in a single discipline. The minor is recommended for those students interested in entering careers or fields of academic study relating to urban issues and problems. These include fields such as public administration, urban planning, transportation,and planning. The minor also is recommended for students with career interests in the non-profit sector as well as for those interested in private sector careers which require substantial interaction with the public sector. Students are also encouraged to participate in the HECUA (Higher Education Consortium for Urban Affairs) programs. Descriptions of the HECUA programs are located under that title in this catalog.

Minor in Urban Studies

ECON 252 Principles of Microeconomics
ECON 333 Regional and Urban Economics
HIST 377 The History of the Twin Cities
POL 303 Urban and Metropolitan Politics and Government
SOC 332 Urban Sociology

Higher Education Consortium for Urban Affairs (HECUA)

Toffolo (POL), adviser; A. Hubbard (International Education Center) co-adviser

The Higher Education Consortium for Urban Affairs (HECUA) provides students the opportunity to explore urban settings to study the underlying causes of social inequality, as well as successful community building and social change strategies in both the United States and in other countries. Students earn sixteen semester credits in the semester-long programs and four credits in January term programs. Open to all majors.

City Arts (spring semester)
City Arts explores the relationship between the arts, culture and social change. Field study and internship provide direct access to the arts community of the Twin Cities. The four courses below are taken as an integrated whole in this semester-long off-campus study program.
IDSC 466 City Arts: Reading Seminar
IDSC 467 City Arts: Field Seminar
IDSC 468 City Arts: Internship
IDSC 469 City Arts: Internship Seminar

Metro Urban Studies Term (MUST) (fall and spring semesters)
Through a combination of seminars, field study and a professional internship in the Twin Cities, students explore the realities of social inequalities in urban America and strategies for bringing about change. The four courses below are taken as an integrated whole in this semester-long off-campus study experience.
IDSC 471 MUST Seminar: Research on Urban Issues
IDSC 472 MUST Seminar: Field Studies in the Twin Cities
IDSC 473 MUST: Urban Studies Internship
IDSC 474 MUST: Urban Studies Internship Seminar

Scandinavian Urban Studies Term (SUST) (fall semester)
SUST, offered in affiliation with the University of Oslo, provides a broad survey of contemporary Scandinavian societies, issues of the modern welfare state and social democracy. The city of Oslo is the primary field-study site, supplemented by travel in other parts of Scandinavia and the Baltic states.

South American Urban Semester (SAUS) (fall semester)
SAUS is an interdisciplinary, field-learning program that examines the relationship between development issues and the consequences of urbanization in Latin America. The program is based in Guatemala City, Guatemala, where students live with local families. Students gain a comparative perspective through study-travel in other regions of Guatemala and in Ecuador.

Environment, Economy and Community in Latin America (EECLA) (spring semester)
Explores the impact of global development on local culture and environment and the response of indigenous communities and other affected groups. Latin American faculty, guest resource persons and field placements guide students' learning. Based in Guatemala City, with study-travel in other regions of Guatemala and in Cuba.

Community Internships in Latin America (CILA) (fall semester)
CILA combines an internship, independent study and seminars on community participation and development in the Latin American urban setting. Based in Quito, Ecuador, students live with local families and are involved in field projects in outlying areas.

Development and Community in Bangladesh (January term)
Through lectures, discussions and group field study (with Bangladeshi collaborators), students explore the poli-

cies, practices and ideologies of socio-economic development in rural and urban Bangladesh.

Pre-Professional Programs

A carefully-crafted baccalaureate degree can prepare a student for entrance to a professional school. The following programs of study will be helpful for students planning such a career.

Pre-Engineering (PNGR)

Tommet (PHYS), adviser

Besides offering a degree program in mechanical engineering (B.S.M.E.), the University of St. Thomas offers a choice of pre-engineering programs under the auspices of the Department of Physics. Some advantages of starting engineering studies at the University of St. Thomas are: the student can benefit from the atmosphere of a liberal arts college and from the university's locale; the student can form a clearer picture of her or his goals before starting on concentrated engineering studies; and a smoother transition from high school to engineering school is possible. The program prepares for all engineering fields which include: aeronautical, aerospace, agricultural, architecture, biomedical, chemical, civil, electrical, engineering science, geological, industrial, materials science, mechanical, metallurgical, mineral and nuclear.

The programs of study are arranged so that a student may transfer to an engineering school with a maximum number of acceptable credits and yet, if a change to a non-engineering major is made while at the university, a maximum number of credits will be applicable to the St. Thomas requirements for graduation. In addition to the liberal arts, courses pre-requisite to an engineering school program are available in areas of mathematics, physics, chemistry, computer programming, and engineering. There are few significant differences in courses taken in the first two years of undergraduate study toward any type of engineering field. All pre-engineering students take mathematics, physics, and chemistry courses, along with a non-credit seminar introducing them to the various fields of engineering and to the work of engineers.

A Liberal Arts-Engineering (3-2) program is offered formally in cooperation with the University of Notre Dame, Washington University in St. Louis, and the University of Minnesota, and informally with virtually any other engineering school. The student will normally spend three years at St. Thomas and, upon approval of St. Thomas and acceptance by the engineering school, two additional years at the engineering school in an engineering field. Upon satisfying the requirements for graduation of both institutions, the student will receive a bachelor of arts (B.A.) degree from the University of St. Thomas and a bachelor of science degree in the selected field of engineering from the engineering school.

A four-year (4-2) program is offered formally in cooperation with the University of Minnesota, and informally with virtually any other engineering school. The student normally spends four years at St. Thomas and graduates with a major in Physic, Mathematics, Chemistry, or Quantitative Methods and Computer Science. The student then enters a masters or bachelors program at an engineering school.

A two-year (2-2) program is offered in which the student normally spends two years at St. Thomas (although transfer may be initiated at any time) and two years in a selected engineering field at an engineering school. No St. Thomas degree is awarded.

For all these programs, students are strongly encouraged to discuss with a pre-engineering adviser their own individual program. Each student, field, and school has different needs and requirements.

Liberal Arts – Engineering Program

CHEM	111	General Chemistry I
CHEM	112	General Chemistry II
ENGR	150	Introduction to Engineering I (0 credit)
ENGR	151	Introduction to Engineering II (1 credit)
MATH	113	Calculus I
MATH	114	Calculus II
MATH	200	Multi-Variable Calculus
MATH	210	Linear Algebra and Differential Equations
PHYS	111	Introduction to Classical Physics I
PHYS	112	Introduction to Classical Physics II
PHYS	225	Introduction to Modern Physics I
QMCS	230	Software Design Using the JAVA Language

At least two additional courses are required. Which technical courses are needed will depend upon the field of engineering. Students must discuss their program with a pre-engineering adviser.

Pre-Health Professions

Ovechka, adviser

The pre-health professions adviser will help students interested in any of the health professions to plan a specif-