, right and wrong, and the existence of God.

25. Ethics
The nature of value, duty, right and wrong, and the good life, with applications to selected problems of personal and social behavior.

30. Ancient and Medieval Philosophies
Major philosophers of Greece, Rome, and the medieval period.

31. Philosophical Foundations
The founders of modern philosophy from Descartes to the nineteenth century.

32. Recent Philosophy
Major philosophers of the late nineteenth and twentieth centuries.

36. Indian Philosophies
Introductory study of selected Hindu and Buddhist texts and philosophies.

37. Chinese and Japanese Philosophies
A study of selected Buddhist, Confucian, and Taoist texts, including Japanese Buddhist works. Prerequisite, sophomore standing or Philosophy 36.

40. Logic and Scientific Method
Principles and methods of critical inquiry, analysis of meaning, formal logic, the logic of modern science.

50. Topics

65. Theory of Knowledge
The nature of knowledge, evidence, and validity, and the character and criteria of truth.

66. Metaphysics
Examination of ultimate categories, such as substance and attribute, particular and universal, mind and body. Special attention to present trends in philosophy. Prerequisite, one course in philosophy.

70. Advanced Logic
Procedures and findings of symbolic or mathematical logic. Identical with Mathematics 70. Prerequisite, Philosophy 40 and permission.

71. Aesthetics
The nature of aesthetic experience and the basis of aesthetic evaluation.

82. Political Philosophy
Western political thought. Identical with Political Science 82.

84. Philosophy of Education
Identical with Education 84.
85. Philosophy of Religion
Analysis of problems and viewpoints represented in the great religions, and of the function of religion in human life.

86. Philosophy of Science
Methods, presuppositions, and modes of confirmation common to all divisions of science; history and logic of problems relating to particular divisions of science; functions of science in contemporary civilization.

87. Philosophy of History
Analysis and evaluation of various interpretations of structure and meaning in history. Identical with History 87.

95, 96. Readings
Works of a specific philosopher or school, or study of a philosophical problem.

98. Seminar
A flexible course of concentrated study upon some movement, problem, or philosopher.

PHYSICAL EDUCATION AND KINESIOLOGY

Mr. Bachman, Mr. Becker, Mr. Bolstorff, Mr. Borstad, Miss Brewer, Mr. Engerbraten, Mr. Hanson (Chairman, on leave Fall term), Mr. Hudson, Mr. Lundeen, Miss Maddux, Mr. Sadek, Miss Weeks, Mrs. Wiesner

The Department of Physical Education and Kinesiology fulfills a multiple role in Macalester's educational program. The academic program provides an opportunity for the in-depth study of kinesiology. Students may prepare for graduate school and research or be certified for teaching and coaching. The activity program provides an opportunity for students to gain an understanding of the role of physical activity as it relates to their functional fitness, provides an opportunity for the acquisition of physical activity skills for the worthwhile use of leisure time, and provides an opportunity for the development and maintenance of an optimum level of personal functional fitness. The intramural and recreation programs provide an opportunity for all students to participate in activities of their choice in a variety of organized and unorganized settings. The intercollegiate athletic program offers an opportunity for men to participate on varsity athletic teams. The following eleven sports are sponsored by the College: baseball, basketball, cross country, football, golf, hockey, soccer, swimming, tennis, track and field (indoor and outdoor) and wrestling.

Major Concentration
The major concentration consists of eight courses which must include P.E.K. 21, 31, 32, 61, 62, and 71. A well-equipped laboratory is provided for the experimental study of anatomical, mechanical, maturational, physiological, psychological, and medical kinesiology. Students wishing to certify to teach physical education are required to include P.E.K. 22, 72 and 82 as well as Education 40, 49, 61, and 65. Additionally a minimum of eight activity courses must be successfully completed to show proficiency in the following skills: aquatics, badminton, basketball, dance (social, folk), field hockey (women), golf, gymnastics, soccer, softball, tennis, touch football (men), track and field, volleyball, weight training and wrestling (men).

Core Concentration
The core concentration consists of P.E.K. 21, five additional courses in Physical Education and Kinesiology, and six supporting courses selected by the student in consultation with the department.

Coaching Certification
Students wishing to certify for coaching in the public schools may gain needed qualifications by successfully completing P.E.K. 61, 62, 71 and 72.

Activity Program
Students may elect to enroll in the activities program for credit or no credit. A course unit of credit counting toward the 31 courses required for graduation may be acquired by successfully completing four terms (not necessarily consecutive) of physical education activities classes. The first of the four successfully completed offerings in the credit series must be P.E.K. 101, Physical Fitness. A particular activities course successfully completed may not be repeated for credit. Grading of all activities courses will be on an S/U basis. An S grade in each of the four activities courses in the credit series is necessary if these courses are to be counted together as one course unit. Text materials will be used. Evaluation will include both written and performance examinations when appropriate. In cases of sequences of activities courses of the same kind, such as the three courses in beginning, intermediate, and advanced tennis, a student will be placed by the department at the appropriate level.

Academic Courses
11. Scientific Foundations of Human Kinesiology
An investigation of the biological, psychological, and sociological findings as they relate to human movement. The development and maintenance of functional fitness is stressed. Fall term.

**12. Community and Camp Recreation**
A study of the organization and administration of community and camp recreational programs. Leadership roles are emphasized. Practical experiences are provided. Spring term.

**21. Kinesiological Research and Measurement**
The development, evaluation, and application of kinesiological and health tests including the use and interpretation of statistical techniques applicable to test development and research. Fall term.

**22. Health Problems**
A survey of school, community, county, and state health problems. Considers the broad scope of health as it relates to the total educational program. It includes personal and community health, and the influences of sex and family, nutrition, disease, drugs, alcohol, and tobacco. Spring term.

**31. Human Anatomy**
Study of the structure of the human body. Topics include embryology, skeletal anatomy, muscular anatomy; the anatomy of the circulation, respiration, lymphatic, digestion, urogenital, endocrine, sensory, and nervous systems. A lecture-laboratory course with three lectures and a two-hour laboratory each week. Fall term.

**32. Human Physiology**
Study of the functioning of the human body. Topics include the physiology of the cell, myology, circulation, respiration, digestion, metabolism, and kidney function. A lecture-laboratory course with three lectures and a two-hour laboratory each week. Spring term.

**45, 46. Independent Study**
Freshman and sophomore students may undertake individual projects involving library or laboratory research. Prerequisites, departmental approval. Fall and spring terms.

**50. Kinesiological Topics**
Examination of a topic of general interest from the point of view of the science of human movement, the topic to be announced in advance of registration. Prerequisite, permission of instructor. Fall or spring term.

**61. Psychological and Sociological Kinesiology**
The effects of motivation, aspiration, leadership, individual differences, cultural differences, physical growth and development on human movement. Consideration also given to sex and age differences. Fall term.

**62. Anatomical and Mechanical Kinesiology**
Physical principles and analysis are stressed as they apply to basic anatomical and mechanical interpretation of kinesiology. An introduction to approaches for motion analysis and data reduction is provided. A lecture-laboratory course with three lectures and a two-hour laboratory each week. Prerequisite, P.E.K. 31. Spring term.

**71. Physiological Kinesiology**
A study of applied physiology associated with human movement. Consideration is given to the physiological effects of conditioning, as well as the influence of exercise on health and fitness. A lecture-laboratory course with three lectures and a two-hour laboratory each week. Prerequisite, P.E.K. 32. Fall term.

**72. Medical Kinesiology**
A study of first aid, the care and prevention of athletic injuries, corrective and adaptive kinesiology with consideration given to growth-development theory. Spring term.

**81. Historical and Philosophical Kinesiology**
The scope of Physical Education from ancient cultures through modern times. Interpretation and application of historical and philosophical bases of physical education. Fall term.

**82. Curriculum Development and Administration**
Physical Education curricula are developed based upon the scientific foundations of human movement. Principles of curriculum implementation are studied. Prerequisites, P.E.K. 21, 61, 62, and 71. Spring term.

**95, 96. Independent Study**
Advanced students may undertake individual projects involving library or laboratory research. Prerequisite, departmental approval. Fall and spring terms.

**Activity Courses**

**100. Movement Fundamentals**

**101. Physical Fitness**

**103. Cross Country**

**105. Track and Field**

**107. Beginning Basketball**

**112. Beginning Team Sports**

**113. Beginning Soccer**

**114. Beginning Volleyball**

**119. Beginning Field Hockey**

**120. Beginning Gymnastics**

**121. Beginning Fencing**

**122. Beginning Handball**

**123. Beginning Badminton**

**124. Beginning Tennis**

**125. Beginning Weight Training**
PHYSICS AND ASTRONOMY

Mr. Congel, Mr. Hastings, Mr. Jeffries, Mr. Kim (on leave
Spring term), Mr. Mikkelson, Mr. J. Roberts (Acting
Chairman), Mr. Schultz, Mr. Smith, Mr. Strait (on leave
1970-71), Mr. Strash

The Physics Department provides opportunities to study
physics on many levels. Special emphasis is given to courses
for the non-science major. These courses are designated by
numbers below 20 and on occasion by Special Topics (Physics
50). Two levels of specialization in physics are available.
These are outlined in detail under the headings, Major
Concentration in Physics and Core Concentration in Physics.
One follows a rigorous specialization in physics and
mathematics and is primarily for those who wish to qualify
for graduate study in physics or who wish to prepare for
specialized work in industry. The other offers more breadth
of choice, such as might be desired by those preparing to
teach physics in secondary schools.

Courses 21 and 22 constitute a two term sequence for
students wishing a more extended coverage than that offered
in Physics 11, but whose mathematical preparation does not
permit entering Physics 26 and 27.

Physics 25, 26 and 27 constitute a desirable sequence for
students planning a major in one of the physical sciences,
or who for other reasons wish an introduction to Physics
which makes use of the calculus.

General Graduation Requirement
Any course numbered less than 30 may be used to count
toward the general graduation requirement.

Major Concentration
The following sequence of courses should be followed by
those students who wish to qualify for graduate study in
Physics, or who for some good reason wish to avail
themselves of the most rigorous preparation in the field that
the college offers. These courses are Physics 21 or 26, 22
or 27, 43, 44, 61, 93 and three additional courses selected
from Physics 25 and courses numbered above 30.

Core Concentration
The following sequence of courses should be followed by
those who do not plan to continue on into graduate work in
Physics, but who nevertheless wish to avail themselves of
the opportunity to specialize in Physics and to be able to
include supporting courses outside the department. These
courses are Physics 21 or 26, 22 or 27, 25, 43, 44, 61, 93, and
six additional courses normally from the area of the Natural
Sciences and Mathematics, but not necessarily so. Courses
from outside these areas may be selected by mutual consent
of the student and his adviser. For those interested in
preparation for teaching, the core concentration is suggested.

Honors Program
Qualified students are encouraged to apply for participation in the Honors Program. Honors courses in Physics are developed around courses 95, 96 (Independent Study) and courses numbered 30 and above.

Further Preparation
Students with a major concentration in Physics, contemplating graduate study in physics, should have completed mathematics through differential equations and advanced calculus, and have a background in at least one other science.

For the core concentration in Physics the student should complete mathematics through calculus.

10. The Physics of Sound
Musical acoustics, the physics of musical instruments and technical applications of sound; experiments in sound are included. Three lectures, one hour of laboratory a week.

11. Contemporary Concepts
The course is specifically designed for the nonscientist who desires a completely nonmathematical, yet wholly faithful, acquaintance with the revolutionary concepts of contemporary physics. Topics will include:
1) Relativity and its fantastic consequences,
2) Electromagnetic nature of light (can there be yet another dimension to the setting sun's awesome beauty?), and
3) Atomic structure and quantum theory, including a discussion of the elusive neutrino (which, incidentally, has neither mass nor charge, and yet constantly spins, left-handedly at that!)
The underlying assumption of the course is that physics examined as a daring way of thinking can be vitally relevant and challenging to students of all intellectual persuasions. Three lectures, one two-hour laboratory a week.

13. Elementary Astronomy
A descriptive, non-mathematical course covering the solar system, constellations, galaxies and other stellar systems and the present theories on the origin of the universe. Four lecture hours per week. Occasional evening viewing sessions. Fall and spring terms.

14. Principles of Astronomy
Nature and origin of the solar system and of various stellar systems. Laws of motion and gravitation, stellar spectra and compositions. Three hours lecture and two hours laboratory per week. Prerequisite, Math 11 or equivalent.

21. Introductory Physics I
Mechanics, heat and sound, including laboratory experiments and extensive demonstrations. Three lectures, two-hour laboratories a week. Fall term.

22. Introductory Physics II
Electricity and magnetism, light and optics, modern physics, including laboratory experiments and extensive demonstrations. Three lectures, two-hour laboratories a week. Spring term.

25. Introductory Modern Physics
An opportunity to study contemporary physics on an introductory level. Atomic concepts of matter, relativity, matter waves, nuclear structure and elementary particles. Three lectures, two-hour laboratories a week. Fall term.

26. Principles of Physics I
Mechanics, heat and sound, including laboratory experiments and extensive demonstrations. Presupposes a working knowledge of calculus. Prerequisite, Mathematics 21. Three lectures, two two-hour laboratories a week. Spring term.

