**Institute of Technology**

From Wikipedia, the free encyclopedia

The pageant of the world's first technical Institute, the Berg-Schola, [Selmecbánya](http://en.wikipedia.org/wiki/Selmecb%C3%A1nya), [Hungary](http://en.wikipedia.org/wiki/Hungary); today, the [University of Miskolc](http://en.wikipedia.org/wiki/University_of_Miskolc).

The Coat of Arms of the [University of Miskolc](http://en.wikipedia.org/wiki/University_of_Miskolc), est. 1735.

The emblem of the [National Technological University](http://en.wikipedia.org/wiki/National_Technological_University), the main institute of technology in [Argentina](http://en.wikipedia.org/wiki/Argentina).

**Institute of technology** is a designation employed in a wide range of learning institutions awarding different types of degrees and operating often at variable levels of the educational system. It may be a world renowned institution of [higher education](http://en.wikipedia.org/wiki/Higher_education) and advanced engineering and scientific research or professional [vocational education](http://en.wikipedia.org/wiki/Vocational_education), specializing in [science](http://en.wikipedia.org/wiki/Science), [engineering](http://en.wikipedia.org/wiki/Engineering), and [technology](http://en.wikipedia.org/wiki/Technology) or different sorts of technical subjects. It may also refer to a [secondary education](http://en.wikipedia.org/wiki/Secondary_education) school focused in vocational training.

The term ***polytechnic*** comes from the [Greek](http://en.wikipedia.org/wiki/Greek_language) πολύ (*polú* or *polý*) meaning "many" and τεχνικός (*tekhnikós*) meaning "arts". The term *institute of technology*, for its part, is often abbreviated **IT**; the term is not to be confused with [information technology](http://en.wikipedia.org/wiki/Information_technology).

While the terms *institute of technology* and *polytechnic* are synonymous, the preference concerning which one is the preferred term varies from country to country.

**Institutes of technology versus polytechnics**

The institutes of technology and polytechnics have been in existence since at least the 18th century, but became popular after [World War II](http://en.wikipedia.org/wiki/World_War_II) with the expansion of [applied science](http://en.wikipedia.org/wiki/Applied_science) education, associated with the new needs created by [industrialization](http://en.wikipedia.org/wiki/Industrialization). The world's first institution of technology, the Berg-Schola (today [University of Miskolc](http://en.wikipedia.org/wiki/University_of_Miskolc)) was founded by the Court Chamber of Vienna in [Selmecbánya](http://en.wikipedia.org/wiki/Selmecb%C3%A1nya) Hungary in 1735 in order to train specialists of precious metal and copper mining according to the requirements of the industrial revolution in Hungary. The oldest German Institute of Technology is the [University of Braunschweig](http://en.wikipedia.org/wiki/University_of_Braunschweig) (founded in 1745 as "Collegium Carolinum"). Another exception is the [*Ecole Polytechnique*](http://en.wikipedia.org/wiki/Ecole_Polytechnique), which has educated [French](http://en.wikipedia.org/wiki/France) *élites* since its foundation in 1794. In some cases, polytechnics or institutes of technology are engineering schools or technical colleges. However this early "Technology schools" were not parts of the [Higher Education](http://en.wikipedia.org/wiki/Higher_Education) in the beginnings. The so-called [BME University of Hungary](http://en.wikipedia.org/wiki/Budapest_University_of_Technology_and_Economics) (Founded as: "Institutum Geometrico-Hydrotechnicum" in 1782) is considered the oldest institution of technology in the world, which has university rank and structure. Sometimes, also institutes of technology are engineering and science research intense [universities](http://en.wikipedia.org/wiki/University) when they meet conditions necessary to be formally considered a university: autonomy to offer [master's](http://en.wikipedia.org/wiki/Master%27s_degree) and [doctoral](http://en.wikipedia.org/wiki/Doctorate) degrees and independence as [research](http://en.wikipedia.org/wiki/Research) institutions. In the USA famous examples include [Caltech](http://en.wikipedia.org/wiki/Caltech), [MIT](http://en.wikipedia.org/wiki/MIT), [NYIT](http://en.wikipedia.org/wiki/NYIT), [Virginia Tech](http://en.wikipedia.org/wiki/Virginia_Polytechnic_Institute_and_State_University), [Georgia Tech](http://en.wikipedia.org/wiki/Georgia_Tech), [Illinois Tech](http://en.wikipedia.org/wiki/Illinois_Tech), [Polytechnic Institute of NYU](http://en.wikipedia.org/wiki/Polytechnic_Institute_of_NYU), [Worcester Polytechnic Institute](http://en.wikipedia.org/wiki/Worcester_Polytechnic_Institute), [Rensselaer Polytechnic Institute](http://en.wikipedia.org/wiki/Rensselaer_Polytechnic_Institute), [Rose-Hulman Institute of Technology](http://en.wikipedia.org/wiki/Rose-Hulman_Institute_of_Technology), and [Rochester Institute of Technology](http://en.wikipedia.org/wiki/Rochester_Institute_of_Technology). In India, [Indian Institutes of Technology](http://en.wikipedia.org/wiki/Indian_Institutes_of_Technology) are specific elite institutes which were based on a post WWII recommendation for industrialization.

In several countries, like Germany, the Netherlands, Switzerland and Turkey, institutes of technology and polytechnics are institutions of [higher education](http://en.wikipedia.org/wiki/Higher_education), and have been accredited to award academic degrees and doctorates. Famous examples are the [Istanbul Technical University](http://en.wikipedia.org/wiki/Istanbul_Technical_University), [ETH Zurich](http://en.wikipedia.org/wiki/ETH_Zurich), [İYTE](http://en.wikipedia.org/wiki/%C4%B0YTE), [Delft University of Technology](http://en.wikipedia.org/wiki/Delft_University_of_Technology) and [RWTH Aachen](http://en.wikipedia.org/wiki/RWTH_Aachen), all considered universities.

In countries like Iran, Finland, Malaysia, Portugal, Singapore or the United Kingdom, there is often a significant and confused distinction between polytechnics and universities. In the UK Polytechnics offered university equivalent degrees from [bachelor's](http://en.wikipedia.org/wiki/Bachelor%27s_degree), [master's](http://en.wikipedia.org/wiki/Master%27s) and [PhD](http://en.wikipedia.org/wiki/PhD) that were validated by the independent UK [Council for National Academic Awards](http://en.wikipedia.org/wiki/Council_for_National_Academic_Awards). In 1992 UK Polytechnics were designated as universities. The UK's first polytechnic, the Royal Polytechnic Institution (now the [University of Westminster](http://en.wikipedia.org/wiki/University_of_Westminster)) was founded in 1838 in Regent Street, London. In [Ireland](http://en.wikipedia.org/wiki/Ireland) the term *institute of technology* is more favored synonym of a [*regional technical college*](http://en.wikipedia.org/wiki/Regional_technical_college) though the latter is the legally correct term; however, [Dublin Institute of Technology](http://en.wikipedia.org/wiki/Dublin_Institute_of_Technology) is a university in all but name as it can confer degrees in accordance with law, [Cork Institute of Technology](http://en.wikipedia.org/wiki/Cork_Institute_of_Technology) and another of other Institutes of Technology have delegated authority from HETAC to make awards to and including Master's degree level—Level 9 of the [National Framework for Qualifications](http://www.nfq.ie/nfq/en/frame_action/documents/DeterminationsfortheOutlineNFQ.pdf) (NFQ)—for all areas of study and Doctorate level in a number of others.

In a number of countries, although being today generally considered similar institutions of higher learning across many countries, polytechnics and institutes of technology used to have a quite different statute among each other, its teaching competences and organizational history. In many cases *polytechnic* were a former designation for a vocational institution, before it has been granted the exclusive right to award academic degrees and can be truly called an *institute of technology*. A number of polytechnics providing [higher education](http://en.wikipedia.org/wiki/Higher_education) is simply a result of a formal upgrading from their original and historical role as intermediate technical education schools. In some situations, former polytechnics or other non-university institutions have emerged solely through an administrative change of statutes, which often included a name change with the introduction of new designations like *institute of technology*, *polytechnic university*, [*university of applied sciences*](http://en.wikipedia.org/wiki/University_of_applied_sciences), or *university of technology* for marketing purposes. Such emergence of so many upgraded polytechnics, former vocational education and technical schools converted into more university-like institutions has caused concern where the lack of specialized intermediate technical professionals lead to industrial skill shortages in some fields, being also associated to an increase of the [graduate unemployment](http://en.wikipedia.org/wiki/Graduate_unemployment) rate. This is mostly the case in those countries, where the education system is not controlled by the state and everybody can grant degrees. Evidence have also shown a decline in the general quality of teaching and graduate's preparation for the workplace, due to the fast-paced conversion of that technical institutions to more advanced higher level institutions.

Mentz, Kotze and Van der Merwe (2008) argues that all the tools are in place to promote the debate on the place of technology in higher education in general and in Universities of Technology specifically. The aspects of this debate can follow the following lines: • To what degree is technology defined as a concept? • What is the scope of technology discourse? • What is the place and relation of science with technology? • How useful is the Mitcham framework in thinking about technology in South Africa? • Can a measure of cooperation as opposed to competition be achieved amongst higher education institutions? • Who ultimately is responsible for vocational training and what is the role of technology in this?

