WikipediA

University of Michigan

The **University of Michigan** (**UM**, **U-M**, **U of M**, or **UMich**), often simply referred to as **Michigan**, is a <u>public research</u> <u>university in Ann Arbor, Michigan</u>. The university is <u>Michigan's</u> oldest; it was founded in 1817 in <u>Detroit</u>, as the *Catholepistemiad*, or University of Michigania, 20 years before the <u>territory</u> became a state. The school was moved to Ann Arbor in 1837 onto 40 acres (16 ha) of what is now known as Central Campus. Since its establishment in Ann Arbor, the flagship university campus has expanded to include more than 584 major buildings with a combined area of more than 34 million gross square feet (780 acres; 3.2 km²) spread out over a Central Campus and North Campus, two regional campuses in <u>Flint</u> and <u>Dearborn</u>, and a <u>Center</u> in Detroit. The university is a founding member of the Association of American Universities.

Considered one of the foremost research universities in the United States with annual research expenditures approaching \$1.5 billion,^{[9][10]} Michigan is classified among "R1: Doctoral Universities – Very high research activity".^[11] As of October 2019, 25 Nobel Prize winners, 6 Turing Award winners and 1 Fields Medalist have been affiliated with the University of Michigan. Its comprehensive graduate program offers doctoral degrees in the humanities, social sciences, and STEM fields (science, technology, engineering, and mathematics) as well as professional degrees in architecture, business, medicine, law, pharmacy, nursing, social work, public health, and dentistry. Michigan's body of living alumni comprises more than 540,000 people, one of the largest alumni bases of any university in the world.^[12]

Michigan's athletic teams compete in <u>Division I</u> of the <u>NCAA</u> and are collectively known as the <u>Wolverines</u>. They are members of the <u>Big Ten Conference</u>. More than 250 Michigan athletes or coaches have participated in Olympic events, winning more than 150 medals.^[13]

Contents

History Campus Central Campus

University of Michigan					
Latin: Universi	tas Michigania				
Motto Artes, Scientia Veritas					
Motto in English	Arts, Knowledge, Truth (Latin)				
Туре	Flagship Public Sea grant Space grant				
Established	August 26, 1817 ^[1]				
Academic affiliations	AAU BTAA URA APLU				
Endowment	\$12.4 billion (2019) ^[2]				
Budget	\$8.99 billion (2018) ^[3]				
President	Mark Schlissel				
Provost	Martin Philbert				
Academic staff	6,771 ^[4]				
Administrative staff	18,986 ^[5]				
Students 46,002 ^[6]					
Undergraduates 29,821 ^[6]					
Postgraduates 16,181 ^[6]					

North Campus South Campus Organization and administration Endowment Student government	Location	Ann Arbor, Michigan, United States 42°16′37″N 83°44′17″W
Academics Research Student body Admissions Enrollment	Campus	3,177 acres (12.86 km ²) Total: 20,965 acres (84.84 km ²), including
Student life Residential life Groups and activities Media and publications	Colors	arboretum ^[7] Maize and Blue ^[8]
Athletics Football Men's ice hockey Men's basketball	Nickname Sporting affiliations Website	Wolverines NCAA Division I – Big Ten www.umich.edu
Other sports In the Olympics Traditions School colors		(http://www.umic h.edu) VERSITY OF CHIGAN
Fight songs and chants Alumni References Specific		

General

External links

History

The University of Michigan was established in Detroit on August 26, 1817, ^[1] as the *Catholepistemiad*, or the University of Michigania, by the governor and judges of Michigan Territory. Judge Augustus B. Woodward specifically invited The Rev. John Monteith and Father Gabriel Richard, a Catholic priest, to establish the institution. Monteith became its first president and held seven of the professorships, and Richard was vice president and held the other six professorships. Concurrently, Ann Arbor had set aside 40 acres (16 ha) in the hopes of being selected as the state capital. But



University of Michigan (1855) Jasper Francis Cropsey

when Lansing was chosen as the state capital, the city offered the land for a university. What would become the university moved to Ann Arbor in 1837 thanks to Governor Stevens T. Mason. The

original 40 acres (16 ha) was the basis of the present Central Campus.^[14] This land was once inhabited by the Ojibwe (Chippewa), Odawa (Ottawa), and Bodewadimi (Potawatomi) Native tribes and was obtained through the Treaty of Fort Meigs.^[15] In 1821, the university was officially renamed the University of Michigan. The first classes in Ann Arbor were held in 1841, with six freshmen and a sophomore, taught by two professors. Eleven students graduated in the first commencement in 1845.^[16]

By 1866, enrollment had increased to 1,205 students, many of whom were <u>Civil War</u> veterans. Women were first admitted in 1870,^[17] although Alice Robinson Boise Wood had become the first woman to attend classes (without matriculating) in 1866-7.^[18] James Burrill Angell, who served as the university's president from 1871 to 1909, aggressively expanded U-M's curriculum to include professional studies in dentistry, architecture, engineering, government, and medicine. U-M also became the first American university to use the <u>seminar</u> method of study.^[19] Among the early students in the School of Medicine was Jose Celso Barbosa, who in 1880 graduated as valedictorian and the first <u>Puerto Rican</u> to get a university degree in the United States. He returned to Puerto Rico to practice medicine and also served in high-ranking posts in the government.

The University of Michigan was involved with the building of the Philippine education system during the era of the American colonization of the Philippines. Early on, colonial government officials highlighted the importance of increasing the number of teachers and primary schools in the country. President McKinley appointed teachers from various universities, tasking them with building the foundations of the Philippine education system under American control. The first wave of these men sailed from San Francisco to Manila on the *Thomas*, also known as the "Thomasites." Of the nearly 500 who came to the Philippines in this group, the delegation from the University of Michigan was the second largest group of teachers who arrived^[20]. The Thomasites were instrumental in the proliferation of schools and mass enrollment of students in the Philippines. Ten years following their arrival, 4,000 schools were established, and by 1920, elementary enrollment was approaching one million and high school enrollment was at 17,335^[20]

From 1900 to 1920, the university constructed many new facilities, including buildings for the dental and pharmacy programs, chemistry, natural sciences, <u>Hill Auditorium</u>, large hospital and library complexes, and two residence halls. In 1920 the university reorganized the <u>College of Engineering</u> and formed an advisory committee of 100 industrialists to guide academic research initiatives. The university became a favored choice for bright Jewish students from New York in the 1920s and 1930s, when the <u>Ivy League</u> schools had quotas restricting the number of Jews to be admitted.^[21] Because of its high standards, U-M gained the nickname "Harvard of the West."^[22] During World War II, U-M's research supported military efforts, such as <u>U.S. Navy</u> projects in proximity fuzes, <u>PT boats</u>, and <u>radar</u> jamming.