27. Principles of Physics II
Electricity and magnetism, light and optics, modern physics, including laboratory experiments and extensive demonstrations. Presupposes a working knowledge of calculus. Prerequisite, Mathematics 21. Three lectures, two two-hour laboratories a week. Fall term.

34. Optics
Principles of optics including laboratory experience in basic optical experiments. Prerequisite, Physics 22 or 27. Three lectures, one two-hour laboratory a week. Spring term.

42. Electronics
AC and DC circuits, vacuum tubes and transistors, amplification, modulation, and digital circuits. Prerequisite, Physics 22 or 27. Three lectures, two-hour laboratories a week. Spring term.

43. Electricity and Magnetism I
Elements of AC and DC circuits, Kirchhoff's laws, transient and steady state conditions, vector and complex number representation, electrostatic field and potential theory, properties of dielectrics. Prerequisite, Physics 22 or 27 and Mathematics 34 or consent of instructor. Four lectures and one two-hour laboratory a week. Fall term.

44. Electricity and Magnetism II
Steady state magnetism, Ampere's laws, vector and scalar potentials, electromagnetic induction, magnetic properties of matter, development of Maxwell's equations, electromagnetic oscillations and radiation. Prerequisite, Physics 43. Four lectures a week. Spring term.
50. Topics

61. Mechanics
Particle dynamics, the central force problem, conservative motion, moving coordinate systems, and Lagrange's equations of motion. Prerequisite, Physics 21 or 26 and Mathematics 33. Four lectures a week. Fall term.

62. Theoretical Mechanics
The Lagrangian and Hamiltonian formulation of mechanics, rigid body motion, and the special theory of relativity. Prerequisite, Physics 61 and Mathematics 34. Four lectures a week. Spring term.

68. Heat and Thermodynamics
A study of the thermal properties of matter including the laws of thermodynamics, conditions for thermodynamic equilibrium and introductory statistical mechanics. Prerequisite, Physics 21 and 22, or 26 and 27, and Mathematics 33 and 34. Four lectures a week. Spring term.

81. Quantum Mechanics
The concepts and techniques of quantum mechanics, developed and applied to atomic and molecular systems. Prerequisite, Mathematics 34 and consent of instructor. Four lectures a week. Fall term.

82. Solid State and Nuclear Physics
A study of modern physics with special emphasis on the solid state, nuclear structure and particle physics. Prerequisite, Physics 81 or consent of instructor. Four lectures a week. Fall term.

93. Comprehensive Laboratory
An emphasis on experimental physics, including participation in a departmental seminar and opportunities to work in departmental research programs and other experimental projects. Prerequisite, junior standing and consent of instructor. Eight hours of laboratory a week. Spring term.

95, 96. Independent Study
Students in either the major concentration or core concentration in Physics select a subject for independent investigation and preparation of a senior thesis. Independent reading and experimentation by arrangement. Prerequisite, junior standing and departmental approval of the project prior to registration.

The Department of Political Science aims to provide students with pre-professional training for government service and for graduate school, and with a general background of knowledge about government and politics which is important to every well-educated citizen. The courses which follow seek to achieve these objectives and include the following areas of political science: Division A, American Government, Politics, and Public Law; Division B, International Politics; Division C, Comparative Politics; Division D, Political Analysis; Division E, Public Policy.

General Graduation Requirement
Any course or courses in the department may be taken to satisfy the general graduation requirement in the social sciences.

Major Concentration
A major concentration consists of eight courses and must normally include: (1) One beginning course (2) A senior project involving either a research paper or an internship project which may be arranged for one or two terms of the senior year (3) Intermediate courses selected in terms of the student's interests and career goals.

Special programs are offered by the department in pre-law, urban affairs, international relations, public administration, comparative cross-national politics. Descriptive literature on these programs is available in Department Office, 316 Old Main.

The department recommends that all students take one statistics course and one research methods course (50-07).

Core Concentration
A core concentration consists of six courses. Students with a core concentration in political science are not required to take statistics, research methods or the senior project. Please see department chairman for individual program descriptions.

Interdepartmental concentrations are offered by political science and other departments such as economics, history, geography, sociology and psychology.

A core concentration in political science may also be taken in connection with an American studies sequence consisting of six courses in political science, three courses in American history and three courses in American literature and philosophy.
Senior Project
The department requires all majors to elect a senior project for at least one term of the senior year. These projects will be reviewed by all members of the department faculty and those students whose projects warrant the classification "with distinction" will be graduated with that designation.

Honors Program
Students with questions about participation in the Honors Program should consult with the department chairman.

Further Preparation
The department encourages students whose career goals would be assisted by language skills to make arrangements to prepare themselves adequately. Students are also encouraged to avail themselves of the opportunities for overseas study or travel available at Macalester College. (See Overseas Programs listings.)

There are no prerequisites for courses numbered below 50. Students must have instructor's permission or have taken the necessary prerequisites for courses numbered above 50.

Introductory Courses — Open to Freshman
11. Politics and Social Change
Designed for entering freshmen who have a particular interest in the field of political science. In the first weeks departmental faculty members will meet individually and collectively with the students and present alternative approaches to the study of contemporary political issues. In the second phase students will work in small groups with an individual faculty member in order to clarify their interests and develop their skills in the analysis of political phenomena.

13. Modern Ideologies
The nature and clash of political ideologies: Communism, Fascism, Socialism, "Welfarism," Liberalism and Conservatism.

16. World Politics
Survey of basic concepts and theories in the study of international politics. Simulation exercises and small group discussions are used to clarify concepts as well as provide background for the understanding of current problem areas in international politics.

18. American National Government
Analysis of federal governmental institutions and political processes.

Intermediate Courses
Division A: American Government, Politics and Public Law

31. Law and Politics
Investigation of formal social control institutions in urban areas: the police, the courts, prosecution and defense agencies in criminal cases.

33. Administrative Organization and Behavior
Theories and analysis of public bureaucracies, their environments and their problems.

35. American Political Thought
A historical-analytical treatment of the main currents of American political thought from colonial times to the present, including post-liberal thought.

40. Decision-Making in an Urban Setting
Investigation of public policy-making processes in American cities. Survey of such topics as urban party organization, leadership recruitment, urban power structures and measurement of governmental policies.

41. American Political Parties, Election and Voting Behavior
Nature of political campaigns, party organization, election processes, interest group politics and voting behavior research.

70. Problems in State and Intergovernmental Relations
The role of state constitutions, city charters, governors, mayors, judges, state legislatures, city councils, county commissioners, and metropolitan authorities in governing state, city, county, township and special districts.

80. The Regulatory Process
Various aspects of governmental regulation of business: the anti-trust laws, regulatory agencies, administrative procedure.

85. American Constitutional Law and Thought
Survey and analysis of leading national and state constitutional decisions and of their contributions to this country's governmental and political development and thought.

Division B: International Affairs
62. International Law and Organization
Survey of contemporary state practice and enforcement of international law and the development of United Nations world law precedents. Emphasis upon the doctrines of recognition, state jurisdiction, immunities, and contemporary problems of outer space and the high seas, continental shelf, and atomic warfare.

63. Contemporary Theory of International Politics
Survey of principal social science theories applied to the study of international behavior with particular emphasis on peace research. Discussion of major methodological problems in generating and analyzing data on interactions between nation-states.
Division C: Comparative Cross-National Politics

36. Problems in Comparative Analysis: Developmental Processes
A comparative analysis of various explanatory variables in political development processes. This course is intended to examine the significance of widely varying development levels in political systems through a systematic study of the contribution of several classes of factors to the development process. These include attitudinal-cultural factors, social structure factors, economic growth processes and the significance of over-time dimensions of development relationships.

37. Comparative Urban Development
Because of the complexities of rapid urbanization, its impact on political democracy needs critical examination. Developing as well as advanced industrialized societies are experiencing common problems. This course is designed to examine the political manifestations of urban growth in different countries and in contrasting regions of the United States.

38. Comparative Law
A study of the institutions of the law at various levels of societal development and in differing cultures; attention will be directed to differing definitions of law, of its function, presuppositions, methods and scope.

44. Cases in Political Development
A survey of developmental literature and an analysis of patterns of social, economic, and political system characteristics correlated with developed and developing societies. Special emphasis on African and Asian data.

65. Comparative Mass Politics
Theory and methods in the comparative analysis of mass political behavior with emphasis on quantitative data and statistical analysis.

66. Foreign Policy: Formation and Outcomes
Discussion of principal determinants of foreign policy with emphasis on individual, societal, and organizational variables. Basic propositions derived largely from U.S. case studies are applied in a broad cross-national context.

Division D. Political Analysis

56. Simulation in Behavioral Science
A laboratory and research experience in simulation involving the construction of the major features of political and social systems. Student participants employ strategies of decision-making in their roles as decision makers. The course places greatest emphasis upon communication models and communication theory.

57. Political Behavior
Theory and research on social-psychological variables in political behavior. Prerequisite, Methods in Political Analysis (50-07) or permission of instructor.

75. Theory of Politics
Modern political explanation; axiomatic and empirical theory building; analysis of major theories and concepts. Prerequisite, Methods in Political Analysis (50-07) or permission of instructor.

82. Political Philosophy
Western political thought from Plato to the present, including major contributions by American political thinkers.

Division E. Public Policy

50. Topics
Analysis of selected political issues of general interest, specific issue to be announced in advance of registration.

95, 96. Independent Study

SENIOR PROJECTS

97, 98. Senior Projects Seminar in Political Science

PSYCHOLOGY

Mr. Armstrong, Mr. Goodrich, Mr. Hultgren, Mr. Johansson, Mr. R. Johnson (on leave 1970-71), Mr. Mack, Mr. Maley, Mr. Mink, Mr. Myers, Mr. Rossmann, Mr. Torrey, Mr. Weiss, Mr. Wendt (Chairman)

The Psychology Department seeks to foster a scientific approach to the study of behavior. The department offers a broad curriculum to serve both those students who will later specialize in experimental research or applied psychology and those who will terminate their formal education with the bachelor's degree. The student who plans to continue his study is prepared for programs leading to college teaching and research or to such applied fields as personnel work, educational administration, human engineering, civil service, religious counseling, social work, and clinical practice in such agencies as child guidance clinics and hospitals for the mentally ill. The student who does not continue his formal education receives a broad course of study in which stress is placed upon the application of scientific method to the complex problems of individual behavior.

The psychology curriculum includes an introductory course which serves as a prerequisite for certain advanced courses,
a course in methods of studying behavior, intermediate
courses dealing with special topics of general interest for
both those who are and those who are not concentrating in
psychology, and advanced courses and independent study
in specific content areas. Throughout the curriculum,
laboratory work, observational experience, and independent
projects are introduced wherever possible.

General Graduation Requirement
Any course or courses in the department satisfy the general
graduation requirement in the social sciences.

Major Concentration
A major concentration in psychology consists of eight
courses, including Psychology 10, 30, 71, and 98. The
remaining courses are selected by the student in consultation with his major adviser.

Core Concentration
The six courses which comprise a core concentration in
psychology include Psychology 10, 30, 71, and 98. The
remaining courses in Psychology and the six supporting
courses are selected by the student in consultation with the department.

Honors Program
The candidate for Honors must complete Psychology 10 and
30 prior to admission to the program. During his junior and
senior years he enrolls in three Honors Seminars, each
counting two course units and comprising half his course work in that term. Written and oral exams in each of the
three seminar areas are administered at the end of the senior
year. These examinations are set and evaluated by outside examiners. In addition, the Honors candidate must do an
Honors thesis in the context of Psychology 98 in his senior year.

Further Preparation
Students concentrating in psychology, particularly those
considering graduate work in psychology or related fields,
are urged to take courses in biology, mathematics and
sociology. Mathematical work in statistics is highly
recommended (Mathematics 14 or 51). In general, individual
programs to meet special needs or interests may be arranged
by consultation with members of the department.

10. Orientation to Psychology
An introduction to psychological thinking about problems and

processes of behavior. In addition to a common core of material
to be covered by all students, the course offers a wide variety of
optional activities for partial credit. Both terms.

30. Methods in Psychological Research
An introduction to experimental methods in psychology including
statistics and the design and execution of experiments. Both terms.

45. Independent Study
Both terms.

50. Topics in Psychology
Examination of a topic of general interest from the point of view of
the science of behavior, the topic to be announced in advance of
registration. Prerequisite, permission of instructor. Spring term.

55. Theories of Personality
Consideration of the structure, organization, and nature of
personality as presented in such theoretical positions as those of
Freud, Jung, Allport, Rogers, and others. Prerequisite, permission of

57. History and Systems
An introduction to the history and systematic development of
contemporary schools and theories in psychology from ancient
Greece through the schools of structuralism, functionalism,
behaviorism, Gestalt and psychoanalysis to the present. Prerequisite,
Permission of instructor. Fall term.

61. Developmental Psychology: Infancy and Childhood
Theory and research on the nature and development of behavioral
processes during infancy and childhood. Prerequisites, Psychology
10 or permission of instructor. Both terms.

62. Developmental Psychology: Adolescence through Old Age
Theory and research on problems associated with behavioral
processes during adolescence, maturity, and old age. Prerequisites,
Psychology 10 or permission of instructor. Spring term.

63. Social Psychology
Theory and research on the influence of social factors on behavior.
Prerequisites, Psychology 10 or permission of instructor. Spring term.

64. Behavior Disorders
Investigation of evidence and theories of behavior abnormalities,
illustrated in problems of causation, diagnosis, and treatment.
Prerequisites, Psychology 10 or permission of instructor. Fall term.