**Argentina**

See also: [Education in Argentina](http://en.wikipedia.org/wiki/Education_in_Argentina) and [List of universities in Argentina](http://en.wikipedia.org/wiki/List_of_universities_in_Argentina)

In the so called [*Latin American docta*](http://en.wikipedia.org/wiki/Latin_American_docta) the main higher institution advocates to the study of technology is the [National Technological University](http://en.wikipedia.org/wiki/National_Technological_University) which has brand ramifications through all the country geographic space in the way of *Regional Faculties*. The [Buenos Aires Institute of Technology](http://en.wikipedia.org/wiki/Buenos_Aires_Institute_of_Technology) (ITBA) is other important recognized institute of technology with renowned and prestige in the country.

**Australia**

See also: [Education in Australia](http://en.wikipedia.org/wiki/Education_in_Australia), [Technical and Further Education](http://en.wikipedia.org/wiki/Technical_and_Further_Education), [College of Advanced Education](http://en.wikipedia.org/wiki/College_of_Advanced_Education), and [Category:Australian tertiary institutions](http://en.wikipedia.org/wiki/Category%3AAustralian_tertiary_institutions)

**1970s–1990s**

During the 1970s to early 1990s, the term was used to describe state owned and funded technical schools that offered both [vocational](http://en.wikipedia.org/wiki/Vocational_education) and [higher education](http://en.wikipedia.org/wiki/Higher_education). They were part of the [College of Advanced Education](http://en.wikipedia.org/wiki/College_of_advanced_education) system. In the 1990s most of these merged with existing universities, or formed new ones of their own. These new universities often took the title [University of Technology](http://en.wikipedia.org/wiki/University_of_Technology), for marketing rather than legal purposes. [AVCC report](http://www.avcc.edu.au/documents/universities/AustralianHEMerges-Amalgamations.pdf) The most prominent such university in each state founded the [Australian Technology Network](http://en.wikipedia.org/wiki/Australian_Technology_Network) a few years later.

**1990s–today**

Since the mid-1990s, the term has been applied to some technically minded [technical and further education](http://en.wikipedia.org/wiki/Technical_and_further_education) (TAFE) institutes. These primarily offer [vocational education](http://en.wikipedia.org/wiki/Vocational_education), although some are beginning to offer [higher education](http://en.wikipedia.org/wiki/Higher_education). This usage of the term is most prevalent in NSW and the ACT. The new terminology is apt given that this category of institution are becoming very much like the institutes of the 1970s–1990s period.

In Tasmania in 2009 the old college system and TAFE Tasmania have started a 3 year restructure to become the Tasmanian Polytechnic www.polytechnic.tas.edu.au, Tasmanian Skills Institute www.skillsinstitute.tas.edu.au and Tasmanian Academy www.academy.tas.edu.au

In the higher education sector, there are five designated Universities of Technology in Australia:

* [Curtin University](http://en.wikipedia.org/wiki/Curtin_University), [Western Australia](http://en.wikipedia.org/wiki/Western_Australia)
* [Queensland University of Technology](http://en.wikipedia.org/wiki/Queensland_University_of_Technology), [Queensland](http://en.wikipedia.org/wiki/Queensland)
* [Royal Melbourne Institute of Technology](http://en.wikipedia.org/wiki/RMIT_University), [Victoria](http://en.wikipedia.org/wiki/Victoria_%28Australia%29)
* [Swinburne University of Technology](http://en.wikipedia.org/wiki/Swinburne_University_of_Technology), [Victoria](http://en.wikipedia.org/wiki/Victoria_%28Australia%29)
* [University of Technology, Sydney](http://en.wikipedia.org/wiki/University_of_Technology%2C_Sydney), [New South Wales](http://en.wikipedia.org/wiki/New_South_Wales)

**Austria**

The world's first technical institute the [Berg-Schola](http://en.wikipedia.org/w/index.php?title=Berg-Schola&action=edit&redlink=1) was founded in the [Austro-Hungarian Empire](http://en.wikipedia.org/wiki/Austro-Hungarian_Empire) in 1735 by the Chamber of Vienna.

**Technische Universität**

These institutions grant can grant [habilitation](http://en.wikipedia.org/wiki/Habilitation) and [doctoral](http://en.wikipedia.org/wiki/Doctorate) degrees and focus on research.

* [Graz University of Technology](http://en.wikipedia.org/wiki/Graz_University_of_Technology) (11.000 students, founded 1811, Hochschule since 1865, doctoral degrees since 1901, University since 1975)
* [Vienna University of Technology](http://en.wikipedia.org/wiki/Vienna_University_of_Technology) (15.000 students, founded 1815, Hochschule since 1872, doctoral degrees since 1901, University since 1975)
* [University of Natural Resources and Applied Life Sciences Vienna](http://en.wikipedia.org/wiki/University_of_Natural_Resources_and_Applied_Life_Sciences_Vienna) focused on agriculture (8600 students, founded as Hochschule in 1872, doctoral degrees since 1906, University since 1975)
* [University of Leoben](http://en.wikipedia.org/wiki/University_of_Leoben) specialized in mining, metallurgy, and materials (2.700 students, founded 1840, Hochschule since 1904, doctoral degrees since 1906, University since 1975)

**Research institutions**

These institutions focus only on research.

* [Austrian Institute of Technology](http://en.wikipedia.org/wiki/Austrian_Institute_of_Technology) (founded 1956)
* [Institute of Science and Technology Austria](http://en.wikipedia.org/wiki/Institute_of_Science_and_Technology_Austria) (founded 2007)

**Technical faculties at universities**

Some Universities have a Faculty of Technology that can grant [habilitation](http://en.wikipedia.org/wiki/Habilitation) and [doctoral](http://en.wikipedia.org/wiki/Doctorate) degrees and focus on research.

* [Johannes Kepler University of Linz](http://en.wikipedia.org/wiki/Johannes_Kepler_University_of_Linz) (Faculty of Engineering and Natural Sciences founded 1965, University since 1975)
* [University of Innsbruck](http://en.wikipedia.org/wiki/University_of_Innsbruck) (Faculty of civil engineering founded 1969)
* [University of Klagenfurt](http://en.wikipedia.org/wiki/University_of_Klagenfurt) (Faculty of Technical Sciences founded 2007)

**Fachhochschulen**

[**Fachhochschule**](http://en.wikipedia.org/wiki/Fachhochschule) is a German type of tertiary education institution and adopted later in Austria and Switzerland. They do not focus exclusively on technology, but may also offer courses in social science, medicine, business and design. They grant bachelor's degrees and master's degrees, and focus more on teaching than research and more on specific professions than on science.

In 2010, there were 20 Fachhochschulen in Austria

**Belarus**

* [Brest State Technical University](http://en.wikipedia.org/wiki/Brest_State_Technical_University) ([Brest, Belarus](http://en.wikipedia.org/wiki/Brest%2C_Belarus))
* [Belarusian State University of Informatics and Radioelectronics](http://en.wikipedia.org/wiki/Belarusian_State_University_of_Informatics_and_Radioelectronics) ([Minsk, Belarus](http://en.wikipedia.org/wiki/Minsk%2C_Belarus))
* [Belarusian National Technical University](http://en.wikipedia.org/wiki/Belarusian_National_Technical_University) (BNTU) ([Minsk, Belarus](http://en.wikipedia.org/wiki/Minsk%2C_Belarus))

**Belgium and the Netherlands**

*Hogeschool* is used in [Belgium](http://en.wikipedia.org/wiki/Belgium) and *Hogere Technische School* (HTS) in the [Netherlands](http://en.wikipedia.org/wiki/Netherlands). The hogeschool has many similarities to the *Fachhochschule* in the German language areas and to the *ammattikorkeakoulu* in Finland.

*Hogeschool* institutions in the [Flemish Community](http://en.wikipedia.org/wiki/Flemish_Community) of Belgium (such as the [Erasmus Hogeschool Brussel](http://en.wikipedia.org/wiki/Erasmus_Hogeschool_Brussel)) are currently undergoing a process of academization. They form associations with a university and integrate research into the curriculum, which will allow them to deliver academic master's degrees.

In the Netherlands, four former institutes of technology have become universities over the past decades. These are the current three Technical Universities (at [Delft](http://en.wikipedia.org/wiki/Delft_University_of_Technology), [Eindhoven](http://en.wikipedia.org/wiki/Eindhoven_University_of_Technology) and [Enschede](http://en.wikipedia.org/wiki/Universiteit_Twente)), plus the former agricultural institute in [Wageningen](http://en.wikipedia.org/wiki/Wageningen_University). A list of all *hogescholen* in the Netherlands, including some which might be called polytechnics, can be found [here](http://en.wikipedia.org/wiki/List_of_universities_in_the_Netherlands#Vocational_universities).

**Canada**

In Canada, there are Affiliate Schools, Colleges, Institutes of Technology/Polytechnic Institutes, and Universities that offer instruction in a variety of programs that can lead to: applied degrees, apprenticeship and trade programs, certificates, diplomas, and degrees. Affiliate Schools are polytechnic divisions belonging to a national university and offer select technical and engineering programs. Colleges, Institutes of Technology/Polytechnic Institutes, and Universities tend to be independent institutions.

Credentials are typically conferred at the undergraduate level, however university-affiliated schools like the École de technologie supérieure and the École Polytechnique de Montréal (both of which are located in Quebec), also offer graduate and postgraduate programs, in accordance with provincial higher education guidelines. Canadian higher education institutions, at all levels, undertake directed and applied research with financing allocated through public funding, private equity, or industry sources.

