

## II.A. Academic Excellence

### Academic Excellence

The University of Minnesota aspires to provide an undergraduate, graduate, and professional student experience that is consistently characterized by educational excellence, timely completion of degrees and programs, and a supportive institutional climate. Through world-class research, scholarship, and artistic activities, it also aims to generate long-term solutions for the challenges facing the state, the nation, and the world and to enhance the quality of life for the people of the state and nation. Finally, the University has a critical role in listening and responding to society, providing broad access to programs and resources and effectively meeting social challenges.

### Reputation

The University of Minnesota intends to advance its national and international reputation as one of the top public universities in the United States, for innovation and excellence in teaching, research, and outreach, and continually setting new standards of quality and service.

To achieve these goals, the University invests in its strongest programs and in new and existing areas of strategic importance, and seeks resources for its programs through sponsored funding and voluntary support, significantly leveraging state investments in the University. Each unit, through its compact, defines the specific areas in which it will invest to improve and focus the quality of its academic programs.

Three broad strategies focus the University's measures of progress in these areas:

- 1) maintaining and increasing the quantity of high-quality research and overall ranking;
- 2) achieving improvements in research productivity; and
- 3) increasing the University's ability to withstand changes in public funding through successful fundraising.

***Maintain and increase the quantity of high-quality research, thereby increasing the overall reputation of the University.***

Indicators: rankings, faculty awards and academy memberships, faculty compensation, faculty retention, library resources, academic initiatives, Compact investments

### Rankings

A variety of systems provide rankings of the University of Minnesota among its peers, as an institution, and for some of its programs. (Most national systems use the Twin Cities campus only.) Among these, the University of Florida, U.S. News and World Report, and the National Research Council (NRC) are the best known or most reliable. Importantly, only the University of Florida's and the National Research Council's studies include the University's graduate programs in arriving at their rankings. The U.S. News ranking is of the undergraduate program and considers graduate education only from the standpoint of defining the institutional type. (A summary of various rankings is provided in Table 2 on page 30.)<sup>1</sup>

**Chart A.  
University of Minnesota Rankings Summary**

Ranking	Graduate Program Y/N	Source
UMTC among top 3 public, and top 10 of all research universities	Y	University of Florida (2002)
UMTC 20 <sup>th</sup> among public doctoral universities; 2 <sup>nd</sup> tier of all doctoral institutions	N	U.S. News (2002)
UMTC 9 <sup>th</sup> among public doctoral institutions; 20 <sup>th</sup> among all doctoral institutions	Y	National Research Council (1995)
UMC 4 <sup>th</sup> among top 4 comprehensive public Midwestern colleges	N	U.S. News (2002)
UMD 9 <sup>th</sup> among top 12 public midwestern masters' universities	N	U.S. News (2002)
UMM 4 <sup>th</sup> among top 5 national public liberal arts colleges	N	U.S. News (2002)

**Chart B**  
**University of Minnesota Ranking 2000, 2001, 2002**  
**University of Florida Study<sup>ii</sup>**

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**2000 (for 1999)**

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Overall ranking: in top 5-10 publics; in top 6-11 of all

FY 1999	\$ or #	Rank among all	Rank among publics
Total Research Expenditures	\$ 345,910,000	13	9
Federal Research	\$ 204,741,000	14	7
Endowment Assets	\$1,509,769,000	23	4
Annual Giving	\$ 161,966,000	18	6
National Academy Members	36	23	10
Faculty Awards	28	19	9
Doctorates Granted	729	5	4
Postdoc Appointees	532	15	8
Median SAT <sup>***</sup>	1165	213	43

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**2001 (for 2000)**

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Overall ranking: in top 6-11 publics; in top 6-11 of all

FY 2000	\$ or #	Rank among all	Rank among publics	Change 2000-2001
Total Research Expenditures	\$ 356,529,000	15	10	-
Federal Research	\$ 207,761,000	16	7	0
Endowment Assets	\$1,809,305,000	23	4	0
Annual Giving	\$ 193,950,000	20	8	-
National Academy Members*	36	23	10	0
Faculty Awards**	31	14	6	+
Doctorates Granted	604	7	7	-
Postdoc Appointees	518	16	8	0
Median SAT <sup>***</sup>	1185	182	37	+

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**2002 (for 2001)**

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Overall ranking: in top 7-9 publics; in top 4-10 of all

FY 2001	\$ or #	Rank among all	Rank among publics	Change 2001-2002
Total Research Expenditures	\$411,380,000	12	7	+
Federal Research	\$229,958,000	15	7	0
Endowment Assets	\$1,650,969,000	24	5	-
Annual Giving	\$228,926,00	15	5	+
National Academy Members	35	25	10	0
Faculty Awards	28	17	10	-
Doctorates Granted	632	5	5	+
Postdoc Appointees	626	15	7	+
Median SAT <sup>***</sup>	1203	161	28	+

Source: *TheCenter, The Top American Research Universities, 2002*; <http://thecenter.ufl.edu>

\*National academy memberships are tracked for the National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine.

\*\*Faculty awards reported for 2000 in the University of Florida 2001 study included: 14 NIH R35/R37 grants; 9 Fulbrights; 5 NSF Career Awards; 1 NEH fellowship; 1 Guggenheim fellowship; 1 USDA award.

\*\*\*Most University of Minnesota freshmen take the ACT; the University of Florida uses a conversion table provided by the College Board to generate comparable SAT equivalent scores.

Comparing 2001 and 2002 UMTC Ranking:

- University of Florida rankings are based on previous fiscal year's data.
- Eight of nine UMTC measures were in top 10 of all public universities.
- In 2001-2002, UMTC improved its ranking on five measures and had a steady ranking for two others.
- In 2001-2002, UMTC dropped in ranking on only two measures.
- Only three public universities, the University of Minnesota-Twin Cities, the University of California-Berkeley and the University of Michigan, were ranked among the top 10 of all American research universities. (2002 University of Florida top 10 universities, Top 3: Harvard, MIT, Stanford; Top 4-10: Columbia, Duke, Johns Hopkins, University of California-Berkeley, University of Pennsylvania, University of Michigan, University of Minnesota-Twin Cities.)
- The single variable in which UMTC is not in the top 25 when ranked with other public universities is median SAT of freshmen. The University improved its ranking on this variable from 37 (public) and 182 (all) in 2001, to 28 (public) and 161 (all) in 2002.

**National Research Council<sup>iii</sup>**

NRC Institutional Ranking.

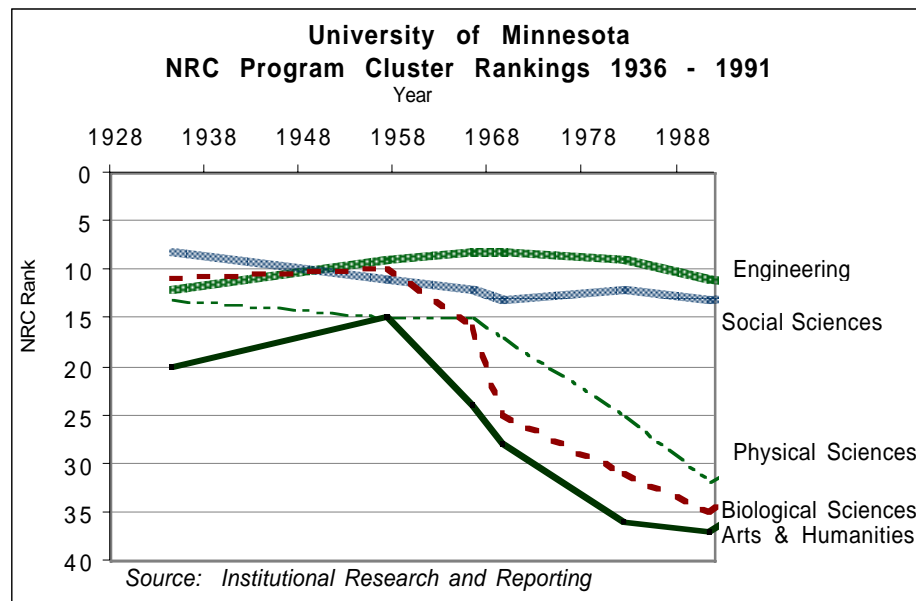
- NRC discourages creating general institutional rankings from combinations of individual program ranks; this is, however, a sufficiently common practice that the rankings are worth noting here.
- Overall institutional rank was 9<sup>th</sup> among public universities and 20<sup>th</sup> among 274 ranked institutions in 1995. (NRC anticipates publishing its next update in 2003-2005.)
- According to the 1995 rankings, top-ranked public institutions and their rankings were:<sup>iv</sup>

1 UC Berkeley	15 UC San Diego
4 University of Michigan	16 University of Washington
8 UC Los Angeles	19 University of Illinois Urbana
12 University of Wisconsin	20 University of Minnesota Twin Cities
14 University of Texas	23 University of North Carolina

NRC 1995 Program Cluster Ranking and Rating.

- The NRC ranking and rating was applied to 39 University of Minnesota programs in arts and humanities, biological sciences, engineering, physical sciences, and social and behavioral sciences.

**Chart C**



- Many programs are not ranked: architecture; agriculture, food, and environmental science; dentistry; education; human ecology; law; management; medicine; nursing; pharmacy; public affairs and policy. These programs make up approximately 23 percent of the University's nonsponsored budget (in FY 02). These rankings do not, therefore, capture completely the strength of public, land-grant universities.
- Changes in rankings between 1969 and 1995 show significant variations among program clusters. Between 1969 and 1995,
  - Engineering remained around 10<sup>th</sup>.
  - Social sciences remained between 10<sup>th</sup> and 15<sup>th</sup>.
  - Physical and mathematical sciences declined from around 15<sup>th</sup> to around 30<sup>th</sup>.
  - Biological sciences declined from near 15<sup>th</sup> to around 35<sup>th</sup>.
  - Arts and humanities declined from near 15<sup>th</sup> to 37<sup>th</sup>.
- No top five public institution had fewer than four of five study field categories within the top 10; UMTC had just one (engineering).
- Strongest ("Distinguished") UM programs by 1995 NRC rank included the following. (See Table 1 on page 29 for full list of program rankings.)
 

Chemical Engineering	1	Economics	10
Geography	3	German	11
Psychology	7	Aerospace Engineering	12
Mechanical Engineering	8		
- It is likely that the NRC study under development will be significantly different from past studies in validating longitudinal data. If the study proceeds along anticipated timelines, the "year of study" will be the 2002-03 academic year.

## U.S. News

U.S. News and World Report publishes its *Best Colleges* guide each fall. Institutions are grouped by highest degrees offered, but this ranking looks at undergraduate programs only. In fall 2002, the University of Minnesota-Twin Cities' undergraduate programs:

- Were ranked in the second tier (groups ranked 52<sup>nd</sup> to 129<sup>th</sup>) of all doctoral universities.
- Were ranked 20<sup>th</sup> among all public doctoral universities.
- Slightly increased its ranking in several variables.

**Chart D**  
**U.S. News Ranking: UMTC, 2000-2002**

Variable	2000 Ranking	2001 Ranking	2002 Ranking
Reputation	3.8 (5.0 highest)	3.8	3.9
Freshmen retention rate	84%	83%	83%
Predicted graduation rate	55%	55%	55%
Actual graduation rate	51% (1999)	50% (2000)	51% (2001)
Overperformance/underperformance	-4	-5	-4
% classes under 20	51%	53%	47%
% classes with 50 or more	17%	16%	18%
% full time faculty	96%	96%	96%
SAT/ACT (25 <sup>th</sup> – 75 <sup>th</sup> percentile)	22-27	22-28	22-28
Freshmen in top 10% of h.s. class	29%	30%	29%
Acceptance rate	73%	75%	76%
Alumni giving	9%	9%	11%

Source: *U.S. News, America's Best Colleges, 2000, 2001, 2002;*  
<http://www.usnews.com/usnews/edu/college/rankings/rankindex.htm>

**Chart E**  
**Ranking Systems Compared**

	University of Florida Top Research Universities 2002	U.S. News Best Colleges 2002	
		All Doctoral	Public Doctoral
Harvard	top 3	2	
MIT	top 3	4	
Stanford	top 3	4	
Columbia	top 4-10	10	
Duke	top 4-10	4	
Johns Hopkins	top 4-10	15	
University of California-Berkeley	top 4-10	20	1
University of Pennsylvania	top 4-10	4	
University of Michigan	top 4-10	25	3
University of Minnesota-Twin Cities	top 4-10	2 <sup>nd</sup> tier	20

Source: *Office of the Executive Vice President and Provost*

## **Academic Health Center Rankings**

Rankings from various sources of schools and programs in the Academic Health Center parallel the varied rankings of other University of Minnesota programs. In some cases, programs are in the top tier; in many they are in the middle tier. In others, noted below, rankings have increased significantly over the past few years.

- Pharmacy, the Medical School's primary care programs, and several nursing specialties are highly ranked by U.S. News.
- The School of Nursing increased its NIH ranking dramatically between 2001 and 2002, from 34<sup>th</sup> to 14<sup>th</sup>.
- U.S. News ranked the Medical School 36<sup>th</sup> overall in 2002. Among Big 10 medical schools, Michigan was ranked 8<sup>th</sup>, Northwestern 22<sup>nd</sup>, Iowa 30<sup>th</sup>, and Wisconsin 31<sup>st</sup>.
- The Gourman Report ranked AHC schools more favorably – many are in the top 25 to 30 percent of all schools. Many of the higher-ranked schools are private.
- The School of Public Health is one of the top public health schools in the country, according to NIH rankings.
- NIH award rankings place the University comparatively high – 19<sup>th</sup> nationally in terms of NIH awards.
- The Medical School's NIH ranking has remained relatively stable for the last three years after a significant decline from 14<sup>th</sup> in 1980 to 27<sup>th</sup> in 2000. The drop reflects the loss of tenured faculty members (84 since 1995 alone). It does not reflect the quality or productivity of the faculty, and grant awards per faculty member have increased.
- The NIH rankings for the College of Pharmacy and the College of Veterinary Medicine declined slightly since last year. NIH rankings for these colleges are less useful indicators of research quality and productivity since much of their research is funded by other federal agencies or the private sector.