After the war, enrollment expanded rapidly and by 1950, it reached 21,000, of which more than one third (or 7,700) were veterans supported by the <u>G.I. Bill</u>. As the <u>Cold War</u> and the <u>Space Race</u> took hold, U-M received numerous government grants for strategic research and helped to develop peacetime uses for <u>nuclear energy</u>. Much of that work, as well as research into alternative energy sources, is pursued via the Memorial Phoenix Project.^[23]

In the 1960 Presidential campaign, U.S. Senator John F. Kennedy jokingly referred to himself as "a graduate of the Michigan of the East, Harvard University" in his speech proposing the formation of the Peace Corps speaking to a crowd from the front steps of the Michigan Union.^[22]



The Central Campus Diag, viewed from the Harlan Hatcher Graduate Library, looking North

Lyndon B. Johnson gave his speech outlining his Great Society program as the lead speaker during the University of Michigan's 1964 spring commencement ceremony.^[16] During the 1960s, the university campus was the site of numerous protests against the Vietnam War and university administration. On March 24, 1965, a group of U-M faculty members and 3,000 students held the nation's first-ever faculty-led "teach-in" to protest against American policy in Southeast Asia.^{[24][25]} In response to a series of <u>sit-ins</u> in 1966 by *Voice*, the campus political party of <u>Students</u> for a Democratic Society, U-M's administration banned sit-ins. In response, 1,500 students participated in a one-hour sit-in inside the Administration Building, now known as the LSA Building. In

April 1968 following the assassination of Dr. Martin Luther King, Jr., a group of several dozen black students occupied the Administration Building to demand that the university make public its threeyear-old commitment as a federal contractor to affirmative action and to increase its efforts with respect to recruiting more African American students, faculty and staff. At that time there were no African American coaches, for instance, in the Intercollegiate Athletics Department. The occupation was ended by agreement after seven hours.

Former U-M student and noted architect <u>Alden B. Dow</u> designed the current Fleming Administration Building, which was completed in 1968. The building's plans were drawn in the early 1960s, before student activism prompted a concern for safety. But the Fleming Building's fortress-like narrow windows, all located above the first floor, and lack of exterior detail at ground level, led to a campus rumor that it was designed to be riot-proof. Dow denied those rumors, claiming the small windows were designed to be energy efficient.^[26]

During the 1970s, severe budget constraints slowed the university's physical development; but in the 1980s, the university received increased grants for research in the social and physical sciences. The university's involvement in the anti-missile Strategic Defense Initiative and investments in South Africa caused controversy on campus.^{[27][28]} During the 1980s and 1990s, the university devoted substantial resources to renovating its massive hospital complex and improving the academic facilities on the North Campus. In its 2011 annual financial report, the university announced that it had dedicated \$497 million per year in each of the prior 10 years to renovate buildings and infrastructure around the campus. The university also emphasized the development of computer and information technology throughout the campus.

In the early 2000s, U-M faced declining state funding due to state budget shortfalls. At the same time, the university attempted to maintain its high academic standing while keeping <u>tuition</u> costs affordable. There were disputes between U-M's administration and labor unions, notably with the Lecturers' Employees Organization (LEO) and the Graduate Employees Organization (GEO), the union representing graduate student employees. These conflicts led to a series of one-day walkouts by the unions and their supporters.^[29] The university is engaged in a \$2.5 billion construction campaign.^[30]

In 2003, two lawsuits involving U-M's affirmative action admissions policy reached the U.S. Supreme Court (*Grutter v.* <u>Bollinger</u> and <u>Gratz v. Bollinger</u>). President George W. Bush publicly opposed the policy before the court issued a ruling.^[31] The court found that race may be considered as a factor in university admissions in all public universities and private universities that accept federal funding. But, it ruled that a point system was unconstitutional. In the first case, the court upheld the <u>Law School</u> admissions policy, while in the second it ruled against the university's undergraduate admissions policy.



Law Library Interior

The debate continued because in November 2006, Michigan voters passed Proposal 2, banning most affirmative action in university admissions. Under that law, race, gender, and national origin can no longer be considered in admissions.^[32] U-M and other organizations were granted a stay from implementation of the law soon after that referendum. This allowed time for proponents of affirmative action to decide legal and constitutional options in response to the initiative results. In April 2014, the Supreme Court ruled in <u>Schuette v. Coalition to Defend Affirmative Action</u> that Proposal 2 did not violate the U.S. Constitution. The admissions office states that it will attempt to achieve a diverse student body by looking at other factors, such as whether the student attended a disadvantaged school, and the level of education of the student's parents.^[32]

On May 1, 2014, University of Michigan was named one of 55 higher education institutions under investigation by the Office of Civil Rights "for possible violations of federal law over the handling of sexual violence and harassment complaints." President Barack Obama's White House Task Force to Protect Students from Sexual Assault was organized for such investigations.^[33]

The University of Michigan's acceptance rate is 22.7% in 2019.^[34] The rate of new freshman enrollment has been fairly stable since 2010.

Campus

The Ann Arbor campus is divided into four main areas: the North, Central, Medical, and South campuses. The physical infrastructure includes more than 500 major buildings,^[35] with a combined area of more than 34 million square feet or 781 acres (3.16 km²).^[36] The Central and South Campus areas are contiguous, while the North Campus area is separated from them, primarily by the <u>Huron River</u>.^[37] There is also leased space in buildings scattered throughout the city, many occupied by organizations affiliated with the University of Michigan Health System. An East Medical Campus has recently been developed on Plymouth Road, with several university-owned buildings for outpatient care, diagnostics, and outpatient surgery.^[38]

In addition to the U-M Golf Course on South Campus, the university operates a second golf course on Geddes Road called Radrick Farms Golf Course. The golf course is only open to faculty, staff and alumni.^[39] Another off-campus facility is the Inglis House, which the university has owned since the 1950s. The Inglis House is a 10,000-square-foot (930 m²) mansion used to hold various social events, including meetings of the Board of Regents, and to host visiting dignitaries.^[40] The university also

operates a large office building called Wolverine Tower in southern Ann Arbor near <u>Briarwood Mall</u>. Another major facility is the <u>Matthaei Botanical Gardens</u>, which is located on the eastern outskirts of Ann Arbor.^[41]

All four campus areas are connected by bus services, the majority of which connect the North and Central campuses. There is a shuttle service connecting the University Hospital, which lies between North and Central campuses, with other medical facilities throughout northeastern Ann Arbor.^[42]

Central Campus

Central Campus was the original location of U-M when it moved to Ann Arbor in 1837. It originally had a school and dormitory building (where Mason Hall now stands) and several houses for professors on 40 acres (16 ha) of land bounded by North University Avenue, South University Avenue, East University Avenue, and State Street. The President's House, located on South University Avenue, is the oldest building on campus as well as the only surviving building from the original 40-acre (16 ha) campus.^[14] Because Ann Arbor and Central Campus developed simultaneously, there is no distinct boundary between the city



Hill Auditorium and Burton Tower

and university, and some areas contain a mixture of private and university buildings.^[43] Residence halls located on Central Campus are split up into two groups: the Hill Neighborhood and Central Campus.^[44]