Some of Canada's most esteemed colleges and polytechnic institutions also partake in collaborative institute-industry projects, leading to technology commercialization, made possible through the scope of [Polytechnics Canada](http://en.wikipedia.org/wiki/Polytechnics_Canada); a national alliance of ten leading research-intensive colleges and institutes of technology.

**Affiliate Schools**

* [École Polytechnique de Montréal](http://en.wikipedia.org/wiki/%C3%89cole_Polytechnique_de_Montr%C3%A9al) (polytechnic school affiliated with the [Université de Montréal](http://en.wikipedia.org/wiki/Universit%C3%A9_de_Montr%C3%A9al) in [Montreal, Quebec](http://en.wikipedia.org/wiki/Montreal%2C_Quebec))
* [ETS](http://en.wikipedia.org/wiki/%C3%89cole_de_technologie_sup%C3%A9rieure) or [École de technologie supérieure](http://en.wikipedia.org/wiki/%C3%89cole_de_technologie_sup%C3%A9rieure) (technical school part of the [Université du Québec](http://en.wikipedia.org/wiki/Universit%C3%A9_du_Qu%C3%A9bec) system in [Montreal, Quebec](http://en.wikipedia.org/wiki/Montreal%2C_Quebec))

**Colleges**

* [Algonquin College](http://en.wikipedia.org/wiki/Algonquin_College) (college in [Ottawa, Ontario](http://en.wikipedia.org/wiki/Ottawa%2C_Ontario))
* [Conestoga College](http://en.wikipedia.org/wiki/Conestoga_College) (college in [Kitchener, Ontario](http://en.wikipedia.org/wiki/Kitchener%2C_Ontario))
* [George Brown College](http://en.wikipedia.org/wiki/George_Brown_College) (college in [Toronto, Ontario](http://en.wikipedia.org/wiki/Toronto%2C_Ontario))
* [Humber College](http://en.wikipedia.org/wiki/Humber_College) (college in [Toronto, Ontario](http://en.wikipedia.org/wiki/Toronto%2C_Ontario))
* [Seneca College of Applied Arts and Technology](http://en.wikipedia.org/wiki/Seneca_College) (college in [Toronto, Ontario](http://en.wikipedia.org/wiki/Toronto%2C_Ontario))

**Institutes of Technology/Polytechnic Institutes**

* [BCIT](http://en.wikipedia.org/wiki/British_Columbia_Institute_of_Technology) or [British Columbia Institute of Technology](http://en.wikipedia.org/wiki/British_Columbia_Institute_of_Technology) (polytechnic institute in [Burnaby, British Columbia](http://en.wikipedia.org/wiki/Burnaby%2C_British_Columbia))
* [NAIT](http://en.wikipedia.org/wiki/Northern_Alberta_Institute_of_Technology) or [Northern Alberta Institute of Technology](http://en.wikipedia.org/wiki/Northern_Alberta_Institute_of_Technology) (polytechnic institute in [Edmonton, Alberta](http://en.wikipedia.org/wiki/Edmonton%2C_Alberta))
* [SAIT Polytechnic](http://en.wikipedia.org/wiki/SAIT_Polytechnic) or [Southern Alberta Institute of Technology](http://en.wikipedia.org/wiki/Southern_Alberta_Institute_of_Technology) (polytechnic institute in [Calgary, Alberta](http://en.wikipedia.org/wiki/Calgary%2C_Alberta))
* [Sheridan Institute of Technology and Advanced Learning](http://en.wikipedia.org/wiki/Sheridan_College) (polytechnic institute in [Oakville, Ontario](http://en.wikipedia.org/wiki/Oakville%2C_Ontario))
* [SIAST](http://en.wikipedia.org/wiki/SIAST) or [Saskatchewan Institute of Applied Science and Technology](http://en.wikipedia.org/wiki/Saskatchewan_Institute_of_Applied_Science_and_Technology) (polytechnic institute in [Saskatoon, Saskatchewan](http://en.wikipedia.org/wiki/Saskatoon%2C_Saskatchewan))

**Universities**

* [Kwantlen Polytechnic University](http://en.wikipedia.org/wiki/Kwantlen_Polytechnic_University) (polytechnic university in [Surrey, British Columbia](http://en.wikipedia.org/wiki/Surrey%2C_British_Columbia))
* [Ryerson University](http://en.wikipedia.org/wiki/Ryerson_University) (university in [Toronto, Ontario](http://en.wikipedia.org/wiki/Toronto%2C_Ontario)) - While not a polytechnic anymore, Ryerson was one of the originators of applied education in Ontario, and Canada. It dropped the term polytechnic in 1993 when it was able to grant master degrees, using the term University instead, and changed the name of some degree designations to bring it in line with other "traditional" universities.
* [UOIT](http://en.wikipedia.org/wiki/University_of_Ontario_Institute_of_Technology) or [University of Ontario Institute of Technology](http://en.wikipedia.org/wiki/University_of_Ontario_Institute_of_Technology) (university in [Oshawa, Ontario](http://en.wikipedia.org/wiki/Oshawa%2C_Ontario))

**Czech Republic**

*See also Category:* [*Universities in the Czech Republic*](http://en.wikipedia.org/wiki/Category%3AUniversities_in_the_Czech_Republic)

**Technical Universities**

* [Czech Technical University in Prague](http://en.wikipedia.org/wiki/Czech_Technical_University_in_Prague) (ČVUT), founded in 1707, 23.000 students, it belongs to the oldest technical universities in the world. [www.cvut.cz/en](http://www.cvut.cz/en)
* [Technical University of Ostrava](http://en.wikipedia.org/wiki/Technical_University_of_Ostrava) (VŠB TUO), founded in 1849, 22.000 students. [en.vsb.cz](http://en.vsb.cz/)
* [Brno University of Technology](http://en.wikipedia.org/wiki/Brno_University_of_Technology) (VUT), founded in 1899, 24.000 students. [www.vutbr.cz](http://www.vutbr.cz/index.php?set_lang=1)
* [Czech University of Life Sciences Prague](http://en.wikipedia.org/wiki/Czech_University_of_Life_Sciences_Prague) (ČZU), founded in 1904, focused on agriculture, 18.000 students. [www.czu.cz](http://www.czu.cz/en/)
* [Mendel University Brno](http://en.wikipedia.org/wiki/Mendel_University_Brno) (MENDELU), founded in 1919, focused on agriculture, 9.000 students. [www.mendelu.cz](http://www.mendelu.cz/en?lang=en)
* [Technical University of Liberec](http://en.wikipedia.org/wiki/Technical_University_of_Liberec) (TUL), founded in 1953, 8.000 students. [www.tul.cz](http://www.tul.cz/en/)
* [Tomáš Baťa University in Zlín](http://en.wikipedia.org/wiki/Tomas_Bata_University_in_Zl%C3%ADn) (UTB), founded in 2000, 10.000 students. [www.utb.cz](http://www.utb.cz/)

**Research institutions**

* [Academy of Sciences of the Czech Republic](http://en.wikipedia.org/wiki/Academy_of_Sciences_of_the_Czech_Republic) (AV ČR), dates back to 1784, 14.000 research staff altogether. [www.avcr.cz](http://www.avcr.cz/index.html)

**Technical faculties at Universities**

* [University of West Bohemia](http://en.wikipedia.org/wiki/University_of_West_Bohemia) (Faculty of Mechanical Engineering, Faculty of Electrical Engineering; University founded in 1991)
* [University of Pardubice](http://en.wikipedia.org/wiki/University_of_Pardubice) (Faculty of Chemical Technology since 1950, [Jan Perner](http://en.wikipedia.org/wiki/Jan_Perner) Faculty of Transportation since 1991, Institute of Electrical Engineering and Informatics since 2002)
* [Jan Evangelista Purkyně University in Ústí nad Labem](http://en.wikipedia.org/wiki/Jan_Evangelista_Purkyn%C4%9B_University_in_%C3%9Ast%C3%AD_nad_Labem) (Faculty of Production Technology and Management, University founded in 1991)

**Denmark**

[Technical University of Denmark](http://en.wikipedia.org/wiki/Technical_University_of_Denmark)

**Egypt**

[Higher Technological Institute](http://en.wikipedia.org/wiki/Higher_Technological_Institute)

**Ethiopia**

[Mekelle Institute of Technology](http://en.wikipedia.org/wiki/Mekelle_Institute_of_Technology)

Mekelle Institute of Technology is located at Ainalem, 5 kilometers outside of Mek'ele, the capital of the Tigray Region of Ethiopia.

Mekelle Institute of Technology(MIT)'s mission is to provide high quality education, training and research in the areas of science and technology to produce qualified professionals that can apply their knowledge and skills in the country's development.

MIT raises funds from non-governmental organizations and individuals who support the mission and objectives of the Institute. Tigray Development Association, its supporters, and REST have provided the initial funds for the launching of the Institute. As a result of the unstinting efforts made by the Provisional Governing Board to obtain technical and financial assistance, the Institute has so far secured financial and material support as well as pledges of sponsorship for 50 students, covering their tuition fees, room and board up to graduation. The MIT has also been able to create linkages with some universities and colleges in the United States of America, which have provided manpower and material support to MIT. The institute is governed by a provisional governing board.

MIT graduated its first batch of 142 students 7 July 2007. Currently the campus is teaching around 300 students attending in Engineering faculty.