**Chart F**  
**Academic Health Center**  
**National Rankings, Most Recent Studies**

AHC School/Program	NIH (2001)	NRC (1995)	U.S. News (2002)	Gourman Report (1995, 1997)
Dentistry	12			11
Medical School – Twin Cities	27			15
Overall MD Program (Research)			36	
Family Medicine			14	
Primary Care (MD)			14	
Occupational Therapy			23 (2001)	
Physical Therapy			28 (2000)	
Neurosciences		34		
Pharmacology		21		
Medical School – Duluth			14	
Family Practice			14	
Rural Medicine Specialty			8	
Nursing	14		27 (2000)	13
Adult Medical/Surgery			10 (2000)	
Public Health Nursing			7 (2000)	
Midwifery Specialty			19 (1999)	
Pharmacy	32		5 (1999)	7
Public Health	3		7 (2000)	
Veterinary Medicine	12		11 (2000)	8

Source: Academic Health Center

**Faculty Awards and Academy Memberships**

**Chart G**  
**University of Minnesota Ranking, Faculty Awards and Academy Memberships**  
**(University of Florida Study)**

	2000 (1999 data)	2001 (2000 data)	2002 (2001 data)
National Academy Memberships			
Number	36	36	35
Rank among publics	10	10	10
Rank among all	23	23	25
Faculty Awards			
Number	28	31	28
Rank among publics	9	6	10
Rank among all	19	14	17

Source: *TheCenter, America's Top Research Universities, 2002*

- With 35 national academy members, the University placed 10<sup>th</sup> among 110 public universities. (See Table 3 on page 33). There is a significant gap between this position and the 9<sup>th</sup>-ranking public institution, the University of Texas, which has 52 national academy members.
- In rankings, the University is not level with its peers in numbers of members of prestigious national academies. This difference may reflect a greater persistence among UMTC peer institutions in nominating faculty to these prestigious appointments. It may also represent the willingness and capacity of institutions to make senior-level faculty appointments (e.g., Texas actively recruited National Academy of Engineering members).

- Individual faculty members received 28 significant national or international awards in 2000, 31 in 2001, and 28 in 2002. The University's ranking decreased to 10<sup>th</sup> among public and 17<sup>th</sup> among all institutions in 2002.

## Faculty Salary and Compensation

### Ranking and Trends.

- Comparisons based on American Association of University Professors (AAUP) annual surveys cover full-time instructional faculty and exclude medical school faculty.
- In 2001-02, the average full professor salary at the University of Minnesota-Twin Cities was \$97,600, placing the University 11<sup>th</sup> among peer, public, NRC-ranked universities.
- When total compensation of full professors is compared (salary and fringe benefits: social security, retirement contribution, medical insurance, dental insurance, group life insurance, disability, unemployment, workers' compensation, and tuition for faculty dependents), the University of Minnesota-Twin Cities ranked 6<sup>th</sup>.
- The campuses in each peer group are chosen because they are representative of the kinds of campuses against which the University of Minnesota's campuses compete in recruiting and retaining faculty. In other respects, however, the campuses in these peer groups may be very different from one another.
- The comparison of salaries and compensation across campuses is inherently imperfect because campuses differ in many ways (e.g., mix of disciplines). Cost-of-living differences, tax burden differences, and variation in fringe benefits that determine overall compensation levels only add to the imperfection. It is nevertheless important to track the competition carefully.

**Chart H**  
**Full Professor Salary and Compensation Compared**

NRC Ranking	Institution	Average Full Professor Salary, 2001-02	Average Full Professor Compensation, 2001-02
1	UC-Berkeley	\$115,900	\$148,600
8	UC-Los Angeles	\$115,700	\$148,500
3	Cornell	\$110,600	\$141,200
4	Michigan	\$108,900	\$133,300
15	UC-San Diego	\$106,200	\$136,500
30	UC-Santa Barbara	\$104,900	\$135,000
23	North Carolina	\$103,400	\$121,800
19	Illinois	\$100,900	\$118,700
14	Texas	\$ 98,800	\$117,800
26	Penn State	\$ 98,100	\$117,800
20	Minnesota	\$ 97,600	\$126,100
12	Wisconsin	\$ 92,900	\$115,100
27	Purdue	\$ 90,500	\$116,100
16	Washington	\$ 90,100	\$109,700

*Source: Office of Institutional Research and Reporting*

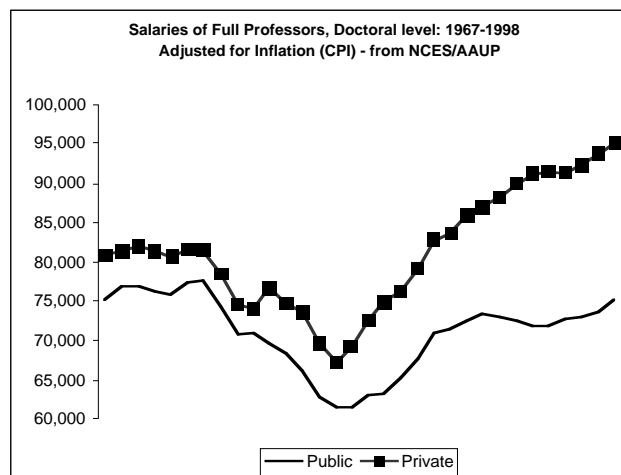
- The peer group for the Twin Cities campus is the nation's top 30 research campuses (16 private, 14 public) as determined by National Research Council rankings.

- Over the past 30 years there has been an ever-widening gap between salaries in private institutions and salaries in public institutions. According to AAUP data, since 1984-85 this gap has increased from 11.3 percent to 22.4 percent.
- The Twin Cities campus dropped a rank in FY 2002 for both full professors (from 20<sup>th</sup> to 21<sup>st</sup>) and associate professors (from 17<sup>th</sup> to 18<sup>th</sup>) in overall compensation. The rank of assistant professors improved from 19<sup>th</sup> to 17<sup>th</sup>. Among public institutions, full professors remained 6<sup>th</sup> and associate professors 4<sup>th</sup>, while the rank of assistant professors improved from 6<sup>th</sup> to 4<sup>th</sup>.
- Salaries for full professors on the Twin Cities campus dropped a rank in FY 2002, from 26<sup>th</sup> to 27<sup>th</sup>. Salaries of associate professors rose one spot, from 24<sup>th</sup> to 23<sup>rd</sup>, while the position of assistant professors remained unchanged at 27<sup>th</sup>. The only change in Minnesota's rank among the 14 public institutions in the peer group was an increase in rank for associate professors from 9<sup>th</sup> to 8<sup>th</sup>. The rank of full professors and assistant professors remained the same, with both in 11<sup>th</sup> place out of 14.
- For FY 2002, Duluth campus compensation was strong at all three ranks, with full professors, associate professors, and assistant professors ranking 6<sup>th</sup>, 2<sup>nd</sup>, and 4<sup>th</sup> respectively among their peers.
- The position of Morris campus salaries and compensation in its peer group has changed very little from FY 2001. A major concern at Morris is that salaries for assistant professors are low in comparison to peer institutions (12<sup>th</sup> of 14). However, total compensation is strong for all three ranks, with assistant professors and associate professors both ranking 4<sup>th</sup> and full professors ranking 5<sup>th</sup>.
- The position of the Crookston campus in its peer group is relatively unchanged from FY 2001. Most importantly, Crookston ranks first in both salaries and compensation for assistant professors.
- See Table 4 on page 34 for more detail.

Trends.

- The 35-year gap between public and private university faculty salaries is increasing.

**Chart I**



Source: Institutional Research and Reporting

- In the broader context, all public universities are losing ground to private institutions. Since 1967, the gap between full professor salaries at public and private institutions has increased from \$5,000 to at least \$20,000.
- The University of Minnesota has increased total faculty salaries over the rate of inflation each year for the past five years. (See Table 4 on page 34.) However, only modest progress has been achieved in increased rankings in salaries compared with other research universities, as our peers have been increasing salaries as well.
- When total compensation is examined, the University was near or above the mean increase in 2001-02 compared with peer institutions.

**Chart J**  
**Mean Compensation Increase, University of Minnesota and Peers**  
**2001-2002**

	Full Prof	Assoc Prof	Assist Prof
Top 30	3.9%	3.0%	4.2%
Twin Cities	5.0%	5.7%	6.2%
UMD Peer Group	4.4%	3.2%	4.0%
UMD*	na	na	na
UMM Peer Group	5.3%	3.7%	4.4%
UMM	4.3%	2.6%	4.4%
UMC Peer Group	3.0%	2.0%	1.7%
UMC	4.7%	16.8%	8.1%

\*Duluth campus salary and compensation information reported in FY 2001 in the AAUP survey was submitted prior to the contract settlement and hence is not meaningful.

Source: Office of Institutional Research and Reporting

## Faculty Hiring and Retention

### Trends.

- In 2001-2002, the University experienced a net faculty attrition rate of 3.8 percent; the rate averaged 5.1 percent over the period 1990-2002.
- Between 1996 and 2000, the University lost a significant portion of faculty; new hires did not compensate for these losses, many of which were in the Medical School. At the lowest point, in 1998, the University lost a net of 97 faculty. Successful hiring has begun to rebound, with net faculty increases of 66 in 2001 and 56 in 2002.
- Over the same period, a small but growing number of faculty of color were successfully hired, beyond the number leaving each year. Between 1998 and 2002, the net number of new faculty of color was 75. (See Section II.D for more detail on faculty and staff diversity.)

**Chart K**  
**Faculty Attrition**  
**1999-2002 and 1990-2002**

	1999-2000	2000-2001	2001-2002	1990-2002 Average
Men	6.3%	5.4%	3.6%	5.2%
Women	5.2%	5.2%	4.3%	4.7%
Faculty of Color	5.4%	6.5%	5.2%	5.1%
<b>Total average</b>	<b>5.6%</b>	<b>5.3%</b>	<b>3.8%</b>	<b>5.1%</b>

*Source: Office of Human Resources*

### **Library Resources and Services**

- The University Libraries make an important contribution in support of research, teaching and learning, and outreach.
- The University Libraries lead the rankings provided by the Association of Research Libraries in numbers of loans to other libraries, reflecting the University's commitment to providing service across the state.
- University Libraries rank 17<sup>th</sup> among 111 ranked libraries in numbers of volumes owned (5,979,843 in 2001); this position has been steady since 1996. In 2001, the Libraries ranked 23<sup>rd</sup> in periodical subscriptions (41,018), down from 11<sup>th</sup> in 1996, and 16<sup>th</sup> in annual expenditures (over \$30 million), down from 11<sup>th</sup> in 1996.
- Other indicators have declined over the past six years – total circulation, reference queries, periodical subscriptions. This reflects national trends and may, in part, be attributed to an increased use of online resources as well as budget stress introduced by new technology.
- The University Libraries' rankings in key service areas are steady or improving, even where absolute numbers have declined.
- In the targeted service area of library instruction sessions (e.g., class orientations; tutorials on complex indices; seminars on specific research topics), University Libraries numbers are increasing, and ranking has improved from 56<sup>th</sup> to 24<sup>th</sup> since 1996.

**Chart L**  
**University Libraries**  
**Trends and Rankings 1996-2001**

Trends

	Volumes Owned	Periodical Subscriptions	Loans to Other Libraries	Annual Expenditures	Total Circulation	Reference Queries	Instruction Sessions	Session Attendees
1996	5,376,090	47,867	246,800	\$ 26,696,016	1,020,273	262,756	668	13,450
1997	5,490,668	48,105	235,602	\$ 27,009,302	863,425	270,919	851	14,545
1998	5,613,171	46,989	237,424	\$ 28,489,796	876,162	248,848	858	15,069
1999	5,747,805	45,696	232,976	\$ 29,715,493	819,156	214,081	861	15,138
2000	5,856,705	41,618	233,783	\$ 29,993,696	715,080	225,727	878	15,655
2001	5,979,843	41,048	225,944	\$ 30,139,362	656,259	198,143	1,065	17,828

Rank

1996	17	11	1	11	23	24	56	28
1997	17	11	1	13	28	22	39	25
1998	17	13	1	14	24	21	41	29
1999	17	13	1	14	30	26	41	29
2000	17	19	1	15	33	18	35	29
2001	17	23	1	16	35	19	24	21

Comparison Ratios

	Volumes Owned/Ph.D. Fields	Reference Queries/Total FT Students	Total Circulation/Total FT Students
1996	53,760	11	44
1997	57,194	11	36
1998	60,356	9	31
1999	48,300	8	32
2000	45,051	8	25
2001	44,961	7	22

Rank

1996	52	40	32
1997	49	34	44
1998	43	49	50
1999	81	38	51
2000	87	38	64
2001	90	44	73

Data is for Twin Cities only.

Source: *University Libraries; Association of Research Libraries*

Investments.

Over the period 1998-2001, the University made substantial investments in the University Libraries, particularly to strengthen digital collections and use of information technology. These include:

- \$3.2 million for digital libraries, through the Compact Process and the academic interdisciplinary initiatives, to hire new digital librarians, to expand digital holdings, and to expand access to on-line databases
- \$500,000 for Law Library and Clinics
- Capital investments of \$44.8 million for the Twin Cities' Andersen Library, \$63.47 million for the Walter Library remodeling, which includes the new Science and Engineering Library and the Digital Media Center, and \$25.8 million for the Duluth Library.