66. Individual Differences
Measured individual and group differences on psychological
variables and the genetic and environmental sources of individuality.
Prerequisites, Psychology 10 or permission of instructor. Fall term.

71. Learning
Theory and research on the basic phenomena of conditioning and
RELIGION

learning, dealing in large measure with the animal level.
Prerequisites, Psychology 10 or permission of instructor. Both terms.

72. Cognitive Processes
Theory and research on human memory, problem-solving, thought, and language. Prerequisites, Psychology 10 or permission of instructor. Spring term.

73. Motivation, Emotion, and Conflict
Theory and research in motivational and affectional processes. Prerequisites, Psychology 10 or permission of instructor. Fall term.

74. Physiological Psychology
Examination of selected problems in the physiological correlates of behavior. Prerequisites, Psychology 10 or permission of instructor. Spring term.

75. Perception
Consideration of theories and selected problems of visual, auditory, and haptic perception. Prerequisites, Psychology 10 or permission of instructor. Spring term.

81, 82, 83, 84, 85, 86. Honors Seminars
Seminar topics and scheduling to be arranged.

95, 96. Independent Study
Both terms.

98. Senior Research Seminar
Examination of problems and methodology in psychological research, including the design, execution, and defense of the student's senior research project. Prerequisite, senior standing and satisfactory progress toward a concentration in psychology. Spring term.

RELIGION

Mr. Boyd, Mr. Butler, Mr. Gaston (on leave Fall term), Mr. Hopper (Chairman), Mr. Jones, Mr. Raskas, Mr. Roetzel (on leave Spring term)

The courses of the Department of Religion focus in the study of Christianity, in both its historical and contemporary expressions, as well as major non-Christian religious traditions. While our introductory courses are broad in scope, they seek to be selective enough to allow an in-depth encounter with source documents through historical understanding. Methods of instruction include not only lectures and seminars but also ample opportunity for individual instruction. The program of studies aims not only at the student whose academic specialization or vocational choice is related to religion, but also at supporting a student's total curriculum by courses that can help unlock the religious dimensions encountered in other disciplines.

Students intending to go to a theological seminary after college are best advised to pursue a broad liberal arts education. Many different disciplines will provide a suitable area of concentration for the pre-theological student. A core concentration in religion may be wisely pursued by such students. Entrance requirements at a number of theological institutions include a study of Greek, which should be considered a part of such a program of study. In consultation with their advisers, students not anticipating a career of theological study following college may discover valid reasons for a major concentration in religion or for combining a cluster of courses in religion with other disciplines as is made possible by the core concentration.

Major Concentration
The major concentration in religion consists of eight courses in religion, three courses in history and philosophy, one course in English, and reading proficiency in at least one foreign language.

Core Concentration
The core concentration in religion consists of 12 courses directly related to a particular problem or theme, six of which shall be in the Department of Religion. Formulation of the theme and the prerequisite courses will be determined in consultation with the chairman of the Department of Religion.

Honors Program
Honors students desiring to take courses in Religion at the honors level may do so by Individual Independent Study. These are planned for each individual student with the chairman of the department and the professor under whose direction the course is pursued.

18. The Ancient World (same as Classics 18)
Study of selected literature of the ancient world in translation, both classical and biblical. Lectures and discussion.

20. Introduction to Biblical Studies
The Bible, both Old and New Testaments, the interpretation by the Jewish and Christian communities of the history it relates, and the light shed upon these by the critical study of the Bible of the last century.
21. Jesus and His Interpreters
The understanding of Jesus found in the New Testament, the ancient Church, and selected periods in the history of the Christian Church from the New Testament age to the present.

30. The History and Theology of the Old Testament
The study of the life and thought of ancient Israel as reflected in the Old Testament and cognate literature. The course will include consideration of the consummation of Old Testament thought in Christianity and Rabbinic Judaism.

31. The History and Theology of the New Testament
The historical critical study of the rise of Christianity in the ministry of Jesus and the early church against its Old Testament background and its expression in the Hellenistic world.

41. Introductory Hebrew
An introduction to the grammar and basic vocabulary necessary for reading ancient Hebrew materials. The emphasis will be on the development of basic reading skills, and simple texts of Biblical and extra-Biblical prose will be introduced as soon as possible. Fall term.

42. Readings In Ancient Hebrew
An introduction to the genres of ancient Hebrew literature and the principles of Hebrew metrics. Selected readings from the Hebrew Bible (prose, prophets, psalms), the Dead Sea Scrolls, the prayer book, and medieval poetry. Emphasis on vocabulary recognition, cursory reading, and understanding of diverse genres. Spring term.

50. Topics: History and Myth in the Biblical Tradition
After being introduced to the character and structure of myth, the student will examine legendary materials in the Old and New Testaments in the light of non-biblical materials (for example, the Epic of Gilgamesh, Enuma Elish, and the Greek mysteries). The course will also explain the relationship of myth (which deals with the timeless) to history (which deals with time). Fall term.

50. Topics: Normative Judaism
An exploration of the basic beliefs and practices of historic Judaism. Emphasis will be placed upon the Jewish view of God and man with reference to his social, political and environmental problems. The course will also touch upon Jewish beliefs about the meaning of life, sex, death, individuality, and the consideration of experimental life styles. Fall term.

50. Topics:
The subject matter of this course for the Spring term will be announced.

55. Anthropology of Religion
(same as Sociology 55)

56. Great Theologians
An in-depth study of the theological work of a major figure in the history of Christian thought (e.g. Augustine, Aquinas, Luther, Calvin, Barth, Tillich, Bonhoeffer). The particular subject of study will be announced prior to registration. For the Fall term 1970: Paul Tillich.

58. The Church in the Modern World
An analysis of the relationship of the church (and Christian faith) to the modern world and a consideration of the various contemporary theological efforts to restate the substance of faith in relation to the issues of the times.

63. The History of Christianity: The Development of Religion In America
This course will trace the development of the major motifs in American religion and will explore the role of these motifs in shaping the American characters and institutions. Major trends, rather than specific denominations, will be considered. Such areas as religion and social reform, religion and American nationalism, religion and contemporary American society, and black religion will be covered. Fall term. The subject matter of this course for the Spring term will be announced.

65. The Non-Christian Religious Traditions
An introduction to the history and contemporary expression of major religious traditions outside of Christianity. Its focus in different terms would be on a single religion or groups of religions. The course is oriented toward developing an awareness of the methodologies appropriate to the study of the history of religions.

66. Modern Christian Thought
The thought of the Christian Church in our time, traditions of Christian thought in contemporary expression, acquaintance in depth with selected emphases and major themes, Christian thought both as a systematic and critical discipline bearing upon the issues of human life.

67. Christian Ethics
The biblical thought, history of ethical concerns, and aspects of modern Christian thought pertaining to concrete ethical issues, both individual and corporate; also, study in concreteness of problems such as marriage and the family, Church and State, nationalism, race relations, and economic justice.

95, 96. Individual Independent Study
Arranged in consultation with the chairman of the department.
The general objectives of the department are to teach students the reading, writing, and speaking of the Russian language, equip the student with the skills necessary for the study of Russian culture and literature, prepare them to teach the language and to continue their work in graduate schools.

A major concentration in Russian provides a study in depth of Russian literature, language, and culture. In all courses, extensive use will be made of the Foreign Language Laboratory.

Those students interested primarily in learning to read Russian or, on the other hand, in concentrating on the development of oral fluency have available to them courses designed to achieve these specific objectives.

**Major Concentration**
A major concentration in Russian shall consist of nine courses beyond the elementary level (Russian 11, 12), normally Russian 31, 32, 61, 62, 71 or 73, 55, 63, 64. To complete a major concentration, students may choose from other advanced course offerings within the department. A number of supporting courses are possible, to be chosen according to the student's vocational interest: for students intending to teach Russian — courses in a second foreign language, English, humanities, or history; for students who are going into government work — supporting courses in political science, history, economics and geography.

**Core Concentration**
The core concentration in Russian Studies consists of six courses in Russian language and literature beyond the first year, plus six additional courses to be chosen from Area Study of Russia, History of Russia, Eurasian Geography, Governments of the Soviet Bloc, and other relevant courses in social science, literature, humanities, fine arts, and philosophy.

**Honors Program**
The Department encourages Honors work for junior and senior students of demonstrated ability.
31, 32. Intermediate Russian
A continuation of language study and introduction to Russian literature. Prerequisite, Russian 12 or approval of chairman.

41. Elementary Conversation
Speaking based on contemporary materials. Prerequisite, Russian 12 or approval of instructor. Students with high school Russian may be admitted on approval of instructor.

55. Russian Culture and Civilization
The most important socio-economic, intellectual and ideological factors in the evolution of Russian culture, both prerevolutionary and Soviet.

61. Intermediate Conversation
Prerequisite, Russian 32 or 41 or approval of instructor.

62. Advanced Conversation
Prerequisite, Russian 32 or 61 or approval of instructor.

63, 64. A Survey of Russian Literature in the Russian Language
Introduction to Russian literature. The reading in historical context of representative works of important Russian writers. The second term is devoted to an introduction to Soviet literature. Prerequisite, Russian 62 or consent of instructor.

71. Advanced Russian Grammar and Composition
A course for advanced students providing foreign language study in depth. Prerequisite, Russian 32. The course is conducted in Russian.

73. Comparative Russian-English Structure
Comparison of the structures of the Russian and English languages, with emphasis on practical difficulties in pronunciation and grammar. Prerequisite, Russian 62 or 71. Alternate years.

74. Early Russian Literature

76. Soviet Literature (in English)
A survey of Soviet literature from 1917 to the present. Reading of representative authors such as Fadeyev, Leonov, Fedin, Sholokhov, Gladkov, Pasternak, and others. Material covered will include: early post-revolutionary writers, the Stalin period, socialist realism, the "thaw" period, and Soviet literature today. Students majoring in Russian will read certain assigned materials in Russian. Prerequisite for Russian majors and core students, Russian 62; other students need not know any Russian.

83, 84. Russian Literature from Pushkin to Chekhov (in English)
An introduction to the Russian novel, drama, and poetry. Major contributions of Pushkin, Lermontov, Gogol, Ostrovsky, Goncharov, Turgenev, Tolstoy, and Chekhov. Students majoring in Russian will read certain assigned materials in Russian. Prerequisite for Russian majors or cores, Russian 62; other students need not know any Russian.

90. History of the Russian Language
A study of the divisions of the Russian language chronologically and geographically; the relationships of the Russian language to the Slavic group, the Indo-European group; the changes in the sounds and forms of the Russian language; vocabulary borrowings from Eastern and Western languages; formation of the Russian literary language. Prerequisite, Russian 71, 73. Alternate years.

95, 96. Independent Study
Arranged in consultation with chairman of department. Advanced students may undertake individual projects involving library or laboratory research.

97, 98. Seminar
Seminars on selected topics on the Russian literature and language may be arranged. For advanced students only; conducted in Russian. Prerequisite, Russian 71 or approval of the department chairman.

SOCIOLOGY AND ANTHROPOLOGY

Mr. Berry (Chairman), Miss Erickson, Mr. Hoffman, Mr. McCurdy, Mr. Rinder, Mr. Spradley, Mr. Swain, Miss Wilkinson

Both Anthropology and Sociology, although separate fields of study each with its distinct approach and subject matter, take MAN IN SOCIETY as their principal focus of study and concern. Each has built a complementary body of knowledge, concepts, and theory concerning the products of human interaction and of socio-cultural processes by which these products have come to be. As these two disciplines are so mutually reinforcing and complementary they are housed within the same academic department.

The overall purpose of the department is to make students more aware of the intricacies of all forms of group life and skillful in socio-cultural analysis. These learnings are directed both toward the understanding of the problem aspects of our changing world (racial tensions, delinquency, war, urbanization, the developing nations, the generation gap, etc.) and toward such regular on-going group life processes as seen in the family, the work-a-day world, the gang, the
decision-making process, the bureaucratic structure, the development of human personality, and the exercise of social power.

Students taking courses within the department may hope to profit by such study on one of three different levels depending in part upon the degree of commitment to the field: (1) by developing through a major in the department a measure of expertness in the understanding of group life and in skills in testing, through research techniques, some of the assumptions that may be made about the way it operates, which could in turn lead to further graduate professional studies in either Sociology or Anthropology; (2) by combining in the core concentration certain courses within the department with courses in other related fields in order to give one a broader base of subject matter coverage somewhat less specialized; or (3) by taking one or more courses in terms of one's own interest in order to gain a better understanding of such as the community, deviant behavior, kinship systems, the significance of culture, and of human behavior as it is to be seen within the ever changing socio-cultural milieu.

Organization of Courses
It will be noted that some of the course offerings are organized in two separate parts, e.g., courses 76 and 77. The first term of such a sequence, designated as an A-type course, introduces the significant body of theory, principles, and vocabulary of analysis appropriate to the respective area of study. The conventional courses procedures are likely to prevail in it. The second follow-up course, designated as a B-type course, offers the opportunity for the student to pursue his own interests which have been generated in the A-type course. Here he is expected to build upon the work of the A course by following through with some implications of selected aspects of his own choosing or by intensive inquiry or original research into some selected but relevant problem. Ordinarily this would culminate in a major paper or research report. Flexibility of course design, largely in the hands of the student, with assured instructor guidance is the hallmark of the B-type course. Prerequisite to all B courses is the corresponding A course but A courses may be taken terminally.