**Finland**

**Universities of Technology**

Universities of Technology are categorized as universities, are allowed to grant B.Sc. (Tech.), [M.Sc. (Tech.)](http://en.wikipedia.org/wiki/Diplomi-insin%C3%B6%C3%B6ri), Lic.Sc. (Tech.), Ph.D. and D.Sc.(Tech.) degrees and roughly correspond to Instituts de technologie of French-speaking areas and Technische Universität of Germany in prestige. In addition to universities of technology, some universities, e.g. University of Oulu and Åbo Akademi University, are allowed to grant the B.Sc. (tech.), M.Sc. (tech.) and D.Sc. (Tech.) degrees.

Universities of Technology are academically similar to other (non-polytechnic) universities. Prior to Bologna process, M.Sc. (Tech.) required 180 credits, whereas M.Sc. from a normal university required 160 credits. The credits between Universities of Technology and normal universities are comparable.

Some Finnish Universities of Technology are:

* [Aalto University](http://en.wikipedia.org/wiki/Aalto_University), formed from [Helsinki University of Technology](http://en.wikipedia.org/wiki/Helsinki_University_of_Technology) and other universities
* [Tampere University of Technology](http://en.wikipedia.org/wiki/Tampere_University_of_Technology)
* [Lappeenranta University of Technology](http://en.wikipedia.org/wiki/Lappeenranta_University_of_Technology)

**Polytechnics**

Polytechnic schools are distinct from academic universities in Finland. [*Ammattikorkeakoulu*](http://en.wikipedia.org/wiki/Ammattikorkeakoulu) is the common term in [Finland](http://en.wikipedia.org/wiki/Finland), as is the Swedish alternative "*yrkeshögskola*" – their focus is on studies leading to a degree (for instance *insinööri*, engineer; in international use, Bachelor of Engineering) in kind different from but in level comparable to an academic Bachelor's degree awarded by a university. After January 1, 2006, some Finnish ammattikorkeakoulus switched the English term "polytechnic" to the term "university of applied sciences" in the English translations of their legal names. The ammattikorkeakoulu has many similarities to the *hogeschool* in Belgium and in the Netherlands and to the *Fachhochschule* in the German language areas.

Some Finnish polytechnics are:

* [Turku University of Applied Sciences](http://en.wikipedia.org/wiki/Turku_University_of_Applied_Sciences)
* [Kemi-Tornio University of Applied Sciences](http://en.wikipedia.org/wiki/Kemi-Tornio_University_of_Applied_Sciences)

a complete list may be found in [List of polytechnics in Finland](http://en.wikipedia.org/wiki/List_of_polytechnics_in_Finland)

**French language areas**

**Instituts de technologie (grandes écoles)**

[Collegiate universities](http://en.wikipedia.org/wiki/Collegiate_university) grouping several engineering schools or multi-site clusters of French [grandes écoles](http://en.wikipedia.org/wiki/Grandes_%C3%A9coles) provide sciences and technology curricula as autonomous higher education engineering institutes. They include :

* [Centrale Graduate School](http://en.wikipedia.org/wiki/Centrale_Graduate_School)
* [Grenoble Institute of Technology](http://en.wikipedia.org/wiki/Grenoble_Institute_of_Technology)
* [Institut national des sciences appliquées](http://en.wikipedia.org/wiki/Institut_national_des_sciences_appliqu%C3%A9es).
* [Paris Institute of Technology](http://en.wikipedia.org/wiki/Paris_Institute_of_Technology)

They provide science and technology master degrees and doctoral degrees.

***Universités technologiques / instituts universitaires de technologie* / polytechs**

France education system also includes three universities of technology:

* [*Université de technologie de Belfort-Montbéliard*](http://en.wikipedia.org/wiki/Universit%C3%A9_de_technologie_de_Belfort-Montb%C3%A9liard)
* [University of Technology of Compiègne](http://en.wikipedia.org/wiki/University_of_Technology_of_Compi%C3%A8gne)
* [University of Technology of Troyes](http://en.wikipedia.org/wiki/University_of_Technology_of_Troyes)

In addition, France's education system includes many institutes of technology, embedded within most French universities. They are referred-to as *institut universitaire de technologie* (IUT). Instituts universitaires de technologie provide undergraduate technology curricula. 'Polytech institutes', embedded as a part of eleven French universities provide both undergraduate and graduate engineering curricula.

In the French speaking part of Switzerland exists also the term *haute école specialisée* for a type of institution called *Fachhochschule* in the German speaking part of the country. (see below).

**Écoles polytechniques**

Higher education systems, that are influenced by the French education system set at the end of the 18th century, use a terminology derived by reference to the French [*École polytechnique*](http://en.wikipedia.org/wiki/%C3%89cole_polytechnique). Such terms include *Écoles Polytechniques* (Algeria, Belgium, Canada, France, Switzerland, Tunisia), Escola Politécnica (Brasil, Spain), Polytechnicum (Eastern Europe).

In [French language](http://en.wikipedia.org/wiki/French_language), higher education refers to *écoles polytechniques*, providing science and engineering curricula:

* [École polytechnique](http://en.wikipedia.org/wiki/%C3%89cole_polytechnique) or **X** (near [Paris](http://en.wikipedia.org/wiki/Paris))
* [École polytechnique de Bruxelles](http://www.ulb.ac.be/facs/polytech/)
* [École polytechnique de Montréal](http://en.wikipedia.org/wiki/%C3%89cole_polytechnique_de_Montr%C3%A9al)
* [École polytechnique fédérale de Lausanne](http://en.wikipedia.org/wiki/%C3%89cole_polytechnique_f%C3%A9d%C3%A9rale_de_Lausanne)
* [National Polytechnic Institute of Lorraine](http://en.wikipedia.org/wiki/National_Polytechnic_Institute_of_Lorraine)
* [National Polytechnic Institute of Toulouse](http://en.wikipedia.org/wiki/National_Polytechnic_Institute_of_Toulouse)

**Germany**

**Fachhochschule / Hochschule**

[*Fachhochschulen*](http://en.wikipedia.org/wiki/Fachhochschule) and [*Hochschulen*](http://en.wikipedia.org/wiki/Hochschule) were first founded in the early 1970s. They do not focus exclusively on technology, but may also offer courses in social science, medicine, business and design. They grant bachelor's degrees and master's degrees, and focus more on teaching than research and more on specific professions than on science.

In 2009/10, there existed about 200 Fachhochschulen in Germany. See the [German wikipedia](http://en.wikipedia.org/w/index.php?title=Liste_der_Fachhochschulen_in_Deutschland&action=edit&redlink=1) for a list.

**Technische Universität**

[*Technische Universität*](http://en.wikipedia.org/wiki/Technische_Universit%C3%A4t) (abbreviation: *TU*) are the common terms for universities of technology or technical university. These institutions grant can grant [habilitation](http://en.wikipedia.org/wiki/Habilitation) and [doctoral](http://en.wikipedia.org/wiki/Doctorate) degrees and focus on research.

The nine largest and most renowned *Technische Universitäten* in Germany have formed [TU9 German Institutes of Technology](http://en.wikipedia.org/wiki/TU9) as community of interests. Technische Universitäten normally have faculties or departements of naturale sciences and often of economics but can also have units of cultural and social sciences and arts. RWTH Aachen, TU Dresden and TU München also have a faculty of medicine associated with [university hospitals](http://en.wikipedia.org/wiki/Teaching_hospital) ([Klinikum Aachen](http://en.wikipedia.org/wiki/Klinikum_Aachen), [University Hospital Dresden](http://en.wikipedia.org/wiki/University_Hospital_Dresden), [Rechts der Isar Hospital](http://en.wikipedia.org/wiki/Rechts_der_Isar_Hospital)).

There are 17 universities of technology in Germany with about 290,000 students enrolled. The four states of [Bremen](http://en.wikipedia.org/wiki/Bremen_%28state%29), [Mecklenburg-Vorpommern](http://en.wikipedia.org/wiki/Mecklenburg-Vorpommern), [Saxony-Anhalt](http://en.wikipedia.org/wiki/Saxony-Anhalt) and [Schleswig-Holstein](http://en.wikipedia.org/wiki/Schleswig-Holstein) are not operating a *Technische Universität*. Saxony and Lower Saxony have the highest counts of *TUs*, while in Saxony three out of four universities are universities of technology.