## Academic Interdisciplinary Initiatives and New Investments in Academic Priorities

The strategic investments initiated by then-President Yudof with Board of Regents approval expanded investments in five areas: digital technology, molecular and cellular biology, new media, design, and agricultural research and outreach. These initiatives were seeded with a 1998 supplemental legislative appropriation of \$18,625,000; combined with internally invested resources, externally leveraged funds, and capital investments. By 2001 they represented an extraordinary investment of over \$362 million to date, including new and renovated buildings.

These investments are intended to accomplish three key goals: strengthening and expanding University programs in high-priority areas where its research was or should be ranked at the highest level; developing research programs that bear the prospect of strengthening the state's economy; and leveraging additional external funding.

A major consequence of these investments has been the ability to strengthen academic departments. With over 80 percent of the positions filled by fall 2002, by the end of 2002-03, a total of 87.5 positions will be added to the cadre of faculty in the five key areas. These investments have made an impact on the composition of the University's faculty, on its success in obtaining external funding, in new research, and in new academic programs.

**Chart M**  
**Academic Interdisciplinary Initiative Investments, 1998-2002**

	New Positions	1998 State Appropriation	Institutional Funds	Externally Leveraged Funds	Total Academic Investment	Related Capital Investments
Digital Technology	20	\$4,500,000	\$1,483,000	\$23,800,642	\$29,783,642	\$53,600,000
Molecular and Cellular Biology	41	\$7,375,000	\$6,090,000	\$56,353,847	\$69,818,847	\$106,372,000
Design	2.5	\$1,150,000	\$261,000	\$3,010,000	\$4,421,000	\$28,882,000
New Media	8	\$1,700,000	\$567,000	\$20,000,000	\$22,267,000	\$18,000,000
Agricultural Research/ Outreach	8	\$2,250,000	\$610,000	\$6,224,312	\$9,084,312	\$14,977,000
UMC (Agriculture)	2	\$600,000	\$300,000	\$374,000	\$1,274,000	
UMD (Biology, Design, Ag)	6	\$1,000,000	\$682,000	\$782,000	\$2,464,000	
UMM (Agriculture)		\$50,000		\$797,000	\$847,000	
<b>Total</b>	<b>87.5</b>	<b>\$18,625,000</b>	<b>\$9,993,000</b>	<b>\$111,341,801</b>	<b>\$139,959,801</b>	<b>\$221,831,000</b>

Source: Office of the Executive Vice President and Provost

**Chart N**  
**Academic Interdisciplinary Initiatives – 2001-02 Highlights**

<p>Digital Technology – 16 of 20 positions filled as of fall 2002</p>	<ul style="list-style-type: none"> <li>▪ Wei-Chung Hsu, an expert on computer architecture and compiler technologies, received \$514,453 from Intel and \$75,000 from Unisys for his work with binary codes and translation.</li> <li>▪ George Karypis, computer science and engineering, received four NSF grants totaling \$2.2 million for his studies of graph partitioning, cluster computing, scalable algorithms in scientific data sets, and turbulent flow analysis.</li> <li>▪ Hans Othmer, mathematics, received a grant of \$1,160,000 from NIH for the study of dynamic pattern in chemically-reacting systems and \$707,000 from NSF for research related to microscale biomedical devices.</li> <li>▪ Nikos Sidiropoulos, an expert on wireless applications, received grants totaling \$385,000 from NSF and an additional \$170,000 from the Army Research Laboratory.</li> </ul>
<p>Molecular and Cellular Biology – Approximately 30 of 41 positions filled as of fall 2002</p>	<ul style="list-style-type: none"> <li>▪ Anja Bielinsky, biochemistry, molecular biology, and biophysics, received \$720,000 from the American Cancer Society for the study of DNA replication origins in yeast.</li> <li>▪ Claudia Schmidt-Dannert, biochemistry, molecular biology, and biophysics, received \$625,000 from David and Lucile Packard Foundation for research in the use of microbial cells as chemical factories.</li> <li>▪ UMD professor Mary Oursler received a new grant of \$25,000 from Eli Lilly for research related to treatment of pathological bone loss; in addition, the Department of the Army renewed her grant for regulating tumor growth progression.</li> <li>▪ UMD professor Matthew Andrews received \$75,000 from the U.S. Army Research Office and \$13,000 from the Minnesota Medical Foundation for research related to hibernation in mammals.</li> </ul>
<p>Design – 2.5 positions filled as of fall 2002</p>	<ul style="list-style-type: none"> <li>▪ The \$1 million gift received in April 2001 from Target Corporation was used to support Design Camp 2002 and will also fund the Twin Cities Design Celebration 2003 and a second design camp scheduled for summer 2003.</li> <li>▪ The Design Institute partnered with Walker Art Center and AIA Minnesota on a series of lectures by internationally known architects and designers.</li> </ul>
<p>New Media – 7 of 8 positions filled as of fall 2002</p>	<ul style="list-style-type: none"> <li>▪ The Institute for New Media Studies received a private deferred gift of \$1.25 million.</li> <li>▪ New Directions for the News, a leading media think tank, provided a grant of \$35,000 to support work in the area of digital storytelling.</li> <li>▪ Total external funds leveraged by the initiative to date approximate \$20 million.</li> </ul>
<p>Agriculture – 8 positions filled as of fall 2002</p>	<ul style="list-style-type: none"> <li>▪ UMM received a second grant of \$187,000 from the Blandin Foundation to assist the Center for Small Towns in its overall operation and services.</li> <li>▪ UMC secured \$75,000 annually for four years from Veden Foundation and \$25,000 annually for four years from Bremer Foundation for rural economic development activity.</li> <li>▪ An additional \$894,312 in contracts and grants has been leveraged since January 2002, including \$574,197 from Minnesota Soybean Research and Promotion Council and \$115,721 from Minnesota Wheat Research and Promotion Council.</li> </ul>
<p><b>Related Investments</b></p>	
<p>Joint degree programs and new minors</p>	<ul style="list-style-type: none"> <li>▪ Joint degree programs: biology, science, and environment; public health practice-veterinary public health</li> <li>▪ Interdisciplinary minors: new media studies; foreign studies (UMD); bioinformatics (master's and doctoral); nanoparticle sciences and engineering (master's and doctoral)</li> </ul>

The original interdisciplinary initiatives were also selected, in part, to strengthen program areas at the University that had, as the NRC 1995 study revealed, slipped in national rankings. The chart below illustrates central investments of new resources over the past four years, mapped generally to NRC program cluster rankings, across broad, inclusive categories of disciplines. (The definition of research program areas and disciplinary clusters are likely to change in the next NRC study, anticipated for 2003-2005.) These investments of new resources include legislative funding and compact investments for the interdisciplinary initiatives and the medical endowment, together with capital investments and private funding for these broad cluster areas.

This summary is intended to show the scale of new funding and the directions in which the University has made strategic choices: to emphasize engineering and biological sciences, and to support, but at a considerably lesser level, social and behavioral sciences, physical sciences, and arts and humanities. A substantial portion of the funding for these priorities was determined by administrative and regental preferences and by legislative concerns; however, sponsored and private funds are more strongly influenced by the research interests and expertise of faculty and the philanthropic interests of donors. It took significant effort by many people to achieve the results depicted in the chart. In future years, the University should see the impact of these investments in increased research discoveries, technology transfer, and rankings.

New investments in these broad areas total over \$1.2 billion. Taking strategic investments beyond the interdisciplinary initiatives to include the legislative medical endowment, compact and capital investments, together with private giving, the University made its largest investment – nearly \$894 million – in biological sciences and medical research. This is comparable to the recent University of Michigan investment of \$800 million in biology.

In making these investments, the University has set priorities and made choices that preferred some areas over others. However, this has not been an all-or-nothing process. Many other significant investments and faculty accomplishments not included here have been made at the college level and through the compacts, to support other significant areas of research that may, in the future, become targets for new initiatives and investments. (Investments in undergraduate education have also been substantial and important; see Section II.B.)

**Chart O**  
**Systemwide Investments in Priority Areas**  
**1998-2002**

NRC Rank 1995	Category	Legislative Investments <sup>1</sup>	Internal Investments <sup>2</sup>	Related Capital Investments <sup>3</sup>	Total Legislative & University Investments	Private Giving	Total New Investments
35 (27*)	Biological Sciences / Medical Research Medical Ed. Endowment	\$7,375,000 523,900,000	\$13,930,607 1,345,000	\$187,395,000	\$733,945,607	\$160,042,536	\$893,988,143
10	Engineering / Computer Science	4,500,000	3,590,770	70,030,000	78,120,770	47,172,059	125,292,829
13	Social / Behavioral Sciences	3,250,000	2,321,120	22,049,000	27,620,120	29,436,280	57,056,400
30	Physical Sciences/ Mathematics		3,697,530	28,507,000	32,204,530	22,879,947	55,084,477
37	Arts and Humanities		2,104,476	44,510,000	46,614,476	25,768,184	72,382,660
<b>Total to FY 02</b>		<b>\$ 539,025,000</b>	<b>\$26,989,503</b>	<b>\$352,491,000</b>	<b>\$918,505,503</b>	<b>\$285,299,006</b>	<b>\$1,203,804,509</b>

Source: Office of Budget and Finance

<sup>1</sup> Legislative appropriations for cellular-molecular biology, digital technology, new media, and design interdisciplinary initiatives, and medical endowment.

<sup>2</sup> Includes central compact and related college investments.

<sup>3</sup> Includes funding for buildings and renovations for: Genomics, Molecular-Cellular Biology, Plant Growth, UMM and UMD Science, Walter Library, Amundson Hall, Mechanical Engineering, Ford, Murphy, Soudan Lab, Twin Cities Art Building, UMD Music.

\*Medical School was ranked 27 by NIH in 2000

**Compact Investments.**

The strategic framework for compact investments includes the following principles:

Insure excellence of top-ranked departments

- Invest in best departments
- Invest to strengthen interdisciplinary initiatives
- Recruit and retain top faculty
- Strengthen academic infrastructure, particularly libraries and technology

Invest in research and curriculum development in key fields

- Build the arts and humanities
- Build on reorganization of biological sciences
- Strengthen medical education
- Support agriculture and natural resources
- Strengthen computer science and engineering

**Chart P**

<b>Examples of Compact Investments</b>	
Computer Science	System-wide initiative to add 16 new computer science positions across all four campuses; 13 more will be added FY 02-03
Arts and Humanities	Added faculty positions in theater, music, film study, Asian languages, German, American Indian studies, and established the Humanities Institute
Social Sciences and Psychology	Added faculty positions in economics, political science, psychology, geography, statistics
Agriculture	Set-up resources for new faculty

Compact-level Measures: Investments in New Faculty and Outstanding Units.

- Between 1999 and 2001, \$3,469,000 was invested in outstanding units across all campuses to create and fill faculty positions.
- Additional investments were made between 1999 and 2001 in 28 new faculty positions to support teaching of freshman seminars. These investments also serve to strengthen top-ranked departments.
- For instance, in CLA, to maintain and strengthen the six departments that rank among the top 15 nationally, new faculty hires (46 of 170 new faculty hired since fall 1997) have concentrated in economics (12), geography (3), German (4), political science (12), psychology (13), and statistics (2). Three of these positions (in economics, psychology, and political science) came from the freshman seminar investments.

**Chart Q**  
**Strengthening Graduate and Professional Programs**

Priorities	Outcomes
<b>\$18 million cumulative compact investments</b>	
Examples:	
Resources for Medical School clinical departments and faculty	Will hire about 55 new basic and clinical scientists faculty over next four years; housed in new Molecular & Cellular Biology building, Transitional Research Facility, and other AHC facilities.
Increased enrollments in nursing and pharmacy	Graduate 30 more baccalaureate nurses per year from the Rochester site and 50 more pharmacists per year from the Duluth campus.
Clinical investigation center in Veterinary Medicine	This program is associated with the Research Service Organization and supports clinical trials of veterinary therapeutics.
Major investments in stem cell research, genomics, bioinformatics, clinical programs, and technology transfer	\$12-15 million invested from AHC and Fairview sources over the last three years; currently evaluating return on investment; over 40 peer reviewed publications; many new NIH grants to date.
Community partnerships	New partnerships in neurology with Hennepin County Medical Center (HCMC); radiology with Veterans Administration and HCMC; emergency medicine with Regions and HCMC; Community-University Partnership in Education and Service (CUPES); interdisciplinary sites; rural dentistry; community pharmacy.
Support for Law Library and Law Clinics	Core support for growing costs in libraries and experiential programs in law.
<b>Additional and future investments</b>	
21 <sup>st</sup> Century Graduate Fellowship Fund	Dedicates \$50 million of license royalty stream to graduate fellowship endowment, available for match in the Capital Campaign, stimulating \$24.3 million in gifts for graduate fellowships.
Translational research building	House state-of-the-art research in neurobehavior, infectious diseases, gene therapies, new cancer therapies, motor disorders, and new approaches to diabetes and organ transplants; provide space for 33 new clinician scientists who perform translational research.

***Achieve improvements in research productivity, measured in the amount of sponsored funding and technology commercialization, to maintain national ranking relative to other major research universities, thereby improving the University's overall ranking and reputation.***

Indicators: sponsored funding; technology commercialization

Sponsored funding, technology commercialization, and voluntary support will be increasingly important to the University as it competes with premier institutions throughout the nation for outstanding faculty, staff, and students. As the indicators below illustrate, the University has a strong track record on which to build. (For additional detail, see the "Annual Report on the Status of University Research," submitted by the Interim Vice President for Research to the Board of Regents, November 8, 2002.)