Central Campus is the location of the <u>College of Literature</u>, <u>Science and the Arts</u>, and is immediately adjacent to the medical campus. Most of the graduate and professional schools, including the <u>Ross</u> <u>School of Business</u>, the <u>Gerald R. Ford School of Public Policy</u>, the <u>Law School and the School of Dentistry</u>, are on Central Campus. Two prominent libraries, the <u>Harlan Hatcher Graduate Library</u> and the <u>Shapiro Undergraduate Library</u> (which are connected by a <u>skywalk</u>), are also on Central Campus.^[45] as well as <u>museums</u> housing collections in <u>archaeology</u>, <u>anthropology</u>, <u>paleontology</u>, <u>zoology</u>, <u>dentistry</u> and art. Ten of the buildings on Central Campus were designed by Detroit-based architect Albert Kahn between 1904 and 1936. The most notable of the Kahn-designed buildings are the Burton Memorial Tower and nearby Hill Auditorium.^[46]

North Campus

North Campus is the most contiguous campus, built independently from the city on a large plot of farmland—approximately 800 acres (3.2 km²)—that the university bought in 1952.^[47] It is newer than Central Campus, and thus has more modern architecture, whereas most Central Campus buildings are classical or gothic in style. The architect Eero Saarinen, based in Birmingham, Michigan, created one of the early master plans for North Campus and designed several of its buildings in the 1950s, including the Earl V. Moore School of Music Building.^[48] North and Central Campuses each have unique bell towers that reflect the predominant architectural styles of their surroundings. Each of the bell towers houses a grand carillon. The North Campus tower is called Lurie Tower.^[49] The University of Michigan's largest residence hall, Bursley Hall, is located on North Campus.^[44]

North Campus houses the <u>College of Engineering</u>, the <u>School of</u> <u>Music</u>, Theatre & Dance, the <u>Stamps School of Art & Design</u>, the <u>Taubman College of Architecture and Urban Planning</u>, and an annex of the <u>School of Information</u>.^[50] The campus is served by the <u>Duderstadt Center</u>, which houses the Art, Architecture and Engineering Library. The Duderstadt Center also contains multiple <u>computer labs</u>, <u>video editing</u> studios, electronic music studios, an audio studio, a video studio, multimedia workspaces, and a <u>3D virtual reality</u> room.^[51] Other libraries located on North Campus include the <u>Gerald R. Ford Presidential Library</u> and the <u>Bentley Historical Library</u>.



Students learn pole climbing in course for telephone electricians, c. 1918

South Campus

South Campus is the site for the athletic programs, including major sports facilities such as <u>Michigan</u> <u>Stadium, Crisler Center</u>, and <u>Yost Ice Arena</u>. South Campus is also the site of the Buhr library storage facility, Revelli Hall, home of the <u>Michigan Marching Band</u>, the Institute for Continuing Legal Education,^[52] and the Student Theatre Arts Complex, which provides shop and rehearsal space for student theatre groups.^[53] The university's departments of public safety and transportation services offices are located on South Campus.^[52]

U-M's golf course is located south of Michigan Stadium and Crisler Arena. It was designed in the late 1920s by Alister MacKenzie, the designer of Augusta National Golf Club in Augusta, Georgia, home of the Masters Tournament.^[54] The course opened to the public in the spring of 1931. The University of Michigan Golf Course was included in a listing of top holes designed by what *Sports Illustrated* calls "golf's greatest course architect". The U-M Golf Course's signature No. 6 hole—a 310-yard (280 m) par 4, which plays from an elevated tee to a two-tiered, kidney-shaped green protected by four bunkers—is the second hole on the Alister MacKenzie Dream 18 as selected by a five-person panel that includes three-time Masters champion <u>Nick Faldo</u> and golf course architect <u>Tom Doak</u>. The listing of "the best holes ever designed by Augusta National architect Alister MacKenzie" is featured in SI's Golf Plus special edition previewing the Masters on April 4, 2006.^[55]

Organization and administration

The University of Michigan consists of a flagship campus in Ann Arbor, with two regional campuses in <u>Dearborn</u> and <u>Flint</u>. The Board of Regents, which governs the university and was established by the Organic Act of March 18, 1837, consists of eight members elected at large in biennial state elections^[57] for overlapping eightyear terms.^{[58][59]} Between the establishment of the University of Michigan in 1837 and 1850, the Board of Regents ran the university directly; although they were, by law, supposed to appoint a Chancellor to administer the university, they never did. Instead, a rotating roster of professors carried out the day-to-day administration duties.^[60]

College/school founding ^[56]				
College/school	Year founded			
College of Literature, Science, and the Arts	1841			
School of Medicine	1850			
College of Engineering	1854			
School of Law	1859			
School of Dentistry	1875			
School of Pharmacy	1876			
School of Music, Theatre & Dance	1880			

The <u>President of the University of Michigan is the</u> principal executive officer of the university. The office was created by the <u>Michigan Constitution</u> of 1850, which also specified that the president was to be appointed by the Regents of the University of Michigan and preside at their meetings, but without a vote.^[61] Today, the president's office is at the Ann Arbor campus, and the president has the privilege of living in the President's House, the university's oldest building, located on Central Campus in Ann Arbor.^[62] <u>Mark Schlissel</u> is the 14th and current president of the university and has served since July 2014.

There thirteen undergraduate schools are and colleges.^[63] Bv enrollment, the three largest undergraduate units are the College of Literature, Science, and the Arts, the College of Engineering, and the Ross School of Business.^[64] At the graduate level, the Rackham Graduate School serves as the central administrative unit of graduate education at the

School of Nursing	1893
A. Alfred Taubman College of Architecture & Urban Planning	1906
Horace H. Rackham School of Graduate Studies	1912
Gerald R. Ford School of Public Policy	1914
School of Education	1921
Stephen M. Ross School of Business	1924
School for Environment and Sustainability	1927
School of Public Health	1941
School of Social Work	1951
School of Information	1969
Penny W. Stamps School of Art & Design	1974
School of Kinesiology	1984

university.^[65] There are 18 graduate schools and colleges, the largest of which are the College of Literature, Science, and the Arts, the College of Engineering, the Law School, and the Ross School of Business. Professional degrees are conferred by the Schools of Architecture, Public Health, Dentistry, Law, Medicine, Urban Planning and Pharmacy.^[64] The Medical School is partnered with the University of Michigan Health System, which comprises the university's three hospitals, dozens of outpatient clinics, and many centers for medical care, research, and education.