| List of *Technische Universitäten* in Germany |
| --- |
| **Name** | [**Land**](http://en.wikipedia.org/wiki/States_of_Germany) | **Foundation** | **Students** | **Notes** |
| [Rheinisch-Westfälische Technische Hochschule](http://en.wikipedia.org/wiki/RWTH_Aachen_University) (RWTH Aachen) | [North Rhine-Westphalia](http://en.wikipedia.org/wiki/North_Rhine-Westphalia) | 1870 | 32,943 | member of TU9 |
| [Berlin Institute of Technology](http://en.wikipedia.org/wiki/Berlin_Institute_of_Technology) | [Berlin](http://en.wikipedia.org/wiki/Berlin) | 1770 | 29,234 | member of TU9 |
| [Brandenburg Technical University](http://en.wikipedia.org/wiki/Brandenburg_Technical_University) | [Brandenburg](http://en.wikipedia.org/wiki/Brandenburg) | 1991 | 6,400 | in [Cottbus](http://en.wikipedia.org/wiki/Cottbus) |
| [Technische Universität Braunschweig](http://en.wikipedia.org/wiki/Braunschweig_University_of_Technology)*Carolo-Wilhelmina* | [Lower Saxony](http://en.wikipedia.org/wiki/Lower_Saxony) | 1745 | 12,500 | member of TU9, oldest TU in Germany |
| [Chemnitz University of Technology](http://en.wikipedia.org/wiki/Chemnitz_University_of_Technology) | [Saxony](http://en.wikipedia.org/wiki/Saxony) | 1836 | 10,317 |  |
| [Clausthal University of Technology](http://en.wikipedia.org/wiki/Clausthal_University_of_Technology) | [Lower Saxony](http://en.wikipedia.org/wiki/Lower_Saxony) | 1775 | 3,199 |  |
| [Technische Universität Darmstadt](http://en.wikipedia.org/wiki/Darmstadt_University_of_Technology) | [Hesse](http://en.wikipedia.org/wiki/Hesse) | 1877 | 20,800 | member of TU9 |
| [Technische Universität Dresden](http://en.wikipedia.org/wiki/Dresden_University_of_Technology) | [Saxony](http://en.wikipedia.org/wiki/Saxony) | 1824 | 34,993 | member of TU9, largest TU in Germany by students enrolled |
| [Dortmund University of Technology](http://en.wikipedia.org/wiki/Dortmund_University_of_Technology) | [North Rhine-Westphalia](http://en.wikipedia.org/wiki/North_Rhine-Westphalia) | 1968 | 22,012 |  |
| [Technische Universität Bergakademie Freiberg](http://en.wikipedia.org/wiki/Technische_Universit%C3%A4t_Bergakademie_Freiberg) | [Saxony](http://en.wikipedia.org/wiki/Saxony) | 1765 | 4,508 | one of the world's oldest universities of mining |
| [Technische Universität Hamburg-Harburg](http://en.wikipedia.org/wiki/Technical_University_of_Hamburg) | [Hamburg](http://en.wikipedia.org/wiki/Hamburg) | 1978 | 5,000 |  |
| [Gottfried Wilhelm Leibniz Universität Hannover](http://en.wikipedia.org/wiki/University_of_Hanover) | [Lower Saxony](http://en.wikipedia.org/wiki/Lower_Saxony) | 1831 | 21,800 | member of TU9 |
| [Technische Universität Ilmenau](http://en.wikipedia.org/wiki/Technische_Universit%C3%A4t_Ilmenau) | [Thuringia](http://en.wikipedia.org/wiki/Thuringia) | 1894 | 7,200 |  |
| [Technische Universität Kaiserslautern](http://en.wikipedia.org/wiki/Technische_Universit%C3%A4t_Kaiserslautern) | [Rhineland-Palatinate](http://en.wikipedia.org/wiki/Rhineland-Palatinate) | 1870 | 9,600 |  |
| [Karlsruhe Institute of Technology](http://en.wikipedia.org/wiki/Karlsruhe_Institute_of_Technology)*Fridericiana* | [Baden-Württemberg](http://en.wikipedia.org/wiki/Baden-W%C3%BCrttemberg) | 1825 | 18,245 | member of TU9 |
| [Technische Universität München](http://en.wikipedia.org/wiki/Technische_Universit%C3%A4t_M%C3%BCnchen) | [Bavaria](http://en.wikipedia.org/wiki/Bavaria) | 1868 | 21,608 | member of TU9 |
| [University of Stuttgart](http://en.wikipedia.org/wiki/University_of_Stuttgart) | [Baden-Württemberg](http://en.wikipedia.org/wiki/Baden-W%C3%BCrttemberg) | 1829 | 19,702 | member of TU9 |

[Niedersächsische Technische Hochschule](http://en.wikipedia.org/w/index.php?title=Nieders%C3%A4chsische_Technische_Hochschule&action=edit&redlink=1) is a joint-venture of TU Clausthal, TU Braunschweig and University of Hanover. Some universities in Germany can also be seen as institutes of technology due to comprising a wide spread of technical sciences and having a history as a technical university. Examples are

* [University of Duisburg-Essen](http://en.wikipedia.org/wiki/University_of_Duisburg-Essen)
* [Otto-von-Guericke University Magdeburg](http://en.wikipedia.org/wiki/Otto-von-Guericke_University_Magdeburg)
* [University of Rostock](http://en.wikipedia.org/wiki/University_of_Rostock) with a tradition in *ship building and engineering*

**Greece**

Main articles: [Polytechnic (Greece)](http://en.wikipedia.org/wiki/Polytechnic_%28Greece%29) and [Technological Educational Institute](http://en.wikipedia.org/wiki/Technological_Educational_Institute)

In Greece, there are 2 "Polytechnics" part of the public higher education in Greece and they confer a 5-year Diplom Uni (300E.C.T.S – I.S.C.E.D. 5A), the [National Technical University of Athens](http://en.wikipedia.org/wiki/National_Technical_University_of_Athens) and the [Technical University of Crete](http://en.wikipedia.org/wiki/Technical_University_of_Crete). Also, there are Greek [Higher Technological Educational Institutes](http://en.wikipedia.org/wiki/List_of_universities_in_Greece) ([Ανώτατα Τεχνολογικά Εκπαιδευτικά Ιδρύματα – Α.T.E.I](http://en.wikipedia.org/wiki/List_of_universities_in_Greece)). After the N.1404/1983 Higher Education Reform Act (Ν.1404/1983 - 2916/2001 - Ν. 3549/2007) the [Technological Educational Institute](http://en.wikipedia.org/wiki/List_of_universities_in_Greece) constitute, a parallel, equivalent and complementary part of the public higher education in Greece. They confer 4-year bachelor's degree (Diplom FH) (240E.C.T.S – I.S.C.E.D. 5A).

**Hong Kong**

See also: [Education in Hong Kong](http://en.wikipedia.org/wiki/Education_in_Hong_Kong) and [List of universities in Hong Kong](http://en.wikipedia.org/wiki/List_of_universities_in_Hong_Kong)

The first polytechnic in [Hong Kong](http://en.wikipedia.org/wiki/Hong_Kong) is The Hong Kong Polytechnic, established in 1972 through upgrading the Hong Kong Technical College (Government Trade School before 1947). The second polytechnic, the City Polytechnic of Hong Kong, was founded in 1984. These polytechnics awards [diplomas](http://en.wikipedia.org/wiki/Diploma), [higher diplomas](http://en.wikipedia.org/wiki/Higher_diploma), as well as academic degrees. Like the [United Kingdom](http://en.wikipedia.org/wiki/United_Kingdom), the two polytechnics were granted university status in 1994, and renamed [The Hong Kong Polytechnic University](http://en.wikipedia.org/wiki/Hong_Kong_Polytechnic_University) and the [City University of Hong Kong](http://en.wikipedia.org/wiki/City_University_of_Hong_Kong) respectively. [The Hong Kong University of Science and Technology](http://en.wikipedia.org/wiki/Hong_Kong_University_of_Science_and_Technology), a university with a focus in applied science, engineering and business, was founded in 1991.

**Hungary**

* The world's first Institute of Technology the Berg-Schola established in Hungary ( today [University of Miskolc](http://en.wikipedia.org/wiki/University_of_Miskolc), re-established in 1949 as Technical University of Heavy Industry in Miskolc). It was founded in Selmecbánya as the Royal Hungarian Academy of Mining and Forestry in 1735.
* [Budapest University of Technology and Economics](http://en.wikipedia.org/wiki/Budapest_University_of_Technology_and_Economics), one of the oldest universities of technology of the world is located in Budapest (est. 1782).

**India**

A polytechnic is a technical institute which imparts technical education in [India](http://en.wikipedia.org/wiki/India). They offer three year duration full time diploma courses in engineering. The courses offered in polytechnics are fewer than the four year degree programs offered in engineering colleges in India. The courses are designed in such a way that the students are able to gain engineering skills. The minimum qualification for admission to polytechnics is pass in [SSLC](http://en.wikipedia.org/wiki/SSLC) (Standard Tenth) or Senior Secondary (Standard Twelfth). Depending upon State admissions are given on the merit bases and often has limited seats. The polytechnics are affiliated to state technical boards. The [All India Council of Technical Education](http://en.wikipedia.org/wiki/All_India_Council_of_Technical_Education) is the regulating authority for polytechnics in India.

After successfully completing their diploma in polytechnic, students can gain lateral entry to engineering degree (under graduate) courses called [BE](http://en.wikipedia.org/wiki/B.E)/[BTech](http://en.wikipedia.org/wiki/BTech) which are conducted by engineering colleges for high studies.

**Iran**

* *Tehran Polytechnic* or [Amirkabir University of Technology](http://en.wikipedia.org/wiki/Amirkabir_University_of_Technology), [Tehran](http://en.wikipedia.org/wiki/Tehran).
* [Sharif University of Technology](http://en.wikipedia.org/wiki/Sharif_University_of_Technology), [Tehran](http://en.wikipedia.org/wiki/Tehran).
* [Isfahan University of Technology](http://en.wikipedia.org/wiki/Isfahan_University_of_Technology), [Isfahan](http://en.wikipedia.org/wiki/Isfahan).
* [Iran University of Science and Technology](http://en.wikipedia.org/wiki/Iran_University_of_Science_and_Technology), [Tehran](http://en.wikipedia.org/wiki/Tehran).
* [K. N. Toosi University of Technology](http://en.wikipedia.org/wiki/K._N._Toosi_University_of_Technology), [Tehran](http://en.wikipedia.org/wiki/Tehran).
* [Sahand University of Technology](http://en.wikipedia.org/wiki/Sahand_University_of_Technology), [Tabriz](http://en.wikipedia.org/wiki/Tabriz).
* [Shahrood University of Technology](http://en.wikipedia.org/wiki/Shahrood_University_of_Technology), [Shahrood](http://en.wikipedia.org/wiki/Shahrood).
* Faculty of Engineering (دانشکده فنی) of [Tehran University](http://en.wikipedia.org/wiki/Tehran_University), [Tehran](http://en.wikipedia.org/wiki/Tehran).
* Faculty of Technology and Engineering of [Shiraz University](http://en.wikipedia.org/wiki/Shiraz_University), [Shiraz](http://en.wikipedia.org/wiki/Shiraz).
* Faculty of Technology and Engineering of [Mashhad University](http://en.wikipedia.org/wiki/Mashhad_University), [Mashhad](http://en.wikipedia.org/wiki/Mashhad).
* Faculty of Technology and Engineering of [Tabriz University](http://en.wikipedia.org/wiki/Tabriz_University), [Tabriz](http://en.wikipedia.org/wiki/Tabriz).
* Faculty of Technology and Engineering of [Arak University](http://en.wikipedia.org/w/index.php?title=Arak_University&action=edit&redlink=1), [Arak](http://en.wikipedia.org/wiki/Arak%2C_Iran).