### Sponsored Funding

#### Ranking.

- The University was ranked 9<sup>th</sup> among public research universities and 13<sup>th</sup> among all research universities based on total research expenditures in FY 2000 (the most recent year for national comparisons). Total research expenditures include both sponsored and institutional expenditures on organizational research.
- Its ranking was slightly higher than in FY 1999, when it was 10<sup>th</sup> among public institutions, and 15<sup>th</sup> among all institutions in federal research expenditures (see Table 5 on page 39).
- The University's position in federal research was 8<sup>th</sup> based on FY 2000 compared with other public institutions. Its rank among all research institutions was 16<sup>th</sup> in FY 2000.
- Between 1990 and 2000, total federal obligations to higher education for research increased an average of 4 percent per year, from \$15.205 billion to \$19.879 billion.
- Over the same period, the University of Minnesota's share of federal obligations increased by an average of 6 percent per year (more than the average available increase), from \$181,694,000 to \$309,632,000; it ranked 12<sup>th</sup> in federal obligations in FY 2000 (see Table 7 on page 41).

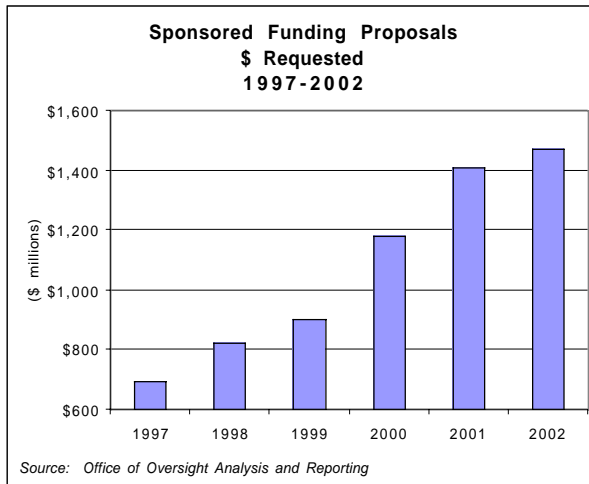
**Chart R**  
**University of Minnesota Ranking, Research Expenditures**  
**(University of Florida Study)**  
**2000 to 2002**

	2000 (1999 data)	2001 (2000 data)	2002 (2001 data)
Total Research			
Amount	\$ 345,910,000	\$ 358,247,000	\$ 411,380,000
Rank among publics	9	10	8
Rank among all	13	15	12
Federal Research			
Amount	\$ 204,741,000	\$ 207,761,000	\$ 229,958,000
Rank among publics	7	7	7
Rank among all	14	16	15

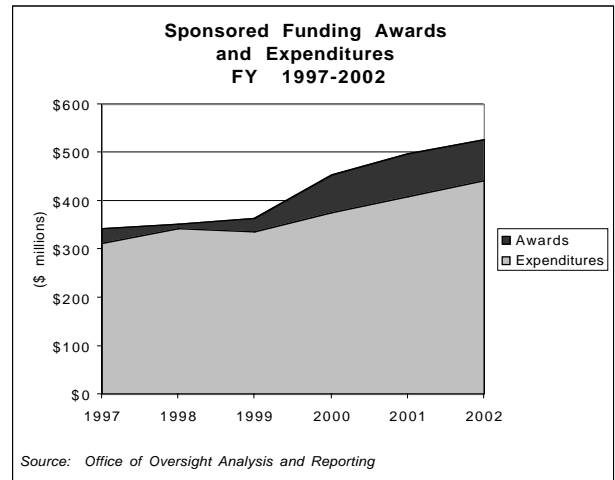
Source: *TheCenter, The Top American Research Universities, 2000, 2001, and 2002*

Trends.

**Chart S**



**Chart T**



- Between 2001 and 2002, sponsored funding awards from all sources increased from \$498 million to \$526.6 million, nearly a 6 percent increase.
- The amount requested in proposals increased by 5 percent in 2002; this continues to reflect faculty and academic staff initiative and strengthening the prospect that the trend in increased awards and expenditures will continue in 2003 and beyond.
- Average percentage change between 1997 and 2002 was a 16 percent increase in requested dollars; 9 percent increase in dollars awarded; and 7 percent increase in annual expenditures.
- See Table 6 on page 40 for six-year trends by college and campus.

**Chart U**  
**Sponsored Funding Trends FY 1997-2002**  
**(\$1,000s)**

	1997	1998	1999	2000	2001	2002
Proposals submitted #	3929	4061	4072	4340	4668	4860
Proposals submitted \$	\$ 698.1	\$ 824.5	\$ 904.4	\$ 1,180.1	\$ 1,406.7	\$ 1,470.3
Awards #	2862	2953	3148	3212	3180	3210
Awards \$	\$ 343.3	\$ 350.1	\$ 364.9	\$ 455.1	\$ 498.4	\$ 526.6
Expenditures \$	\$ 312.3	\$ 343.5	\$ 335.5	\$ 376.5	\$ 410.5	\$ 443.1*
% change \$ requested		18%	10%	30%	19%	5%
% change \$ awards		2%	4%	25%	10%	6%
% change \$ expenditures		10.0%	-2.3%	12.2%	9.0%	8%

Source: Office of Oversight Analysis and Reporting

\*preliminary

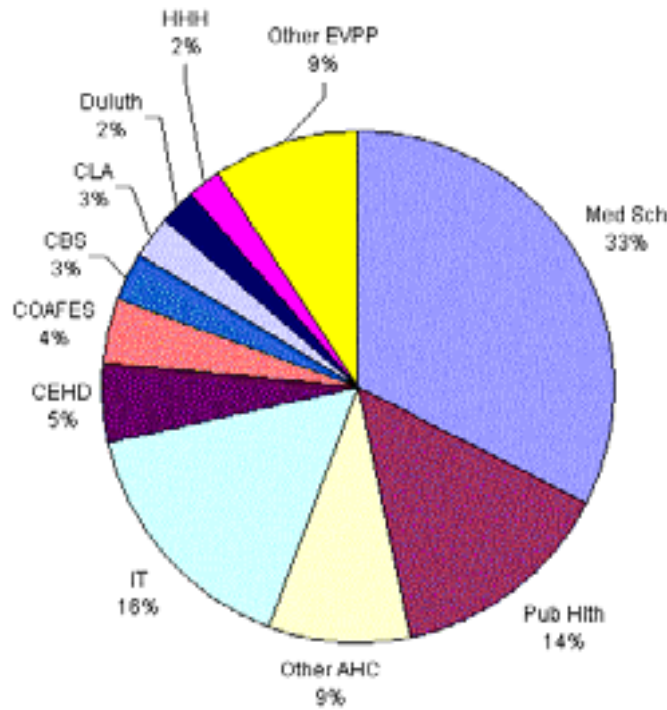
**Chart V**  
**Sponsored Funding Awards**  
**All Sources for Research, Training, and Public Service**  
**(in \$ thousands)**

	1997	1998	1999	2000	2001	2002
Institutional	312,288	350,057	364,949	455,199	498,400	526,642
Twin Cities	300,184	338,723	355,805	441,296	486,375	512,468
Duluth*	11,296	107,484	8,221	12,561	11,376	12,149
Morris	258	198	120	678	126	700
Crookston	550	488	803	664	523	1,325

\*Awards for UMD Medical School are included in Twin Cities figure above.

Source: Office of Oversight Analysis and Reporting

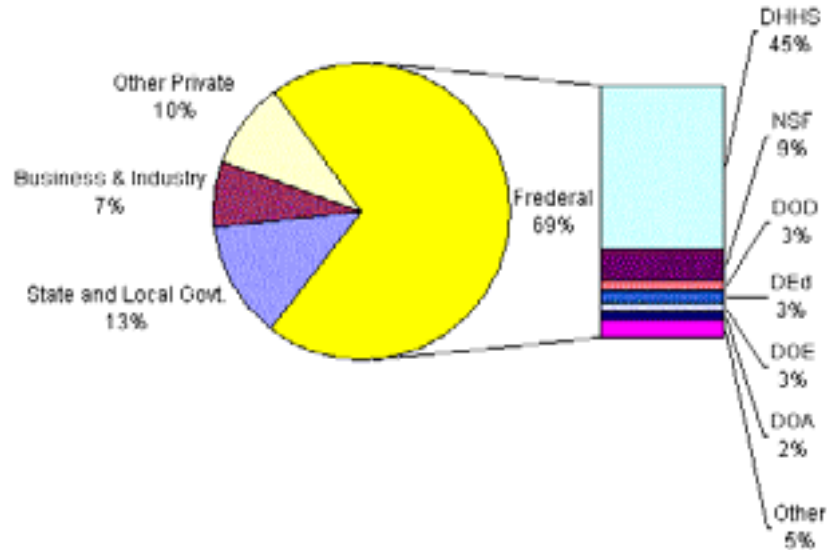
**Chart W**  
**Sponsored Awards by Academic Unit (FY02: \$526.7M)**



Source: Office of the Vice President for Research

**Chart X**

**Sponsored Program Awards by Sponsor  
(FY02: \$526.7M)**



Source: Office of the Vice President for Research

Research Productivity.

- Research productivity of faculty is also increasing. Between 1997 and 2002, the average amount of sponsored funding requested by tenured/tenure-track faculty increased by 109 percent, from \$260,000 to \$542,000. This reflects in part the increase in large-scale, multi-disciplinary funding proposals.
- Average award amounts increased by 52 percent, from \$127,000 to \$194,000 per faculty member.

**Chart Y**

**Sponsored Funding per Tenured/Tenure-Track Faculty**

	1997	1998	1999	2000	2001	2002	Change over 6 years
Grant & Contract Proposals: \$s	\$259,629	\$325,876	\$352,455	\$428,654	\$523,131	\$542,346	109%
Grant & Contract Proposals: #	1.46	1.61	1.59	1.56	1.72	1.79	23%
Grant & Contract Awards: \$s	\$127,684	\$138,582	\$142,206	\$172,620	\$185,348	\$194,246	52%
Grant & Contract Awards: #	1.06	1.17	1.23	1.15	1.18	1.18	11%
Expenditures: \$	\$95,276	\$111,684	\$107,468	\$117,041	\$105,541	n.a.	n.a.

Source: Office of Institutional Research and Reporting

## Technology Commercialization: Inventions, Patents, and Licenses

The University's goal is to continue expanding its technology transfer activities and increasing its effectiveness in moving University technologies to the marketplace to benefit the public.

### Ranking.

The University maintains its position among the 20 top universities, and among the top 10 in many categories, for example:

- 4<sup>th</sup> in start-up companies
- 8<sup>th</sup> in intellectual property disclosures received
- 9<sup>th</sup> in license agreements executed
- 14<sup>th</sup> in income
- 14<sup>th</sup> in research expenditures

(Rankings based on FY 2000 Association of University Technology Managers (AUTM) Survey and NSF Survey on research expenditures.)

**Chart Z**  
**Technology Commercialization**  
**University of Minnesota Ranking**

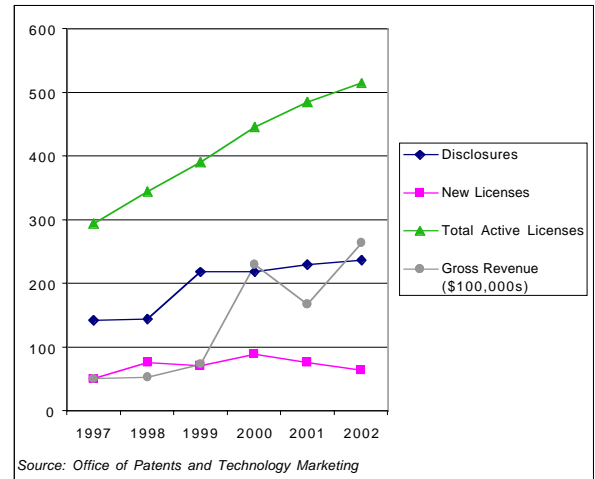
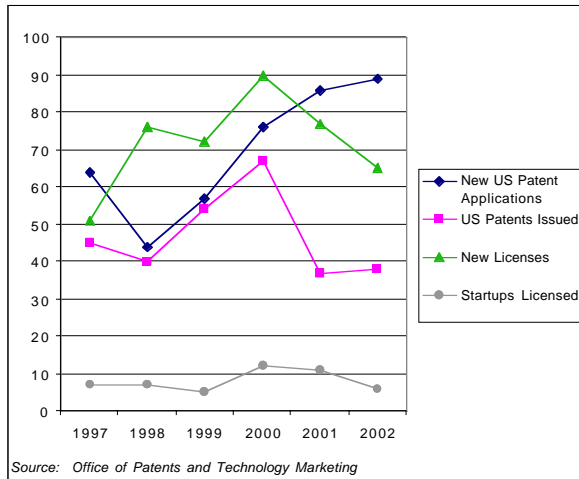
	1999	2000
Industry Sponsored Research	18*	20*
Licenses and Options Executed	13	9
Active Licenses	8	11
License Income	22	13
Invention Disclosures	8	8
Total and New U.S. Patent Applications Filed	25	17
U.S. Patents Issued	14	11
Start-up Companies	7	4

*Source: Office of Patents and Technology Marketing; AUTM*

*\*Source: National Science Foundation*

Trends.

**Chart AA  
Technology Commercialization Trends  
1998-2002**



- Between FY 1998 and FY 2002, most measures of technology transfer increased, with a few exceptions.
- New technology disclosures increased by 65 percent, from 144 to 237.
- Patent applications submitted annually increased by 102 percent, from 44 to 89.
- Number of patents issued decreased by 5 percent, from 40 to 38.
- Licensed start-ups decreased by 14 percent, from seven to six.
- Total number of active licenses is now 514, a 49 percent increase over the 344 active in FY 1998.
- Royalties generated by University-developed technologies totaled \$26.5 million in FY 2002.

**Chart BB  
University of Minnesota Technology Commercialization  
Summary Trends**

	FY 98	FY 02	% Change FY98-FY02
Disclosures	144	237	65%
New US Patent Applications	44	89	102%
US Patents Issued	40	38	-5%
Licenses			
New	76	65	-14%
Start-ups licensed	7	6	-14%
Total active licenses	344	514	49%
Gross Revenues (in \$ millions)	\$5.3	\$26.5	400%
Patent Cost Reimbursement	\$0.9	\$1.1	22%

Source: Office of Patents & Technology Marketing. Generated 8/02.