Endowment

As of 2017, U-M's <u>financial endowment</u> (the "University Endowment Fund") was valued at \$10.9 billion.^{[66][67]} The endowment is primarily used according to the donors' wishes, which include the support of teaching and research. In mid-2000, U-M embarked on a fund-raising campaign called "The Michigan Difference", which aimed to raise \$2.5 billion, with \$800 million designated for the permanent endowment.^[68] Slated to run through December 2008, the university announced that the campaign had reached its target 19 months early in May 2007.^[69] Ultimately, the campaign raised \$3.2 billion over 8 years. Over the course of the capital campaign, 191 additional professorships were endowed, bringing the university total to 471 as of 2009.^[70] Like nearly all colleges and universities, U-M suffered significant realized and unrealized losses in its endowment during the second half of 2008. In February 2009, a university spokesperson estimated losses of between 20 and 30 percent.^[71]

In November 2013, the university launched the "Victors for Michigan" campaign with a \$4 billion goal.^{[72][73]} In 2017, the university announced that the campaign had met the goal 18 months ahead of schedule. In 2018, the university announced that the original \$4 billion campaign had exceeded its goal by raising \$5 billion from 382,000 donors.^[74]

Student government



Central Campus: Angell Hall, one of the major buildings of the College of Literature, Science, and the Arts

Housed in the Michigan Union, the <u>Central Student Government</u> (CSG) is the central student government of the University. With representatives from each of the University's colleges and schools, including graduate students, CSG represents students and manages student funds on the campus. CSG is a 501(c)(3) organization, independent from the University of Michigan.^[75] In recent years CSG has organized Airbus, a transportation service between campus and the <u>Detroit Metropolitan Wayne County</u> <u>Airport</u>, and has led the university's efforts to register its student population to vote, with its Voice Your Vote Commission (VYV) registering 10,000 students in 2004. VYV also works to improve access to non-partisan voting-related information and increase

student voter turnout.^[76] CSG was successful at reviving <u>Homecoming</u> activities, including a carnival and parade, for students after a roughly eleven-year absence in October 2007,^[77] and during the 2013-14 school year, was instrumental in persuading the University to rescind an unpopular change in student football seating policy at Michigan Stadium.^[78] In 2017, CSG successfully petitioned the Ann Arbor City Council to create a Student Advisory Council to give student input into Ann Arbor city affairs.^[79]

There are student governance bodies in each college and school, independent of Central Student Government. Undergraduate students in the LS&A are represented by the LS&A Student Government (LSA SG).^[80] Engineering Student Government (ESG) manages undergraduate student government affairs for the College of Engineering. Graduate students enrolled in the Rackham Graduate School are represented by the Rackham Student Government (RSG), and law students are represented by the Law School Student Senate (LSSS) as is each other college with its own respective government. In addition, the students who live in the residence halls are represented by the University of Michigan Residence Halls Association (RHA), which contains the third most constituents after CSG and LSA SG.^[81]

A longstanding goal of the student government is to create a student-designated seat on the Board of Regents, the university's governing body.^[82] Such a designation would achieve parity with other Big Ten schools that have student regents. In 2000, students Nick Waun and Scott Trudeau ran for the board on the statewide ballot as third-party nominees. Waun ran for a second time in 2002, along with Matt Petering and Susan Fawcett.^[83] Although none of these campaigns has been successful, a poll conducted by the State of Michigan in 1998 concluded that a majority of Michigan voters would approve of such a position if the measure were put before them.^[82] A change to the board's makeup would require amending the Michigan Constitution.^[84]

Academics

The University of Michigan is a large, four-year, residential research university accredited by the <u>Higher Learning</u> <u>Commission</u>.^{[95][96][97]} The four-year, full-time undergraduate program comprises the majority of enrollments and emphasizes instruction in the arts, sciences, and professions with a high level

University rankings			
National			
ARWU ^[85]	16—		
	17		

of coexistence between graduate and undergraduate programs. The university has "very high" research activity and the comprehensive graduate program offers doctoral degrees in the humanities, social sciences, and <u>STEM fields</u> as well as professional degrees in medicine, law, and dentistry.^[95] U-M has been included on <u>Richard Moll's list of Public Ivies</u>.^[98] With over 200 undergraduate majors, and 100 doctoral and 90 master's programs,^[99] U-M has conferred 6,490 undergraduate degrees, 4,951 graduate degrees, and 709 first professional degrees in 2011-2012.^[100]

National honor societies such as Phi Beta Kappa, Phi Kappa Phi, and Tau Beta Pi have chapters at U-M.^[101] Degrees "with Highest Distinction" are recommended to students who rank in the top 3% of their class, "with High Distinction" to the next 7%, and "with Distinction" to the next 15%. Students earning a minimum overall GPA of 3.4 who have demonstrated high academic achievement and capacity for independent work may be recommended for a degree "with Highest Honors," "with High Honors," or "with Honors."^[101] Those students who earn all A's for two or more consecutive terms in a calendar year are recognized as James B. Angell Scholars and are invited to attend the annual Honors Convocation, an event which recognizes undergraduate students with distinguished academic achievements.[101]

Out-of-state undergraduate students pay between \$36,001.38 and \$43,063.38 annually for tuition while in-state undergraduate students pay between \$11,837.38 and \$16,363.38 annually.^[102] U-M provides financial aid in the form of need-based loans, grants, scholarships, work study, and non-need based scholarships, with 77% of undergraduates in 2007 receiving financial aid.^{[103][104]} For undergraduates in 2008, 46% graduated averaging approximately \$25,586 of debt.^[104] The university is attempting to increase financial aid availability to students by devoting over \$1.53 billion in endowment funds to support financial aid.^{[105][106][107]}

Research

Michigan is one of the founding members (1900) of the Association of American Universities. With over 6,200 faculty members, 73 of whom are members of the National Academy and 471 of whom hold an endowed chair in their discipline,^[108] the university manages one of the largest annual collegiate research budgets of any university in the United States, totaling about \$1 billion in 2009.^[109] The Medical School spent the most at over

Forbes ^[86]	20			
Times/WSJ ^[87]	27			
U.S. News & World Report ^[88]	25			
Washington Monthly ^[89]	26			
Global				
ARWU ^[90]	20			
QS ^[91]	21			
<i>Times</i> ^[92]	21			
U.S. News & World Report ^[93]	17			

USNWR graduate school rankings^[94]

Business	10
Education	11
Engineering	5
Law	9
Medicine: Primary Care	6
Medicine: Research	16
Nursing: Doctorate	14
Nursing: Master's	8

USNWR departmental rankings^[94]

Biological Sciences	23
Chemistry	15
Clinical Psychology	16
Computer Science	11
Earth Sciences	10
Economics	12
English	8
Fine Arts	20
Health Care Management	3
History	6
Library and Information Studies	5
Mathematics	12

\$445 million, while the College of Engineering was second at more than \$160 million.^[109] U-M also has a technology transfer office, which is the university conduit between laboratory research and corporate commercialization interests. In 2009, the university consummated a deal to purchase a facility formerly owned by Pfizer. The acquisition includes over 170 acres (0.69 km²) of property, and 30 major buildings comprising roughly 1,600,000 square feet (150,000 m²) of wet laboratory space, and 400,000 square feet (37,000 m²) of administrative space. As of the purchase date, the university's intentions for the space were not announced, but the expectation is that the new space will allow the university to ramp up its research and ultimately employ in excess of 2,000 people.^[110]