Departmental Requirements
An Introductory course, offered in both Sociology and Anthropology, is prerequisite to all courses in the department. The choice of which one ordinarily should be made consistent with the field in which additional courses are planned. There is no particular sequence in which courses are to be taken except in the pre-professional social work offerings. Students concentrating in the department will choose their courses in consultation with their departmental adviser.

Major Concentration
A total of eight courses within the department is required for the major and it is identified as a Sociology major. Courses will be selected in consultation with the student's adviser. Those planning for further graduate study in Sociology are strongly advised to include Sociology 25, 70 and 71. It is also thought advisable to include at least one B course or one course of Independent Study.

Core Concentration
Six courses in either Sociology or Anthropology (exclusive of Sociology 74 and 86) together with six chosen by the student from outside the department constitute a core concentration. The pattern of courses is to be designed by the student in consultation with his departmental adviser. The student should be prepared to provide a rationale for his selection in terms of the internal consistency of his proposed pattern. Ordinarily there should be some clustering within disciplines of the supportive courses chosen from outside of the department.

Honors Program
The B-type course (see Organization of Courses) serves as the principal starting point for those who opt for the Honors Program (see general catalog statement for eligibility). The built-in flexibility of these courses makes them readily adaptable to the kind of independent study upon which Honors is based. In the event the student's interest around which he wishes to design his Honors studies is not congruent with his scheduled progress through the departmental courses, he may begin his Honors work with course 95. The second course in the sequence, ordinarily taken in the first term of the senior year, is the Honors Seminar. The last course is 96, during which time the major task is the final preparation of the Honors thesis and preparation for the Honors oral examination.
Pre-Professional Social Welfare Work
Students anticipating working in one of the "helping professions" immediately upon graduation from college will find the two pre-professional social work courses (74 and 86 listed with the Sociology courses) useful in two ways: (1) to test out the depth of their own interest in the field and (2) to begin to equip themselves to work in certain agencies or programs not requiring the Masters Degree in Social Work, e.g., Case Worker I in county welfare, some group work programs, and some of the newer positions working with the disadvantaged. These courses build upon knowledge gained from all the behavioral and social sciences and require a supervised field placement concurrent with the regular class work in an agency or program selected by the instructor. Care is taken to make such placements in terms of student interest and capacity; they are made only in those agencies equipped and willing to provide genuine learning experiences. Ordinarily these courses are taken in the senior year; 74 should precede 86. They may be included within the Sociology major but not within a core concentration. It should be understood that a Sociology major is generally not required for those welfare positions for which the B.A. degree makes one eligible (e.g., county welfare) but some work in the field is usually expected by employing agencies.

20. Introduction to Sociology
Survey of principal concepts and methods with emphasis on sociology as a mode of analysis or way of knowing. Study of individual, collective, and institutional behavior utilizing materials largely drawn from contemporary American society. Fall and Spring terms.

25. Social Statistics
An introduction to theory and application of statistics in the social sciences with intent to provide some of the essential tools for sociological analysis. Emphasis placed on understanding the reasoning underlying statistical usage in sociology. Univariate and bivariate data description, sampling, estimation, and hypothesis-testing. Special attention given to recent developments in "nonparametric" and ordinal measures. Prerequisite, course 20 or 21 or one course from the behavioral or social sciences. Fall term.

30. Sociology of Law Violation
The major forms of anti-social behavior with emphasis upon crime and delinquency in the United States. Theories of such behavior and attempts at control, rehabilitation, and alleviation. Fall term.

40. Minorities in the United States
The nature of racial, ethnic, and religious minority groups. Social and economic adjustments in the U.S. of Negro, Indian, Asiatic and various nationality groups. Intergroup relations and the problems of conflict and tensions. Fall term.

50. Topics in Sociology/Anthropology
Examination of some selected topic of concern to sociologists or anthropologists to be announced prior to registration. Prerequisite, permission of instructor. Fall or Spring term.

62. Social Change: Topics in the Non-Western World
Theories of social change. Programs of social change and development in non-Western countries. Evaluation of these theories and programs in terms of change-phenomena in significant areas of the modern world. Evolution, revolution, reform, reconstruction, utopias and other ideal-typical images. Spring term.

66. Urban Social Structures — A
Main focus on contemporary urbanism with an emphasis on urban social institutions, value systems and social change. Examination of contemporary urban culture and its identity seekers including a macro-level analysis of structural changes in institutions and stratification systems. Fall term.

67. Urban Social Structures — B
Intensive study of one selected topic or problem as a follow-up of course 66.

68. The Changing Community — A
The search for community in Megalopolis; historical origins and forms that shaped a sense of community; the significance of the urbanizing process and the resultant problems, both in social relations and in perspectives. Fall term.

69. The Changing Community — B
Intensive studies in special aspects, such as theories of change, human ecology, cross-cultural comparisons of locality-systems, field work in nearby localities and neighborhoods. Spring term.

70. Development of Sociology
Sociology's 19th century roots; contemporary theories and concepts in current use, with special attention given to the role of a theory in both research and in assessing social action programs. Spring term.

71. Methodology of Sociology
Field work problems in the use of current instruments and techniques; methodological problems; theory-building in relation to empirical research. Spring term.
72. Social Organization: Formal and Informal Systems — A
Two forms of organization: The large-scale complex as in business, religion, education, and the small, less formally structured group, e.g., the committee or work group. Division of labor, status, decision making, communication, leadership, and relationship of systems to larger ones of which they are a part. Spring term.

73. Social Organization: Formal and Informal Systems — B
Intensive study of some one form of large-scale organization or research on some phase of the small group. Fall term.

74. Changing Social Welfare Systems
A review of public and private welfare programs and institutions (The Establishment) and the impetus and challenge for change and reappraisal coming out of the Anti-Poverty and other current and projected Federal programs; to provide sufficient knowledge about social welfare programs to help the student think critically about problems, issues, and approaches to social welfare in his community as a responsible citizen. Field placement, with limited practice, under supervision and selected field visits. Fall term.

75. Collective Behavior in Mass Society
Social movements, mass demonstrations and outbursts; panic, disaster, and crowd behavior. Collective action growing out of crisis situations. Influence of mass communication media on behavior. Spring term.

76. Social Deviancy — A
Major approaches used in Sociology to examine and explain individual and group deviation from social norms: social pathology, social disorganization. The concept of deviation as a normal response to inconsistencies in social structure, social change, and the breakdown of social control. Fall term.

77. Social Deviancy — B
Selected studies of social structure and deviancy in such behavior areas as delinquency, race conflict, broken homes, or other expressions of social disorder or breakdown. Spring term.

78. Institutions and Social Stratification — A
Functions of the basic institutions such as family, school, work, church. The impact of social class and rank systems on values, goals, and behavior within institutions. Problems of institutional maintenance and societal cohesiveness. Spring term.

79. Institutions and Social Stratification — B
Specialized studies in sociology of family, religion, professions, education, or social class. Fall term.

84. Individual in Society — A
Man in his symbolic environment. Processes of internalizing culture and development of self through role enactment. Motivational, perceptual, and evaluative processes viewed within the context of social structure and group membership. Fall term.

85. Individual in Society — B
Selected studies, e.g., impact of society-culture on personality, attitudes, aspirations; role consensus, norm formation in different socio-cultural settings; faulty socialization. Spring term.

86. Individual in Welfare Systems
Generic social work principles used in an agency setting to assist persons or groups with psycho-social problems which impair interpersonal relationships and person adequacy. Field placement in an appropriate agency; observation and practice under supervision. Spring term.

88. The Sociology of Behavioral Disorders
Mental illness as residual deviance: a case study of extrusion, labeling, and isolation in the management of deviance. The social psychology of personality disorganization; the self-system; differential distribution of rates and types of mental illness in the U.S. and cross-culturally. Prerequisite, Sociology 76 or 84. Spring term.

95, 96. Independent Study

97. Honors Seminar
Continuation of work on the topic selected for the Honors thesis which will have been begun in a B type course or 95; readings and reports deemed to be relevant to this study as assigned by the Honors adviser. Fall term.

ANTHROPOLOGY COURSES:

21. Introduction to Anthropology
The basic concepts and theory employed in general anthropology with emphasis on human modes of thinking and acting viewed in cross-cultural perspective. Human pre-history and language and a treatment of man’s social, economic, legal, and religious systems. Fall and Spring terms.

55. Anthropology of Religion
Survey of the types of religious experience and meaning found in non-Western and Western societies including the kinds of explanations used by anthropologists to account for religious forms. Course includes the ethnographic discovery and description of religious categories and plans by involving the student in field research. Fall term.

56. Urban Anthropology — A
Survey of anthropological approaches to the study of urban phenomenon. Research methods and theories for explaining urban subcultures. Non-Western cities and comparative studies of cities in human history. Course will focus upon micro-analysis of one urban subculture by each student. Fall term.
57. Urban Anthropology — B
Intensive study of one selected topic or problem as a follow-up of course 56.

64. Anthropology: Peoples and Cultures of Mesoamerica
Indian and peasant cultures from Mexico through Nicaragua are surveyed. Cultural and social types, the nature of the peasant community, and the relationship of these groups to the national culture are examined. Fall term. Not offered 1970-71.

65. Anthropology: Peoples and Cultures of India
The history and current cultural groups of India with emphasis on Indian social structure. Rural and urban society, theoretical aspects related to the caste system, and other features of culture particularly as they are related to India's place in today's world. Spring term.

81. Problems and Explanations in Anthropology — A
Basic approaches to explanation in anthropology including those dealing with cultural evolution, historical diffusion, social function, and psychological function. The application of these to selected problems dealt with by the cultural anthropologist. Fall term. Not offered 1970-71.

82. Problems and Explanations in Anthropology — B
Intensive study of one selected topic or problem as a follow-up of course 81.

83. Psychological Anthropology
A survey of the sub-field of culture and personality within anthropology. The relationship of this sub-field to other disciplines and a review of its basic concepts and contributions as illustrated through specific studies. The influence of culture on the development of personality as well as psychological processes of culture change. Spring term.

SPANISH
Mr. Dassett, Mr. Fabian (Chairman), Mrs. Johnston, Mr. Kester, Mr. Walter Thompson.

Major Concentration
A major concentration in Spanish shall consist of a minimum of eight (8) courses in Spanish beyond the elementary level (Spanish 11, 12, or equivalent), plus the Senior Seminar in Spanish Civilization (Spanish 98).

Required courses: 31, 32, 51 (unless excused from these three by placement) 61, 62, 98. For those specializing in Latin-American Studies (see Latin-American Studies): 65.

Four supporting courses chosen according to student's interests:

1. For majors including those going into teaching —
   Another foreign language, English, Humanities or History or Geography.
2. For those going into government work or some field of business — Political Science, Economics, History or Geography.
3. For those majoring in Latin-American Studies — History 51, Geography 42, and two additional courses in Geography, History, Sociology, Political Science or Portuguese, to be chosen in consultation with the departmental adviser.

A Macalester graduate with a major concentration in Spanish should:

a) be able to identify the significant questions of his time and see them in some historical perspective.
b) be able to express himself effectively in English.
c) have the necessary proficiency in Spanish language skills and sufficient knowledge of literature in Spanish, and of the civilization of the Spanish-speaking countries, to teach or to be eligible for entrance into graduate school.

To secure those features of a liberal arts education program which we believe essential, we recommend in addition to the general college graduation requirements and the courses required above: one course in History and one course in the Humanities (in addition to graduation requirements) chosen from Philosophy, Art, Music or another literature than Spanish.

Core Concentration
The core concentration consists of six Spanish courses numbered 31 or higher, plus the Senior Seminar (Spanish 98) and six courses chosen from a related area. In all cases, the pattern of the core concentration of work must be approved by the department.

Honors Program
Spanish majors who are qualified may apply to the chairman of the department for admission to the Honors Program. The candidate will usually take one Honors course each term after he is accepted into the program. Courses which may be designated as Honors courses include: (a) the seminar (Spanish 97) offered each Fall term; (b) special Interim Term courses for Honors candidates (Spanish 80); and (c) Spanish 65, 67, 68, or 75, which, when designated as Honors
courses, will require additional work. Spanish 80 and Spanish 97 will vary in content from year to year and may, thus, be included more than once in a candidate's program.

In consultation with the thesis adviser appointed by the department chairman, the Honors candidate will prepare a thesis to be presented during the senior year and must successfully defend the thesis before an outside examiner. Honors candidates will be given all possible flexibility in arranging their programs.

Study in Spain
The Spanish Department sponsors a study-abroad program in Madrid. Fifteen to twenty students, not necessarily Spanish majors, are selected to spend their Interim Term and the following Spring Term (summer optional) studying on the campus of the University of Madrid. Two courses may be counted towards the Spanish major. The Spanish major will have to take, on campus, all additional courses that are necessary to meet the departmental graduation standards. This program is recommended for Spanish majors.

Mexican Caravan
During the month of January, twenty to twenty-five Macalester students travel to Mexico under leadership supplied by the Spanish Department.

Note: Spanish 11, 12, 31 and 32 constitute the basic sequence in Spanish for further study in conversation and literature. Spanish 21, 22 is an intensive reading sequence, complete in itself.