These numbers reflect dramatic growth in technology transfer activity for technology commercialization. Although the greatest increase is in gross revenues, the increase in the number of new licenses and the number of active licenses is most significant to the University's mission in technology transfer – to seek commercialization of University technologies for public benefit. Technology commercialization also plays an increasingly important role in the context of the University's sponsored funding, and the necessity of increasing the proportion of overall funding from non-state sources.

The University expects to maintain, if not improve, its standing in the national rankings compiled by the AUTM during future fiscal years. Initiatives to help reach this goal and improve technology transfer activity include:

- Hosting seminars which bring members of the business and industry community together with University researchers to facilitate discussions and investments in available technologies;
- Collaborating with efforts to establish incubator sites near campuses;
- Developing sources of funding for early stage technologies;
- Working with the Carlson School of Management, including the New Business Development Enterprise, to nurture University start-ups and other technology transfer business opportunities;
- Continuing to use the Technology Transfer Advisory Committee (TTAC) for feedback and input on technologies; and
- Improving access to information on the University's research capabilities and licensable technologies via the Web.

### **Implications for 2003-2004 Planning and Initiatives**

The University has long been a national and international leader in research and serves as an important component of the state's economic engine. Its research programs attract outstanding faculty and students from a national and international pool. Many students are actively recruited by Minnesota employers looking for highly motivated, well-educated staff. The University's research programs may be thought of as a valuable Minnesota industry in and of themselves, attracting over \$526 million in sponsored funds, bringing back to Minnesota \$370 million from the federal government. The U.S. Department of Commerce estimates that 39 jobs are created in Minnesota for every \$1 million spent on research by colleges or universities in this state. Amazingly, the University attracts over 98 percent of all the sponsored research performed by colleges and universities in Minnesota. Investments in targeted areas—the Academic Health Center, the five interdisciplinary initiatives, social and physical sciences, arts and humanities—are intended to support the University's competitive position and reputation. Its investment strategies reflect priorities of multiple stakeholders, including the legislature, private donors, and federal agencies that fund research.

The indicators cited here illustrate that the University is maintaining momentum in some areas, such as engineering and social sciences, and is rebuilding in the biological sciences and medical research. They demonstrate the University's significant effort to reverse the trend in biology and medical research, substantial effort in computer science/engineering and social sciences, and more modest efforts in physical sciences, arts, and humanities. In these areas (and across many other fields), the University's faculty have been quite successful in obtaining sponsored funding, patents,

and licenses. Federal funding secured by University faculty and staff has grown slightly more, proportionately, than the total pool of federal funds available.

However, the University's peers are also experiencing growth in most of these areas. To compete successfully with the nation's top universities in sponsored funding, the University must sustain its capacity to recruit and retain top faculty, well-trained and highly motivated support staff, and high-quality graduate students; well-equipped and well-maintained laboratories; access to the latest information technologies; and continuing enhancement of the University's grants management system.

The University will continue its successful investment strategies. It will depend even more on continued success in meeting performance objectives in voluntary support to balance decreases in state support. However, when viewing investment results, it is important to note that the results are a snapshot at a particular point in time for a particular time period. The returns may include an anomaly and may not be indicative of either past or future long-term performance.

The University's gains will also be influenced by any future shifts in federal appropriations for sponsored activities, post-9/11 federal regulations, an increasingly competitive environment, as well as by its underinvestment in its support for faculty salaries in comparison with its major competitors, public and private. If this underinvestment in salaries continues, the University is likely to lose its competitive position; it will become increasingly difficult to recruit the quality of faculty needed to keep the University at the forefront of U.S. public research institutions.

## Endnotes

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<sup>i</sup> Several national ranking systems offer a range of positions for the University of Minnesota. There is no single system that includes all components of the University, which continues to be one of the nation's largest and most comprehensive higher education institutions. The various systems are not complementary, since they focus on very different kinds of data. Where comparison data are available, they are commonly collected at the campus level. College-level data are rarely compared nationally because of widely varying collegiate structures; for similar reasons, department-level comparisons do not exist, except in cases of single-department colleges such as law schools. No uniform system exists for ranking all professional schools and programs.

<sup>ii</sup> The University of Florida's The Center for the Studies of the Humanities and Social Sciences has published its *Top American Research Universities* every year since 2000. The study examines 600 research institutions, selected on the basis of size of external research funding, and ranks them on nine indicators, selected to reflect the success in what The Center regards as the core function of universities: garnering resources to support research. Indicators (listed on page 2) are compared, but not weighted, as they are in other national studies.

<sup>iii</sup> Rankings are published every 10 years by the National Research Council (NRC), a service of the National Academy of Arts and Sciences, most recently in 1995. NRC ranking is the "usual" measure to define the "top five public universities." The focus is on research-doctoral programs; the 1995 study examined 3,600 doctoral programs in 41 fields of study in 274 universities. Methodology includes both objective criteria – faculty achievements (research support, publications), characteristics of graduates, program size – and subjective criteria (survey of 10,000+ faculty) including faculty reputation for scholarly quality and effectiveness in doctoral education.

<sup>iv</sup> Top 30 1995 NRC-ranked institutions were:

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UC Berkeley	1	U Washington	16
Stanford	2	Cal Tech	17
Cornell	3	Johns Hopkins	18
Michigan	4	UIUC	19
Harvard	5	U Minnesota - Twin Cities	20
Princeton	6	Northwestern	21
Chicago	7	Duke	22
UCLA	8	UC North Carolina	23
U of Pennsylvania	9	NYU	24
MIT	10	Brown	25
Yale	11	Penn State	26
U Wisconsin-Madison	12	Purdue	27
Columbia	13	SUNY Stony Brook	28
U Texas-Austin	14	Carnegie Mellon	29
UC San Diego	15	UC Santa Barbara	30

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**Table 1**  
**National Research Council National Rank (Faculty Quality)**  
**and Program Rating**  
**University of Minnesota Doctoral Programs**

<b>Program</b>	<b>1995 Faculty Ranking</b>	<b>1995 Program Ranking</b>
Chemical Engineering	1	4.86
Geography	3	4.22
Psychology	7	4.46
Mechanical Engineering	8	4.09
Economics	10	4.22
German	11	3.68
Aerospace Engineering	12	3.4
Political Science	13	3.95
Statistics	13	3.91
Civil Engineering	13	3.76
Mathematics	14	4.08
Ecology Evolution and Behavior	15	3.88
Materials Science	17	3.64
Biomedical Engineering	17.5	3.49
Electrical Engineering	18	3.73
Chemistry	21	3.89
Pharmacology	21	3.76
History	21.5	3.66
Physics	22.5	3.76
Sociology	24	3.29
Astrophysics and Astronomy	24	2.89
Classics	24	2.43
French	26.5	2.88
Spanish	27.5	3.06
Comparative Literature	28	2.53
Art History	30	2.47
Music	30.5	3.16
Geology	31	3.35
Philosophy	32	3.01
Cell and Development Biology (Medicine)	34	3.54
Neuroscience	34	3.43
English	36	3.24
Cell and Development Biology	37	3.49
Biochemistry and Molecular Biology	39	3.46
Molecular and General Genetics	39	3.23
Biostatistics	45	2.52
Computer Science	47	2.67
Anthropology	50	2.49
Physiology	72.5	3.00

**Table 2**  
**University of Minnesota in National Rankings**

Program	NRC 1995	US News			Gourman 1997
		Earlier rank	2001 rank	2002 rank	
Engineering		23 (2000)	20	21	12
Aerospace Engineering	12			19	12
Bioengineering/Biomedical	17.5		21	21	17
Chemical Engineering	1	3 (2000)	3	2	1
Civil Engineering	13	16 (2000)	17	17	13
Computer Engineering		19 (2000)			
Electric/Electronic Communication	18	21 (2000)	21		18
Materials Engineering	17		21	19	17
Mechanical Engineering	8	9 (2000)	10	9	8
Chemistry	21	20 (1999)		22	23
Analytical Chemistry				12	
Inorganic Chemistry				10	1
Physical Chemistry					1
Polymer Chemistry		8 (1999)			
Computer Science	47			35	
Geology	31	21 (1999)			
Hydrogeology		7 (1999)			
Geosciences					26
Mathematics	14	17 (1999)		16	17
Applied Mathematics		4 (1999)		9	
Physics	22.5	24 (1999)		24	24
Astrophysics & Astronomy	24				20
Biological Sciences				29	
Medicine					15
Audiology		8 (2000)			3
Biochemistry & Molecular Biology	39				
Biostatistics	45				
Cell Biology	34				33
Clinical Nursing, Adult/Med-Surg		10 (2000)			
Clinical Nursing, Comm/Pulb Hlth		7 (2000)			
Clinical Psychology		2 (2000)	5		4
Dentistry					11
Family Medicine (UMTC)			9	14	
Family Medicine (UMD)			13	14	
Microbiology					22
Molecular & General Genetics	39				
Neurosciences	34				34
Nursing		27 (2000)			13
Occupational Therapy		13 (2000)	23		
Pharmacology	21				22
Pharmacy					7
Physical Therapy		28 (2000)			
Physiology	72.5				
Primary Care (UMTC)			11	14	
Primary Care (UMD)			8	14	
Public Health		7 (2000)			7
Research			35	36	
Rural Medicine (UMD)			6	8	
Rural Medicine (UMTC)			19		
Social Work		19 (2000)			10
Speech-Lang Pathology (UMTC)		14 (2000)			3
Speech-Lang Pathology (UMD)		95 (2000)			

Program	NRC 1995	US News			Gourman 1997
		Earlier rank	2001 rank	2002 rank	
Veterinary Medicine		11 (2000)			8
Public Affairs		18 (2000)	12		
City Management & Urban Policy			20		
Health Policy & Management		10 (2000)	7		
Nonprofit Management		11 (2000)	3		
Public Management Admin		24 (2000)	13		12
Public Policy Analysis		12 (2000)	13		
Social Policy			11		
Law			19	18	19
Healthcare Law				12	
International Law			14	20	
Business				24	
International Business				23	
Management			30		
Business & Management PhD					30
Executive MBA				16	28
General Management			29	23	
Health Services Administration		4 (2000)			
Industrial/Labor Relations					6
M.I.S.			6	5	
Marketing			25		
Part-time MBA			12	11	
Production/Operations Management			21	19	
UG Business Degree			14		
Education		14 (2000)	20	12	
Administration/Supervision			12	19	
Counseling/Personnel Services		3 (2000)	2	5	
Curriculum/Instruction		13 (2000)	18	19	
Education Policy			14	20	
Educational Psychology		6 (2000)	6	6	
Elementary Education		11 (2000)	11	13	
Higher Education Administration		15 (2000)	11	13	
Secondary Education		13 (2000)	11	16	
Special Education		5 (2000)	8	7	
Vocational/Technical		5 (2000)	3	3	
Agricultural Sciences					9
Agricultural Economics					4
Agricultural Engineering					6
Agronomy/Soil Sciences					5
Botany					16
Entomology					5
Food Sciences & Nutrition (UG)					10 (1996)
Horticulture					8
Plant Pathology					7
Cell & Developmental Biology	37				
Ecology, Evolution & Behavior	15				
Nutrition					15
Forestry					6
Architecture		13 (1997)			28
Landscape Architecture					16

Program	NRC 1995	US News			Gourman 1997
		Earlier rank	2000 rank	2001 rank	
Anthropology	50				
Art History	30				25
Classics	24				24
Comparative Literature	28				27
Creative Writing		62 (1997)			
Drama/Theatre		23 (1997)			6
Economics	10	10 (2000)	11		10
Industrial Organization		13 (2000)			
International Economics		15 (2000)			
Macroeconomics		5 (2000)	6		
Microeconomics		11 (2000)	12		
English	36		34		35
Gender & Literature		16 (2000)	14		
Literary Criticism & Theory			19		
Medieval Literature		13 (2000)			
Fine Arts		55 (1997)			
French	26.5				26
Geography	3				1
German	11				18
History	21.5	19 (2000)	19		25
European History		19 (2000)	14		
Modern U.S. History			18		
Women's History		11 (2000)	7		
Institute of Child Development			3		4
Developmental Psychology		1 (2000)	1		7
Journalism					4
Music	30.5	30 (1997)			32
Philosophy	32				31
Political Science	13	15 (2000)	15		14
American Politics		11 (2000)	9		
Political Theory		7 (2000)	7		
Psychology	7	9 (2000)	11		5
Cognitive Psychology					5
Experimental Psychology		18 (2000)			2
Industrial/Organizational Psych		2 (2000)	2		2
Personality					4
Sensation & Perception					5
Social Psychology		11 (2000)			9
Sociology	24	19 (2000)	22		20
Historical Sociology		13 (2000)	6		
Spanish	27.5				26
Statistics	13				10

**Table 3**  
**Top 25 Institutions**  
**in National Academy Membership (2001)**

	Number of Members	National Rank	Rank among Peers (Public/Private)
Harvard University	265	1	1
Stanford University	243	2	2
Massachusetts Institute of Technology	232	3	3
University of California - Berkeley	199	4	1
Yale University	108	5	4
California Institute of Technology	93	6	5
University of California - San Diego	93	6	2
University of Pennsylvania	87	8	6
Cornell University	80	9	7
University of Washington – Seattle	78	10	3
Columbia University	77	11	8
Princeton University	76	12	9
University of Wisconsin - Madison	69	13	4
University of California – San Francisco	68	14	5
Johns Hopkins University	64	15	10
University of Michigan – Ann Arbor	62	16	6
University of California - Los Angeles	58	17	7
University of Chicago	56	18	11
University of Illinois - Urbana-Champaign	54	19	8
University of Texas - Austin	52	20	9
Rockefeller University	43	21	12
Duke University	42	22	13
Washington University	37	23	14
University of Southern California	36	24	15
University of Minnesota - Twin Cities	35	25	10