The university is also a major contributor to the medical field with the <u>EKG</u>,^[111] gastroscope,^[112] and the announcement of <u>Jonas Salk</u>'s polio vaccine. The university's 13,000-acre (53 km²) <u>biological station</u> in the <u>Northern Lower Peninsula of Michigan</u> is one of only 47 Biosphere Reserves in the United States.^[113]

In the mid-1960s U-M researchers worked with IBM to develop a new virtual memory architectural model^[114] that became part of IBM's Model 360/67 mainframe computer (the 360/67 was initially dubbed the 360/65M where the "M" stood for Michigan).^[115] The Michigan Terminal System (MTS), an early time-sharing computer operating system developed at U-M, was the first system outside of IBM to use the 360/67's virtual memory features.^[116]

U-M is home to the <u>National Election Studies</u> and the <u>University of Michigan Consumer Sentiment</u> <u>Index</u>. The <u>Correlates of War</u> project, also located at U-M, is an accumulation of scientific knowledge about war. The university is also home to major research centers in <u>optics</u>, reconfigurable manufacturing systems, <u>wireless integrated microsystems</u>, and social sciences. The University of Michigan Transportation Research Institute and the Life Sciences Institute are located at the university. The <u>Institute for Social Research</u> (ISR), the nation's longest-standing laboratory for interdisciplinary research in the social sciences,^[117] is home to the Survey Research Center, Research Center for Group Dynamics, Center for Political Studies, Population Studies Center, and Inter-Consortium for Political and Social Research. Undergraduate students are able to participate in various research projects through the <u>Undergraduate Research Opportunity Program</u> (UROP) as well as the UROP/Creative-Programs.^[118]

The <u>Michigan Spin Physics Center</u> focuses on studies of spin effects in high polarized proton-proton elastic and inelastic scattering. These polarized scattering experiments use the world-class solid and jet polarized proton targets, which are developed, upgraded and tested at the Center.

The <u>U-M library system</u> comprises nineteen individual libraries with twenty-four separate collections —roughly 13.3 million volumes.^[119] U-M was the original home of the <u>JSTOR</u> database, which contains about 750,000 digitized pages from the entire pre-1990 backfile of ten journals of history

Nursing–Midwifery	1
Pharmacy	3
Physics	13
Political Science	4
Psychology	3
Public Affairs	7
Public Health	5
Social Work	1
Sociology	1
Statistics	11



A. Alfred Taubman Biomedical Science Research Building at the U-M Medical School

and economics, and has initiated a book digitization program in collaboration with <u>Google</u>.^[120] The University of Michigan Press is also a part of the U-M library system.

In the late 1960s U-M, together with Michigan State University and Wayne State University, founded the Merit Network, one of the first university computer networks.^[121] The Merit Network was then and remains today administratively hosted by U-M. Another major contribution took place in 1987 when a proposal submitted by the Merit Network together with its partners IBM, MCI, and the State of Michigan won a national competition to upgrade and expand the National Science Foundation Network (NSFNET) backbone from 56,000 to 1.5 million, and later to 45 million bits per second.^[122] In 2006, U-M joined with Michigan State University and Wayne State University to create the University Research Corridor. This effort was undertaken to highlight the capabilities of the state's three leading research institutions and drive the transformation of Michigan's economy.^[123] The three universities are electronically interconnected via the Michigan LambdaRail (MiLR, pronounced 'MY-lar'), a high-speed data network providing 10 Gbit/s connections between the three university campuses and other national and international network connection points in Chicago.^[124]

Student body

Fail Admission Statistics						
	2019 ^[125]	2018 ^[126]	2017 ^[34]	2016 ^[34]	2015 ^[34]	2014 ^[127]
Applicants	65,716	65,684	59,861	55,439	51,753	49,776
Admits	14,949	15,468	15,874	15,862	13,555	16,047
Admit rate	22.8%	23.5%	26.5%	28.6%	26.2%	32.2%
Enrolled	6,995	6,685	7,023	6,860	6,269	6,505
SAT range	1380–1540	1380–1540	1910–2230	2050–2330	2040–2280	1920-2210
ACT range	32–35	31–34	31–34	30–34	30–34	29–33

Fall Admission Statistics

Admissions

Admissions are highly competitive, with an admit rate of 22.8%.^[125] The university's incoming class of 2019 had an average high school GPA of 3.9. The middle 50 percent of admitted applicants reported an SAT score of 1380-1540 and an ACT score of 32-35.^[128]

In recent years, annual numbers of applications for freshman admission have exceeded 65,000. Around 15,000 students are admitted annually, with a target freshman class of more than 6,000 students.^[128] Students come from all 50 U.S. states and more than 100 countries.^[129] Full-time students make up about 97 percent of the student body. Among full-time students, the university has a first-time student retention rate of 97 percent.^[130]

Enrollment

In Fall 2016, the university had an enrollment of 44,718 students: 28,983 <u>undergraduate students</u>, 12,565 <u>graduate students</u> and 2,665 <u>first professional students</u>^{[6][64]} in a total of 600 academic programs. Of all students, 37,954 (84.9%) are <u>U.S. citizens</u> or <u>permanent residents</u> and 6,764 (15.1%) are international students.^[6]

In 2014, undergraduates were enrolled in 12	Demographics of student body (Fall 2018) ^{[131][132]}					
schools or colleges:		Graduate	Michigan	U.S. Census		
About 61 percent in the	African American	4.24%	4.46%	14.1%	12.4%	
College of Literature,	Asian American	14.63%	7.89%	2.3%	4.3%	
Science, and the Arts; 21 percent in the College of	European American	58.24%	41.53%	79.6%	74.1%	
Engineering; 5.3 percent	Hispanic American	6.3%	6.2%	3.9%	14.7%	
in the Ross School of	Native American	0.12%	0.16%	0.5%	0.8%	
Business;3.3 percent intheSchoolof	International student	7.4%	33.9%	N/A	N/A	

Kinesiology; 2.7 percent in the School of Music, Theatre & Dance; and 2 percent in the School of Nursing. Small numbers of undergraduates were enrolled in the colleges or schools of Art & Design, Architecture & Urban Planning, Dentistry, Education, Pharmacy, and Public Policy.^[64] In 2014, the School of Information opened to undergraduates, with the new Bachelor of Science in Information degree. Among undergraduates, 70 percent graduate with a bachelor's degree within four years, 86 percent graduate within five years and 88 percent graduating within six years.^[130]

Of the university's 12,714 non-professional graduate students, 5,367 are seeking <u>academic doctorates</u> and 6,821 are seeking <u>master's degrees</u>. The largest number of master's degree students are enrolled in the <u>Ross School of Business</u> (1,812 students seeking <u>MBA</u> or <u>Master of Accounting</u> degrees) and the <u>College of Engineering</u> (1,456 students seeking <u>M.S.</u> or <u>M.Eng.</u> degrees). The largest number of doctoral students are enrolled in the College of Literature, Science, and the Arts (2,076) and College of Engineering (1,496). While the majority of U-M's graduate degree-granting schools and colleges have both undergraduate and graduate students, a few schools only issue graduate degrees. Presently, the <u>School of Natural Resources and Environment</u>, <u>School of Public Health</u>, and <u>School of Social Work only have graduate students</u>.