11, 12. Elementary Spanish
Pronunciation, grammar essentials, conversation and reading. Four class hours a week plus one hour of laboratory.

31A, 32A. Intermediate Spanish: Oral emphasis
Grammar, review, conversation, readings from Spanish and Latin American authors. Prerequisite, Spanish 12 or satisfactory score on placement test.

31B, 32B. Intermediate Spanish: Reading emphasis
Reading and grammar review intended for those who desire to develop reading ability for whatever purpose. A short intensive grammar review followed by reading of novels, poems, and short stories of recognized literary merit. We will attempt critical appraisals for these works. Attention to pronunciation and intonation throughout the sequence. Prerequisite, Spanish 12 or satisfactory score on placement test.

21, 22. Spanish for Reading Knowledge
This sequence is designed for students interested in learning to read Spanish for use in research or in literary studies. Open to any student who wishes to obtain a reading knowledge of Spanish. Presupposes no previous acquaintance with Spanish. Speaking and writing will not be emphasized but some attention will be given to aural comprehension. In Spanish 22, readings may be drawn from student's major field of interest. This sequence also prepares students for literature courses 61 and beyond. (This sequence does not lead to Spanish 31, 32, 51.)

51. Conversation
Conversational practice with special emphasis on aural-oral skills. Readings on Spanish and Spanish-American civilization and culture. Prerequisite, Spanish 32.

61. Survey of Spanish Literature (Part I)
19th and 20th Centuries. Prerequisite, Spanish 22 or 32. Fall term.

62. Survey of Spanish Literature (Part II)
Medieval period through the Golden Age. Prerequisite, Spanish 22 or 32. Spring term.

65. Readings in Spanish American Literature
Prerequisite, Spanish 61, 62, or consent of instructor.

67. The Nineteenth Century
Emphasis on the novel. Prerequisite, Spanish 61, 62, or consent of instructor.

68. Twentieth Century Spanish Literature
From the Generation of 1898 to the present time. Prerequisite, Spanish 61, 62, or consent of instructor.

71. Phonetics and Advanced Conversation
Study of the phonetics of the Spanish language and analysis of its sound system. Development of skill in oral expression with emphasis on pronunciation, accuracy of expression, use of a varied vocabulary, and fluency. Laboratory drills in pronunciation. Instruction entirely in Spanish. Prerequisite, senior standing or consent of instructor. Fall term.

72. Syntax and Advanced Grammar
Detailed study of the structure of Spanish sentences and intensive study of Spanish grammar on an advanced level. Daily written homework exercises and weekly themes required. Class conducted in Spanish as much as possible. Prerequisite, senior standing or consent of instructor. Spring term.

75. Cervantes and the Quijote
Prerequisite, Spanish 61, 62, or consent of instructor.
95, 96. Independent Course
For the advanced student who wishes to carry on a project requiring library research or laboratory work. Consent of instructor. Fall and Spring terms.

97. Seminar
Areas not regularly offered in literature or language. In 1970-71 the topic will be the Mexican Novel since 1910. Prerequisite, Spanish 61, 62, or consent of instructor. Fall term.

98. Senior Seminar
Spanish Civilization. Required of all majors and cores. Fall term. (Note: The Senior Seminar in Civilization is offered only in the Fall term. This course is required of all majors in lieu of senior comprehensive.)

SPEECH AND DRAMATIC ARTS

Mr. Hatfield, Miss Hoffman, Mr. Jurik, Mr. Landreth, Miss Maddux, Mr. Mosvick (on leave Spring term), Mr. Nobles, Miss Owen, Mr. Steil, Mr. Wilson (Chairman)

Speech and Dramatic Arts Department courses are designed for scholarly study in historic and contemporary theories of the speech arts and to teach fundamental techniques of performance in Interpretation, Theatre, Rhetoric and Public Address.

Those students preparing for graduate study should choose either emphasis in Interpretation and Theatre or Rhetoric and Public Address. The State of Minnesota, Department of Education, Certification Division, requires teachers of speech to have fulfilled the requirements of either a major or minor in Public Address, General Speech or Dramatic Arts.

Any student in the department with demonstrated academic ability and a capacity to do individual creative work in the area of the speech arts is encouraged to integrate independent study with the Honors program. Sequence of courses for the Honors candidate will be developed through consultation with the department chairman.

Related Programs of Study
Humanities Program. Students wishing to fulfill a humanities program by electing courses in Speech and Dramatic Arts should choose either Speech 30, Introduction to the Theatre, Speech 33, History of Theatre or Speech 34, History of Modern Theatre or Speech 36, Theory and Practice of Public Address, and Speech 46, British and American Public Address. (See Humanities Program.)

English Teaching Certification Requirement
The State Department of Education requires that prospective teachers of high school English and language arts must take academic instruction in each of two areas of speech and dramatic arts. The students must take Speech 36, Theory and Practice of Public Address, and either Speech 20, Oral Interpretation, or Speech 30, Introduction to the Theatre.

Major Concentration
The department offers two basic types of programs: A) A major area of concentration for students intending to receive a liberal arts degree and/or planning to engage in graduate study in either Public Address and Rhetoric or Dramatic Arts and Oral Interpretation, and B) A certification major or minor area of concentration in General Speech, Rhetoric and Public Address of Dramatic Arts in compliance with recently revised state certification requirements for students who intend to teach in high school.

Each major requires from eight to ten courses specified by course or area from within the department; each minor requires five courses similarly specified. In addition, all majors and minors are required to participate in co-curricular speech activities appropriate to the field of study and the needs of each student. Students in each major field have the option of substituting for one of the required courses any other departmental course, seminar or independent which meets the approval of the appropriate area committee and which will, in the case of certification majors, insure that the student meets state requirements in specified areas of competence.

Major Programs
1. Rhetoric and Public Address: Ten courses, eight of which must be Public Address courses, plus a seminar or independent devoted to scholarly writing.
   Required courses: 25, 32, 36, 46, 48, 98.
2. Theatre: Nine courses from within the department plus three electives from outside the department which are related to the student's major concentration and approved by the student's adviser and area committee.
   Required courses: 20, 22, 30, 33, 40, 64.
Certification Programs

   Required courses: 20, 25, 28, 30, 32, 40, 64, 36 or 38, 46 or 48, and Mass Media and Society.*

2. Public Address Major: Ten courses.
   Required courses: 20, 25, 28, 32, 36, 38, 46, 48, 98, Mass Media and Society.

   Required courses: 20, 22, 28, 30, 33, 40, 64, 11 or 25 or 36, Mass Media and Society.

4. General Speech Minor:
   Required courses: 11**, 20, 30, 64, 25 or 32.

5. Public Address Minor.
   Required courses: 20, 11 or 48, 25 or 32, 36 or 38 or 46, 28 or Mass Media and Society.

6. Theatre Minor.
   Required courses: 20, 22, 30, 33, 64.

*Presently listed under 50, Topics in Speech and Dramatic Arts.
**English certification majors may substitute 36 for 11.

Core Concentration

All core programs require six department courses individually programmed by the student and his adviser, with the exception of the Theatre Core for which the following courses are specified: 20, 22, 30, 33, 40, 64.

The six other courses elected from outside the department must be appropriately related to the student's core field of study and subject to his faculty adviser's approval.

11. Speech Fundamentals
Examination of contemporary theory and principles of speech communication divided into two major units: interpersonal communication and public communication. Study of selected literature in the area and appropriate exercises in each unit. Both terms.

20. Oral Interpretation
Development and use of fundamental techniques for analysis and reading aloud of prose and poetry. Both terms.

22. Acting
Basic theories and techniques of acting are studied and applied. Spring term.

25. Argumentation and Debate
Principles and practice of argument; study of adaptation of logic and evidence to rational decision making and to effective advocacy. Fall term.

27. Creative Dramatics
The history and development of creative dramatics and its relation to the educational philosophy of John Dewey. Through participation in classroom exercises and in the design and teaching of class sessions, students develop concepts and techniques of creative dramatics for use in elementary and high school teaching, small group conference work, and group counseling. Fall term in alternate years.

28. Voice and Diction
A study of the anatomy and physiological processes of voice production and articulation. Introduction to the International Phonetic Alphabet and its application to various levels of English pronunciation; introduction to elementary theory of speech correction; individualized programs of self-analysis and self-improvement. Fall term.

30. Introduction to Theatre
The art and craft of the theatre. Elements of technical production and direction culminating in the production of a one-act play. Laboratory crew experience. Both terms.

31. History of Costume and Stage Make-up
Study of fashion from early times to present day. Techniques of adapting historical designs into costumes for modern theatre production. Concentrated study of make-up techniques for stage, cinema and television. Fall term in alternate years.

32. Discussion and Parliamentary Procedure
Basic forms of small group discussion and group dynamics processes; fundamentals of parliamentary procedure. Fall term, alternate years.

33. History of Theatre
Survey of the origins and development of theatre as an art form. In addition to dramatic literature, particular emphasis is placed on architecture and theatrical practices up to mid-nineteenth century. Fall term, alternate years.

34. History of Modern Theatre
A sequel to Speech 33. Study of evolution of theatrical movements, influences and practices from mid-nineteenth century to the present in Europe and America. Reading of representative plays and attendance at relevant productions as available. Spring term, alternate years.

36. Theory and Practice of Public Address
The study of canons of Classical Rhetoric, the theory of oral discourse and the ethics of speech communication. The course is designed to increase the student's competence in communication,
his understanding of the rhetorical factors involved in speaking and writing. Required for English certification. Both terms.

38. Fundamentals of Persuasion

40. Technical Theatre
Study in the arts and crafts of the theatre. Emphasis on design, construction, and mounting of the production. Laboratory crew experience. Prerequisite, Speech 30. Spring term.

46. American and British Public Address
History and criticism of models of eloquence of British Public Address of the 18th and 19th centuries, of American Public Address of the 19th and 20th centuries. Spring term, alternate years.

48. Speech and Language in Human Affairs
A linguistic-semantic study of speech and language in our culture; importance of language in perception, categorizing, and thinking. Fall term, alternate years.

50. Topics in Speech and Dramatic Arts: Mass Media and Society
A comprehensive study of the relationship of mass media and audiences, centering on the social aspects of the impact of radio, television, cinema, newspapers and magazines. The course moves from a study of the origins and significance of mass media to an analysis of current research in the field. Practicum experience in radio and television is included. Fall term.

52. Dance Technique and Composition
An introductory study of the compositional elements of contemporary dance, complemented by intensive work in modern dance techniques. Course culminates in a studio performance. Fall term.

53. Survey of Dance History
A study of the history of dance as an art form approached through movement studies. Spring term, alternate years.

54. Dance Theory
Dance as an art form; its educational, sociological and psychological values in today's culture. Spring term, alternate years. Prerequisite, Dance Technique and Composition.

62. Readers Theatre
Selection, analysis and adaptation of literature for group reading. Course culminates in recital performance, Prerequisite, Speech 20. Spring term, alternate years.

64. Direction
History, theory, and techniques of directing, culminating in the production of an edited three-act play. Laboratory crew experience. Prerequisite, Speech 30. Spring term.

65. Scene Design
Study of the concepts, principles and techniques of scene design in the modern theatre. Exercises employing the many and varied methods of illustrating ideas and visual concepts of design on stage. Prerequisite, Speech 40. Fall term, alternate years.

66. Advanced Acting
Historic and contemporary acting theories and styles are studied and applied in performance. Prerequisite, Speech 22. Offered alternate years.

95, 96. Independent Course
For the occasional advanced student capable of independent study requiring library research and/or experimental work in the theatre or the Communications Research Laboratory. Prerequisite, consent of instructor. Fall and Spring terms.

97. Seminar in Theatre
Advanced study of such topics as acting, lighting, children's theatre.

98. Seminar in Rhetoric
Advanced study of such topics as classical rhetoric, speech criticism, experimental methodology, listening.

Critical analysis of selected topics, persons and works related to Oral Interpretation theory. Prerequisite, Speech 20.

Practicum Credit in Speech
The following may be elected for one-fourth of a course credit in co-curricular activities per term and may be repeated up to the total of a full course credit. Credit in one area or in any combination of areas in the department may not exceed one full course credit. Prerequisite, approval of instructor.

203, 204. Drama Choros
Analysis and interpretation of literature, both classical and contemporary, for group reading and program presentation. Spring term, alternate years.

205. Practicum in Forensics.
Credit may be earned either by participating in several forensic tournaments or by extensive participation in the public audience symposium program.