*Source: TheCenter, The Top American Research Universities, 2002*

**Table 4A. Faculty Salaries for Twin Cities Peer Group (sorted by FY02 salaries of full professors)**

	2001-2002			2000-2001			1999-2000			1998-1999			1997-1998			
	NRC Rank	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof
Harvard University	5	144.7	85.2	75.0	135.2	79.2	71.6	128.9	71.6	66.5	122.1	69.6	63.8	116.8	64.3	60.9
Princeton University	6	131.7	85.9	65.3	125.7	80.2	62.6	120.0	71.9	56.0	114.9	68.8	54.3	110.3	65.4	51.0
Yale University	11	131.2	72.7	60.6	124.1	69.4	58.0	119.0	67.3	54.7	113.1	64.4	52.2	108.4	60.5	49.7
Stanford University	2	131.0	92.7	73.9	126.7	88.1	69.1	121.1	81.2	65.8	117.0	79.8	63.6	111.0	75.3	60.1
University of Chicago	7	129.2	81.7	69.6	124.8	79.5	67.1	118.5	75.7	68.5	112.0	72.3	65.5	106.0	68.0	61.4
University of Pennsylvania	9	128.0	90.8	76.7	120.3	83.5	73.1	114.8	80.5	67.0	108.4	72.6	65.1	104.6	69.7	62.0
California Inst. of Tech.	17	127.7	88.4	79.0	122.2	85.9	73.4	118.4	81.0	69.9	114.6	79.7	66.1	110.2	77.9	63.5
New York University	24	126.4	78.4	70.2	120.8	76.0	66.7	116.1	75.0	63.6	110.0	71.7	61.0	106.4	68.4	57.2
Columbia University	13	125.5	81.4	65.0	120.2	76.0	60.0	113.4	72.2	57.0	109.2	69.5	55.0	103.6	65.2	52.5
Massachusetts Inst. of Tech.	10	123.2	82.9	74.8	117.0	78.7	72.1	111.7	75.1	66.3	107.0	73.4	63.0	104.2	70.3	61.0
Northwestern University	21	122.3	80.3	69.1	116.2	78.5	65.8	111.2	73.4	62.4	106.6	70.8	59.8	101.4	67.4	58.5
Duke University	22	118.8	79.0	67.8	113.6	75.7	62.5	108.0	72.6	59.0	105.9	69.1	57.0	100.9	65.8	54.3
Univ. of Calif.-Berkeley	1	115.9	73.7	66.2	113.6	73.2	62.5	108.7	69.6	60.1	103.6	68.3	57.0	92.7	61.1	52.0
Univ. of Calif.-Los Angeles	8	115.7	73.2	63.5	112.7	72.4	63.0	106.1	67.4	58.3	101.4	65.4	54.7	92.6	60.7	52.0
Cornell U-Endowed Colleges	3	110.6	81.4	69.2	103.0	75.8	66.4	97.9	72.3	61.4	93.5	67.3	59.0	89.9	64.2	56.2
Univ. of Michigan-Ann Arbor	4	108.9	76.3	61.7	105.2	73.3	59.7	100.9	71.8	57.7	96.7	68.2	54.5	91.9	65.9	53.0
Carnegie-Mellon University	29	108.8	78.5	69.8	105.0	73.5	68.1	99.7	69.7	63.2	97.0	66.7	59.6	93.9	66.1	56.2
Univ. of Calif.-San Diego	15	106.2	67.8	58.9	104.3	67.0	58.2	99.7	65.0	55.6	96.6	64.1	53.7	88.3	59.4	49.1
Johns Hopkins	18	105.0	72.0	60.1	93.6	68.6	57.0	90.0	66.0	54.8	87.0	62.9	53.6	91.1	61.2	51.3
Univ. of Calif.-Santa Barbara	30	104.9	65.5	57.6	102.2	65.8	55.6	96.7	63.4	53.2	94.2	61.7	51.0	86.2	56.2	47.2
Univ. of N.C. at Chapel Hill	23	103.4	72.2	60.3	100.9	71.4	58.5	93.8	67.4	55.2	88.7	65.2	51.2	86.0	61.8	49.2
Brown University	25	101.8	68.1	58.3	96.6	64.8	55.5	91.8	61.7	53.0	89.0	59.7	50.9	85.9	58.2	49.7
Univ. of Illinois-Urbana	19	100.9	69.9	60.4	95.6	66.3	56.8	91.6	63.4	54.1	86.8	60.6	52.3	83.6	58.4	51.2
Univ. of Texas at Austin	14	98.8	63.5	60.0	94.1	60.8	57.3	89.4	58.2	54.2	84.4	54.6	50.6	82.4	53.7	49.7
SUNY at Stony Brook	28	98.3	72.7	59.1	93.8	67.3	55.6	88.0	62.8	49.8	84.0	60.2	48.1	80.9	58.0	43.7
Penn State Univ.-Main Campus	26	98.1	66.5	56.0	93.8	63.4	52.7	89.9	60.4	50.2	86.1	58.0	47.4	83.1	56.0	45.8
Univ. Minnesota-Twin Cities	20	97.6	69.2	58.2	93.6	66.1	55.4	89.5	63.9	53.6	85.6	61.7	51.3	81.0	57.5	48.6
Univ. Wisconsin-Madison	12	92.9	70.2	59.8	90.4	68.0	59.8	84.5	64.8	55.4	77.6	58.7	52.1	73.9	55.5	50.6
Purdue Univ.-Main Campus	27	90.5	62.7	55.7	87.4	60.6	53.0	86.9	60.1	51.4	84.6	57.7	48.8	80.8	55.2	46.8
University of Washington	16	90.1	65.5	58.3	85.5	62.6	53.6	80.6	58.4	51.4	75.6	55.1	48.1	73.0	52.9	47.6
Top 30: Mean w/o MN		113.5	75.8	64.9	108.4	72.6	61.9	103.4	69.0	58.5	98.9	66.1	55.8	94.5	62.9	53.2
Top 30: Dev from Mean #		-15.9	-6.7	-6.7	-14.8	-6.6	-6.5	-13.8	-5.1	-4.9	-13.3	-4.4	-4.5	-13.5	-5.4	-4.6
Top 30: Dev from Mean %		-14.0%	-8.8%	-10.3%	-13.6%	-9.0%	-10.5%	-13.4%	-7.3%	-8.3%	-13.4%	-6.6%	-8.1%	-14.3%	-8.5%	-8.7%
Top 30: Rank		27 <sup>th</sup>	23 <sup>rd</sup>	27 <sup>th</sup>	26 <sup>th</sup>	24 <sup>th</sup>	27 <sup>th</sup>	25 <sup>th</sup>	22 <sup>nd</sup>	24 <sup>th</sup>	25 <sup>th</sup>	22 <sup>nd</sup>	22 <sup>nd</sup>	26 <sup>th</sup>	24 <sup>th</sup>	25 <sup>th</sup>
Top Public 14: Mean w/o MN		101.9	69.2	59.8	98.4	67.1	57.4	93.6	64.1	54.3	89.3	61.4	51.5	84.3	58.1	49.1
Top Public 14: Dev from Mean #		-4.3	0.0	-1.6	-4.8	-1.0	-2.0	-4.1	-0.2	-0.7	-3.7	0.3	-0.2	-3.3	-0.6	-0.5
Top Public 14: Dev from Mean %		-4.2%	0.0%	-2.6%	-4.9%	-1.6%	-3.5%	-4.4%	-0.2%	-1.3%	-4.1%	0.5%	-0.4%	-3.9%	-1.0%	-1.0%
Top Public 14: Rank		11 <sup>th</sup>	8 <sup>th</sup>	11 <sup>th</sup>	11 <sup>th</sup>	9 <sup>th</sup>	11 <sup>th</sup>	9 <sup>th</sup>	7 <sup>th</sup>	9 <sup>th</sup>	9 <sup>th</sup>	7 <sup>th</sup>	7 <sup>th</sup>	10 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>
MN Increase over Prior Year		4.3%	4.7%	5.1%	4.6%	3.4%	3.3%	4.6%	3.6%	4.5%	5.7%	7.3%	5.6%	8.3%	9.3%	5.9%
Mean of Peer Group over Prior Year		3.5%	3.1%	4.2%	4.9%	5.3%	5.8%	4.5%	4.4%	4.8%	4.7%	5.1%	4.9%	4.3%	4.7%	4.3%

**Table 4B. Faculty Compensation for Twin Cities Peer Group (sorted by FY02 compensation of full professors)**

	2001-2002			2000-2001			1999-2000			1998-1999			1997-1998			
	NRC Rank	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof
Harvard University	5	174.8	103.6	90.0	157.8	94.0	84.3	156.8	87.6	80.7	148.4	85.0	77.4	141.9	78.5	73.9
University of Pennsylvania	9	166.9	119.9	102.1	159.5	112.0	98.6	151.9	107.8	90.3	135.9	92.3	83.1	130.6	88.3	79.0
New York University	24	165.8	104.4	93.5	159.3	100.8	88.5	153.1	99.5	84.5	144.1	95.0	81.0	139.8	90.2	75.9
Princeton University	6	160.7	105.8	81.0	152.4	99.5	77.8	145.0	89.1	69.3	139.5	85.2	67.4	134.1	80.9	63.0
Stanford University	2	157.8	116.9	97.1	150.9	107.8	86.1	144.2	99.6	81.9	139.1	97.6	79.1	131.7	91.8	74.5
Yale University	11	155.7	90.2	73.7	148.2	85.4	70.5	142.4	82.3	66.1	135.1	79.0	64.0	130.1	74.2	61.2
California Inst. of Tech.	17	155.4	106.5	94.5	138.7	101.8	89.8	140.8	102.1	93.2	142.1	99.9	81.6	136.6	97.3	78.4
University of Chicago	7	154.3	102.7	88.8	148.2	99.0	84.9	140.8	94.4	86.1	133.9	90.3	82.5	127.1	85.7	77.6
Massachusetts Inst. of Tech.	10	153.4	105.3	95.6	144.8	99.3	91.1	138.6	95.4	84.7	132.4	92.2	80.0	129.3	88.9	77.8
Univ.of Calif.-Berkeley	1	148.6	94.5	85.0	144.1	94.4	80.6	136.8	90.5	78.8	130.8	87.7	73.2	117.5	78.6	66.9
Univ.of Calif.-Los Angeles	8	148.5	93.9	81.5	143.1	93.4	81.4	133.4	87.5	76.3	128.2	84.1	70.4	117.5	78.2	67.0
Columbia University	13	148.0	102.0	83.5	141.8	95.3	78.3	139.7	90.3	72.1	131.8	89.6	73.4	125.7	80.6	65.7
Northwestern University	21	147.4	98.7	83.5	140.0	96.5	79.5	134.0	90.2	75.5	128.4	87.0	72.3	122.2	82.9	70.8
Duke University	22	145.3	97.9	80.9	140.4	94.8	75.8	133.8	90.6	71.7	130.9	86.6	69.2	124.7	82.5	65.9
Cornell U-Endowed Colleges	3	141.2	107.6	93.4	130.5	99.3	88.1	125.2	95.1	81.1	119.8	88.1	77.7	114.8	84.0	73.7
Univ.of Calif.-San Diego	15	136.5	87.0	75.6	132.8	86.6	75.1	125.7	84.4	72.8	122.3	82.3	69.0	112.2	76.5	63.1
Carnegie-Mellon University	29	135.4	99.9	89.1	131.0	93.5	86.6	123.2	88.4	79.7	115.5	81.6	72.2	111.6	80.4	68.3
Univ.of Calif.-Santa Barbara	30	135.0	84.3	74.1	130.1	84.9	71.7	122.0	82.2	69.5	119.3	79.2	65.4	109.6	72.3	60.8
Univ.of Michigan-Ann Arbor	4	133.3	96.6	79.6	128.3	92.4	76.5	122.8	90.2	73.7	116.9	85.2	69.2	111.1	82.2	67.2
Johns Hopkins	18	133.1	92.2	77.2	115.2	84.9	71.0	110.8	81.6	68.3	108.0	78.8	67.6	110.1	75.0	63.4
Univ. Minnesota-Twin Cities	20	126.1	92.0	78.9	120.1	87.0	74.3	113.9	83.2	70.9	108.0	80.1	67.7	102.2	74.8	64.0
Brown University	25	124.6	84.4	72.4	119.1	81.0	69.5	112.5	76.1	65.3	110.3	74.3	63.4	106.6	73.3	63.2
Univ. of N.C. at Chapel Hill	23	121.8	87.0	73.4	117.9	84.9	69.8	109.1	79.6	65.3	104.7	78.0	61.4	101.6	74.0	59.2
SUNY at Stony Brook	28	119.6	88.7	72.3	118.7	85.6	69.9	111.4	80.1	62.3	105.7	76.5	60.2	101.9	73.8	54.9
Univ. of Illinois-Urbana	19	118.7	84.2	73.7	111.7	79.3	68.6	105.8	74.9	64.6	99.6	71.0	62.1	95.4	67.7	59.9
Univ. of Texas at Austin	14	117.8	78.2	72.9	111.4	74.1	69.0	105.9	71.1	65.5	100.0	66.7	61.5	97.5	65.6	60.5
Penn State Univ.-Main Campus	26	117.7	82.1	69.1	112.2	78.2	65.0	108.6	75.1	62.5	103.9	72.0	58.9	100.4	69.6	56.8
Purdue Univ.-Main Campus	27	116.1	82.0	72.1	111.3	78.4	68.1	110.6	77.7	65.7	107.7	74.5	62.5	102.7	71.3	59.9
Univ. Wisconsin-Madison	12	115.5	89.3	77.4	111.6	85.9	76.3	104.0	82.1	71.3	96.5	75.5	67.7	92.0	70.4	64.6
University of Washington	16	109.7	80.9	70.5	104.2	77.5	65.6	97.5	71.6	61.8	91.9	65.1	57.5	89.5	65.7	58.6
Top 30: Mean w/o MN		140.0	95.4	81.8	132.9	91.1	77.9	127.1	86.8	73.8	121.5	82.8	70.0	116.1	78.6	66.6
Top 30: Dev from Mean #		-13.9	-3.4	-3.0	-12.8	-4.0	-3.6	-13.2	-3.6	-3.0	-13.5	-2.7	-2.3	-13.9	-3.8	-2.6
Top 30: Dev from Mean %		-9.9%	-3.6%	-3.6%	-9.7%	-4.4%	-4.6%	-10.4%	-4.1%	-4.0%	-11.1%	-3.2%	-3.3%	-11.9%	-4.9%	-3.9%
Top 30: Rank		21 <sup>st</sup>	18 <sup>th</sup>	17 <sup>th</sup>	20 <sup>th</sup>	17 <sup>th</sup>	19 <sup>th</sup>	20 <sup>th</sup>	18 <sup>th</sup>	18 <sup>th</sup>	22 <sup>nd</sup>	18 <sup>th</sup>	17 <sup>th</sup>	23 <sup>rd</sup>	19 <sup>th</sup>	17 <sup>th</sup>
Top Public 14: Mean w/o MN		126.1	86.8	75.2	121.3	84.3	72.1	114.9	80.5	68.5	109.8	76.8	64.5	103.8	72.8	61.5
Top Public 14: Dev. from Mean #		0.0	5.1	3.7	-1.2	2.7	2.1	-1.0	2.7	2.4	-1.8	3.3	3.2	-1.6	2.0	2.5
Top Public 14: Dev. from Mean %		0.0%	5.9%	4.9%	-1.0%	3.3%	3.0%	-0.8%	3.3%	3.5%	-1.6%	4.4%	4.9%	-1.5%	2.8%	4.1%
Top Public 14: Rank		6 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	6 <sup>th</sup>	4 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	7 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>
MN Increase over Prior Year		5.0%	5.7%	6.2%	5.4%	4.6%	4.8%	5.5%	3.9%	4.7%	5.7%	7.1%	5.8%	8.3%	9.5%	6.1%
Mean of Peer Group over Prior Year		3.9%	3.0%	4.2%	4.6%	4.9%	5.5%	4.7%	4.9%	5.4%	4.7%	5.3%	5.1%	4.2%	4.6%	4.1%