In Fall 2014, 2,709 Michigan students were enrolled in U-M's professional schools: the School of Dentistry (628 students), Law School (1,047 students), Medical School (1300 students), and College of Pharmacy (436 students).^[64]

Student life

Residential life

The University of Michigan's campus housing system can accommodate approximately 10,000 students, or nearly 25 percent of the total student population at the university.^[133] The residence halls are located in three distinct geographic areas on campus: Central Campus, Hill Area (between Central Campus and the University of Michigan Medical Center) and North Campus. Family housing is located on North Campus and mainly serves graduate students. The largest residence hall has a capacity of 1,270 students,^[134] while the smallest accommodates 25 residents.^[135] A majority of upper-division and graduate students live in off-campus apartments, houses, and <u>cooperatives</u>, with the largest concentrations in the Central and South Campus areas.



North Quad Residence Hall

The residential system has a number of "living-learning communities" where academic activities and residential life are combined. These communities focus on areas such as research through the Michigan Research Community, medical sciences, community service and the German language.^[136] The Michigan Research Community and the Women in Science and Engineering Residence Program are housed in Mosher-Jordan Hall. The Residential College (RC), a living-learning community that is a division of the College of Literature, Science and the Arts, also has its principal instructional space in East Quad. The Michigan Community Scholars Program, dedicated to civic engagement, community service learning and intercultural understanding and dialogue, is located in West Quad.^[137] The Llovd Hall Scholars Program (LHSP) is located in Alice Llovd Hall. The Health Sciences Scholars Program (HSSP) is located in Couzens Hall. The North Quad complex houses two additional living-learning communities: the Global Scholars Program^[138] and the Max Kade German Program.^[139] It is "technology-

rich," and houses communication-related programs, including the <u>School of Information</u>, the Department of Communication Studies, and the Department of Screen Arts and Cultures.^{[140][141]} North Quad is also home to services such as the Language Resource Center and the Sweetland Center for Writing.^[142]

The residential system also has a number of "theme communities" where students have the opportunity to be surrounded by students in a residential hall who share similar interests. These communities focus on global leadership, the college transition experience, and internationalism.^[143] The Adelia Cheever Program is housed in the Helen Newberry House.^[144] The First Year Experience is housed in the Baits II Houses and Markley Hall along with portions of all other buildings with the exception of North Quad, Northwood, and Stockwell Hall.^[145] The Sophomore Experience is housed in Stockwell Hall and the Transfer Year Experience is housed in Northwood III.^{[146][147]} The newly organized International Impact program is housed in North Quad.^[148]

Groups and activities

The University lists 1,438 student organizations.^[149] With a history of student activism, some of the most visible groups include those dedicated to causes such as <u>civil rights</u> and <u>labor</u> <u>rights</u>, such as local chapters of <u>Students for a Democratic Society</u> and United Students Against Sweatshops (USAS). The latter group seeks to hold accountable multinational companies that exploit their workers in factories around the world where college apparel is produced. Although the student body generally leans toward <u>left-wing politics</u>,^[150] there are also conservative groups, such as <u>Young Americans for Freedom</u>, and non-partisan groups, such as the Roosevelt Institute.



Michigan Union on Central Campus

There are also several engineering projects teams, including the <u>University of Michigan Solar Car</u> <u>Team</u>, which has placed first in the <u>North American Solar Challenge</u> six times and third in the <u>World</u> <u>Solar Challenge four times.^[151] Michigan Interactive Investments</u>, the TAMID Israel Investment Group, and the Michigan Economics Society^[152] are also affiliated with the university.

The university also showcases many community service organizations and charitable projects, including Foundation for International Medical Relief of Children, Dance Marathon at the University of Michigan,^[153] The Detroit Partnership, Relay For Life, U-M Stars for the Make-A-Wish Foundation, InnoWorks at the University of Michigan, SERVE, Letters to Success, PROVIDES, <u>Circle K, Habitat for Humanity</u>,^[154] and Ann Arbor Reaching Out. <u>Intramural sports</u> are popular, and there are recreation facilities for each of the three campuses.^[155]

<u>Fraternities and sororities</u> play a role in the university's social life; approximately 17 percent of undergraduates are involved in Greek life. Membership numbers for the 2009-2010 school year reached the highest in the last two decades. Four different Greek councils—the Interfraternity Council, Multicultural Greek Council, <u>National Pan-Hellenic Council</u>, and Panhellenic Association—represent most Greek organizations. Each council has a different recruitment process.^[156]

The <u>Michigan Union</u> and Michigan League are student activity centers located on Central Campus; Pierpont Commons is on North Campus. The Michigan Union houses a majority of student groups, including the student government. The William Monroe Trotter House, located east of Central Campus, is a multicultural student center operated by the university's Office of Multi-Ethnic Student Affairs.^[157] The University Activities Center (UAC) is a student-run programming organization and is composed of 14 committees.^[158] Each group involves students in the planning and execution of a variety of events both on and off campus.

The Michigan Marching Band, composed of more than 350 students from almost all of U-M's schools,^[159] is the university's marching band. Over 100 years old,^[160] the band performs at every home football game and travels to at least one away game a year. The student-run and led <u>University of Michigan Pops Orchestra</u> is another musical ensemble that attracts students from all academic backgrounds. It performs regularly in the Michigan Theater. The <u>University of Michigan Men's Glee Club</u>, founded in 1859 and the second oldest such group in the country, is a men's chorus with over 100 members.^[161] Its eight-member subset a cappella group, the <u>University of Michigan Friars</u>, which was founded in 1955, is the oldest currently running *a cappella* group on campus.^[162]

The University of Michigan also encourages many cultural and ethnic student organizations on campus. There are currently over 317 organizations under this category.^[163] There are organizations for almost every culture from the Arab Student Association to Persian Student Association^[164] to African Students Association^[165] to even the Egyptian Student Association.^[166] These organizations hope to promote various aspects of their culture along with raising political and social awareness around campus by hosting an assortment of events throughout the school year. These clubs also help students make this large University into a smaller community to help find people with similar interests and backgrounds.

Media and publications

The <u>student newspaper</u> is <u>*The Michigan Daily*</u>, founded in 1890 and editorially and financially independent of the university. *The Daily* is published five days a week during academic year, and weekly from May to August. Other student publications at the university include the conservative *The*

<u>Michigan Review</u> and the progressive Michigan Independent. The humor publication <u>Gargoyle</u> Humor Magazine is also published by Michigan students.

WCBN-FM (88.3 FM) is the student-run college radio station which plays in freeform format. WOLV-TV is the student-run television station that is primarily shown on the university's cable television system.