207. Practicum in Theatre
Credit may be earned by extensive play production participation in major roles as an actor or in major positions as a technician or theatre manager.
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STUART G. BAIRD, JR., B.A., Director of Development
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<thead>
<tr>
<th>Department</th>
<th>Title</th>
<th>Name</th>
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<td><strong>Admissions</strong></td>
<td>Director</td>
<td>WILLIAM H. GRAMENZ, B.A., M.S., Ed.D.</td>
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<td>Associate Director</td>
<td>CHARLES E. HOLLINS, B.S., M.S.</td>
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<td>Associate Director</td>
<td>MARGARET DEAN, B.A.</td>
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<td>Admissions Counselor</td>
<td>STEVEN R. B. ORR, B.A.</td>
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<td>LINDA BLOCK, B.A.</td>
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<td>JOHN S. SWIFT, JR., B.F.A., M.F.A.</td>
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<td>Director</td>
<td>IVAN HERNANDEZ, B.A., M.S.</td>
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<td>Instructor and Project Associate</td>
<td>ROBERT A. BAUMAN, B.A., M.S.</td>
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<tr>
<td><strong>Audio-Visual Services</strong></td>
<td>Director</td>
<td>ARTHUR E. SPURLOCK, B.S., M.S.</td>
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<td><strong>Business</strong></td>
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<td>S. MARK VAUGHT, B.A.</td>
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<td>Comptroller</td>
<td>ALVIN C. CURRIER, B.A., B.D.</td>
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<td>Accountant</td>
<td>JOSEPH W. PILATE, B.A., B.D.</td>
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<td><strong>Computing Services</strong></td>
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<td>RICHARD D. PAULSON, B.B.A.</td>
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<td>Operations Manager</td>
<td>LEWIS DOHMAN, B.A.</td>
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<td>Programming Supervisor</td>
<td>JANET GRIFFIN, B.S.</td>
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<td>Academic Consultant</td>
<td>OLIVER MCKINNEY, B.A.</td>
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<td>Program Analyst</td>
<td>DANIEL M. CISIN, B.A.</td>
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<tr>
<td><strong>Counseling and Psychological Services</strong></td>
<td>Coordinator of Counseling and Psychological Services (Associate Dean of Student Services), Coordinator of Academic Advising (Associate Dean of Student Services), Counselor, Academic Advising Program Consulting Psychiatrist Director of Career Planning and Placement Associate Director of Career Planning and Placement Career Counselor, Career Planning and Placement Field Work Coordinator, Career Planning and Placement</td>
<td>LAWRENCE A. YOUNG, B.A., Certified Psychologist SUE LUND, B.A., M.A. DAVID B. ECKHOLDT, B.A., M.A. ROBERT P. BUSH, M.D. ROBERT W. HUTCHINS, B.A. PAMELA MOREHEAD, B.A., M.A. PATRICIA FISHER, B.S., M.Ed. JOHN BEATTIE, B.A.</td>
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<td><strong>Departmental Assistants</strong></td>
<td>Administrative Assistant, Art</td>
<td>ROXANNE SORENSON</td>
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Director, Annual Giving Programs
Grants Officer
Coordinator of Special Events
Coordinator of Development Services
Director of Alumni Affairs
Associate Director of Alumni Affairs
Director of Information Services
Staff Writer, Information Services
Staff Writer, Information Services

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Research Associate
Research Associate
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Associate Counselor
Associate Counselor

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Dean of the Faculty
Assistant to the Dean

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College Nurse
Assistant Nurse
Assistant Nurse
Assistant Nurse
Assistant Nurse

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<th>Director</th>
<th>Educational Skills Counselor</th>
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<td><strong>International Center</strong></td>
<td>Director, International Center, and Executive Director, World Press Institute</td>
<td>Assistant to the Director</td>
<td>Assistant Director, International Center</td>
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<td>Assistant Director, International Center</td>
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<td>Acting Science Supervisor and Reserve</td>
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<td>Director of Grounds and Trucking</td>
<td>Executive Housekeeper</td>
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<td>Maintenance Coordinator</td>
<td>Director of Safety</td>
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<td>Coordinator of High Winds Project</td>
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<tr>
<td><strong>President</strong></td>
<td>President</td>
<td>Assistant to the President</td>
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<th>Personnel Representative</th>
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<tr>
<td><strong>President</strong></td>
</tr>
</tbody>
</table>
## ADMINISTRATION

### Registrar
- Registrar
- Assistant Registrar

### Residence Halls
- Director of Student Housing Programs (Assistant Dean of Student Services)
- Senior Counselor-in-Residence, Wallace Hall
- Counselor-in-Residence, Bigelow Hall
- Counselor-in-Residence, Dayton Hall
- Counselor-in-Residence, Doty Hall
- Counselor-in-Residence, Dupre Hall
- Counselor-in-Residence, Kirk Hall
- Counselor-in-Residence, Turck Hall
- Counselor-in-Residence, Wallace Hall
- Administrative Director of Residence Halls

### Simulation Center
- Director

### Special Academic Programs and the Summer Session
- Dean
- Assistant to the Dean

### Staff Associates
- Staff Associate to the Faculty Advisory Council
- Staff Associate to the Faculty Personnel Committee

### Student Services
- Dean
- Administrative Assistant
- Coordinator of Indian Programs

### Vice-President for Financial Affairs
- Vice-President for Financial Affairs
- Budget Director
- Budget Analyst

### Presidents of Macalester College
- REV. EDWARD DUFFIELD NEILL,* D.D., 1874-1884
- REV. THOMAS A. McCURDY,* D.D., 1884-1890
- REV. DAVID JAMES BURRELL,* D.D., 1890-1891
- REV. ADAM WEIR RINGLAND,* D.D., 1892-1894
- JAMES WALLACE,* Ph.D., LL.D., D.D., 1894-1906
- THOMAS MOREY HODGMAN,* LL.D., 1907-1917
- REV. ELMER ALLEN BESS,* D.D., 1918-1923
- JOHN CAREY ACHESON,* A.M., LL.D., 1924-1937
- ARTHUR S. FLEMMING, A.B., M.A., J.D., 1968-
*Deceased

<table>
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<tr>
<th>Position</th>
<th>Name</th>
<th>Degree(s)</th>
<th>Years</th>
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<tr>
<td>Registrar</td>
<td>DOROTHY GRIMMELL</td>
<td>AL G. FROST, B.A.</td>
<td></td>
</tr>
<tr>
<td>Residence Halls</td>
<td>JAMES H. WHIPPLE, B.A., M.S.</td>
<td>LOIS A. LINDBLOOM, B.A., M.A.</td>
<td></td>
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<td></td>
<td>IRIS ERICKSON, B.A.</td>
<td>SISTER LORETTO SCHNEIDER, B.S., M.A.</td>
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<td>LOIS ANNE FRYE, B.A.</td>
<td>RICK KELSEY, B.A., M.A.</td>
<td></td>
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<td>GARY ETCHESON, B.A., M.A.</td>
<td>EDGAR COLEMAN, B.A., M.A.</td>
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<td>EVAN GAY, B.A., M.A.</td>
<td>MARIAN ANDERSON, B.A.</td>
<td></td>
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<tr>
<td>Simulation Center</td>
<td>DAVID MACK, B.A., Ph.D.</td>
<td></td>
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</tr>
<tr>
<td>Special Academic Programs and the Summer Session</td>
<td>JACK L. ARMSTRONG, A.B., M.Ed., Ph.D.</td>
<td>SANDRA ARNDT, B.A.</td>
<td></td>
</tr>
<tr>
<td>Staff Associates</td>
<td>LOUISE F. LOWE, B.A., M.A.</td>
<td>SUSAN M. SMITH, B.A., M.A.</td>
<td></td>
</tr>
<tr>
<td>Student Services</td>
<td>FRED P. KRAMER, B.B.A., M.S., Ph.D.</td>
<td>MOLLY W. PERLMAN</td>
<td>WALLACE E. BROWN, B.A.</td>
</tr>
<tr>
<td>Vice-President for Financial Affairs</td>
<td>JOHN M. DOZIER, A.B.</td>
<td>WILLIAM HALLORAN, JR., B.S.</td>
<td>GENEROSO P. REYES, JR., B.S.C., C.P.A.</td>
</tr>
</tbody>
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(Date in parenthesis indicates year of first appointment at Macalester College.)

Professors Emeriti

JOHN MAXWELL ADAMS
Chaplain, Professor of Religion (1947); B.A., Wabash College, 1923; B. D., McCormick Theological Seminary, 1926; D.D., Alfred University, 1940.

ANNE HELENE BLEGEN
Associate Professor of French (1946); B.A., University of Minnesota, 1921; M.A., University of Minnesota, 1930.

RAYMOND JAY BRADLEY
Professor of Education (1932); B.S., Cornell College, 1912; Ph.D., University of Minnesota, 1929.

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Dean of Women (1920); B.A., Macalester College, 1914; M.A., Columbia University, 1927.

DONALD N. FERGUSON
Professor of Music (1950); B.A., University of Minnesota, 1904; M.A., University of Minnesota, 1922.

WALDO S. GLOCK
Professor of Geology (1948); B.A., State University of Iowa, 1920; Ph.D., Yale University, 1925.

RUSSELL BYRON HASTINGS
Professor of Physics (1929); B.A., Clark University, 1924; M.A., Clark University, 1925.

KENNETH LEEDS HOLMES
Professor of History (1925); B.A., Yale University, 1917; M.A., University of Louisville, 1925.

CARL A. JENSEN
Professor of Music (1925); A.A.G.O., 1924; T.C.L., Trinity College, London, 1935; L.T.C.L., Trinity College, 1942.

EDWIN KAGIN
Professor of Religion (1926); B.A., Centre College, 1904; B.D., Louisville Presbyterian Seminary, 1907; Th.M., Princeton Seminary, 1922; M.A., Princeton University, 1923; D.D., Centre College, 1937; D.R.E., Boston University, 1940.

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Professor of Speech and Drama (1928); B.A., Macalester College, 1923; M.A., University of Minnesota, 1930.

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President (1958); A.B., Concord College, 1929; M.A., West Virginia University, 1933; Ph.D., Ohio State University, 1938; LL.D., Concord College, 1961; L.H.D., Macalester College, 1968.

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OTTO THEODORE WALTER
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(Date in parenthesis indicates year of first appointment at Macalester College.)

*Leave of Absence, Fall Term
**Leave of Absence, Spring Term
***Leave of Absence, Academic Year, 1970-71

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THOMAS L. GRISsom

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CHESTER HEDGEPETH  

THELMA WASHINGTON HEDGEPETH  
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THOMAS ENGLISH HILL  
Elizabeth Sarah Bloedel Professor of Philosophy (1946); A.B., Davidson College, 1929; B.D., Union Theological Seminary, 1932; M.A., University of Richmond, 1934; Ph.D., University of Edinburgh, 1937.

WILLIAM HARLEY HENRY**  
Assistant Professor of English (1966); B.A., Kenyon College, 1959; M.A., Johns Hopkins University, 1963; Ph.D., Johns Hopkins University, 1970.

EDDIE P. HILL**  
Associate Professor of Biology (1964); B.A., Nebraska State Teachers College, 1952; M.A., Colorado State College, 1957; Ph.D., University of Nebraska, 1962.

CHARLES B. JOHANSSON  
Research Associate in Educational Research; Assistant Professor of Psychology (1969); B.A., University of Minnesota, 1964; M.A., University of Minnesota, 1965.

CHARLES R. JOHNSON  
HILDEGARD BINDER JOHNSON
Professor of Geography (1947); M.A., University of Berlin, 1933; Ph.D., University of Berlin, 1934.

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MARIAN F. JOHNSTON

JAMES ALBERT JONES
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JAMES W. JONES

HARVEY PAUL JURIK

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Assistant Professor of Spanish (1970); B.A., Millsaps College, 1964; M.A., University of Missouri, 1967; Ph.D., University of Kansas, 1970.

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SAVEL KLIACHKO
Associate Professor of Russian, Four-College Cooperative Russian Program (1969); Ph.B., University of Chicago, 1947; M.I.A., Columbia University, 1951; Ph.D., Stanford, 1968.

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Visiting Lecturer in Music (1970)

JOSEPH D. E. KONHAUSER
Professor of Mathematics (1968); B.S., Pennsylvania State University, 1948; M.A., Pennsylvania State University, 1951; Ph.D., Pennsylvania State University, 1963.

GAIL M. KRISTENSEN
Visiting Artist in Art Department (1969).

KAREN D. KURVINK

JERRY D. LANDRETH

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Assistant Professor of Geography (1969); B.A., Macalester College, 1963; M.A., University of Minnesota, 1966; Ph.D., University of Minnesota, 1970.

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Instructor in French (1968); A.B., Brown University, 1963; M.A., Princeton University, 1967.

HENRY LEPP**
Professor of Geology (1964); B.S., University of Saskatchewan, 1944; Ph.D., University of Minnesota, 1954.
H. GREGG LEWIS
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Professor of Physical Education, Director of Athletics (1954); B.S., University of Minnesota, 1946; M.Ed., University of Minnesota, 1947.

JEAN LYLE
Instructor in Education (1964); B.A., State College of Iowa, 1950; M.S., University of Tennessee, 1954.

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Assistant Professor of Psychology & Director of Simulation Center (1969); B.A., Queen's University of Belfast, 1966; Ph.D., University of Stirling, Scotland, 1969.

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PETER B. MURRAY

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Director of the Drama Choros (1928); B.A., Macalester College, 1923; M.A., University of Minnesota, 1936.

JACK PATNODE  
Associate Professor of English (1946); B.A., Macalester College, 1942; M.A., University of Minnesota, 1947; Ph.D., University of Minnesota, 1968.

HELENE NAHAS PETERS  
Associate Professor of French (1961); M.A., University of Toulouse, France, French-1939, English-1949; Ph.D., University of Minnesota, 1954.

RICHARD S. PRAWAT  
Instructor in Education & Research Associate in Educational Research (1970); B.A., Michigan State University, 1966.

ROGER PRESTWICH  
Instructor in Geography (1969); B.A., University of Sheffield, 1964; M.A., University of Minnesota, 1968.