**Table 4C. Faculty Salaries and Compensation for Crookston Peer Group**

	<b>SALARIES</b>											
	<b>2001-2002</b>			<b>2000-2001</b>			<b>1999-2000</b>			<b>1998-1999</b>		
	<b>Full Prof</b>	<b>Assoc Prof</b>	<b>Asst Prof</b>	<b>Full Prof</b>	<b>Assoc Prof</b>	<b>Asst Prof</b>	<b>Full Prof</b>	<b>Assoc Prof</b>	<b>Asst Prof</b>	<b>Full Prof</b>	<b>Assoc Prof</b>	<b>Asst Prof</b>
Pittsburg State University	70.2	54.5	44.5	60.6	51.5	42.1	57.6	49.4	39.8	53.3	44.7	36.4
Univ. Wisconsin-Stout	63.8	52.0	45.4	62.7	50.9	44.7	59.6	48.4	43.5	57.2	46.2	41.3
Ferris State University	62.9	55.4	46.9	61.9	54.0	46.6	57.2	51.8	45.3	59.0	50.9	44.9
SUNY Coll. Tech. at Alfred	59.5	48.1	41.4	57.9	46.3	40.4	54.2	46.1	38.1	54.0	44.2	35.5
Univ. Minnesota-Crookston	58.3	54.2	46.9	56.8	46.6	44.2	54.9	51.8	44.3	54.3	51.0	43.2
University Southern Colorado	58.2	48.3	43.6	55.8	46.6	42.4	54.0	46.0	40.3	52.9	46.1	39.4
Worcester Institute	n.a.	n.a.	n.a.									
Mean w/o MN	62.9	51.7	44.3	59.8	49.8	43.3	56.5	48.4	41.4	55.3	46.4	39.5
Dev from Mean #	-4.6	2.5	2.6	-3.0	-3.2	1.0	-1.6	3.5	2.9	-1.0	4.6	3.7
Dev from Mean %	-7.3%	4.8%	5.8%	-5.2%	-6.9%	2.2%	-2.9%	6.7%	6.5%	-1.8%	9.0%	8.6%
Rank of 6	5 <sup>th</sup>	3 <sup>rd</sup>	1 <sup>st</sup>	5 <sup>th</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	5 <sup>th</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>
UMC Increase over Prior Year	2.7%	16.1%	6.0%	3.4%	-10.0%	-0.1%	1.2%	1.6%	2.5%	6.3%	6.5%	4.9%
Mean of Peer Group over Prior Year	5.3%	3.7%	2.5%	5.8%	3.1%	4.5%	2.2%	4.2%	4.8%	1.9%	2.5%	2.3%

	<b>COMPENSATION</b>											
	<b>2001-2002</b>			<b>2000-2001</b>			<b>1999-2000</b>			<b>1998-1999</b>		
	<b>Full Prof</b>	<b>Assoc Prof</b>	<b>Asst Prof</b>	<b>Full Prof</b>	<b>Assoc Prof</b>	<b>Asst Prof</b>	<b>Full Prof</b>	<b>Assoc Prof</b>	<b>Asst Prof</b>	<b>Full Prof</b>	<b>Assoc Prof</b>	<b>Asst Prof</b>
Pittsburg State University	84.0	66.8	55.1	74.4	63.6	52.6	71.8	62.2	50.1	64.6	54.0	43.8
Ferris State University	82.9	74.5	65.1	83.3	73.8	64.7	76.0	70.7	64.2	76.1	67.9	62.0
Univ. Wisconsin-Stout	82.5	68.6	60.9	80.0	66.0	58.9	75.9	62.6	56.8	73.4	60.2	54.5
Univ. Minnesota-Crookston	80.1	75.0	66.3	76.5	64.2	61.3	72.9	69.2	60.1	71.2	67.2	57.8
SUNY Coll. Tech. at Alfred	71.4	57.9	49.9	74.4	59.9	51.4	69.5	59.6	48.4	68.9	57.0	45.6
University Southern Colorado	69.3	57.6	51.9	66.4	55.5	50.5	64.4	54.8	48.0	63.0	54.9	46.9
Worcester Institute	n.a.	n.a.	n.a.									
Mean w/o MN	78.0	65.1	56.6	75.7	63.8	55.6	71.5	62.0	53.5	69.2	58.8	50.6
Dev from Mean #	2.1	10.0	9.7	0.8	0.5	5.7	1.4	7.2	6.6	2.0	8.4	7.2
Dev from Mean %	2.6%	15.3%	17.2%	1.0%	0.7%	9.3%	1.9%	10.4%	10.9%	2.8%	12.5%	12.5%
Rank of 6	4 <sup>th</sup>	1 <sup>st</sup>	1 <sup>st</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	2 <sup>nd</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>
UMC Increase over Prior Year	4.7%	16.8%	8.1%	4.9%	-7.1%	2.1%	2.4%	2.9%	3.9%	6.1%	6.3%	4.9%
Mean of Peer Group over Prior Year	3.0%	2.9%	4.0%	5.9%	2.9%	4.0%	3.3%	5.4%	5.8%	1.5%	1.7%	2.0%

**Table 4D. Faculty Salaries and Compensation for Morris Peer Group**

	<b>SALARIES</b>											
	<b>2001-2002</b>			<b>2000-2001</b>			<b>1999-2000</b>			<b>1998-1999</b>		
	<b>Full</b>	<b>Assoc</b>	<b>Asst</b>	<b>Full</b>	<b>Assoc</b>	<b>Asst</b>	<b>Full</b>	<b>Assoc</b>	<b>Asst</b>	<b>Full</b>	<b>Assoc</b>	<b>Asst</b>
	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>
Carleton College	91.1	64.3	54.9	82.2	60.9	50.6	79.6	59.5	47.7	77.4	58.3	46.2
Ramapo Coll. of NJ	85.2	66.4	52.1	81.1	64.2	50.3	77.6	62.0	49.6	76.7	61.5	47.2
Macalester College	84.6	64.0	48.9	82.9	62.1	48.3	80.1	60.3	45.2	77.3	59.5	45.9
St. Mary's Coll. of Maryland	75.8	57.4	43.4	74.7	55.4	41.9	72.4	55.5	41.1	70.0	54.7	40.3
Mary Washington College	75.3	56.2	42.2	68.4	53.2	41.3	64.0	50.7	41.2	62.1	49.2	40.0
Hamline University	72.0	53.6	38.7	70.0	51.7	38.9	64.7	47.5	34.7	60.8	45.7	32.9
Univ. Minnesota-Morris	68.9	53.9	39.7	66.7	53.3	38.7	67.2	51.4	38.7	64.9	49.4	37.8
Univ. of N.C. at Asheville	68.0	50.7	42.8	67.3	51.6	40.9	65.2	49.9	38.8	64.2	49.4	37.2
St. Olaf College	68.0	55.4	43.4	65.5	53.5	42.4	62.7	51.9	40.3	60.0	49.1	39.5
St. John's University	67.5	51.7	43.2	62.2	48.9	40.7	60.9	47.6	38.7	58.8	46.5	37.0
Gustavus Adolphus Coll.	66.4	54.1	45.3	64.3	52.4	43.7	61.1	49.9	42.3	60.2	48.5	40.9
College of Saint Benedict	64.0	51.9	43.2	57.9	49.9	42.0	55.9	48.3	40.0	54.7	48.1	39.6
Concordia College-Moorhead	61.7	50.9	43.3	60.8	50.9	41.0	60.6	49.6	40.5	59.1	44.3	39.0
Univ. of Maine - Farmington	53.3	42.6	34.8	52.8	44.1	34.8	50.7	41.4	33.8	51.9	42.4	34.3
Mean w/o MN	71.8	55.3	44.3	68.5	53.8	42.8	65.8	51.9	41.1	64.1	50.6	40.0
Dev from Mean #	-2.9	-1.5	-4.6	-1.7	-0.4	-4.1	1.4	-0.5	-2.4	0.8	-1.2	-2.2
Dev from Mean %	-4.1%	-2.7%	-10.4%	-2.6%	-0.8%	-10.6%	2.1%	-0.9%	-6.1%	1.2%	-2.3%	-5.8%
Rank of 14	7 <sup>th</sup>	8 <sup>th</sup>	12 <sup>th</sup>	8 <sup>th</sup>	6 <sup>th</sup>	13 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	12 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	10 <sup>th</sup>
UMM Increase over Prior Year	3.2%	1.0%	2.5%	-0.7%	3.7%	0.1%	3.6%	4.1%	2.4%	3.8%	5.1%	-2.1%
Mean of Peer Group over Prior Year	4.8%	2.9%	3.5%	4.1%	3.6%	4.3%	2.7%	2.6%	2.7%	3.5%	4.1%	3.3%
	<b>COMPENSATION</b>											
	<b>2001-2002</b>			<b>2000-2001</b>			<b>1999-2000</b>			<b>1998-1999</b>		
	<b>Full</b>	<b>Assoc</b>	<b>Asst</b>	<b>Full</b>	<b>Assoc</b>	<b>Asst</b>	<b>Full</b>	<b>Assoc</b>	<b>Asst</b>	<b>Full</b>	<b>Assoc</b>	<b>Asst</b>
	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>	<b>Prof</b>
Carleton College	118.0	85.4	73.9	107.0	80.9	67.3	103.1	78.8	63.3	99.4	76.1	60.6
Ramapo Coll. of NJ	107.2	83.5	65.6	101.6	80.4	63.0	98.3	78.6	62.8	92.8	75.2	58.7
Macalester College	106.7	82.6	61.1	102.8	78.2	59.2	99.8	73.9	55.1	95.3	73.5	55.8
St. Mary's Coll. of Maryland	94.3	72.2	55.5	92.0	68.7	52.7	89.7	69.3	51.8	86.8	68.2	50.2
Mary Washington College	93.9	71.0	54.3	86.3	67.9	53.5	78.8	63.0	52.0	76.5	61.2	50.5
Univ. Minnesota-Morris	93.1	75.0	57.9	89.3	73.1	55.5	88.7	69.6	54.3	84.6	65.9	51.9
Hamline University	90.3	68.1	50.1	86.7	64.6	49.2	79.3	57.7	40.7	76.0	56.1	40.2
St. John's University	86.9	65.7	53.1	79.8	62.1	50.1	80.5	61.1	45.6	76.1	59.3	44.8
St. Olaf College	85.8	68.8	54.5	79.8	65.6	52.4	76.2	62.9	49.4	72.5	59.5	47.9
College of Saint Benedict	83.7	68.3	54.0	76.3	65.5	52.0	72.2	63.5	49.9	66.8	58.4	48.1
Univ. of N.C. at Asheville	82.2	62.0	53.1	80.5	62.2	49.9	77.5	59.9	46.9	77.1	59.8	45.4
Gustavus Adolphus Coll.	81.4	67.2	56.4	80.3	64.6	53.6	76.5	60.9	52.2	74.6	58.5	49.5
Concordia Coll. Moorhead	74.2	61.2	52.0	73.7	61.7	49.7	72.7	59.0	48.2	69.9	52.6	46.6
Univ. of Maine - Farmington	68.3	55.5	45.2	67.3	56.9	45.1	64.6	54.0	43.9	65.4	53.7	44.1
Mean w/o MN	90.2	70.1	56.1	85.7	67.7	53.7	82.2	64.8	50.9	79.2	62.5	49.4
Dev from Mean #	2.9	4.9	1.9	3.6	5.4	1.8	6.5	4.8	3.3	5.4	3.4	2.5
Dev from Mean %	3.2%	6.9%	3.4%	4.0%	7.4%	3.3%	7.3%	6.9%	6.2%	6.4%	5.2%	4.8%
Rank of 14	6 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	5 <sup>th</sup>	4 <sup>th</sup>
UMM Increase over Prior Year	4.3%	2.6%	4.4%	0.7%	5.0%	2.3%	4.9%	5.6%	4.6%	4.3%	5.4%	-0.8%
Mean of Peer Group over Prior Year	5.3%	3.7%	4.4%	4.2%	4.4%	5.4%	3.9%	3.8%	3.0%	4.5%	4.7%	3.2%