Several academic journals are published at the university:

- The Law School publishes the well-regarded <u>Michigan Law Review</u> and six other law journals: The <u>Michigan Journal of Environmental and Administrative Law</u>, <u>University of Michigan Journal of Law Reform</u>, <u>Michigan Journal of Race & Law</u>, <u>Michigan Telecommunications and Technology</u> Law Review</u>, <u>Michigan Journal of International Law</u>, and <u>Michigan Journal of Gender and</u> Law.^[167]
- The Ross School of Business publishes the *Michigan Journal of Business*.
- Several undergraduate journals are also published at the university, including the <u>Michigan</u> Journal of Political Science, Michigan Journal of History, University of Michigan Undergraduate Research Journal, the Michigan Journal of International Affairs, and the Michigan Journal of Asian Studies.

Athletics

The University of Michigan's sports teams are called the <u>Wolverines</u>. They participate in the <u>NCAA's</u> Football Bowl Subdivision (formerly <u>Division I-A</u>) and in the <u>Big Ten</u> <u>Conference</u> in all sports except women's water polo, which is a member of the <u>Collegiate Water Polo Association</u>. U-M boasts 27 varsity sports, including 13 men's teams and 14 women's teams.^[168] In 10 of the past 14 years concluding in 2009, U-M has finished in the top five of the <u>NACDA Director's Cup</u>, a ranking compiled by the <u>National Association of Collegiate Directors of Athletics</u> to tabulate the success of universities in competitive sports. U-M has finished in the top 10 of the Directors' Cup



A football game at Michigan Stadium

standings in 14 of the award's 16 seasons and has placed in the top six in nine of the last 10 seasons.^[169]

Football

The <u>Michigan football</u> program ranks first in NCAA history in total wins (925 through the end of the 2015 season) and first among FBS schools in winning percentage (.731).^[170] The team won the first <u>Rose Bowl</u> game in 1902. U-M had 40 consecutive winning seasons from 1968 to 2007, including consecutive <u>bowl game</u> appearances from 1975 to 2007.^[171] The Wolverines have won a record 42 Big Ten championships. The program has 11 <u>national championships</u>, most recently in 1997,^[172] and has produced three <u>Heisman Trophy</u> winners: <u>Tom Harmon</u>, <u>Desmond Howard</u> and <u>Charles</u> Woodson.^[173]

<u>Michigan Stadium</u> is the largest college football stadium in the nation and one of the largest footballonly stadiums in the world, with an official capacity of 107,601^[174] (the extra seat is said to be "reserved" for <u>Fritz Crisler^[175]</u>) though attendance—frequently over 111,000 spectators—regularly exceeds the official capacity.^[176] The NCAA's record-breaking attendance has become commonplace at Michigan Stadium, especially since the arrival of head coach <u>Bo Schembechler</u>. U-M has fierce rivalries with many teams, including <u>Michigan State</u>, <u>Notre Dame</u>, and <u>Ohio State</u>; <u>ESPN</u> has referred to the <u>Michigan-Ohio State rivalry</u> as the greatest rivalry in American sports.^[177] U-M also has alltime winning records against Michigan State, Notre Dame, and Ohio State.^[178]

Men's ice hockey

The men's ice hockey team, which plays at Yost Ice Arena, has won nine national championships.^[179]

Men's basketball

The <u>men's basketball</u> team, which plays at the <u>Crisler Center</u>, has appeared in five <u>Final Fours</u> and won the <u>national championship</u> in 1989. The men's basketball program became involved in a <u>scandal</u> involving payments from a booster during the 1990s. This led to the program being placed on probation for a four-year period. The program also voluntarily vacated victories from its 1992–1993 and 1995–1999 seasons in which the payments took place, as well as its 1992 and 1993 Final Four appearances.^[180]

The <u>men's basketball team</u> has most recently won back-to-back Big Ten Tournament Championships, against Wisconsin in 2017 and Purdue in 2018.

Other sports

The men's wrestling, men's gymnastics, and women's volleyball teams compete at the Cliff Keen Arena, dedicated and named after longtime wrestling coach Cliff Keen in 1990.

U-M is also home to 29 men's and women's club sports teams, such as rugby, hockey, volleyball, boxing, soccer, and tennis.

In the Olympics

Through the <u>2008</u> Summer Olympics, 178 U-M students and coaches had participated in the Olympics, winning medals in each Summer Olympic Games except 1896, and winning gold medals in all but four Olympiads. U-M students have won a total of <u>151</u> Olympic medals: 72 golds, 39 silvers, and 40 bronzes.^[181]

Traditions

School colors

The University of Michigan school colors are maize and blue.

Fight songs and chants

The University of Michigan's fight song, "<u>The Victors</u>," was written by student <u>Louis Elbel</u> in 1898 following the last-minute football victory over the <u>University of Chicago</u> that won a league championship. The song was declared by <u>John Philip Sousa</u> as "the greatest college fight song ever written."^[182] The song refers to the university as being "the Champions of the West." At the time, U-M was part of the Western Conference, which would later become the <u>Big Ten Conference</u>. Michigan was considered to be on the Western Frontier when it was founded in the old Northwest Territory.

Although mainly used at sporting events, the Michigan fight song is often heard at other events as well. President <u>Gerald Ford</u> had it played by the <u>United States Marine Band</u> as his entrance anthem during his term as president from 1974 to 1977, in preference over the more traditional "<u>Hail to the Chief</u>",^[183] and the <u>Michigan Marching Band</u> performed a slow-tempo variation of the fight song at his funeral.^[184] The fight song is also sung during graduation commencement ceremonies. The university's <u>alma mater</u> song is "<u>The Yellow and Blue</u>." A common rally cry is "Let's Go Blue!" which had a complementary short musical arrangement written by former students Joseph Carl, a sousaphonist, and Albert Ahronheim, a drum major.^[185]

Before "The Victors" was officially the University's fight song, the song "<u>There'll Be a Hot Time in the</u> <u>Old Town Tonight</u>" was considered to be the school song.^[186] After Michigan temporarily withdrew from the Western Conference in 1907, a new Michigan fight song "Varsity" was written in 1911 because the line "champions of the West" was no longer appropriate.^[187]

Alumni

In addition to the late <u>U.S. president</u> <u>Gerald Ford</u>, the university has produced twenty-six <u>Rhodes</u> Scholars. As of 2012, the university has almost 500,000 living alumni.^[188]

More than 250 Michigan graduates have served as legislators as either a United States Senator (40 graduates) or as a Congressional representative (over 200 graduates), including former House Majority Leader <u>Dick Gephardt^[189]</u> and U.S. Representative <u>Justin Amash</u>, who represents <u>Michigan's Third Congressional District</u>.^[190] <u>Mike Duggan</u>, <u>Mayor of Detroit</u>, earned his bachelor and law degree at Michigan, while Michigan Governor <u>Rick Snyder</u> earned his bachelor, M.B.A., and J.D. degrees from Michigan. Current Secretary of Housing and Urban Development Ben Carson received his medical degree from the U-M medical school. Thomas E. Dewey, another Michigan alumnus, was the Governor of New York from 1943 to 1954 and was the Republican Party's presidential nominee in the 1944 and 1948 presidential elections. The 13th <u>President of Pakistan</u>, <u>Arif Alvi</u>, completed his master's degree in prosthodontics in 1975.