**Iraq**

See also: [List of Iraqi technical colleges and institutes](http://en.wikipedia.org/wiki/List_of_Iraqi_technical_colleges_and_institutes)

* [University of Technology, Iraq](http://en.wikipedia.org/wiki/University_of_Technology%2C_Iraq)

**Ireland**

The [Republic of Ireland](http://en.wikipedia.org/wiki/Republic_of_Ireland) has an "Institute of Technology" system, formerly referred to as [Regional Technical College](http://en.wikipedia.org/wiki/Regional_Technical_College) (RTCs) system – the latter term is still the correct legal term for the colleges when used generically or collectively but this term is now seldom used. The terms "IT" and "IT's" are now widely used to describe an Institute(s) of Technology. These institutions offer sub-degree, degree and post-graduate level studies. Unlike the Irish university system an Institute of Technology also offers sub-degree programs such as 2 year [Higher Certificate](http://en.wikipedia.org/wiki/Higher_Certificate) program in various academic fields of study. An Irish Higher Certificate is the equivalent of a British [Certificate of Higher Education](http://en.wikipedia.org/wiki/Certificate_of_Higher_Education). Some institutions have "delegated authority" that allows them to make awards in their own name, after authorization by the [Higher Education & Training Awards Council](http://en.wikipedia.org/wiki/Higher_Education_%26_Training_Awards_Council).

[Dublin Institute of Technology](http://en.wikipedia.org/wiki/Dublin_Institute_of_Technology) developed separately from the Regional Technical College system, and after several decades of association with the [University of Dublin, Trinity College](http://en.wikipedia.org/wiki/University_of_Dublin%2C_Trinity_College) it acquired the authority to confer its own degrees.

The IOTI, [Institutes of Technology Ireland](http://www.ioti.ie/), is the representative body for the various Institutes of Technology in Ireland.

**Israel**

* [Technion – Israel Institute of Technology](http://en.wikipedia.org/wiki/Technion_%E2%80%93_Israel_Institute_of_Technology) in 2010 ranked 38 in the world.

**Italian language areas**

In [Italy](http://en.wikipedia.org/wiki/Italy) the term *Politecnico* is used to refer to a university of applied sciences. Currently there are three *Politecnici* in the country:

* [Politecnico di Milano](http://en.wikipedia.org/wiki/Politecnico_di_Milano)
* [Politecnico di Torino](http://en.wikipedia.org/wiki/Politecnico_di_Torino)
* [Politecnico di Bari](http://en.wikipedia.org/wiki/Politecnico_di_Bari)

In the [Italian-speaking part of Switzerland](http://en.wikipedia.org/wiki/Canton_Ticino) the term *Scuola Universitaria Professionale* is used for the type of institution called *Fachhochschule* in the German-speaking part of the country. (See [German language areas](http://en.wikipedia.org/wiki/Institute_of_technology#German_language_areas_.E2.80.93_Fachhochschule_and_Technische_Hochschule#German_language_areas_.E2.80.93_Fachhochschule_and_Technische_Hochschule), above.)

**Jamaica**

* [University of Technology, Jamaica](http://en.wikipedia.org/wiki/University_of_Technology%2C_Jamaica), in Kingston, Jamaica.

**Japan**

See also: [Technical education in Japan](http://en.wikipedia.org/wiki/Technical_education_in_Japan) and [Colleges of technology in Japan](http://en.wikipedia.org/wiki/Colleges_of_technology_in_Japan)

See the [Tokyo Institute of Technology](http://en.wikipedia.org/wiki/Tokyo_Institute_of_Technology) and the [Imperial College of Engineering](http://en.wikipedia.org/wiki/Imperial_College_of_Engineering), forerunner of [The University of Tokyo](http://en.wikipedia.org/wiki/The_University_of_Tokyo)'s engineering faculty. See also [Kyushu Institute of Technology](http://en.wikipedia.org/wiki/Kyushu_Institute_of_Technology), [Osaka Institute of Technology](http://en.wikipedia.org/wiki/Osaka_Institute_of_Technology) and [Nagoya Institute of Technology](http://en.wikipedia.org/wiki/Nagoya_Institute_of_Technology).

**Jordan**

* [Princess Sumaya University for Technology](http://en.wikipedia.org/wiki/Princess_Sumaya_University_for_Technology) in [Amman](http://en.wikipedia.org/wiki/Amman).
* [Jordan University of Science and Technology](http://en.wikipedia.org/wiki/Jordan_University_of_Science_and_Technology) in [Irbid](http://en.wikipedia.org/wiki/Irbid).
* [New York Institute of Technology](http://en.wikipedia.org/wiki/New_York_Institute_of_Technology), [Jordan](http://en.wikipedia.org/wiki/Jordan) campus.
* [Balqa Applied University](http://en.wikipedia.org/wiki/Balqa_Applied_University) in [Salt](http://en.wikipedia.org/wiki/Salt).

**Malaysia**

See also: [Education in Malaysia](http://en.wikipedia.org/wiki/Education_in_Malaysia)

**Mauritius**

The only technical university in [Mauritius](http://en.wikipedia.org/wiki/Mauritius) is the [University of Technology, Mauritius](http://en.wikipedia.org/wiki/University_of_Technology%2C_Mauritius) with its main campus situated in La Tour Koenig, Pointe aux Sables. It has a specialized mission with a technology focus. It applies traditional and beyond traditional approaches to teaching, training, research and consultancy. The university has been founded with the aim to play a key role in the economic and social development of Mauritius through the development of programs of direct relevance to the country’s needs, for example in areas like technology, sustainable development science, and public sector policy and management.

**New Zealand**

See also: [Public sector organizations in New Zealand#Polytechnics and institutes of technology](http://en.wikipedia.org/wiki/Public_sector_organisations_in_New_Zealand#Polytechnics_and_institutes_of_technology) and [Education in New Zealand](http://en.wikipedia.org/wiki/Education_in_New_Zealand)

[New Zealand](http://en.wikipedia.org/wiki/New_Zealand) polytechnics are established under the Education Act 1989 as amended, and are considered state-owned tertiary institutions along with [universities](http://en.wikipedia.org/wiki/University), colleges of education, and [wānanga](http://en.wikipedia.org/wiki/Wananga); there is today often much crossover in courses and qualifications offered between all these types of [Tertiary Education Institutions](http://en.wikipedia.org/wiki/Tertiary_Education_Institution). Some have officially taken the title 'institute of technology' which is a term recognized in government strategies equal to that of the term 'polytechnic'. One has opted for the name '[Universal College of Learning](http://en.wikipedia.org/wiki/Universal_College_of_Learning)' (UCOL), and another '[Unitec New Zealand](http://en.wikipedia.org/wiki/Unitec_New_Zealand)'. These are legal names but not recognized terms like 'polytechnic' or 'institute of technology'. Many if not all now grant at least bachelor-level degrees.

Since the 1990s, there has been consolidation in New Zealand's state-owned tertiary education system. In the polytechnic sector: Wellington Polytechnic amalgamated with [Massey University](http://en.wikipedia.org/wiki/Massey_University). The Central Institute of Technology explored a merger with the [Waikato Institute of Technology](http://en.wikipedia.org/wiki/Waikato_Institute_of_Technology), which was abandoned, but later, after financial concerns, controversially amalgamated with Hutt Valley Polytechnic, which in turn became [Wellington Institute of Technology](http://en.wikipedia.org/wiki/Wellington_Institute_of_Technology). Some smaller polytechnics in the [North Island](http://en.wikipedia.org/wiki/North_Island), such as Waiarapa Polytechnic, amalgamated with [UCOL](http://en.wikipedia.org/wiki/Universal_College_of_Learning). (The only other amalgamations have been in the colleges of education.)

The [Auckland University of Technology](http://en.wikipedia.org/wiki/Auckland_University_of_Technology) is the only polytechnic to have been elevated to [university](http://en.wikipedia.org/wiki/University) status; while [Unitec](http://en.wikipedia.org/wiki/Unitec_New_Zealand) has had repeated attempts blocked by government policy and consequent decisions; Unitec has not been able to convince the courts to overturn these decisions.

**Pakistan**

The Polytechnic institutes in [Pakistan](http://en.wikipedia.org/wiki/Pakistan), offer a diploma spanning three years in different branches. Students are admitted to the diploma program based on their results in the 10th grade standardized exams. The main purpose of Polytechnic Institutes is to train people in various trades.

These institutes are located throughout Pakistan and have been in service since early 1950s.