**Table 4E. Faculty Salaries and Compensation for Duluth Peer Group**

**SALARIES**

	2001-2002			2000-2001*			1999-2000			1998-1999		
	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof
Villanova University	97.4	67.2	55.3				91.6	62.8	53.9	89.3	60.6	51.3
University of Nevada-Reno	90.4	65.9	52.2				84.3	60.9	49.3	81.9	60.5	49.0
Univ. of Nevada-Las Vegas	88.6	67.4	52.7				81.5	61.5	47.4	78.7	59.5	46.8
Univ. of Central Florida	84.7	62.4	49.9				75.2	57.6	46.4	70.4	54.9	44.2
Old Dominion University	84.3	59.9	51.6				75.1	55.7	46.9	72.9	54.1	45.5
University of New Hampshire	83.9	63.1	49.8				76.8	58.8	46.2	74.6	57.1	44.8
Univ. of N.C. at Charlotte	82.8	61.3	53.7				73.6	55.3	46.1	69.7	52.5	44.0
Univ. of Colorado at Denver	82.0	60.6	53.3				74.4	55.2	47.8	72.0	53.9	47.0
Univ. Wisconsin-Milwaukee	80.6	62.8	54.3				73.5	57.7	49.7	70.6	55.0	47.1
Marquette University	80.5	62.8	53.8				76.8	59.3	49.2	73.7	57.6	46.6
Oakland University	79.9	62.0	53.7				73.2	58.6	48.7	72.2	57.5	46.3
Wright State University-Main	79.3	58.5	48.8				73.8	54.6	45.4	75.6	55.5	45.7
Univ. Minnesota Duluth	78.8	63.6	49.7				72.8	59.4	47.5	71.0	57.4	46.4
Cleveland State University	78.2	60.5	46.2				72.0	56.3	45.3	69.9	55.1	43.3
Florida Atlantic University	75.8	57.6	48.8				72.7	55.8	45.4	69.6	53.6	44.3
Univ. of Maine at Orono	68.5	56.5	47.3				62.6	51.7	44.2	64.0	51.6	44.7
U Massachusetts-Dartmouth	n.a.	n.a.	n.a.				71.9	60.7	52.7	69.9	58.3	52.8
Mean w/o MN	82.5	61.9	51.4	78.9	60.0	49.6	75.6	57.6	47.8	73.4	56.1	46.5
Dev from Mean #	-3.7	1.7	-1.7				-2.8	1.7	-0.3	-2.4	1.3	-0.1
Dev from Mean %	-4.5%	2.7%	-3.3%				-3.7%	3.0%	-0.7%	-3.3%	2.3%	-0.1%
Rank of 17 (of 16 in '02)	13 <sup>th</sup>	4 <sup>th</sup>	12 <sup>th</sup>				13 <sup>th</sup>	5 <sup>th</sup>	8 <sup>th</sup>	10 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>
MN Increase over Prior Year	n.a.	n.a.	n.a.				2.5%	3.4%	2.3%	5.5%	6.8%	5.4%
Mean of Peer Group over Prior Year	4.5%	3.1%	3.8%	4.5%	4.1%	3.7%	2.9%	2.8%	2.8%	3.8%	4.0%	3.2%

**COMPENSATION**

	2001-2002			2000-2001*			1999-2000			1998-1999		
	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof	Full Prof	Assoc Prof	Asst Prof
Villanova University	121.2	86.4	71.4				114.0	81.1	70.2	110.6	78.5	67.5
University of New Hampshire	108.0	83.8	68.2				95.8	74.6	59.8	93.0	72.4	58.0
Old Dominion University	106.3	77.4	67.1				92.6	69.8	59.2	89.9	67.8	57.5
Oakland University	106.2	83.9	73.3				97.9	78.5	65.3	95.6	77.2	62.9
University of Central Florida	104.5	77.5	61.9				98.4	76.1	62.0	91.3	71.7	58.2
Univ. Minnesota Duluth	104.3	85.9	69.2				94.5	78.2	63.9	91.2	74.9	61.7
Univ. of Nevada-Las Vegas	104.2	80.4	64.0				95.8	73.4	57.6	92.0	70.5	56.2
University of Nevada-Reno	104.1	77.1	62.0				97.0	71.1	58.3	94.1	70.5	57.8
Marquette University	103.3	81.7	67.7				97.4	76.9	61.5	94.0	74.3	58.6
Univ. Wisconsin-Milwaukee	101.7	81.1	71.1				92.0	73.6	64.1	89.0	70.8	61.3
Univ. of N.C. at Charlotte	99.2	74.6	65.9				86.7	65.9	55.2	83.2	63.3	53.3
Wright State University-Main	97.1	73.3	61.1				89.9	67.7	56.8	91.7	68.6	57.3
Cleveland State University	95.9	75.5	59.1				87.3	69.3	56.6	84.7	67.7	54.1
Univ. of Colorado at Denver	95.8	74.4	67.1				87.2	68.0	60.6	87.2	68.2	60.8
Florida Atlantic University	92.3	70.6	60.0				93.5	72.4	59.5	88.4	68.7	57.3
Univ. of Maine at Orono	86.1	71.6	60.0				78.8	65.9	56.2	79.2	64.5	56.0
U Massachusetts-Dartmouth	n.a.	n.a.	n.a.				96.4	81.5	71.2	92.2	77.1	69.8
Mean w/o MN	101.7	78.0	65.3	97.4	75.5	62.8	93.8	72.9	60.9	91.0	70.7	59.2
Dev from Mean #	2.6	8.0	3.9				0.7	5.4	3.0	0.2	4.2	2.5
Dev from Mean %	2.5%	10.3%	5.9%				0.7%	7.4%	4.9%	0.2%	5.9%	4.3%
Rank of 17 (of 16 in '02)	6 <sup>th</sup>	2 <sup>nd</sup>	4 <sup>th</sup>				9 <sup>th</sup>	4 <sup>th</sup>	5 <sup>th</sup>	10 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>
MN Increase over Prior Year	n.a.	n.a.	n.a.				3.6%	4.5%	3.5%	10.1%	11.6%	13.0%
Mean of Peer Group over Prior Year	4.4%	3.2%	4.0%	3.9%	3.7%	3.2%	3.1%	3.0%	2.9%	3.8%	4.0%	3.4%

**Table 5**  
**Science and Engineering Research and Development Expenditures**  
**Top 15 Universities**

**Federal Fiscal Year 2000**

INSTITUTION	Dollars in Millions
Johns Hopkins University*	901
University of Wisconsin, Madison	554
University of Michigan	552
University of California, Los Angeles	531
University of Washington	530
University of California, San Diego	519
University of California, Berkeley	519
Stanford University	455
University of California, San Francisco	443
University of Pennsylvania	430
Pennsylvania State University	428
Massachusetts Institute of Technology	426
University of Minnesota	411
Cornell University	410
Texas A&M University	397

\* Includes Applied Physics Laboratory at Johns Hopkins University  
Source: <http://www.oar.umn.edu>

**Table 6 University of Minnesota Expenditures of Sponsored Programs  
FY 1997-2002  
By College/Campus  
(\$1,000s)**

<u>COLLEGE</u>	<u>FY 1997</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>% Change 2001- 2002</u>	<u>Average Annual % Change 1997- 2002</u>
Medical School	104312	108892	110107	111235	121387	140273	16%	6%
Dentistry, School of	4743	5096	4891	4532	4676	5088	9%	2%
Pharmacy, College of	3392	3457	3754	4000	3477	3475	0%	1%
Nursing, School of	2547	2476	2486	2309	3219	4246	32%	16%
Public Health, School of	35665	37339	34922	42796	57934	70645	22%	16%
Veterinary Medicine, Coll. of	5106	5029	5440	6423	7664	6628	-14%	6%
Other Academic Health Ctr	3181	3822	4646	12138	14735	16409	11%	47%
UMD-School of Medicine	2675	2743	2754	3028	3304	3454	5%	5%
<i>Total Academic Health Ctr</i>	<b>161621</b>	<b>168854</b>	<b>169000</b>	<b>186462</b>	<b>216397</b>	<b>250219</b>	<b>16%</b>	<b>9%</b>
Institute of Technology	65428	83967	69146	90016	83371	70982	-15%	4%
Ag, Food, Environmental Sci.	13671	14552	14734	13688	16819	17911	6%	6%
Arch. & Landscape Arch.	452	838	1323	802	1232	1297	5%	33%
Biological Sciences, Coll. of	10992	12451	13546	12935	13181	14622	11%	6%
Education & Human Dev.	11810	12512	14633	16810	19230	21716	13%	13%
Human Ecology, College of	3460	3664	4216	4522	5224	6797	30%	15%
Liberal Arts, College of	8747	9286	9049	9744	10421	11845	14%	6%
Libraries, University	N/A	N/A	N/A	326	455	344	-24%	N/A
Natural Resources, Coll. of	3334	4553	4889	6068	7522	6767	-10%	16%
Management, Carlson Sch.	1581	1602	1864	1948	2118	827	-61%	-6%
HHH Inst of Public Affairs	3960	3336	2540	3452	4407	7376	67%	18%
Law School	220	275	182	427	89	592	565%	122%
General College	1564	1564	1698	2089	1778	1412	-20%	-1%
Ag Exp Sta/MN Ext Service	2695	5859	5846	5559	6254	6098	-2%	25%
University College	531	627	448	376	450	390	-13%	-4%
Other TC Provost	5226	51	614	N/A	N/A	N/A	N/A	N/A
<i>Total Twin Cities Provost</i>	<b>133671</b>	<b>155137</b>	<b>144728</b>	<b>168762</b>	<b>172552</b>	<b>168975</b>	<b>-2%</b>	<b>5%</b>
VP for Research	5877	6044	6608	6587	7251	7652	6%	6%
UM-Duluth	8622	8635	10228	10224	11209	12426	11%	8%
UM-Morris	258	179	271	460	335	623	86%	30%
UM-Crookston	550	604	773	655	589	780	32%	9%
Other Units*	1689	4087	3920	3383	2155	2431	13%	20%
<b>GRAND TOTAL</b>	<b>312288</b>	<b>343540</b>	<b>335528</b>	<b>376531</b>	<b>410487</b>	<b>443107</b>	<b>8%</b>	<b>7%</b>

\* Other units includes Office of the President, University VP Offices, Academic Affairs, Student Support Services, and miscellaneous others.

Source: Annual Financial Records, Sponsored Projects Administration, University of Minnesota

**Table 7**

**Federal Obligations to Higher Education and University of Minnesota  
1990-2000 (Federal Fiscal Year)  
(\$ millions)**

	<b>Total Federal Obligation to Higher Education</b>	<b>% change total</b>	<b>UM Federal Obligations</b>	<b>% change UM</b>	<b>UM Rank</b>
1990	\$15,204.6		181,694		12
1991	\$17,414.7	15%	210,856	16%	9
1992	\$19,047.5	9%	227,999	8%	8
1993	\$12,401.6	-35%	194,575	-15%	13
1994	\$13,739.3	11%	204,971	5%	14
1995	\$14,346.0	4%	230,720	13%	9
1996	\$14,338.0	0%	220,684	-4%	13
1997	\$15,081.0	5%	249,650	13%	8
1998	\$16,032.0	6%	225,997	-9%	16
1999	\$18,057.9	13%	261,406	16%	16
2000	\$19,879.2	10%	309,632	18%	12
Average change 1990-2000		3.8%		6.1%	

*Source: Office of Oversight, Analysis, and Reporting*

**Table 8**

<b>University of Minnesota Technology Transfer Data \a</b>						
	FY	FY	FY	FY	FY	% Change
	98	99	00	01	02	FY98-FY02
Disclosures \b	144	219	218	229	237	65%
New US Patent Applications \c	44	57	76	86	89	102%
US Patents Issued \d	40	54	67	37	38	-5%
Licenses \e						
New	76	72	90	77	65	-14%
Start-ups licensed	7	5	12	11	6	-14%
Total active licenses	344	391	447	486	514	49%
Gross Revenues \f \g	\$5.3	\$7.3	\$23.1	\$16.8	\$26.5	400%
Patent Cost Reimbursement \h	\$0.9	\$1.1	\$1.3	\$1.1	\$1.1	22%

*Source: Office of Patents & Technology Marketing. Generated 7/02. Dollar amounts represented in millions.*

\a These numbers are current as of the date indicated. They may differ from previously reported or future reported numbers due to database updates or differences in the criteria.

\b Number of new inventions and technologies disclosed to the University's technology transfer office.

\c Includes first filed U.S. patent applications only, not continuations or divisions. Includes plant patents and PVP certificates.

\d Includes new and reissued patents assigned solely or jointly to the University, not patents assigned to third parties.

\e Agreements that transfer technology rights to companies, including options but not including end user licenses for software.

\f Includes all financial returns from licensing, except for licensee reimbursements of the University's patent costs.

\g Revenue increase from FY00 forward is principally from Carbovir license and from Net Perceptions stock (FY00 only).

\h Payments by licensees to directly reimburse the University for its out-of-pocket patent costs.