JEAN PROBST  
Instructor in Mathematics (1966); B.A., Macalester College, 1949.

ALBERT L. RABENSTEIN***  
Associate Professor of Mathematics (1964); A.B., Washington & Jefferson College, 1952; M.S., West Virginia University, 1953; Ph.D., Massachusetts Institute of Technology, 1958.

JEREMIAH REEDY  
Assistant Professor of Classics (1968); S.T.B., Gregorian University, 1958; M.A., University of South Dakota, 1960; M.A., University of Michigan, 1966; Ph.D., University of Michigan, 1968.

IRWIN DANIEL RINDER  
Professor of Sociology (1968); B.A., University of Idaho, 1947; M.A., University of Chicago, 1950; Ph.D., University of Chicago, 1953.

ARTHUR WAYNE ROBERTS  
Associate Professor of Mathematics (1965); A.A., Morton Junior College, 1954; B.S., Illinois Institute of Technology, 1956; M.S., University of Wisconsin, 1958; Ph.D., University of Wisconsin, 1965.

JAMES H. ROBERTS  
Professor of Physics (1963); B.S., University of Arizona, 1937; M.S., University of Arizona, 1938; Ph.D., University of Chicago, 1946.

EDWIN JAMES ROBINSON, JR.  
Professor of Biology (1963); A.B., Dartmouth College, 1939; M.S., New York University, 1941; Ph.D., New York University, 1948.

JOSEPH ROCHE  

CALVIN J. ROETZEL  
Assistant Professor of Religion (1969); B.A., Hendrix College, 1952; B.D., Perkins School of Theology, 1955; Ph.D., Duke University, 1968.

JACK EUGENE ROSSMANN**  
Director of Educational Research; Associate Professor of Psychology (1964); B.S., Iowa State University, 1958; M.S., Iowa State University, 1960; Ph.D., University of Minnesota, 1963.

JERRY J. RUDQUIST  
Associate Professor of Art (1958); B.F.A., Minneapolis School of Art, 1956; M.F.A., Cranbrook Academy of Art, 1958.

ROBERT WILLIAM SADEK, JR.  
Instructor in Physical Education (1967); B.S., University of Minnesota, 1964; M.S., Bemidji State College, 1967.

WILLIAM SALTZMAN  
Associate Professor of Art (1966); B.S., University of Minnesota, 1940.

KARL C. SANDBERG  
Professor of French (1968); B.A., Brigham Young University, 1954; M.A., Brigham Young University, 1957; Ph.D., University of Wisconsin, 1960.
FACULTY

ERNEST R. SANDEEN
Associate Professor of History (1963); B.A., Wheaton College, 1953; M.A., University of Chicago, 1955; Ph.D., University of Chicago, 1959.

DAVID B. SANFORD
Assistant Professor of German (1966); B.A., University of Minnesota, 1959; M.A., University of Minnesota, 1962; Ph.D., University of Minnesota, 1966.

RIDGWAY SATTERTHWAITE

VIRGINIA SCHUBERT
Instructor in French (1965); B.A., College of St. Catherine, 1957; M.A., University of Minnesota, 1961.

JOHN R. SCHUE
Professor of Mathematics (1962); B.A., Macalester College, 1953; Ph.D., Massachusetts Institute of Technology, 1959.

SHERMAN W. SCHULTZ, JR.
Adjunct Instructor in Astronomy (1958); O.D., Illinois College of Optometry, 1945.

ALBERT TRUMAN SCHWARTZ
Assistant Professor of Chemistry (1966); A.B., University of South Dakota, 1956; B.A., Oxford University, 1958; M.A., Oxford University, 1958; Ph.D., Massachusetts Institute of Technology, 1963.

JOHN HOWE SCOTT
Associate Professor of Chemistry (1941); A.B., Clark University, 1930; M.S., State University of Iowa, 1931; Ph.D., State University of Iowa, 1933.

BOYD CARLISLE SHAFER
James Wallace Professor of History (1963); B.A., Miami University, 1929; M.A., State University of Iowa, 1930; Ph.D., State University of Iowa, 1932.

JACK WOODWARD SHIELDS
Instructor in Biology (1967); B.S., University of Wisconsin, 1960; M.S., University of Wisconsin, 1963.

BROCK SHORT
Post-doctoral Research and Teaching Fellow, Economics (1970); B.A., University of Western Ontario, 1965; Ph.D., Cornell University, 1970.

JOHN H. SIGLER
Assistant Professor of Political Science (1968); A.B., Dartmouth College, 1953; M.A., Georgetown University, 1960; Ph.D., University of Southern California, 1968.

THOMAS D. SIMPSON
Instructor in Economics (1968); B.A., University of Minnesota, 1964; M.A., University of Chicago, 1966.

WESLEY G. SKOGAN

EMIL JOHN SLOWINSKI
Professor of Chemistry (1964); B.S., Massachusetts State College, 1946; Ph.D., Massachusetts Institute of Technology, 1949.

JAMES RICHARD SMAIL
Assistant Professor of Biology (1963); A.B., Oberlin College, 1957; Ph.D., University of Illinois, 1965.

CARL H. SMITH

GEORGE SOLDATOW

PAUL DOUGLAS SOLON
Assistant Professor of History (1970); B.A., University of California, 1964; M.A., University of California, 1966; Ph.D., Brown University, 1970.

OTTO M. SORENSEN
Associate Professor of German (1967); A.B., Stanford University, 1950; M.A., Stanford University, 1952; Ph.D., University of Washington, 1966.

DAVID LeROY SOUTHWICK
Associate Professor of Geology (1968); B.A., Carleton College, 1958; Ph.D., Johns Hopkins University, 1962.
JAMES P. SPRADLEY
Associate Professor of Anthropology (1969); B.A., Fresno State, 1960; M.A., University of Washington, 1963; Ph.D., University of Washington, 1967.

LYMAN K. STEIL
Instructor in Speech (1966); B.S., University of Minnesota, 1964.

JAMES B. STEWART
Assistant Professor of History (1969); B.A., Dartmouth College, 1962; M.A., Case Western Reserve, 1966; Ph.D., Case Western Reserve, 1968.

FRED B. STOCKER
Professor of Chemistry (1968); B.S., Hamline University, 1953; M.S., University of Minnesota, 1955; Ph.D., University of Colorado, 1958.

EDWARD N. STRAIT***
Professor of Physics (1965); B.A., University of Wisconsin, 1941; Ph.D., Massachusetts Institute of Technology, 1948.

ALFRED M. STRASH
Post-doctoral Research and Teaching Fellow, Physics (1970); B.S., University of Buffalo, 1963; M.S., Clarkson College of Technology, 1966; Ph.D., Clarkson College of Technology, 1969.

WILLIAM ALVA SWAIN
Associate Professor of Sociology (1948); B.A., University of Minnesota, 1946; M.A., University of Minnesota, 1952.

WALTER E. THOMPSON, JR.
Assistant Professor of Spanish (1967); B.S., Wayne State University, 1956; A.B., Wayne State University, 1960; M.A., Middlebury College, 1963; Ph.D., University of Illinois, 1967.

WILLIAM LAWRENCE THOMPSON
Research Associate Professor of English Literature (1950); B.A., University of Maine, 1934; M.A., University of Maine, 1936; Ph.D., Stanford University, 1946.

CHARLES C. TORREY
Associate Professor of Psychology (1966); B.A., Swarthmore College, 1955; Ph.D., Cornell University, 1963.

SUSAN TOTH
Assistant Professor of English (1969); B.A., Smith College, 1961; M.A., University of California, 1963; Ph.D., University of Minnesota, 1969.

ROGER R. TRASK***
Associate Professor of History (1964); B.A., Thiel College, 1952; M.A., Pennsylvania State University, 1954; Ph.D., Pennsylvania State University, 1959.

STEVEN C. TRIMBLE

MILTON D. ULMER
Assistant Professor of Mathematics (1970); B.A., University of Minnesota, 1965; Ph.D., Wesleyan University, 1970.

EVELYN H. VANOUSE

JOHN F. VOLLRATH
Assistant Professor of Philosophy (1969); B.A., Valparaiso University, 1963; Ph.D., Indiana University, 1967.

ERIC WAHLIN
Adjunct Instructor in Music (1965)

WILLIAM T. WARD

ROBERT HALL WARDE
Instructor in English (1970); B.A., Princeton, 1965; M.A., Harvard University, 1968.

JOHN L. WARFIELD
Executive Director, Expanded Educational Opportunities Program; Associate Professor of Education (1969); B.A., Kalamazoo College, 1959; M.A., University of Denver, 1962; Ph.D., University of Oregon, 1969.

DALE E. WARLAND**
Associate Professor of Music (1967); B.A., St. Olaf College, 1954; M.A., University of Minnesota, 1960; D.M.A., University of Southern California, 1965.

GERALD F. WEBERS
Associate Professor of Geology (1965); B.S., Lawrence College, 1954; M.S., University of Minnesota, 1961; Ph.D., University of Minnesota, 1964.
ELIZABETH P. WEEKS
Instructor in Physical Education (1968); B.A., College of Wooster, 1960; M.A., University of Colorado, 1968.

GERALD WEISS
Assistant Professor of Psychology (1965); B.A., Brooklyn College, 1953; M.A., University of Iowa, 1954; Ph.D., University of Iowa, 1965.

CLAUDE A. WELCH
Professor of Biology (1969); B.S., Michigan State University, 1948, Ph.D., Michigan State University, 1957.

HANS W. WENDT
Professor of Psychology (1968); B.A., University of Hamburg, 1949; M.A., University of Hamburg, 1949; Ph.D., University of Marburg, 1952.

HENRY R. WEST***
Associate Professor of Philosophy (1965); A.B., Emory University, 1954; M.A., Duke University, 1958; B.D., Union Theological Seminary, 1959; Ph.D., Harvard University, 1965.

FRANZ XAVIER WESTERMEIER
Director of Foreign Language Laboratory; Associate Professor of German (1947); B.A., College of St. Thomas, 1941; M.A., University of Minnesota, 1955.

DAVID B. WHITE
Professor of Philosophy (1948); B.S., Northeastern State (Oklahoma), 1937; M.A., Oklahoma State College, 1939; Ph.D., University of Pacific, 1959.

RUSSELL A. WHITEHEAD
Assistant Professor of Biology (1969); B.S., Northland College, 1954; M.S., Oregon State University, 1962; Ph.D., Oregon State University, 1966.

PATRICIA WIESNER
Assistant Professor of Physical Education (1950); B.S., Iowa State Teachers College, 1948; M.A., University of Southern California, 1955.

DORIS Y. WILKINSON
Associate Professor of Sociology (1970); B.A., University of Kentucky, 1958; M.A., Western Reserve, 1960; Ph.D., Case Western Reserve, 1968.

M. GLEN WILSON
Associate Professor of Speech and Dramatic Arts (1968); B.S., West Virginia University, 1948; M.A., West Virginia, 1949; Ph.D., Ohio State University, 1957.

WAYNE C. WOLSEY
Assistant Professor of Chemistry (1965); B.S., Michigan State University, 1958; Ph.D., University of Kansas, 1962.

C. GILBERT WRENN
Educational Consultant, (1968); B.A. Willamette University; M.A., Stanford University, 1929; Ph.D., Stanford, 1932.
**Technical Assistants**

DWANE KOSTRON  
Art

JAMES DERKS  
Audio-Visual Services

JOHN H. Santee  
Chemistry

JERRY BOHN  
Language Laboratory

JAMES R. HESSLER  
Physics and Astronomy

KENNETH B. HOPPER  

**Graduate Assistants — 1970-71**

SOPHIE BONCARS  
Graduate Assistant in French, (1970)

CARL A. KLEIN  
Graduate Assistant in Speech and Dramatic Arts, (1970)

ISABELLE MARCADIER  
Graduate Assistant in French, (1970)

RICHARD V. SCHULTZ  
Graduate Assistant in Psychology, (1970); B.A., Macalester College, 1969.

GORDON I. ZIMMERMAN  
Graduate Assistant in Speech and Dramatic Arts, (1969); B.A., University of Oregon, 1965; M.A., University of Arizona, 1966.

**Studio Instructors**

JAMES ALEXANDER  
Studio Instructor in Oboe (1969).

MARTIN BECKERMAN  
Studio Instructor in Bassoon (1964).

EDWARD D. BERRYMAN  
Studio Instructor in Organ (1963); A.B., University of Omaha, 1942; M.A., University of Minnesota, 1950; D.S.M., Union Theological Seminary, 1962.

ADYLINE J. FELSTED  
Studio Instructor in Voice (1963); B.M., MacPhail College of Music, 1950.

ELLIOT FINE  
Studio Instructor in Drums (1969).

MERRIMON T. HIPPS  
Studio Instructor in Brass (1966); B.M.E., Florida State University, 1959; M.M., Manhattan School of Music, 1961.

MARVIN McCOY  
Studio Instructor in French Horn (1968).

CELESTE M. O'BRIEN  

BEATRICE OHANESSIAN  

EMIL B. OPAVA  
Studio Instructor in Flute (1969).

CHARLOTTE E. STRAKA  

HERMAN STRAKA  

HIRAM TITUS  
Studio Instructor in Piano (1970); Oberlin College.

MADELEINE R. TITUS  
Studio Instructor in Classical Piano (1952); B.M., MacPhail College of Music, 1936.

ERIC WAHLIN  
Studio Instructor in Cello (1965).