After successfully completing a diploma at a polytechnic, students can gain lateral entry to engineering degree (under graduate) courses called BE, which are conducted by engineering colleges affiliated to universities.

**Philippines**

* [Cebu Institute of Technology – University](http://en.wikipedia.org/wiki/Cebu_Institute_of_Technology_%E2%80%93_University), a premier engineering school located in [Cebu City](http://en.wikipedia.org/wiki/Cebu_City), [Philippines](http://en.wikipedia.org/wiki/Philippines) in the [Visayas](http://en.wikipedia.org/wiki/Visayas) region. The University is known to have high selectivity in admissions as well as excellence in engineering research and education.
* [Cebu Technological University](http://en.wikipedia.org/wiki/Cebu_Technological_University)
* [Far Eastern University - East Asia College](http://en.wikipedia.org/wiki/Far_Eastern_University_-_East_Asia_College), an engineering school operating under the Far Eastern University system. The college consistently tops various board exams for engineering students in the Philippines.
* [Mapúa Institute of Technology](http://en.wikipedia.org/wiki/Map%C3%BAa_Institute_of_Technology), an engineering school in the Philippines
* [Polytechnic University of the Philippines](http://en.wikipedia.org/wiki/Polytechnic_University_of_the_Philippines), a state university in the Philippines that is also referred to as the National Comprehensive University of the Philippines.
* [Rizal Technological University](http://en.wikipedia.org/wiki/Rizal_Technological_University), the only university that offers degree courses in astronomy.
* [Technological University of the Philippines](http://en.wikipedia.org/wiki/Technological_University_of_the_Philippines)
* [Technological Institute of the Philippines](http://en.wikipedia.org/wiki/Technological_Institute_of_the_Philippines)
* [Mindanao State University - Iligan Institute of Technology](http://en.wikipedia.org/wiki/Mindanao_State_University_-_Iligan_Institute_of_Technology), the premier state university in the southern Philippines, and the science and technology flagship campus of the [Mindanao State University](http://en.wikipedia.org/wiki/Mindanao_State_University) System (the second biggest university system in the Philippines next to the [University of the Philippines](http://en.wikipedia.org/wiki/University_of_the_Philippines)).
* Bicol University-center in teaching excellence, offers IT Courses and a well-known university.

**Poland**

**Politechnika** (translated as a "technical university" or "university of technology") is a main kind of technical university name in Poland. There are some biggest Polytechnic in Poland:

* [Politechnika Śląska](http://en.wikipedia.org/wiki/Politechnika_%C5%9Al%C4%85ska)
* [Politechnika Wrocławska](http://en.wikipedia.org/wiki/Politechnika_Wroc%C5%82awska)
* [Politechnika Warszawska](http://en.wikipedia.org/wiki/Politechnika_Warszawska)
* [Politechnika Poznańska](http://en.wikipedia.org/wiki/Pozna%C5%84_University_of_Technology)
* [Politechnika Krakowska](http://en.wikipedia.org/wiki/Politechnika_Krakowska)
* [Politechnika Gdańska](http://en.wikipedia.org/wiki/Politechnika_Gda%C5%84ska)
* [Politechnika Łódzka](http://en.wikipedia.org/wiki/Politechnika_%C5%81%C3%B3dzka)

Other polytechnical universities:

* [Akademia Górniczo-Hutnicza](http://en.wikipedia.org/wiki/Akademia_G%C3%B3rniczo-Hutnicza)

**Portugal**

Main article: [Polytechnic (Portugal)](http://en.wikipedia.org/wiki/Polytechnic_%28Portugal%29)

The designation "Institute of Technology" is not applied at all, being meaningless in [Portugal](http://en.wikipedia.org/wiki/Portugal). However, there are [higher education educational institutions in Portugal](http://en.wikipedia.org/wiki/List_of_higher_education_institutions_in_Portugal) since the 1980s, which are called [polytechnics](http://en.wikipedia.org/wiki/Polytechnic_%28Portugal%29). After 1998 they were upgraded to institutions which are allowed to confer bachelor's degrees (the Portuguese *licenciatura*). Before then, they only awarded short-cycle degrees which were known as *bacharelatos* and did not provide further education. After the [Bologna Process](http://en.wikipedia.org/wiki/Bologna_Process) in 2007, they have been allowed to offer 2nd cycle (master's) degrees to its students. The polytechnical higher education system provides a more practical training and is profession-oriented, while the university higher education system has a strong theoretical basis and is highly research-oriented.

**Russia**

See also: [List of institutions of higher learning in Russia](http://en.wikipedia.org/wiki/List_of_institutions_of_higher_learning_in_Russia)

* [Bauman Moscow State Technical University](http://en.wikipedia.org/wiki/Bauman_Moscow_State_Technical_University)
* [Saint Petersburg Polytechnical University](http://en.wikipedia.org/wiki/Saint_Petersburg_Polytechnical_University)
* [Tomsk Polytechnic University](http://en.wikipedia.org/wiki/Tomsk_Polytechnic_University)

**Singapore**

See also: [Education in Singapore](http://en.wikipedia.org/wiki/Education_in_Singapore)

[Singapore](http://en.wikipedia.org/wiki/Singapore) retains a system close to that applying in the United Kingdom from 1969–1992, distinguishing between polytechnics and universities, but also including a third component, the institute of technical education (ITE). Under this system, most Singaporean students sit for their 'O' Level examinations after a four or five years of education in [secondary school](http://en.wikipedia.org/wiki/Secondary_school), and apply for a place at either ITE, a polytechnic or a [pre-university center](http://en.wikipedia.org/w/index.php?title=Pre-university_centre&action=edit&redlink=1) (a junior college or the [Millennia Institute](http://en.wikipedia.org/wiki/Millennia_Institute), a centralized institute). A few secondary schools are now offering a six-year program which leads directly to university entrance.

Polytechnics offer three year [diploma](http://en.wikipedia.org/wiki/Diploma) courses in subjects such as information technology, engineering subjects and other vocational fields. There are a total of 5 polytechnics in Singapore. They are namely:

* [Singapore Polytechnic](http://en.wikipedia.org/wiki/Singapore_Polytechnic)
* [Ngee Ann Polytechnic](http://en.wikipedia.org/wiki/Ngee_Ann_Polytechnic)
* [Temasek Polytechnic](http://en.wikipedia.org/wiki/Temasek_Polytechnic)
* [Nanyang Polytechnic](http://en.wikipedia.org/wiki/Nanyang_Polytechnic)
* [Republic Polytechnic](http://en.wikipedia.org/wiki/Republic_Polytechnic)

The institute of technical education offers shorter programs up to 2 year certificates in a wide variety of fields, ranging from beauty therapy to nursing, electronics, business and information technology. There are currently three colleges within ITE. One of them is a recently opened large campus while the other two are each composed of five smaller campuses which will be replaced in the coming years by a large campus for each college. The three colleges are:

* [ITE College East](http://en.wikipedia.org/wiki/ITE_College_East)
* [ITE College West](http://en.wikipedia.org/wiki/ITE_College_West)
* [ITE College Central](http://en.wikipedia.org/wiki/ITE_College_Central)

[Nanyang Technological University](http://en.wikipedia.org/wiki/Nanyang_Technological_University) (public research university) offers up PhD degree level engineering education. Another comprehensive university known as [National University of Singapore](http://en.wikipedia.org/wiki/National_University_of_Singapore) (public research university) also provides up to PhD level engineering education.

A new public [university](http://en.wikipedia.org/wiki/University) ([Singapore Institute of Technology](http://en.wikipedia.org/wiki/Singapore_Institute_of_Technology)) for polytechnic [diploma](http://en.wikipedia.org/wiki/Diploma) holders, was announced in 2010. It is scheduled to be opened in 2011.

Another new public university known as [Singapore University of Technology and Design](http://en.wikipedia.org/wiki/Singapore_University_of_Technology_and_Design) would be opened in 2011.

**Slovakia**

* [Slovak University of Technology in Bratislava](http://en.wikipedia.org/wiki/Slovak_University_of_Technology_in_Bratislava)

**South Africa**

See also: [List of universities in South Africa](http://en.wikipedia.org/wiki/List_of_universities_in_South_Africa)

[South Africa](http://en.wikipedia.org/wiki/South_Africa) is in a process of transforming its "higher education landscape". Historically a division in South Africa between Universities and Technikons (polytechnics) as well between institutions servicing particular racial and language groupings. In 1993 Technikons were afforded the power to award certain technology degrees. Beginning in 2004 former Technikons have either been merged with traditional Universities to form Comprehensive Universities or have become Universities of Technology, however the Universities of Technology have not to date acquired all of the traditional rights and privileges of a University (such as the ability to confer a wide range of degrees).

In an article by Jan Mentz, Paula Kotze and [Alta van der Merwe](http://en.wikipedia.org/w/index.php?title=Alta_van_der_Merwe&action=edit&redlink=1) (2008) the authors looks at the role of Universities of Technologies after the merger.