U-M's contributions to aeronautics include aircraft designer Clarence "Kelly" Johnson of Lockheed Skunk Works fame,^[191] Lockheed president Willis Hawkins, and several astronauts including the all-U-M crews of both Gemini $4^{[192]}$ and Apollo $\overline{15.^{[193]}}$

U-M counts among its matriculants <u>twenty-one billionaires</u> and prominent company founders and cofounders including <u>Google</u> co-founder <u>Larry Page^[194]</u> and Dr. J. Robert Beyster, who founded <u>Science</u> Applications International Corporation (SAIC) in 1969.^[195] Several U-M graduates contributed greatly to the field of computer science, including <u>Claude Shannon</u> (who made major contributions to the mathematics of information theory),^[196] and <u>Turing Award</u> winners <u>Edgar Codd</u>, <u>Stephen Cook</u>, <u>Frances E</u>. Allen and <u>Michael Stonebraker</u>. <u>Marjorie Lee Browne</u> received her M.S. in 1939 and her doctoral degree in 1950, becoming the third African American woman to earn a PhD in mathematics.^{[197][198]} <u>Katharine Coman</u>, who taught and researched at Wellesley College, was the first female statistics professor in the US.^{[199]:15}

Notable writers who attended U-M include playwright Arthur Miller,^[189] essayists Susan Orlean^[189] and Sven Birkerts, journalists and editors Mike Wallace,^[189] Jonathan Chait of *The New Republic*, Indian author and columnist Anees Jung, Daniel Okrent,^[189] and Sandra Steingraber, food critics Ruth Reichl and Gael Greene, novelists Brett Ellen Block, Elizabeth Kostova, Marge Piercy,^[189] Brad Meltzer,^[189] Betty Smith,^[189] and Charles Major, screenwriter Judith Guest,^[189] Pulitzer Prizewinning poet Theodore Roethke, National Book Award winners Keith Waldrop and Jesmyn Ward, composer/author/puppeteer Forman Brown, and Alireza Jafarzadeh (a Middle East analyst, author, and TV commentator).

In Hollywood, famous alumni include actors Michael Dunn,^[189] Darren Criss, James Earl Jones,^[189] David Alan Grier,^[189] actresses Lucy Liu,^[189] Gilda Radner,^[189] and Selma Blair,^[189] television director Mark Cendrowski, and filmmaker Lawrence Kasdan.^[189] Many Broadway and musical theatre actors, including Gavin Creel,^[189] Andrew Keenan-Bolger, his sister Celia Keenan-Bolger, and Taylor Louderman attended U-M for musical theatre. The musical theatre group StarKid Productions had their start at the University, and staged multiple productions there.^[200]

Musical graduates include operatic soprano Jessye Norman,^[189] singer Joe Dassin, jazz guitarist <u>Randy Napoleon</u>, and <u>Mannheim Steamroller</u> founder <u>Chip Davis</u>.^[189] Well-known composers who are alumni include <u>Frank Ticheli</u>, <u>Andrew Lippa</u>, and the Oscar and Tony Award-winning duo <u>Benj</u> <u>Pasek and Justin Paul</u>. Pop Superstar <u>Madonna</u>^[189] and rock legend <u>Iggy Pop</u>^[189] attended but did not graduate.

Other U-M graduates include former Dean of Harvard Law School Martha Minow, assisted-suicide advocate Dr. Jack Kevorkian,^[189] Weather Underground radical activist Bill Ayers,^[201] activist Tom Hayden,^[189] architect Charles Moore,^[202] the Swedish Holocaust hero Raoul Wallenberg,^[203] and Civil War General Benjamin D. Pritchard.^[204] Neurosurgeon and CNN chief medical correspondent Sanjay Gupta attended both college and medical school at the University.^[205] Clarence Darrow attended law school at U-M at a time when many lawyers did not receive any formal education.^[189] Frank Murphy, who was mayor of Detroit, governor of Michigan, attorney general of the United States, and Supreme Court justice was also a graduate of the Law School.^[189] Conservative pundit Ann Coulter is another U-M law school graduate (J.D. 1988).^[189]

Vaughn R. Walker, a federal district judge in California who overturned the controversial California Proposition 8 in 2010 and ruled it unconstitutional, received his undergraduate degree from U-M in 1966.^[206]

Kenneth Marin was appointed by President Lyndon B. Johnson as a member of the White House Consumer Advisory Council where he served on Wage and Price Control in the mid-1960s. He went to <u>Tanzania</u> in the late sixties and worked as an economic advisor to the government of President Julius Nyerere until the early 1970s. Some notorious graduates of the University are 1910 convicted murderer Dr. <u>Harvey Crippen</u>,^[189] late 19th-century American serial killer Herman Webster Mudgett (also known as <u>H. H. Holmes</u>),^[189] and "Unabomber" Ted Kaczynski.^[189]

U-M athletes have starred in <u>Major League Baseball</u>, the <u>National Football League</u> and <u>National Basketball Association</u> as well as other professional sports. Notable among recent players is <u>Tom Brady</u> of the <u>New England Patriots</u>.^[189] Three players have won college football's <u>Heisman Trophy</u>, awarded to the player considered the best in the nation: <u>Tom Harmon</u> (1940), <u>Desmond Howard</u> (1991) and <u>Charles Woodson</u> (1997).^[173] Professional golfer John Schroeder and Olympic swimmer <u>Michael Phelps</u> also attended the University of Michigan, with the latter studying Sports Marketing and Management. Phelps also swam competitively for <u>Club Wolverine</u>, a swimming club associated with the university.^[207] <u>National Hockey League</u> players <u>Marty Turco</u>, <u>Chris Summers</u>, <u>Max Pacioretty</u>, <u>Carl Hagelin</u>, <u>Dylan Larkin</u>, <u>Zach Hyman</u>, <u>Brendan Morrison</u>,^[189] <u>Jack Johnson</u>, and <u>Michael Cammalleri</u>^[189] all played for U-M's ice hockey team. Baseball Hall of Famers <u>George Sisler</u> and Barry Larkin also played baseball at the university.^[189]

The university claims the only alumni association with a chapter on the <u>moon</u>, established in 1971 when the crew of <u>Apollo 15</u> placed a charter plaque for a new U-M Alumni Association on the lunar surface.^[189] The plaque states: "The Alumni Association of The University of Michigan. Charter Number 1. This is to certify that The University of Michigan Club of The Moon is a duly constituted unit of the Alumni Association and entitled to all the rights and privileges under the Association's Constitution." According to the Apollo 15 astronauts, several small U-M flags were brought on the mission.

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- Official website (http://www.umich.edu)
- University of Michigan Athletics website (http://www.mgoblue.com/)
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