MARY E. WILSON  
Studio Instructor in Flute (1951); B.A., Macalester College, 1938.
Clerical and Secretarial Staff

JEANNE AIRD
Senior Secretary, Admissions

RENATA ANDERSON
Secretary, Executive Vice-President and Provost

BARBARA APPLETON
Administrative Secretary, Education

DEOLORIS ASKEW
Senior Secretary, Simulation Center

DOROTHY BARNES
Principal Secretary, Library

BETTY BLAND
Senior Administrative Secretary, Psychology

MARIANNE BOERGER
Senior Clerk, Admissions

BEVERLY BORCHERS
Senior Secretary, Economics and Business

RUTH BOYD
Manager, Post Office

MARIE BRADDOCK
Administrative Secretary, Expanded Educational Opportunities

NOELANN BROWN
Secretary, Spanish

SUSAN BRUNDRETT
Secretary, Development

LOUIS BUGGS
Clerk, Library

WILLIAM BURNS
Manager, Printing and Duplicating

EVANGELINE BURTON
Senior Secretary, Individual Learning Center

CAROLYN CARLSON
Secretary, Religion

MARY CATLIN
Senior Secretary, Coordinator of Academic Advising

RICHARD J. CHRISTMAN
Naturalist-Caretaker, Natural History Study Area

SECRETARIAL AND BUSINESS STAFF

BLANCHE CLAY
Secretary and Acting Librarian, Black House

ALAN CLEMONS
Computer Operator, Computing Services

MARIE COLE
Senior Clerk, Registrar

REGINA CROUSE
Clerk-Typist, Library

GERALDINE CUFF
Clerk, Printing and Duplicating

MYRNA DANIELS
Accounting Clerk, Purchasing

DORIS DAVIS
Senior Account Clerk, Cashier

MARIE DeCORA
Clerk-Typist, Personnel

JANICE DICKINSON
Administrative Secretary, International Center

MILDRED DIXON
Clerk, Comptroller

MARIAN ECKER
Telephone Operator, Campus Programming Services

CLARK EDWARD
Clerk, Campus Programming Services

FRANCES EKDAHL
Senior Clerk-Typist, Purchasing

RUTHENA FINK
Principal Secretary, Educational Research

BERNADINE FOSTER
Senior Clerk, Post Office

JEAN FRANCIS
Senior Clerk-Typist, Library

MARY FRANCIS
Senior Secretary, English

LEILA FROGH
Senior Secretary, Physical Education and Kinesiology
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>SANDRA GRAF</td>
<td>Secretary, History</td>
</tr>
<tr>
<td>ANN GROHS</td>
<td>Secretary, Student Services</td>
</tr>
<tr>
<td>MARGARET HAGEMAN</td>
<td>Secretary, Alumni</td>
</tr>
<tr>
<td>MARY HAMPL</td>
<td>Senior Clerk, Library</td>
</tr>
<tr>
<td>MARIE HANNAHAN</td>
<td>Administrative Secretary, Information Services</td>
</tr>
<tr>
<td>WILBERT HARRI</td>
<td>Senior Clerk, Library</td>
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<td>KAREN HARTMAN</td>
<td>Senior Secretary, Registrar</td>
</tr>
<tr>
<td>PENNY HAWKINSON</td>
<td>Secretary, Budget</td>
</tr>
<tr>
<td>DOROTHY HEGMAN</td>
<td>Principal Secretary, Educational Resources</td>
</tr>
<tr>
<td>MARY CLARE HUELMANN</td>
<td>Senior Secretary, Macalester Foundation for Higher Education</td>
</tr>
<tr>
<td>JANICE HUNTER</td>
<td>Secretary, Development</td>
</tr>
<tr>
<td>JEAN JACKSON</td>
<td>Principal Secretary, Audio-Visual</td>
</tr>
<tr>
<td>CAROLYN JOHNSON</td>
<td>Administrative Secretary, Upward Bound</td>
</tr>
<tr>
<td>MARJORIE JOHNSON</td>
<td>Senior Secretary, Career Planning and Placement</td>
</tr>
<tr>
<td>JERALD JOHNSTON</td>
<td>Purchasing Assistant, Purchasing</td>
</tr>
<tr>
<td>CORRINE KELLAR</td>
<td>Clerk-Typist, Library</td>
</tr>
<tr>
<td>JACQUELINE KEMP</td>
<td>Receptionist-Typist, Expanded Educational Opportunities</td>
</tr>
<tr>
<td>HARLAN KING</td>
<td>Manager, Mail Room</td>
</tr>
<tr>
<td>LOUISE KISCADEN</td>
<td>Clerk-Typist, Library</td>
</tr>
<tr>
<td>HELEN KOCHNEFF</td>
<td>Locker Room Attendant, Physical Education and Kinesiology</td>
</tr>
<tr>
<td>BETTY KROHNBERG</td>
<td>Secretary, Asst. Dean of Student Services</td>
</tr>
<tr>
<td>JANET KRUEGER</td>
<td>Secretary, Sociology and Anthropology</td>
</tr>
<tr>
<td>KIYOKO KUMAGAI</td>
<td>Clerk-Typist, Admissions</td>
</tr>
<tr>
<td>KAREN LARSON</td>
<td>Clerk-Typist, Financial Aid</td>
</tr>
<tr>
<td>RUTH LaMERE</td>
<td>Senior Secretary, International Center</td>
</tr>
<tr>
<td>HELENE LEE</td>
<td>Senior Secretary, Admissions</td>
</tr>
<tr>
<td>JEWEL LEWIS</td>
<td>Telephone Operator, Campus Programming Services</td>
</tr>
<tr>
<td>FRANKIE X. LOWE</td>
<td>Administrative Secretary, Expanded Educational Opportunities</td>
</tr>
<tr>
<td>JOYCE MADSEN</td>
<td>Administrative Secretary, Campus Programming Services</td>
</tr>
<tr>
<td>DOROTHY MANTHEY</td>
<td>Senior Secretary, Computing Services</td>
</tr>
<tr>
<td>MAURINE MARTIN</td>
<td>Secretary, Chemistry-Mathematics</td>
</tr>
<tr>
<td>LUCILE MAYO</td>
<td>Administrative Secretary, Financial Aid</td>
</tr>
<tr>
<td>DIANE McKay</td>
<td>Account Clerk, Personnel</td>
</tr>
<tr>
<td>ARTHUR MERTES</td>
<td>Security Guard, Natural History Study Area</td>
</tr>
<tr>
<td>FRANCES MEYERS</td>
<td>Senior Secretary, Speech and Dramatic Arts</td>
</tr>
</tbody>
</table>
HELEN MORGAN
   Housekeeper, Black House
NORMA MUNTEAN
   Senior Account Clerk, Personnel
LORETTA MYERS
   Senior Secretary, Music
CLARA NELSON
   Senior Account Clerk, Comptroller
LOIS NELSON
   Senior Clerk-Typist, Library
TOBY NERENBERG
   Administrative Secretary, Political Science
VIOLET NEUHAUS
   Account Clerk, Cashier
BERNICE OLIVER
   Clerk-Typist, Library
AUDREY OLSON
   Clerk-Typist, Health Service
DONNA ORR
   Secretary, Philosophy-Russian
ROBERT OSTERGREN
   Safety Officer
SHIRLEY OTTMAR
   Senior Secretary, Comptroller
JUDY PATTERSON
   Senior Secretary, Biology
JACQUELINE PEACOCK
   Senior Administrative Secretary, Executive Vice-President and Provost
LORRAINE PETERSON
   Senior Account Clerk, Personnel
ANN PRESSMAN
   Clerk, Library
ALICE RAHAMAN
   Administrative Secretary, Development
BERNICE RASMUSSEN
   Senior Secretary, Career Planning and Placement
HELEN REINECKE
   Senior Administrative Secretary, President
RICHARD ROBERTSON
   Safety Officer
MARY JANE ROBINETTE
   Secretary, Geology
PATRICIA ROBINSON
   Senior Clerk-Typist, Registrar
SHIRLEY SALOKA
   Principal Secretary, Business Officer
RUDOLPH SANTOS
   Safety Officer
HELEN SAVAGE
   Clerk-Typist, Admissions
GLADYS SCHAEFFER
   Housekeeper, International Center
GLENNIS SCHONES
   Principal Secretary, Education
BETTY SCHULTZ
   Keypunch Operator, Computing Services
EDNA MAE SEALE
   Interior Decorating Consultant, Purchasing
MARJORIE SETTERHOLM
   Secretary, French
MARGARET SEVLIE
   Clerk, Comptroller
LORRAINE SHIMEK
   Senior Secretary, Physical Plant
ELLI SORENSON
   Senior Clerk, Library
SUSAN SPOKER
   Senior Secretary, International Center
ESTHER STAHEL
   Clerk, Admissions
LENORA STEMAN
   Senior Secretary, Personnel
STAFF

MARILYN STENDAHL
Faculty Secretary

WILADENE STICKEL
Senior Secretary, History

VIOLET STOBER
Senior Account Clerk, Comptroller

EVELYN STROM
Secretary, Alumni

PATRICIA STURDIVANT
Secretary, Education

GLORIA TENTIS
Secretary, Executive Vice-President and Provost

VIOLET THOMPSON
Senior Clerk, Mail Room

MARJORIE TOENSING
Senior Secretary, Chaplain

MILDRED UTTER
Principal Secretary, Counseling and Psychological Services

JOAN VANDERBILT
Secretary, President

LAURA WEAVER
Secretary, Physics and Astronomy

VERBA WEAVER
Secretary, Geography

MARJORIE WEGNER
Principal Secretary, Dean of the Faculty

RONALD WESTBERRY
Safety Officer

LORRAINE WETHERBEE
Clerk-Typist, Alumni

RUTH WILMER
Senior Administrative Secretary, Vice President for Financial Affairs

BARBARA ZWEBER
Senior Secretary, Registrar
## Fall Term 1970
- **September 1-5**: Tuesday through Saturday
- **September 3-4**: Thursday and Friday
- **September 5**: Saturday
- **September 7**: Monday
- **September 8**: Tuesday
- **October 23, through November 3**: 4:20 p.m.
- **October 28**: Wednesday
- **November 4**: Wednesday
- **November 23-December 9**: Monday to Tuesday

## Interim Term 1971
- **December 17-19**: Thursday through Saturday
- **December 20-January 3**: Wednesday

## Spring Term 1971
- **February 1**: Monday
- **February 2**: Tuesday
- **March 25**: Thursday
- **April 3-12**: Monday
- **April 13**: Tuesday
- **April 26-May 7**: Monday
- **May 17**: Tuesday through Friday
- **May 18-21**: Saturday
- **May 22**: Tuesday
- **May 25**: Tuesday

## First Summer Term 1971
- **June 7**: Monday

## Second Summer Term 1971
- **July 1**: Thursday
- **July 5**: Monday
- **July 6**: Tuesday
- **July 30**: Friday
- **August 2**: Monday

---

**New Student Orientation**

**Upperclass Registration**

**Freshman Registration**

**Labor Day Vacation**

**Classes Begin**

**Fall Recess**

**Mid-Term Grades Due**

**Classes Resume**

**Interim and Spring Term Registration**

**Final Examinations**

**Christmas Vacation**

**Incompletes Incurred in Fall 1969 Due**

**Final Grades Due**

**Classes Begin**

**Final Examinations**

**Validation**

**Classes Begin**

**Incompletes Incurred In Interim 1970 Due**

**Interim Term Grades Due**

**Mid-Term Grades Due**

**Easter Vacation**

**Classes Resume**

**Fall Term Registration**

**Reading Day**

**Final Examinations**

**Commencement**

**Final Grades Due**

**Incompletes Incurred In Spring 1970 Due**

**Classes Begin**

**Final Examinations**

**Classes Begin**

**Final Grades Due**

**Incompletes Incurred in First Summer Term 1970 Due**

**Final Examinations**

**Incompletes Incurred in Second Summer Session 1970 Due**

**Final Grades Due**
### REGISTRATIONS

#### Summer Session, 1969

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
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<tbody>
<tr>
<td></td>
<td>245</td>
<td>232</td>
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</table>

#### Fall Term, 1969

<table>
<thead>
<tr>
<th>Year</th>
<th>Men</th>
<th>Women</th>
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<tbody>
<tr>
<td></td>
<td>340</td>
<td>328</td>
<td>668</td>
</tr>
<tr>
<td>Freshmen</td>
<td>262</td>
<td>273</td>
<td>535</td>
</tr>
<tr>
<td>Sophomores</td>
<td>196</td>
<td>184</td>
<td>380</td>
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<tr>
<td>Juniors</td>
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<td>159</td>
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<td>Seniors</td>
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<tr>
<td>M. Ed.</td>
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<tr>
<td>Specials</td>
<td>11</td>
<td>32</td>
<td>43</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1004</td>
<td>977</td>
<td>1981</td>
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</tbody>
</table>

#### Spring Term, 1970

<table>
<thead>
<tr>
<th>Year</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>323</td>
<td>314</td>
<td>650</td>
</tr>
<tr>
<td>Freshmen</td>
<td>252</td>
<td>255</td>
<td>508</td>
</tr>
<tr>
<td>Sophomores</td>
<td>188</td>
<td>155</td>
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### GEOGRAPHICAL DISTRIBUTION

#### Fall Term, 1969

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