**Sri Lanka**

Main article: [Technical College (Sri Lanka)](http://en.wikipedia.org/wiki/Technical_College_%28Sri_Lanka%29)

**Thailand**

See also: [Education in Thailand](http://en.wikipedia.org/wiki/Education_in_Thailand)

Most of Thailand's institutes of technology were developed from [technical colleges](http://en.wikipedia.org/wiki/Technical_college), in the past could not grant bachelor's degrees; today, however, they are [university](http://en.wikipedia.org/wiki/University) level institutions, some of which can grant degrees to the [doctoral](http://en.wikipedia.org/wiki/Doctorate) level. Examples are [Pathumwan Institute of Technology](http://en.wikipedia.org/wiki/Pathumwan_Institute_of_Technology) (developed from Pathumwan Technical School), [King Mongkut's Institute of Technology Ladkrabang](http://en.wikipedia.org/wiki/King_Mongkut%27s_Institute_of_Technology_Ladkrabang) (Nondhaburi Telecommunications Training Centre), and [King Mongkut's Institute of Technology North Bangkok](http://en.wikipedia.org/wiki/King_Mongkut%27s_Institute_of_Technology_North_Bangkok) (Thai-German Technical School).

There are two former institutes of technology, which already changed their name to "University of Technology": [Rajamangala University of Technology](http://en.wikipedia.org/wiki/Rajamangala_University_of_Technology) (formerly Institute of Technology and Vocational Education) and [King Mongkut's University of Technology Thonburi](http://en.wikipedia.org/wiki/King_Mongkut%27s_University_of_Technology_Thonburi) (Thonburi Technology Institute).

Institutes of technology with different origins are [Asian Institute of Technology](http://en.wikipedia.org/wiki/Asian_Institute_of_Technology), which developed from [SEATO](http://en.wikipedia.org/wiki/SEATO) Graduate School of Engineering, and [Sirindhorn International Institute of Technology](http://en.wikipedia.org/wiki/Sirindhorn_International_Institute_of_Technology), an engineering school of [Thammasat University](http://en.wikipedia.org/wiki/Thammasat_University). [Suranaree University of Technology](http://en.wikipedia.org/wiki/Suranaree_University_of_Technology) is the only government-owned technological university in Thailand that was established (1989) as such; while [Mahanakorn University of Technology](http://en.wikipedia.org/wiki/Mahanakorn_University_of_Technology) is the most well-known private technological institute.

**Turkey**

See also: [Education in Turkey](http://en.wikipedia.org/wiki/Education_in_Turkey)

In [Turkey](http://en.wikipedia.org/wiki/Turkey) and the [Ottoman Empire](http://en.wikipedia.org/wiki/Ottoman_Empire), the history of engineering is the history of [Istanbul Technical University](http://en.wikipedia.org/wiki/Istanbul_Technical_University). Its graduates built dams, roads and buildings. In the mid of 1950s, 2 technical university was opened in [Ankara](http://en.wikipedia.org/wiki/Ankara) and [Trabzon](http://en.wikipedia.org/wiki/Trabzon). In recent years, Yildiz University is reorganized as [Yildiz Technical University](http://en.wikipedia.org/wiki/Yildiz_Technical_University) and 2 institute of technologies was founded in [Kocaeli](http://en.wikipedia.org/wiki/Kocaeli) and [Izmir](http://en.wikipedia.org/wiki/Izmir). In 2010, technical universities named [Bursa Technical University](http://en.wikipedia.org/wiki/Bursa_Technical_University) and [Konya Technical University](http://en.wikipedia.org/w/index.php?title=Konya_Technical_University&action=edit&redlink=1) is announced to be opened in Bursa and Konya respectively.

| List of Technical Universities in Turkey |
| --- |
| **Name** | **City** | **Foundation** | **Students** | **Notes** |
| [Istanbul Technical University](http://en.wikipedia.org/wiki/Istanbul_Technical_University) (ITU) | [Istanbul](http://en.wikipedia.org/wiki/Istanbul) | 1773 | 21000 | Ranked 108th in THES QS [University ranking](http://en.wikipedia.org/wiki/University_ranking) in the field of technology |
| [Yıldız Technical University](http://en.wikipedia.org/wiki/Y%C4%B1ld%C4%B1z_Technical_University) (YTU) | [Istanbul](http://en.wikipedia.org/wiki/Istanbul) | 1911 |  |  |
| [Karadeniz Technical University](http://en.wikipedia.org/wiki/Karadeniz_Technical_University) (KTU) | [Trabzon](http://en.wikipedia.org/wiki/Trabzon) | 1955 |  | First technical university in [Turkey](http://en.wikipedia.org/wiki/Turkey) outside [Istanbul](http://en.wikipedia.org/wiki/Istanbul) |
| [Middle East Technical University](http://en.wikipedia.org/wiki/Middle_East_Technical_University) (ODTU) | [Ankara](http://en.wikipedia.org/wiki/Ankara) | 1956 |  |  |
| [Gebze Institute of Technology](http://en.wikipedia.org/wiki/Gebze_Institute_of_Technology) (GYTE) | [Kocaeli](http://en.wikipedia.org/wiki/Kocaeli) | 1992 |  |  |
| [İzmir Institute of Technology](http://en.wikipedia.org/wiki/%C4%B0zmir_Institute_of_Technology) (IYTE) | [Izmir](http://en.wikipedia.org/wiki/Izmir) | 1992 |  |  |

**United Kingdom**

Main article: [Polytechnic (United Kingdom)](http://en.wikipedia.org/wiki/Polytechnic_%28United_Kingdom%29)

Polytechnics were [tertiary education](http://en.wikipedia.org/wiki/Tertiary_education) teaching institutions in [England](http://en.wikipedia.org/wiki/England), [Wales](http://en.wikipedia.org/wiki/Wales) and [Northern Ireland](http://en.wikipedia.org/wiki/Northern_Ireland). Polytechnics offered university equivalent degrees (bachelor's, master's, PhD) validated by the UK Council for National Academic Awards [CNAA](http://en.wikipedia.org/wiki/CNAA). They particularly excelled in engineering and applied science degree courses similar to technological universities in the USA and continental Europe . The comparable institutions in [Scotland](http://en.wikipedia.org/wiki/Scotland) were collectively referred to as [Central Institutions](http://en.wikipedia.org/wiki/Central_Institution). Britain's first Polytechnic, the [Royal Polytechnic Institution](http://en.wikipedia.org/wiki/Royal_Polytechnic_Institution) later known as the [Polytechnic of Central London](http://en.wikipedia.org/wiki/Polytechnic_of_Central_London) (now the [University of Westminster](http://en.wikipedia.org/wiki/University_of_Westminster)) was established in 1838 at Regent Street in London and its goal was to popularize engineering and science knowledge in Victorian Britain.

In 1956, some colleges of technology received the designation [College of Advanced Technology](http://en.wikipedia.org/wiki/College_of_Advanced_Technology_%28United_Kingdom%29). They became universities in the 1960s. The designation "Institute of Technology" was occasionally used by polytechnics (Bolton), [Central Institutions](http://en.wikipedia.org/wiki/Central_Institution) (Dundee, Robert Gordon's), and postgraduate universities, (Cranfield and Wessex), most of which later adopted the designation University, and there were two "Institutes of Science and Technology": [UMIST](http://en.wikipedia.org/wiki/UMIST) and UWIST of the [University of Wales](http://en.wikipedia.org/wiki/University_of_Wales). [Loughborough University](http://en.wikipedia.org/wiki/Loughborough_University) was called Loughborough University of Technology from 1966 to 1996, the only institution in the UK to have had such a designation.

**United States**

Main article: [Institute of Technology (United States)](http://en.wikipedia.org/wiki/Institute_of_Technology_%28United_States%29)

Polytechnic Institutes are elite technological universities many dating back to the mid-19th century. A handful of American universities include the phrases "Institute of Technology", "Polytechnic Institute", "Polytechnic University", or similar phrasing in their names; these are generally [research](http://en.wikipedia.org/wiki/Research)-intensive universities with a focus on engineering, science and technology. Conversely, schools dubbed "technical colleges" or "technical institutes" generally provide post-secondary training in technical and mechanical fields focusing on training vocational skills primarily at a [community college](http://en.wikipedia.org/wiki/Community_college) level—parallel and sometimes equivalent to the first two years at a bachelor's-granting institution.

**Venezuela**

Institutes of technology in Venezuela were developed in the 1950s as an option for post-Secondary education in technical and scientific courses, after the *polytechnic* French concepts. At that time, technical education was considered essential for the development of a sound [middle class](http://en.wikipedia.org/wiki/Middle_class) economy.

Nowadays, most of the *Institutos de Tecnología* are privately run businesses, with varying degrees of quality.

Most of these institutes award diplomas after three or three and a half years of education. Few, if any *Institutos de Tecnología* have any research facilities.

**Vietnam**

After the communists took control of Hanoi in 1954, with support from Soviet Union, many new universities were built:

* [Hanoi University of Technology](http://en.wikipedia.org/wiki/Hanoi_University_of_Technology) the first technical university in Vietnam (were built in 1956)
* [Le Quy Don Technical University](http://en.wikipedia.org/wiki/Le_Quy_Don_Technical_University),
* [Water Resources University (Vietnam)](http://en.wikipedia.org/wiki/Water_Resources_University_%28Vietnam%29)
* [Ho Chi Minh City University of Technology](http://en.wikipedia.org/wiki/Ho_Chi_Minh_City_University_of_Technology)
* [Da Nang University of Technology](http://en.wikipedia.org/wiki/Da_Nang_University_of_Technology)
* [Vietnam Maritime University](http://en.wikipedia.org/wiki/Vietnam_Maritime_University)

**See also**

[List of institutions using the term "institute of technology" or "polytechnic"](http://en.wikipedia.org/wiki/List_of_institutions_using_the_term_%22institute_of_technology%22_or_%22polytechnic%22)

This page was last modified on 5 December 2011 at 06:18.